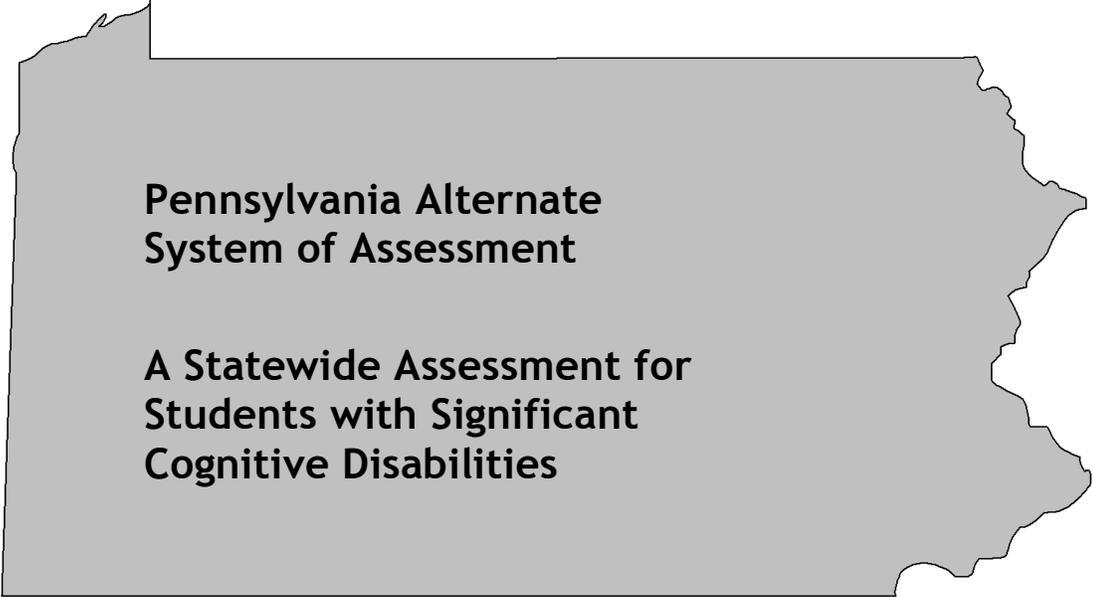


TECHNICAL REPORT 2013-2014



**Pennsylvania Alternate
System of Assessment**

**A Statewide Assessment for
Students with Significant
Cognitive Disabilities**

**2014 Reading and Mathematics
Grades 3/4, 5/6, 7/8 and 11**

**2014 Science
Grades 4, 8 and 11**

Provided by

**University of Pittsburgh, PASA Project
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Preface

The purpose of this report is to document the development, administration, scoring and technical quality of the 2013-14 administration of the *Pennsylvania Alternate System of Assessment (PASA) Reading, Math, and Science* assessments. The 2013-14 administration is referred to as the 2014 *PASA* throughout this report. The report is organized into 11 chapters. The chapters describe the background, purpose, design and development, administration, scoring, and score reporting of the *PASA*.

Several of the chapters are updates from previous *PASA* technical reports to reflect the current year's data. Additionally, most of the appendices contain similar content to that presented in the appendices of previous reports. Content standards, administrator manuals, and summaries of statistical analyses conducted on the item level data from the 2014 *PASA* are included in Appendices to this technical report, as they have been in the past. The report concludes with a discussion of activities that are currently being planned to further the development of *PASA Reading, Math and Science* and enhance the technical characteristics of the assessment.

Chapter 1: Overview of the Pennsylvania Alternate System of Assessment (PASA) Reading, Math and Science

Purpose of the PASA

As outlined in Chapter 4 of the State Board of Education regulations, the purposes of the statewide assessment (referring to the *Pennsylvania System of School Assessment (PSSA)*) are as follows:

- Provide students, parents, educators, and citizens with an understanding of student and school performance
- Determine the degree to which school programs enable students to attain proficiency of the Academic Standards
- Provide information to state policy makers, including the State Senate, the General Assembly, and the State Board, on how effective Pennsylvania schools are in promoting and demonstrating student proficiency of the Academic Standards
- Provide information to the general public on school performance
- Provide results to school districts based on aggregate performance of all students, for students with an Individualized Education Plan (IEP) and for those without an IEP.

The *PASA* was designed to fulfill the same purposes, and ensures that Pennsylvania students with the most significant cognitive disabilities are included in the state accountability system. An additional purpose of the *PASA* is to provide information to teachers and schools to guide the improvement of curricula and instruction to enable students with the most significant cognitive disabilities to reach proficiency in the Alternate Academic Standards and Eligible Content.

PASA Reading, Math and Science were designed in response to federal laws requiring that all students, including those with the most significant disabilities, participate in the statewide accountability process (see Section 504 of The Rehabilitation Act, Title II of the Americans with Disabilities Act of 1990, Title I of the Elementary and Secondary Education Act, and the Individuals with Disabilities Education Act (IDEA) Amendments of 1997). More recently, *PASA Reading, Math and Science* have been used to meet the requirements of No Child Left Behind (NCLB).

Until 2008, *PASA Reading, Math, and Science* test scores were aggregated to the district of residence and used as part of the determination of Adequate Yearly Progress (AYP) at the district level. In 2008, all *PASA Reading, Math and Science* scores were attributed to the students' home school (i.e., the school the student would have attended in the district of residence had the student not had a disability). From 2009 to 2013, *PASA Reading, Math and Science* scores for students served in district-run special education programs were attributed to the students' home school, but *PASA Reading, Math and Science* scores for students in Intermediate Unit-run programs or in Approved Private Schools were attributed to the students' district of residence. In 2014, the attribution map for scores of students with disabilities was changed, again. The 2014 attribution map for student with IEPs is provided below as Figure 1. Although student proficiency scores are reported to parents, *PASA Reading, Math and Science* were not designed to be used to make individual student-level instructional decisions.

Student Situation	Who is responsible for ensuring student participation in the state assessment?	Who is responsible for ordering test materials and administering the assessment?	Performance and Participation is attributed to: School District State		
Students with an individualized education plan (IEP), regardless of type of disability, who are enrolled in a district and are receiving educational services from their district of residence but in a school in the district other than the students' school of residence.	District of residence	District of residence	School of attendance	District of residence	State
Rationale: The school providing educational services for the subject areas being tested is responsible for the education of the child.					
Students with an IEP who are enrolled in a charter school and are receiving educational services from their charter school (regardless of type of disability).	Charter or cyber charter school	Charter or cyber charter school	Charter or cyber charter school	Charter or cyber charter school	State
Rationale: The charter school is responsible for the education of a child receiving educational services from the charter school.					
Students with an individualized education plan (IEP), who are enrolled in a district and are receiving their educational services from an entity other than their district of residence.	District of residence	School/program of attendance		District of residence	State
Rationale: The district's decision to place a student into a program operated by an entity other than the district of residence does not absolve the district of its responsibility to educate the child.					

Students with an IEP who are enrolled in a charter school and are receiving their educational services from an entity other than their charter school.	Charter or cyber charter school	School/program of attendance		Charter or cyber charter school	State
Rationale: The charter school's decision to place a student into a program operated by an entity other than the charter school does not absolve the school of its responsibility to educate the child.					
Students with an IEP who are court or agency placed.	Entity providing the educational services	Entity providing the educational services			State
Rationale: The Individuals with Disabilities Education Act (IDEA) mandates that all children with an IEP must participate in the assessment, but placement of a student by a court or agency is not an LEA decision. Since this decision is made outside of the LEA's authority, attribution is to the state only.					

Figure 1. 2014 Attribution Map for Students with IEPs

The *PASA Reading, Math and Science* tests measure skills related to the Pennsylvania Alternate Assessment Anchors, which were derived from the Pennsylvania Chapter 4 Content Standards. Like the *PSSA*, the *PASA* is designed to take a snapshot of students' typical performance on a small sample of academic skills derived from the PA academic standards.

Historical Perspective

PASA Reading and Math were introduced as the statewide alternate assessment during the 2000-2001 school year. Initially, the *PASA* was designed for use in grades 5, 8, and 11. It began as a set of four extended performance tasks, two related to reading and two related to mathematics. Extended performance tasks were divided into component steps, and performance on each step was scored separately. In the process of pilot testing and validating of the conceptual framework for the assessment, it was recommended by administrators and confirmed by raters evaluating student performance that administration and scoring as well as student performance were hindered by the extended task format. Consequently, *PASA Reading and Math* ceased to consist of an extended set of performance tasks and instead became an assessment comprised of several independent items or small item sets linked to one piece of stimuli (e.g., a paragraph of text). In the 2002-03 school year, grade 3 was added to the set of grades tested. In the 2004-05 school year, grades 4, 6, and 7 were included in a mandatory pilot test; in 2005-06, *PASA Reading and Math* scores were included in the calculation of AYP in grades 3 through 8 and 11. The *PASA Reading and Math* are administered in grade spans of 3/4, 5/6, 7/8 and 11, meaning that students in both grades (i.e., 3 and 4) receive the same *PASA* assessment for a given administration. The *PASA Science* was administered for the first time in 2007-08 to students in grades 4, 8 and 11. The format of the *PASA Science* models the format of the *PASA Reading and Math*.

Description of the Alternate Assessment

The *PASA* assessments have 3 distinct levels of difficulty for reading and math in each grade span

3/4, 5/6, 7/8, and 11, and in Science for grades 4, 8, and 11. The test levels at each grade or grade span, labeled A, B and C, represent three levels of complexity or “cognitive demand,” with Level A being the simplest and most concrete, Level B more complex, and Level C the most complex.

The content of the *PASA Reading, Math, and Science* items link to the Alternate Assessment Anchors and Eligible Content. The Alternate Assessment Anchors are extensions of the PA Assessment Anchors and Eligible Content, which are linked to the PA Academic Standards.

Items on all levels of the *PASA* for a given content area are written to the same Alternate Assessment Anchors and Eligible Content. However, the skills that are evaluated and the format of the items vary on the A, B and C level tests.

Level A items might include tasks across the content areas in which students match objects, pictures, or sets, or where they select a requested object, picture, or amount. Items on the Level A assessments are multiple choice with 2 distractors. Reading content on the Level A assessments involves reading simple pictures and comprehension refers to listening comprehension. Level A math items can involve distinguishing between items based on mathematical concepts such as size, shape, amount and function, and Level A Science items require students to distinguish between items based on scientific concepts.

The Level B assessments at each grade span or grade fall at an intermediate level of complexity. At Level B, students would not be required to draw inferences in order to reach solutions. The Level B assessments consist of mainly selected response items with limited production items. Selection items on the Level B assessments have 3 distractors, two of which are related. In Level B reading, tasks might include working with complex pictures, icons, or sight words. In Level B math and science, students might be asked to solve problems and answer questions using manipulatives.

Level C items are the most complex. In Level C reading, items require that the student read and answer questions about the information read. In Level C math, items require solving arithmetic problems, using tools to measure, using money, etc. Level C science items might require students to describe or select a scientific function or process. In some cases, items require that students make inferences in order to determine the solution. The level C assessments contain a majority of production items, and the selected response items have 4 distractors. Further, option choices for the selected response items on the level C assessments are more closely related than are option choices on the other test levels.

A summary of the characterizations of the *PASA* test levels is:

- Level A: Concrete tasks, related to personal experiences, orienting, matching, sorting, receptive labeling, objects as test material, extensive prompting and assistance
- Level B: Representations using pictures, limited test and content area vocabulary, related to familiar surroundings and experiences, receptive and expressive labeling, sorting, classifying, identifying function, limited assistance
- Level C: Symbolic representation using text and complex pictures, extensive test and content area vocabulary, related to experience beyond personal familiarity, labeling, applying knowledge, producing responses to open ended questions

Each form of the *PASA* has consisted of between 20-25 items over the past several

administrations. The *PASA Reading, Math and Science* are administered to students by their teachers or another special educator who knows them well, on a one-on-one basis. The assessments consist of a series of independent or small item sets linked to one piece of stimuli (e.g., a paragraph of text). Teachers are provided with a suggested script to follow with each test item, as well as the text, graphics, and most objects that they will need to administer the test.

Student performance is recorded via video or through detailed narrative notes and these recordings or notes of student performance are submitted for scoring along with Supporting Documentation. The Supporting Documentation form is completed by the test administrator. The form provides additional background information about the student that can help scorers in interpreting the student's performance.

The *PASA Reading, Math and Science* test booklets were distributed in early February 2014. Student performance recordings in *Reading and Math* were to be returned by April 7. Student performance on the *PASA Science* was to be returned to PASA Central by May 19.

Scoring of the *PASA* takes place at annual scoring conferences. Individuals who complete an on-line training and pass a proficiency test can apply to be a scorer. At the scoring conferences, teams of scorers (comprised of practicing teachers, supervisory/administrative school personnel, and college/University faculty) view the media or read the narrative notes and use a specific rubric to score students' performances on each item. Scoring of the 2014 *PASA* took place in the spring and summer of 2014.

Chapter 2: Description of Students taking the PASA

Eligibility

The *PASA Reading, Math and Science* permit students with the most significant disabilities, who are unable to participate in the *PSSA* or *PSSA-M* (even with accommodations), to demonstrate mastery of skills and attainment of knowledge on the alternate academic anchor standards. The *PASA* is appropriate for students who have significant cognitive disabilities, and who require intensive instruction and extensive support in order to perform and/or participate meaningfully and productively in the everyday activities of integrated school, home, community and work environments. These students require substantial modifications of the general education curriculum as well as instruction in areas not presently assessed by the *PSSA*.

The *PASA* is administered to students with significant disabilities in the equivalent of grades 3, 4, 5, 6, 7, 8, and 11 for Math and Reading, and grades 4, 8 and 11 for Science who meet the criteria that have been established and disseminated by the Bureau of Special Education, Pennsylvania Department of Education. The decision about participation in the regular or alternate statewide assessment is made by the student’s IEP Team, and is based on the criteria found in Figure 1. If the answer was “Yes” to all of the questions below, it would be appropriate for the IEP team to consider assessing the student with the *PASA*. If the answer was “No” to any of these questions, the *PASA* would not be the appropriate statewide assessment for the student.

1. By September 1 of the school year in which this IEP will be operative, will the student be in grade 3, 4, 5, 6, 7, 8, or 11?	YES	NO
AND		
2. Does the student have significant cognitive disabilities?	YES	NO
AND		
3. Does the student require intensive instruction to learn?	YES	NO
AND		
4. Does the student require extensive adaptation and support in order to perform and/or participate meaningfully and productively in the everyday life activities of integrated school, home, community and work environments?	YES	NO
AND		
5. Does the student require substantial modifications of the general education curriculum?	YES	NO
AND		
6. Does the student’s participation in the general education curriculum differ substantially in form and/or substance from that of most other students (i.e., different objectives, materials, or activities)?	YES	NO

Figure 2. Questions Guiding Decisions about Participation in PASA

In 2014, enrollment of eligible students into the alternate assessment was conducted digitally. A packet was sent to Alternate Assessment Coordinators in every district, charter school, Cyber School, Approved Private School, and Intermediate Unit with instructions on how to enroll students online as well as the eligibility criteria chart, the *PASA* enrollment and testing calendar, and one blank old (pencil/paper) enrollment form as a reference for information that would be needed. Assessment coordinators were directed to pre-populated online records for students

who had taken the PASA in the previous year and were currently in grades 4-8; some students in grade 11 had also had pre-populated records but those students' records were incomplete and the coordinator had to enter some basic student information to have the student assigned to district; students in grade 3, the remaining students in grade 11, and all students new to the PASA in 2013-14 were to be added as new *PASA* participants.

Description of Examinees

In 2014, a total of 16,414 students in grades 3, 4, 5, 6, 7, 8, and 11 participated in *PASA Reading and Math* and a total of 6,472 students participated in *PASA Science*. Table 1 provides the participation counts by grade level and as a percent of total participation in statewide assessment at that grade level. Tables 2 and 3 provide additional demographic information on *PASA* participants. A total of 512 students who initially enrolled in the *PASA Math, Reading or Science* were not administered the assessment. Explanations for non-participation were as follows: Religious reasons (n=47), extended absence (n=77), deceased/medical emergency (n=54) and other (n=334).

Table 1. PASA Reading, Math and Science Participation in 2014: Counts by Grade and as Percent of Students Participating in Statewide Assessment

Grade	Math		Reading		Science	
	N	% Statewide	N	% Statewide	n	% Statewide
3	2316	1.8	2316	1.8	-	-
4	2338	1.8	2338	1.8	2315	1.8
5	2378	1.8	2378	1.8	-	-
6	2393	1.8	2393	1.8	-	-
7	2477	1.8	2477	1.8	-	-
8	2341	1.7	2341	1.7	2319	1.7
11	2171	1.6	2171	1.6	2108	1.6

Table 2 summarizes participation counts overall and by the demographic variables of gender, ethnicity, and primary disability for the *PASA Reading and Math*. Table 3 presents the corresponding information for the *PASA Science*.

Table 2. Demographic Data for Students Assessed by the 2014 PASA Reading and Math

	Overall		3		4		5		6		7		8		11	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Gender																
Female	5485	33.4	747	32.3	758	32.4	751	31.6	775	32.4	822	33.2	842	36.0	790	36.4
Male	10929	66.6	1569	67.7	1580	67.6	1627	68.4	1618	67.6	1655	66.8	1499	64.0	1381	63.6
Ethnicity																
American Indian or Alaskan Native	19	0.1	2	0.1	4	0.2	3	0.1	3	0.1	2	0.1	2	0.1	3	0.1
Asian or Pacific Islander	387	2.4	65	2.8	65	2.8	64	2.7	56	2.3	45	1.8	51	2.2	41	1.9
Black or African American not Hispanic	3566	21.7	532	23.0	489	20.9	512	21.5	539	22.5	571	23.1	487	20.8	436	20.1
Hispanic or Latino	1740	10.6	282	12.2	280	12.0	257	10.8	244	10.2	249	10.1	218	9.3	210	9.7
Multi-racial	498	3.0	104	4.5	87	3.7	68	2.9	77	3.2	62	2.5	60	2.6	40	1.8
White (not Hispanic)	10204	62.2	1331	57.5	1413	60.4	1474	62.0	1474	61.6	1548	62.5	1523	65.1	1441	66.4
Primary Disability																
Autism	4913	29.9	860	37.1	806	34.5	767	32.3	730	30.5	702	28.3	612	26.1	436	20.1
Deaf/Blindness	16	0.1	1	0.0	3	0.1	2	0.1	3	0.1	1	0.0	2	0.1	4	0.2
Deafness/Hearing Impairment	104	0.6	17	0.7	9	0.4	16	0.7	15	0.6	21	0.8	19	0.8	7	0.3
Emotional Disturbance	342	2.1	46	2.0	36	1.5	36	1.5	49	2.0	54	2.2	58	2.5	63	2.9
Intellectual Disability	6832	41.6	766	33.1	854	36.5	966	40.6	974	40.7	1096	44.2	1034	44.2	1142	52.6
Learning Disability	1505	9.2	193	8.3	219	9.4	208	8.7	217	9.1	230	9.3	245	10.5	193	8.9
Multiple Disabilities	1281	7.8	187	8.1	173	7.4	166	7.0	188	7.9	190	7.7	181	7.7	196	9.0
Other Health Impairment	955	5.8	170	7.3	163	7.0	147	6.2	149	6.2	128	5.2	122	5.2	76	3.5
Orthopedic Impairment	126	0.8	17	0.7	17	0.7	20	0.8	18	0.8	14	0.6	22	0.9	18	0.8
Speech/Language Impairment	109	0.7	24	1.0	28	1.2	17	0.7	16	0.7	11	0.4	9	0.4	4	0.2
Traumatic Brain Injury	79	0.5	6	0.3	8	0.3	9	0.4	20	0.8	11	0.4	12	0.5	13	0.6

Table 3. Demographic Data for Students Assessed by the 2014 PASA Science

	Overall		4		8		11	
	N	%	n	%	n	%	n	%
Gender								
Female	2350	34.8	751	32.4	837	36.1	762	36.1
Male	4392	65.2	1564	67.6	1482	63.9	1346	63.9
Ethnicity								
American Indian or Alaskan Native	9	0.1	4	0.2	2	0.1	3	0.1
Asian or Pacific Islander	154	2.3	65	2.8	51	2.2	38	1.8
Black or African American (not Hispanic)	1359	20.2	477	20.6	472	20.4	410	19.4
Hispanic or Latino	706	10.5	275	11.9	223	9.6	208	9.9
Multi-racial	184	2.7	87	3.8	59	2.5	38	1.8
White (not Hispanic)	4330	64.2	1407	60.8	1512	65.2	1411	66.9
Primary Disability								
Autism	1810	26.9	792	34.2	598	25.8	420	19.9
Deaf/Blindness	9	0.1	3	0.1	2	0.1	4	0.2
Deafness/Hearing Impairment	34	0.5	9	0.4	18	0.8	7	0.3
Emotional Disturbance	151	2.2	34	1.5	57	2.5	60	2.8
Intellectual Disability	2990	44.3	852	36.8	1031	44.4	1107	52.5
Learning Disability	651	9.7	215	9.3	245	10.6	191	9.1
Multiple Disabilities	541	8.0	171	7.4	178	7.7	192	9.1
Other Health Impairments	359	5.3	163	7.0	122	5.3	74	3.5
Orthopedic Impairment	58	0.9	18	0.8	22	0.9	18	0.9
Speech/Language Impairment	40	0.6	28	1.2	8	0.3	4	0.2
Traumatic Brain Injury	34	0.5	8	0.3	13	0.6	13	0.6
Visual Impairment including Blindness	65	1.0	22	1.0	25	1.1	18	0.9

Assignment of Students to Levels

As was described, the *PASA Reading, Math and Science* have three levels at each grade. Grade-span appropriate Skills Checklists were created in 2005 to be used to determine the appropriate level of *PASA* to be administered to each individual student. In 2014, the checklists were no longer used. Instead, for students in grades 4-8 who had previously taken the *PASA*, past performance was used to assign the student to a test level. Students who achieved a perfect score on the previous year's test were automatically assigned to one-level up on the grade-appropriate test. For all students in grades 3 and 11 and any other students new to the *PASA*, teachers were provided, online, a description of the performances expected, by grade, on the A, B, and C levels of the assessment. Based on their day-to-day knowledge of each student, the teacher/test administrator was responsible for enrolling the student into a level of the *PASA* deemed appropriate.

Level Changes

In the Administrator Manual, in the administration training sessions, on the web site, and in the packets of testing materials distributed, test administrators are reminded that, if they believed the pre-assigned level of the *PASA* was not appropriate (too high or too low) they could petition the Bureau of Special Education in PDE for permission to alter the assigned level. Reasons for the request of a level change had to be provided in the petition.

For the 2014 administration of the *PASA*, if a student's previous performance level (2013) was Proficient or Advanced, teachers could NOT request a level change *down* for the 2014 administration without substantial justification (for example, of a degenerating disability). In addition, students who received a perfect score on the 2013 administration of the *PASA* were automatically assigned a higher level of the assessment. The intent of this policy was to support high expectations for students. The number of requests for level changes for the 2014 administration is summarized in Table 4. A total of 462 level change submissions were approved, including 186 for math, 229 for reading, and 47 for science. Table 5 details the final assignment of students, by grade, to the A, B, and C levels of the *PASA*.

Table 4. Counts of Level Change Requests by Content Area and Grade Level for the 2014 PASA

Content	Grade														Total
	3		4		5		6		7		8		11		
	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	
Math	0	1	5	27	9	32	2	34	1	31	5	39	0	0	186
Reading	0	0	8	35	8	45	3	56	2	37	5	30	0	0	229
Science	-	-	1	23	-	-	-	-	-	-	1	22	0	0	47

Table 5 presents the counts of examinees at each grade level who took the PASA Reading, Math and Science overall, in each grade, and at each test level.

Table 5. Counts of Examinees taking the PASA Reading, Math and Science Overall and by Grade and Test Level

Grade	Reading				Math				Science			
	Total	A	B	C	Total	A	B	C	Total	A	B	C
Grade	16414	5733	6917	3764	16414	6142	6319	3953	6741	2799	2651	1291
3	2316	1292	777	247	2316	1295	755	266	-	-	-	-
4	2338	960	1029	349	2338	1085	849	404	2315	1212	853	250
5	2378	756	1066	556	2378	843	916	619	-	-	-	-
6	2393	699	1117	577	2393	762	1000	631	-	-	-	-
7	2477	693	1052	732	2477	737	970	770	-	-	-	-
8	2341	591	1032	718	2341	657	957	727	2319	745	1018	556
11	2171	742	844	585	2171	763	872	536	2108	842	781	485

Chapter 3: Test and Item Development

Development of the Alternate Academic Standards and Alternate Assessment Anchors and Eligible Content

Before developing the alternate assessment, the Pennsylvania Academic Standards in reading, mathematics and science (22 PA Code § 4.12.) were reinterpreted in ways that would make them more meaningful and relevant for students with significant disabilities. A summary of the process follows.

For the content areas of reading and mathematics, the essence of each standard was first identified. Then, in conjunction with teachers, more specific skills were identified. This process of identifying the essence of the standards and associated skills is reflected on the charts that appear as Appendix A.

These sets of skills were reviewed and discussed by subject matter experts and experts in low incidence disabilities, and comments were collected regarding the validity of the standards and skills. The Advisory Committee to the *PASA Reading and Math*, consisting of stakeholders such as Pennsylvania Department of Education employees, parents of students with disabilities, and technical consultants from the *PSSA*, also reviewed the re-interpreted standards. After incorporating their suggestions, comments were solicited from any interested parties through a posting on the Pennsylvania Department of Education/*PASA* website. All feedback received was reviewed and incorporated into the standards to the fullest extent possible. The *Pennsylvania Alternate Academic Content Standards for Reading and for Mathematics* were formally adopted by the Pennsylvania Board of Education in June, 2005, and are found in Appendix B.

In 2005, Assessment Anchor Content Standards (Assessment Anchors) were developed to clarify the structure and improve the articulation between instruction and the *PSSA*. During 2007-08, a set of comparable Alternate Assessment Anchors and were developed for the *PASA* to parallel the alignment context of the *PSSA* and to improve the articulation between instruction and the *PASA*. These *PASA* Alternate Assessment Anchors also serve to communicate the eligible content or range of knowledge and skills from which the *PASA* is designed each year. Since the Alternate Assessment Anchors and Eligible Content encompass the grade spans 3/4, 5/6, 7/8, and 11, the document informs the test design for all grade levels and levels of complexity within grade levels.

PASA Science was developed over a three-year period prior to its implementation in 2007-08. The development involved a series of focus groups, pilots and field tests. One of the initial products developed was the delineation of Alternate Anchors and Eligible Content developed directly from the regular Pennsylvania Science *PSSA* anchors and eligible content. Once eligible content was delineated, specific assessment items were developed which are used to assess students. The *PASA Science* Alternate Anchors and Eligible Content include content drawn from the four major reporting areas of the *PSSA* Science assessment: the nature of science, biological sciences, physical science and earth and space science. The *PASA Science* Alternate Anchors and Eligible Content were approved by the Pennsylvania State Board in November, 2008. The Alternate Assessment Anchors and Eligible Content for Science are provided in Appendix C.

The Alternate Assessment Anchors and Eligible Content for Reading, Mathematics, and Science are provided in Appendix C.

During the test design stage, developers reviewed available research literature pertaining to alternate assessments of science and other related assessment and curricular materials for assessing and teaching science-related skills to students with significant cognitive disabilities. Subsequently, a higher education science content expert (who also has classroom teaching experience teaching science to students with significant disabilities) was retained by the

project and several months were spent reviewing and reinterpreting the *PSSA* anchors and eligible content to draft alternate anchors and eligible content. Groups of special education teachers in the Pittsburgh and central Pennsylvania areas were then recruited to further review, develop and validate the alternate anchors and eligible content and to begin to develop ideas for tasks which might be used to assess the targeted skills.

The developers then secured the participation of two science content experts employed by Allegheny Intermediate Unit 3 (who also are teacher trainers in elementary and secondary science) to further refine the alternate anchors and eligible content and to develop tasks to be incorporated into the assessment.

Development of PASA Reading and Math, Historical Perspective

Prior to the 2006-07 spring administration of *PASA Reading and Math*, a study was completed to verify the adequacy of the conceptual framework underlying *PASA*, initially derived from the general skill areas identified in Appendix A. Specific skills were generated within the general skill areas by teachers, and were reviewed by subject matter experts, experts in the field of low incidence disabilities, and measurement experts. Specific skills ranged from items as simplistic as orienting toward materials, to reading extended blocks of text or solving word problems using addition, subtraction, multiplication, or division. Based on judgments of the cognitive complexity and age appropriateness of each skill, items were placed at specific grade levels and levels of difficulty (A, B, or C). After skills were placed, they were again reviewed by experts to determine if those within a grade were age-appropriate. Items were also examined to determine if the levels of difficulty within a grade differed appropriately and if skills within one level of difficulty (e.g., Level A at grades 3, 5, 8, and 11) changed across grades in a way that was consistent with the *theoretical* pattern of growth for students with severe cognitive disabilities represented in the model shown in Figure 3.

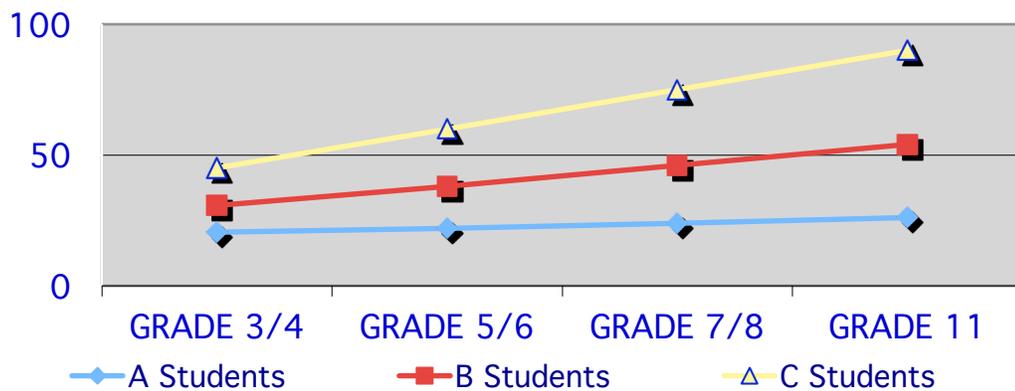


Figure 3. Theoretical Representation of Growth Trajectories for Students Assigned to Levels A, B, or C of the PASA

All items identified by experts were then evaluated in a pilot test conducted in the fall of 2004. In this study, between 31 and 64 students at each grade level from grades 3 through 8 and 11 were selected and given a set of reading and/or math items. Teachers were required to complete a Skills Checklist for each participant. In addition, teachers were asked to read 3 profiles that had been written to describe the typical expected performance of a student who

would take levels A, B, or C at a given grade level. Using a combination of patterns of endorsement on the Skills Checklist, the Skills Checklist total score, and the profile selected by a teacher to describe his/her student, students were assigned to receive a Level A, B, or C form in Reading and/or in Math. Teachers were then provided with one of several test booklets. They were instructed to administer the items as they typically would, providing the necessary accommodations and supports to bring out optimal student performance. The teachers were also asked to write down their comments about items. The performance of students was videotaped, and this, along with teacher comments on items, was submitted for scoring. Scorers were asked to rate each item from 0-5 using the usual rubric. They were also asked to select from a list the reason for the score that included a true reflection of the student's ability, a lucky guess, or an error in the administration of the item.

Performance of students was analyzed considering both the score (0-5) and the reason for the score on each item. Items were flagged if they appeared to be too easy or too difficult. In addition, items were examined within a test form to ensure that they were reasonably consistent in terms of difficulty. Items were further examined across forms to make sure that the characteristics identified as increasing the difficulty of items across grades within a level worked effectively.

Across grade levels, existing items and formats that exhibited appropriate characteristics were identified. Extensive reviews were conducted on items that did not perform as desired. Skills that appeared to be fundamentally flawed were eliminated from the conceptual framework. Skills that could potentially be altered and be successful were identified and revisions were made. These items were included as field test items in the subsequent spring administrations of the *PASA Reading and Math*.

Non-field test items were sampled across the domain of possible skills. Consideration was given to general categories (e.g., addition/subtraction, multiplication/division) in order to ensure that the breadth of the content area was covered. When more skills were represented in the Alternate Assessment Anchor Standards than could be assessed in a single 25-item test, skills were tested systematically so that over a two year period all eligible content has been rotated through the assessment.

From the start, individual test items were generated by professionals in special education and in reading and mathematics. Items were reviewed by special education, content, and technical experts in order to identify items that were likely to be biased for or against certain subgroups. Specifically, items were reviewed in an effort to identify those that appeared biased on the basis of gender and also on the basis of setting (rural, urban, or suburban). Items that seemed particularly problematic were revised or eliminated. Considering the nature of the cognitive disabilities for students taking *PASA Reading and Math*, care was taken to present information about subjects with which students were likely to have direct experience (e.g., items that involve activities in the home or in school). In addition, the range of disabilities of students taking *PASA Reading and Math* and the nature of the stimuli and responses were considered and a description of acceptable accommodations was developed. The description appears in the administrator's manual found in Appendix E.

After extensive review by individuals in special education, reading and mathematics, and measurement, items were tried out by undergraduate and graduate students working toward degrees in special education. This review process helped to identify instructions that were unclear, typographical errors, and materials that were unwieldy.

Bias, Fairness and Sensitivity Reviews, Historical Perspective

The PASA item review team considered each test item and the objects or graphics associated with each item. The team's primary responsibility was to evaluate every test item as to acceptability for students with vision impairments (size and color of objects; clarity of graphics), students who used sign language for communication (signing the instructions did not give away the answer; synonyms were available for vocabulary words to be signed), students whose work table would be no wider than a wheelchair tray (number and size of objects or pictures placed for student consideration), etc. The team also considered issues of familiarity with the content for students educated in separate schools or residential treatment centers, especially items in Level A of the test at any grade span. After item by item discussions, all consensus comments were compiled and actions taken were recorded for future reference.

Expert review by teachers specializing in the instruction of students with hearing impairments was conducted. Certain items that were judged as being flawed, (e.g., irrelevant to students with hearing impairments or flawed for students using ASL) were identified and were eliminated from the computation of these students' final scores.

The final step in item development and fairness review involved selection of objects for test kits as well as graphics, drawings, and photographs for the test booklets. For objects, availability was one consideration, but more importantly, the team considered familiarity, functionality, size, and color. Sample item arrays were reviewed until consensus was reached on the suitability of objects for each test item. The same review process was undertaken for all graphics, pictures, and photographs prepared for the test booklets.

Alignment of the PASA Reading, Math and Science to the Alternate Standards and Assessment Anchors and Eligible Content

During 2007-08, the alignment between the PASA test items on the 2007 test and the PA Academic Standards and Alternate Academic Standards was examined through an Enhanced Assessment Instruments grant awarded to Pennsylvania, Georgia, Washington State, and Wyoming, with research partners from Measured Progress and the Universities of Oregon, North Carolina at Charlotte, and Western Carolina. The eight criteria used in this alignment study were developed by a collaboration of content experts, special educators, and measurement experts at UNC Charlotte (see Browder, Wakeman, Flowers, Rickleman, Pugalee, & Karvonen, 2006). While some of the alignment criteria are similar to other alignment methods (e.g., Webb, Surveys of Enacted Curriculum, and Achieve), additional criteria (criteria 5-8) were designed especially as value indicators for students with significant cognitive disabilities. All assessment items from each of the 12 Reading and 12 Mathematics grade span assessments for 2006/07 (3&4, 5&6, 7&8, and 11 at each level A, B, and C) were examined (n=267 Reading items; n=283 Math items, n=550 total items). Only items that were included in the grade span assessment for 2006-07 were rated, not the entire bank of items. The Executive Summary of the alignment report was provided as an appendix for the 2009 PASA Technical Manual. The alignment study results suggested that Pennsylvania's extended standards and alternate assessments for students with significant cognitive disabilities are linked to academic content in the majority of instances. The study found some areas for improvement, including decreasing the number of items that were foundational, and providing a test blueprint to more explicitly show the link between PASA items and the alternate eligible content. As a result, tables showing the content

link between the items and alternate eligible content were added within the technical reports and as appendices. The August 2008 alignment report dealt only with Reading and Math, as *PASA Science* was not administered in 2007.

Two alignment studies, one internal and one external, have been conducted for the *PASA Science*. The results of the internal alignment study were provided as part of a Peer Review packet, and the results of the external alignment study were provided as an appendix to the 2012 Technical Manual. Generally, the alignment studies found that there was alignment associated with the majority of content on the *PASA Science*, across test forms and grade levels. The studies also found areas for improvement. Results from the internal alignment study suggested that an alternate assessment anchor was not linked to the regular education assessment anchors, and items related to this non-linked assessment anchor were phased out of the *PASA Science*. The external alignment study also found that the majority of items linked to the content standards, but did find that some content at certain grades, mainly 11th grade Level C, was not linked. As a result of this study, new items following new item writing procedures were added to the *PASA*.

Tables 6 through 8 below present summaries of the item distributions for the content areas of Reading, Math, and Science, respectively, by Grade Span, Level, and PSSA Reporting Category. These tables show a total of 20 items being administered on each form of the *PASA*. In addition to these 20 items that were scored, an additional five Level B items were embedded into each Level A form, and an additional five Level C items were embedded into each Level B form, for each content area assessment. Additional items were not embedded into the Level C forms. Blueprints for the 2012/2014 *PASA* reading math and science tests are provided in Appendix D.

Table 6. Distribution of Items on the 2012 and 2014 PASA Reading by Grade Span, Level and PSSA Reporting Category

Grade and Level	Comprehension and Reading Skills		Interpretation and Analysis of Fictional and Nonfictional Text	Total
	Reading	Comprehension		
3/4 A	5	15	-	20
3/4 B	7	13	-	20
3/4 C	8	12	-	20
5/6 A	5	15	-	20
5/6 B	9	11	-	20
5/6 C	0	20	-	20
7/8 A	5	15	-	20
7/8 B	7	13	-	20
7/8 C	0	20	-	20
11A	5	15	-	20
11B	5	15	-	20
11C	0	20	-	20

Table 7. Distribution of Items on the 2012 and 2014 PASA Math by Grade Span, Level and PSSA Reporting Category

Grade and Level	Numbers and Operations	Measurement	Geometry	Algebra	Data Analysis and Probability	Total
3/4 A	5	13	1	1	0	20
3/4 B	7	7	1	1	4	20
3/4 C	10	4	1	2	3	20
5/6 A	5	13	1	1	0	20
5/6 B	8	7	1	1	3	20
5/6 C	9	5	1	2	3	20
7/8 A	5	13	1	1	0	20
7/8 B	9	6	1	1	3	20
7/8 C	9	4	1	3	3	20
11A	5	13	1	1	0	20
11B	10	5	1	1	3	20
11C	9	4	1	3	3	20

Table 8. Distribution of Items on the 2012 and 2014 PASA Science by Grade, Level and PSSA Reporting Category

Grade and Level	Nature of Science	Biological Sciences	Physical Sciences	Earth and Space Sciences	Total
4A	5	5	4	6	20
4B	5	5	6	4	20
4C	4	5	6	5	20
8A	5	5	4	6	20
8B	4	5	5	6	20
8C	4	5	5	6	20
11A	6	5	3	6	20
11B	6	5	3	6	20
11C	4	7	4	5	20

Chapter 4: Additional Versions of the PASA

Although the *PASA* has been designed to be accessible to students with the most severe cognitive disabilities, some students benefit from additional adaptations to the test. A section in the Administrator Manual and in each test booklet included information about some of the ways the test can be adapted.

Accommodations

Accommodations are changes to the skills that are designed to reduce or remove the construct-irrelevant variance that arises as a function of disability. Accommodations for an item do not change what is being assessed and do not affect the difficulty level of the math, reading, or science assessed by the items. Given the heterogeneous nature of the population, it was necessary to allow items to be accommodated in a variety of ways. Common types of accommodations included using enlarged pictures or fonts; adaptive or prosthetic equipment; assistive technology devices; Braille or miniatures; sign language; and communication boards, booklets or other devices. Other accommodations involved changes in the setting, in timing, or in scheduling of the assessment. In addition to these accommodations, teachers were permitted to substitute entirely different materials without penalty, provided that the essential characteristics of the task were maintained, as judged by the scorer. This option is utilized rarely.

Colored versions of printed test materials were made available as an accommodation for students whose vision problems required testing materials with greater contrast. These could be downloaded as needed from the *PASA* website at <http://www.pasaassessment.org/administering/coloredmaterials.html>

Items that remained in the test but were not appropriate for students who use American Sign Language as their communication mode were flagged with the designation **D/HOH** on the top right-hand corner of the test item page in the test booklet. Instructions in the Test Administrator Manual and in the front of the Test Booklet directed test administrators to access alternate replacement items that could be downloaded from the *PASA* website at <http://www.pasaassessment.org/administering/dhoh.html>. Additionally, for students whose enrollment designated them as D/HOH, these replacement test item pages were sent in the test-booklet packet.

For hearing students who **cannot produce an oral response** when presented with **open-ended questions**, test items requiring open-ended responses were adapted appropriately to allow for selection responses. Test items for which an adapted version had been designed were designated with an **AAC** in the top right hand corner of the Test Booklet. Again, instructions in the Test Administrator Manual and in the front of the Test Booklet directed test administrators to access adapted items from the *PASA* website at <http://www.pasaassessment.org/administering/nonverbal.html>. Additionally, for students whose enrollment designated them as nonverbal, replacement test item pages were sent in the test-booklet packet.

It should be noted that while some teachers of students taking the Level A *PASA* indicated that the AAC version would be needed, these students received the regular Level A assessment, because the items on the Level A assessments do not require verbal responses.

An adapted version of the *PASA* was produced for students with no useable/functional vision, as they require the use of tactile and auditory presentations of the test. Most test items needed to

be adapted to make them suitable to these presentation modes. This **tactual version** of the PASA could be downloaded from the PASA website at <http://www.pasaassessment.org/administering/visualimpairments.html>. Additionally, for students whose enrollment designated them as having no usable vision, these replacement test item pages were sent in the test-booklet packet.

Table 9. Use of Accommodations for the 2014 PASA Reading, Math, and Science as Reported by the Teacher

Accommodated Version of PASA	Reading			Math			Science		
	Level			Level			Level		
	A	B	C	A	B	C	A	B	C
Grade 3									
Tactual Version	33	5	0	33	4	1	-	-	-
Augmentative Communication Version	0	9	3	0	10	1	-	-	-
Deaf & Hard of Hearing Version	0	7	0	0	3	0	-	-	-
Grade 4									
Tactual Version	15	1	0	17	0	0	18	0	0
Augmentative Communication Version	0	12	2	0	8	3	0	9	2
Deaf & Hard of Hearing Version	0	3	4	0	1	0	-	-	-
Grade 5									
Tactual Version	11	2	0	13	1	0	-	-	-
Augmentative Communication Version	0	17	2	0	15	2	-	-	-
Deaf & Hard of Hearing Version	2	7	0	0	0	0	-	-	-
Grade 6									
Tactual Version	16	0	1	17	0	1	-	-	-
Augmentative Communication Version	0	34	5	0	29	4	-	-	-
Deaf & Hard of Hearing Version	1	15	0	0	2	0	-	-	-
Grade 7									
Tactual Version	12	2	1	14	2	0	-	-	-
Augmentative Communication Version	0	26	4	0	25	4	-	-	-
Deaf & Hard of Hearing Version	2	20	0	0	2	1	-	-	-
Grade 8									
Tactual Version	12	0	1	16	1	0	23	1	3
Augmentative Communication Version	0	36	2	0	26	3	0	20	2
Deaf & Hard of Hearing Version	2	10	0	1	0	0	-	-	-
Grade 11									
Tactual Version	14	3	1	14	3	1	12	6	1
Augmentative Communication Version	0	9	3	0	10	3	0	12	3
Deaf & Hard of Hearing Version	6	0	0	6	0	0	-	-	-
Total									
Tactual Version	113	13	4	124	11	3	53	7	4
Augmentative Communication Version	0	143	21	0	123	20	0	41	7
Deaf & Hard of Hearing Version	13	62	4	7	8	1	-	-	-

Table 9 presents the counts of students who took one of the adapted versions of the 2014 PASA Reading, Math, and Science by grade and test level. Again, teachers whose students took the Level A PASA (only) may have indicated that the AAC version of the test was needed, but

because verbal responses are not required on the Level A *PASA*, these students received the regular test rather than an adapted version.

Modifications

Modifications to the task change what is being assessed and alter the difficulty level of the reading- math- or science-related items. Modifications resulted in the student's score being lowered because the targeted skills were not fully observed. Modifications might include changes in the materials that make the correct answer more obvious. Modifications might also have occurred if the teacher provided additional information that made the task easier to complete. Test administrators were encouraged to make modifications if the student was unable to complete a task as specified. These modifications allow for partial participation. If an item is modified during the assessment by the test administrator, the examinee's score on that item drops to a 3 at best. Appendix E contains the Administrator's Manual in which a complete list of Accommodations and Modifications appear.

Chapter 5: Test Administration Procedures

Materials Required for PASA Administration

Several sets of materials are required for administration of the PASA. These materials are described in the sections that follow.

Test Booklets

Test booklets contained all the printed materials required for administration of the PASA at each level and grade span. Teacher packets were prepared and included rosters of all the students enrolled to be assessed on the PASA by that teacher, a blank Supporting Documentation Form for each student on the teacher roster, a set of preprinted Student Labels for each student on the roster, directions to the teacher on PASA administration, and a plastic bag for each student in which to place completed media recordings. Separate packets were assembled for each teacher and put into plastic bags. Test booklets each teacher would need for administration were then added to their plastic bag. Plastic Bags were boxed for shipment to the appropriate Assessment Coordinator. Assessment coordinators in each APS, district, or IU were responsible for distributing packets to the appropriate teachers.

Test Kits

Physical objects needed for test administration were assembled into Test Kits and distributed directly to test administrators. Materials were placed into bins for each grade and level of the test. Bins were boxed and return instructions and a UPS return label were included. Kits were distributed in an approximately 2 students to 1 test kit ratio. Most districts had the kits go directly to the schools, but some opted for kits to be delivered to the Assessment Coordinator, instead. Most IUs asked that kits be sent to the AC who would, then, distribute the kits according to a schedule they created to accommodate all teachers within their jurisdiction. Other IU ACs, opted to have kits mailed directly to schools or to certain schools based on their location (i.e., they sort of divided the IU into regions and shared kits within the region instead of across the whole IU).

Preparation of Test Administrators

Training

The PASA Reading, Math and Science assessments are designed to be individually administered by a student's teacher or someone who knows the student well. The test administrator must be certified to teach in Pennsylvania. The test administrator can exert a large influence on a student's score by the way in which the materials are varied, the way in which questions are asked, and the extent to which accommodations and modifications are provided. In order to train test administrators, on-line training was available. The online training is for both new and veteran test administrators, and features brief video segments with valuable information for before, during, and after testing. Proficiency tests are also available for test administrators to assess their test administration knowledge. A total of 2,741 people registered on the test

administration training site. A total of 1,214 completed the training for veteran test administrators, which included a video segment of changes in the current year, and a total of 402 completed the training for new test administrators, which included seven more comprehensive video segments and proficiency tests.

In addition to the online training modules, three training webinars (each 2-hours in length) were scheduled in mid-January through the PA Training and Technical Assistance Network (PaTTAN). They were broadly advertised and available at no cost to participants. They covered 1. General administration information/update, 2. Providing accommodations for students who are non-verbal, 3. Providing accommodations for students who have no usable vision.

Administrator's Manual

In addition to training, an Administrator's Manual (see Appendix E) was available for download at the PASA website. The Manual briefly outlines the purpose of the assessment and some commonly asked questions and answers. In addition, it explains in detail how to effectively administer the assessment and how to submit the materials after testing. Information about general accommodations and modifications and those applicable for students with specific kinds of disabilities, a description of the scoring rubric, a description of the difficulty levels (A, B, and C), the performance standards, and a copy of the Supporting Documentation form. Administrator's Manuals are available in print form on request.

PASA Digital Pilot Project

In an effort to make annual testing with the PASA more efficient and cost effective, the PASA staff piloted a set of digital procedures for enrollment of students for the PASA, distribution of test booklets, and retrieving and scoring student test performances. Digital enrollment procedures were described in Chapter 2 of this report, and applied to all students enrolling for the 2014 PASA. Meanwhile, participants (districts, charter or cyber schools, approved private schools and Intermediate Units) were recruited to receive digital test booklets rather than printed ones and to upload student performance recordings directly to a secure website rather than sending the hardware of recordings to Pittsburgh in preparation for scoring. 199 service providers (districts, charter schools, IU/s, approved private schools) volunteered for the digital experiment, involving 5,444 students (nearly one-third of PASA takers).

Feedback from the participants in the pilot was mixed. Although there was universal agreement that on-line student enrollment was a welcomed change, easy to learn how to do and more efficient in terms of time and effort, participants were not enthusiastic about receiving test booklets online. Because of problem in scheduling test sessions and access to computers and videographers, test administrators downloaded the test booklets and printed them at the school site. This was both time consuming and expensive for the schools. It also put test security in jeopardy; hard-copy test booklets are coded when they are distributed by mail and are scanned back in as they are returned after testing to assure test security from year to year. But there was no mechanism in place for downloaded test booklets to be retrieved after the testing window closed. Further, since test materials (printed) and test kits still needed to be sent to test administrators, delivering the test booklets online was not as efficient as expected. Overall, consensus was that the 2014 test booklets should not be delivered online.

Pilot participants were much more enthusiastic about returning student performance recordings by uploading them to a secure website, rather than mailing them back to *PASA* Headquarters through UPS. However, uploading required merging multiple digital videos into a single file (recording devices create a new file each time the camera is stopped and re-started, so one complete student test performance may be captured in numerous files that have to be merged before uploading). This glitch made the uploading process too complex and time consuming for some test administrators. The problem will be solved in 2014 through programming at the receiving end that will create the merged file for the test administrator, zip the file into uploadable form and speed the uploading process.

Chapter 6: Processing and Scoring the PASA

Processing Completed Assessments

UPS return labels are provided for each box of test booklets and each test kit mailed to test administrators. Test administrators are instructed to repackage all materials for return to the PASA project offices. Test administrators send the KITS back from the schools, but they are required to return their test booklets, media, rosters, and supporting docs to their AC, who then packages everything up and returns it to PASA Headquarters. Boxed materials can be placed with standard outgoing school UPS pickup. If there are no school pickups, materials can be delivered to the nearest UPS drop-off location.

All packages sent from and to the PASA project are tracked by UPS Worldship. Once received, all returned packages are opened, inspected, and teacher rosters and media are separated from everything else. Returned media are logged into the PASA database, and reboxed for transport to the scoring conferences. Remaining materials are divided between Test Booklets and Kits. Test booklets are destroyed/recycled. Kit materials are separated, counted, and cleaned with help provided through a contract with a local sheltered workshop. Kit materials are then inventoried and stored until new Kits are made for the following year.

For the 2014 administration of the PASA, in an increased effort to heighten the test security, all PASA test books were barcoded before they were sent out. Books were then scanned in upon return to PASA headquarters in an effort to determine how many books that were sent out were returned. A total of 15,545 books were sent out and 14,515 were returned (93.4%).

Participants in the Digital Pilot program followed the same return procedures for test kits and materials as all other test administrators.

Scoring Rubric

Each of the reading, mathematics and science items was scored on a scale from 0 to 5. Scores were assigned based on the degree to which the item was performed independently and whether the correct response was ultimately generated. A score of 5 was assigned if an individual completed an item after receiving the initial instruction only. A score of 1 was assigned if the student passively participated as the teacher guided the student through the item. The scoring rubric used to score the 2014 PASA is found in Figure 4.

5	4	3	2	1	0
Performed target skill correctly and independently with beginning prompt only	Performed target skill correctly with beginning prompt and one additional prompt, redirection, or correction	Performed correctly but the beginning prompt was not heard <i>or</i> a modified (easier) version of the skill <i>or</i> at least one but not all of the steps of a multi-step skill <i>or</i> with the array reduced <i>or</i> with beginning prompt and two or more additional prompts	Performed incorrectly <i>or</i> Demonstrated a skill completely different from targeted skill <i>or</i> Actively engaged and the teacher ensured the correct response <i>or</i> Actively engaged but the response was not seen nor heard	Passively participated and administrator ensured correct response	Entire skill was not recorded (skipped, not able to be seen nor heard)
<i>Beginning prompt only</i> <i>Lucky guess</i> <i>Self-correction</i>	<i>Beginning prompt + one additional prompt</i> <i>Silent prompt</i> <i>Confirmation</i>	<i>Easier</i> <i>Reduced array</i> <i>Hints,</i> <i>more info,</i> <i>strategies</i> <i>Some steps done; not all</i> <i>Beginning prompt missing</i>	<i>Engaged but... Response wrong</i> <i>Different skill Responses ensured</i>	<i>Not engaged</i> <i>Administrator ensured response</i>	<i>Skill omitted</i> <i>Not recorded</i>

Figure 4. Rubric for Scoring the 2014 PASA

A more complete description of scores and decision rules is provided to each scorer for use during the scoring conferences; it is also published in the Administrator Manual so that test administrators will understand the implications of prompting, accommodations, and modifications as they administer the test. A copy of the expanded Scoring Rubric is provided in Appendix F.

Scoring Conferences

PASA performances are scored at “scoring conferences”, gatherings of volunteer teachers, school administrators, or University faculty who are trained to apply a scoring rubric to each test item on each assessment returned to PASA. Six “scoring conferences” took place in order to evaluate all of the videotapes and narrative notes that had been submitted. A total of 761 people participated as scorers in these conferences, with some serving at more than one conference. Three hundred eight participants were new and had never attended a scoring conference in a prior year. At each conference, scorers were assigned to 2-person teams. Across the set of 6 conferences, there were 775 two-person teams. Two hundred ten of the scorers had administered the PASA this year, and all 761 of the scorers were certified teachers.

Recruitment and Selection of Scorers

An email announcing the opening of the scoring conference training, test, and application was sent to all test administrators, ACs, and past scorers. All other interested parties could find a scoring conference application on the PASA website.

Selection was based on criteria such as: proficiency as measured by the *PASA* Proficiency Test, type of certification, past and current experience in administering the *PASA* Assessment, past scoring conference participation, foreign/sign language skills, need for housing accommodations during the scoring sessions, and availability.

Training Scorers

In 2014, in order to be selected as a scorer, applicants had to participate in an on-line training module and pass the *PASA* Scoring Proficiency Test. In the training module, the general rules of scoring, videotaped examples, and details pertaining to specific scores were presented, and applicants engaged in practice scoring activities. Upon completion of the training module, applicants completed the *PASA* Scoring Proficiency Test. If participants passed the proficiency test (minimum of 16/20 items scored correctly) in one or two attempts, they were invited to participate in one or more scoring conference. Applicants who did not pass the test were not invited to attend a conference. A total of 1288 individuals registered for the training site, and 993 attempted the proficiency test. A total of 843 people passed the proficiency test with a score of 80% or higher.

Reliability to Standard

At the start of the scoring conferences, a short review of the scoring procedures was conducted, and participants scored a reliability tape at the first conference they attended. The standards tape contained videotaped performance clips across grades, levels of difficulty, and score ranges. Clips were specifically selected so that they were challenging and offered a reasonable assessment of scorers' understanding of the scoring rules. Each team worked independently to rate the same videotaped performances. The ratings by each scoring team were then compared against the scores assigned by the *PASA* staff prior to the conferences. Participants who met the standard on the reliability tape moved on immediately to scoring. Participants who did not meet the standard met with *PASA* staff who provided feedback on scoring errors and additional training before scoring.

The percentage of items on which there was exact agreement appears in the following table.

Table 10. *Reliability to Standard - Average Percentage of Items with Exact Agreement*

Scoring Conference	Subject	% Exact Agreement
1	Reading	87.4
	Math	80.8
	Total	84.1
2	Reading	87.2
	Math	81.1
	Total	84.2
3	Reading	86.7
	Math	81.6
	Total	84.1
4	Reading	87.6
	Math	80.9
	Total	84.2
5	Reading	88.0
	Math	79.4
	Total	83.7
6	Science	74.7

Team-to-Team Reliability

Percentage of Tapes Scored Twice. In addition to reliability to the standard, a subset of tapes was selected randomly to establish team-to-team reliability at each conference and between conferences. Pairs of scoring teams were not prearranged. Instead, any 2 teams might form a reliability pair for a given tape. The counts and percentages of tapes double scored for reliability appear in Table 11.

Percent Agreement for Item Scores. The percentages of scores that matched exactly, that were within 1 point, or that were 2 points or more were computed. The percentage of exact agreement between scores averaged between 83.2% and 90.7% for all grades for reading, mathematics and science. The specific results appear on tables 12, 13, 14, 15.

Table 11. Team-to-Team Reliability Counts and Percentages

Grade	Read and Math		Science	
	# tapes scored for reliability	% of tapes scored for reliability	# tapes scored for reliability	% of tapes scored for reliability
3	329	14.2	-	-
4	341	14.6	262	11.3
5	342	14.4	-	-
6	334	14.0	-	-
7	302	12.2	-	-
8	326	13.9	258	11.1
11	322	14.8	256	12.1

Table 12. Grades 3 and 4: Percent Agreement for Item Scores

Percent agreement between scores	3 rd grade Reading	3 rd grade Math	4 th grade Reading	4 th grade Math	4 th grade Science
	Average	Average	Average	Average	Average
Exact match	90.6	88.9	90.7	89.1	88.9
Within 1 point	6.1	6.9	7.0	7.8	8.3
Differ by 2 or more points	3.3	4.1	2.3	3.1	2.8

Table 13. Grades 5 and 6: Percent Agreement for Item Scores

Percent agreement between scores	5 th grade Reading	5 th grade Math	6 th grade Reading	6 th grade Math
	Average	Average	Average	Average
Exact match	87.9	89.4	87.5	89.6
Within 1 point	8.0	7.6	8.0	7.5
Differ by 2 or more points	4.1	3.0	4.5	3.0

Table 14. Grades 7 and 8: Percent Agreement for Item Scores

Percent agreement between scores	7 th grade Reading	7 th grade Math	8 th grade Reading	8 th grade Math	8 th grade Science
	Average	Average	Average	Average	Average
Exact match	86.3	83.9	87.5	85.8	85.5
Within 1 point	8.9	11.6	7.8	10.1	9.4
Differ by 2 or more points	4.9	4.6	4.8	4.1	5.1

Table 15. Grade 11: Percent Agreement for Item Scores

Percent agreement between scores	11 th grade Reading	11 th grade Math	11 th grade Science
	Average	Average	Average
Exact match	87.7	87.6	83.2
Within 1 point	7.8	9.0	12.1
Differ by 2 or more points	4.5	3.4	4.7

Chapter 7: Score Reporting

Individual student-level scores from the *PASA Reading, Math and Science* are provided to Data Recognition Corporation, the contractor for the *PSSA*. These data are used in the calculation of School Performance Profiles. In addition, individual student data is summarized in a report that is sent, in duplicate, to schools for placement in the students' permanent records and distributed to parents. The report briefly describes the skills on which the student was tested, the performance levels earned, and an explanation of the meaning of the scores.

Individual score reports are generated and two copies of each student's report are sent to the student's school: one to be placed in the student's permanent record, the other to be sent home to the student's parents/guardian. An example of the score report for the 2014 administration is provided in Appendix G. The format of this report derived from results of a study conducted to directly examine issues related to the reporting of assessment scores to parents in Pennsylvania. The study examined meaningful ways of reporting alternate assessment results to parents. The study is described in the 'Pennsylvania Alternate System of Assessment Supplemental Report on Validity Studies' and a complete summary of the findings is provided in Appendix D of that supplemental report.

Chapter 8: Statistical Analyses of Item Data

Descriptive Statistics and Internal Consistency

Descriptive statistics and internal consistency of each level at each grade were computed. Results for reading, mathematics and science are provided in the following tables. Test administrators were asked to mark assessments for which they began to administer the test but stopped. Scorers were asked to verify that the assessment was stopped during scoring. Overall, 450 students in reading, 457 in math, and 143 in science stopped the test after beginning administration. Summary statistics are presented for those students who completed the assessment according to their test administrator. For all analyses in Appendices H, I, and J, the subset of examinees with incomplete assessments as marked by the teacher and verified by the scorer is excluded.

Total scores on the test were computed based on 20 items for the *PASA Reading, Math and Science*. Despite the fact that scores are unweighted by the level of difficulty, students tended to earn the lowest scores, on average, for the most simplistic tasks, Level A, and higher (or comparable) scores on average for the B and C level tasks in reading. Results in mathematics and science were similar. Cronbach's Alpha reliability coefficients were also computed using SPSS, and were at a high level across content areas and test forms.

The standard errors of measurement (SEM) for each test level at each grade level are also provided. The SEMs were computed using the formula: $SEM = SD * \sqrt{1 - \alpha}$ for the raw scores, where SD is the standard deviation of the raw scores on the test, and is the Cronbach's alpha reliability coefficient. Raw scores on the PASA are computed by summing the individual item scores across all items.

Item Correlations

The inter-item correlations were computed for each item in reading, math and science for each grade span and level. Correlations were also computed for each grade. Inter-item correlations tended to be higher for Level A than for Levels B and C across grades and content areas with few exceptions. Correlations also tended to be higher in grade 11 than in the lower grades for all levels of difficulty. The full set of item correlations for each grade span and test level appears in Appendix H.

Table 16. Descriptive Statistics, Cronbach's Alpha and SEM for the 2014 PASA Reading (20 Items) for All Students Completing the PASA

Grade/ Level	n	Mean	SD	Cronbach's α	SEM
3A	1292	82.3	23.64	0.976	3.66
3B	777	90.4	12.59	0.927	3.40
3C	247	84.2	14.75	0.918	4.22
4A	960	79.5	25.44	0.979	3.69
4B	1029	92.1	11.73	0.928	3.15
4C	349	89.3	12.16	0.911	3.63
5A	756	77.5	25.30	0.976	3.92
5B	1066	88.0	13.19	0.922	3.68
5C	556	83.0	16.19	0.934	4.16
6A	699	77.1	26.21	0.978	3.89
6B	1117	88.6	14.32	0.939	3.54
6C	577	86.3	14.25	0.921	4.01
7A	693	77.4	25.92	0.978	3.84
7B	1052	86.7	13.84	0.926	3.76
7C	732	84.3	13.52	0.914	3.96
8A	591	74.6	27.56	0.979	3.99
8B	1032	88.5	13.50	0.930	3.57
8C	718	86.3	12.86	0.913	3.79
11A	742	79.7	26.36	0.981	3.63
11B	844	89.2	14.56	0.942	3.51
11C	585	83.6	15.34	0.927	4.14



Table 17. Descriptive Statistics, Cronbach's Alpha and SEM for the 2014 PASA Math (20 Items) for All Students Completing the PASA

Grade/ Level	n	Mean	SD	Cronbach's Alpha	SEM
3A	1295	80.5	23.67	0.973	3.89
3B	755	89.1	13.07	0.923	3.63
3C	266	83.6	13.13	0.894	4.27
4A	1085	79.9	23.98	0.973	3.94
4B	849	91.0	11.40	0.911	3.40
4C	404	87.0	15.68	0.944	3.71
5A	843	78.3	24.38	0.972	4.08
5B	916	88.5	12.85	0.924	3.54
5C	619	83.8	16.61	0.940	4.07
6A	762	76.8	26.05	0.976	4.04
6B	1000	88.9	15.89	0.956	3.33
6C	631	87.2	13.51	0.919	3.85
7A	737	75.4	26.18	0.976	4.06
7B	970	81.7	16.23	0.937	4.07
7C	770	80.9	13.29	0.892	4.37
8A	657	74.3	27.35	0.978	4.06
8B	957	84.7	15.37	0.933	3.98
8C	727	82.1	14.35	0.910	4.31
11A	763	77.0	27.04	0.978	4.01
11B	872	83.8	15.31	0.924	4.22
11C	536	80.3	18.61	0.949	4.20



Table 18. Descriptive Statistics, Cronbach's Alpha and SEM for the 2014 PASA Science (20 Items) for All Students Completing the PASA

Grade/ Level	n	Mean	SD	Cronbach's alpha	SEM
4A	1212	81.7	22.74	0.971	3.87
4B	853	86.1	12.34	0.911	3.68
4C	250	81.8	10.85	0.848	4.23
8A	745	75.8	25.09	0.974	4.05
8B	1018	86.7	13.06	0.913	3.85
8C	556	83.1	13.58	0.901	4.27
11A	842	73.3	25.81	0.973	4.24
11B	781	75.5	13.38	0.891	4.42
11C	485	76.9	15.15	0.908	4.60

Item Performance

Item performance varied systematically as a function of level of difficulty, but remained relatively consistent across grades. The mean and standard deviation for each item for each grade span appear in Appendix I. Means and standard deviations for each item by grade were also computed.

Percentages of Items at Each Score Level

Appendix K shows the percentage of scores (0-5) assigned for each item for each grade and level of difficulty for all students attempting a given task. In reading, mathematics and science, across grades and levels, scores of 5 were the most prevalent, on average. Scores of 0 and 1 are not prevalent.

For field test items, item statistics are used as a means of detecting items that deserve close scrutiny, rather than being a mechanism for automatic rejection or retention of items. Towards this end, a set of criteria was used as a screening tool to identify items that need a closer review by the test development committee. For an item to be flagged, the criteria included any of the following:

- Correlation (Pearson's) of the item score to the total test score of less than .40
- Percent of students scoring 5 greater than 80% or less than 20%
- Percent of students scoring 2 or 3 greater than percent scoring 4 or 5

The tables in Appendix K were also used to evaluate whether teachers (or other individuals) were adequately trained to administer the PASA. Scores of 0 indicate that the person

administering the test did not administer the test item. These scores of 0 inevitably lower a student's scores. Additional training to test administrators emphasizing that the full set of items should be attempted in most cases, should reduce instances of 0 scores and improve students' scores.

Differential Item Performance

During the 2006-07 year, differential item performance was studied in students whose visual impairment does not permit using vision as the input mode for the assessment. Performance on items was compared for students with significant visual impairments and those without visual impairments using a matched pairs Wilcoxon test. Items flagged as functioning differently for the groups were further examined by experts in vision to determine the source for the difference in item functioning. A qualitative review of items revealed additional areas of bias: In some cases, students with visual impairments lacked familiarity with the content (e.g., things that refer to color), or items could not be altered to make them accessible to students with visual impairments (e.g., a complex picture of a playground). A replacement test was created and placed on the PASA website for use with students who do not have useable vision. For the 2014 test administration, if teachers indicated on the student enrollment form (or in the previous year's testing) that the target student had no usable vision, a hard-copy alternate test booklet was sent directly to the test administrator as well as an alternate Kit of manipulables to facilitate the testing.

In 2011 and 2012, a study was conducted to investigate how adaptations were being provided to students who are non-verbal on PASA test items that required speech responses. For these students the PASA test developers designed an adapted, multiple choice of the PASA; however, it was speculated that some test administrators were using their own adaptations.

Performances of students who are non-verbal were examined to determine whether students were being assessed using the PASA-provided Adapted Version or test-administrator-made adaptations and whether test administrator-made adaptations were appropriate accommodations or modifications that changed the nature of the skill being assessed. Additional information regarding the presentation format, response mode, and the use of assistive technology were also collected. The student performances were also scored and coded to examine the impact of adaptations on scores. Comparisons between the scores of students who are non-verbal and students who have functional speech were made using the Mann-Whitney *U* test. In addition, students who are non-verbal were matched to students with functional speech on the basis of the non-oral response test items, and their scores were compared as were the scores of students who were assessed using the PASA-provided Adapted Version and test administrator-made adaptations.

The results indicated that both PASA-provided Adapted Version and test administrator-made adaptations are being used. However, test administrator-made adaptations often led to modifications. The students who are non-verbal were outperformed by those with functional speech, and those who were assessed using the PASA-provided Adapted Version received higher scores than those assessed using test administrator-made adaptations. The findings point to a need for greater professional development in accommodation methods for students who are non-verbal in order to more validly assess this population.

Chapter 9: Setting Standards: Performance Level Descriptions and Cut Scores

Standard Settings for the PASA Reading, Math and Science

Three previous standard settings for the *PASA Reading and Math* have occurred since the inception of the assessment. The first took place after the first administration of the *PASA* and the second took place using data from the Spring 2006 administration. Due to the time since the previous standard setting, changes to the scoring rubric, and recent literature related to including content into Performance Level Descriptors (PLDs), new standard setting workshops for the *PASA Reading and Math* were conducted in 2009-2010. A detailed summary of the standard setting workshops was provided in the 2010 *PASA* technical manual. The standard setting workshops were held over two weekends, and the Performance Level Descriptors (PLDs) were revised during the first weekend of the standard setting workshop, and cut scores were established during the second weekend.

The first administration of the *PASA Science* took place in 2008, and the standard setting for the *PASA Science* assessment took place in early Fall of the 2008-09 school year. As a result of this process, cut scores were recommended to separate the reported performance levels (Advanced-Level C only, Proficient, Novice and Emerging) for the three levels of tests (A, B, and C) at each grade level (4, 8, and 11). The standard setting for the *PASA Science* took place in 2008, and was summarized in a standard setting report and in the 2009 Technical Manual. The standard setting workshop was held over two weekends, and the Performance Level Descriptors (PLDs) were established during the first weekend of the standard setting workshop, and cut scores were established during the second weekend.

Due to the restructuring of the *PASA* in the 2013 administration, the cut scores had to be revised. The cut scores for the *PASA Reading and Math* had been based on 25 items. All forms of the *PASA* for the 2014 administration were based on 20 items. Upon consultation with the TAC and PDE, new standard setting workshops were not recommended. Instead, mathematical adjustments to the existing cut scores, based on the items that were included in the 2014 administration of the *PASA*, were recommended.

As was stated, the final cut scores from the standard setting workshops were found by summing across items to obtain a single panelists' estimated cut scores, and then averaging across panelists to get each panel's estimated cut scores. This same process was followed for the subset of 20 items that were administered in 2014. When possible, the final item ratings established by the standard setting panelists for the exact items that were on the 2014 administration of the *PASA* were used to establish the revised cut scores. When exact items from the standard setting did not appear on the 2014 *PASA*, the estimated cut scores from items that had similar characteristics in terms of content, item difficulty, and item format to those from the standard setting were used. One additional adjustment was made to the 3/4 B Math form, where the cut score for proficient was changed from 97 to 93 in order to make the number of student at each of the performance levels more in line with each other. The cut scores for the *PASA Reading, Math and Science* for the 2014 administration are provided in Table 19.

Table 19. Score Ranges for the 2014 PASA Reading, Math and Science

	Emerging	Novice	Proficient	Advanced
3/4 Reading				
A	0 - 70	71 - 87	88 - 100	-
B	0 - 74	75 - 89	90 - 100	-
C	0 - 71	72 - 84	85 - 93	94 - 100
3/4 Math				
A	0 - 75	76 - 88	89 - 100	-
B	0 - 84	85 - 92	93 - 100	-
C	0 - 77	78 - 86	87 - 94	95 - 100
4 Science				
A	0 - 71	72 - 88	89 - 100	-
B	0 - 70	71 - 87	88 - 100	-
C	0 - 72	73 - 81	82 - 91	92 - 100
5/6 Reading				
A	0 - 71	72 - 87	88 - 100	-
B	0 - 72	73 - 89	90 - 100	-
C	0 - 70	71 - 84	85 - 92	93 - 100
5/6 Math				
A	0 - 77	78 - 89	90 - 100	-
B	0 - 75	76 - 87	88 - 100	-
C	0 - 73	74 - 82	83 - 91	92 - 100
7/8 Reading				
A	0 - 73	74 - 86	87 - 100	-
B	0 - 71	72 - 86	87 - 100	-
C	0 - 70	71 - 84	85 - 93	94 - 100
7/8 Math				
A	0 - 72	73 - 86	87 - 100	-
B	0 - 77	78 - 90	91 - 100	-
C	0 - 74	75 - 85	86 - 92	93 - 100
8 Science				
A	0 - 65	66 - 84	85 - 100	-
B	0 - 68	69 - 86	87 - 100	-
C	0 - 69	70 - 83	84 - 93	94 - 100
11 Reading				
A	0 - 68	69 - 85	86 - 100	-
B	0 - 71	72 - 89	90 - 100	-
C	0 - 65	66 - 82	83 - 92	93 - 100
11 Math				
A	0 - 73	74 - 87	88 - 100	-
B	0 - 72	73 - 87	88 - 100	-
C	0 - 69	70 - 83	84 - 93	94 - 100
11 Science				
A	0 - 80	81 - 90	91 - 100	-
B	0 - 75	76 - 87	88 - 100	-
C	0 - 73	74 - 84	85 - 91	92 - 100

Tables 20 to 22 show the percentage of students falling at each performance level for the 2014 PASA in the content areas of Reading, Math and Science, respectively.

Table 20. Percentage of PASA Students at Each Performance Level for the 2014 PASA Reading

Level	Emerging	Novice	Proficient	Advanced
3A	23.2	18.5	58.3	-
3B	4.9	24.7	70.4	-
3C	15.4	21.5	38.1	25.1
3 ALL	16.2	20.9	60.2	2.7
4				
4A	25.4	22.5	52.1	-
4B	4.0	16.7	79.3	-
4C	6.9	14.3	34.4	44.4
4 ALL	13.2	18.7	61.4	6.6
5				
5A	27.1	26.9	46.0	-
5B	7.8	33.8	58.4	-
5C	12.8	27.5	35.3	24.5
5 ALL	15.1	30.1	49.1	5.7
6				
6A	25.3	28.9	45.8	-
6B	7.5	29.1	63.4	-
6C	8.0	20.5	35.2	36.4
6 ALL	12.8	27.0	51.4	8.8
7				
7A	31.3	19.0	49.6	-
7B	9.5	26.7	63.8	-
7C	11.2	25.3	42.9	20.6
7 ALL	16.1	24.1	53.7	6.1
8				
8A	33.8	21.0	45.2	-
8B	6.2	22.4	71.4	-
8C	7.9	23.3	39.8	29.0
8 ALL	13.7	22.3	55.1	8.9
11				
11A	22.8	18.7	58.5	-
11B	7.7	22.7	69.5	-
11C	6.2	26.3	43.8	23.8
11 ALL	12.4	22.3	58.8	6.4

Table 21. *Percentage of PASA Students at Each Performance Level for the 2014 PASA Math*

Level	Emerging	Novice	Proficient	Advanced
3A	27.9	20.2	52.0	-
3B	19.3	33.6	47.0	-
3C	22.6	27.1	38.0	12.4
3 ALL	24.5	25.3	48.7	1.4
4				
4A	27.4	23.0	49.6	-
4B	16.1	25.4	58.4	-
4C	11.6	18.1	43.8	26.5
4 ALL	20.6	23.1	51.8	4.6
5				
5A	33.5	23.1	43.4	-
5B	10.4	24.5	65.2	-
5C	12.0	17.8	38.8	31.5
5 ALL	19.0	22.2	50.6	8.2
6				
6A	33.2	25.5	41.3	-
6B	10.0	17.2	72.8	-
6C	7.6	12.2	36.1	44.1
6 ALL	16.8	18.5	53.1	11.6
7				
7A	29.2	26.5	44.4	-
7B	29.6	37.0	33.4	-
7C	20.9	38.4	27.5	13.1
7 ALL	26.8	34.3	34.8	4.1
8				
8A	32.1	23.7	44.1	-
8B	20.9	35.0	44.1	-
8C	17.5	35.6	31.4	15.5
8 ALL	23.0	32.0	40.2	4.8
11				
11A	31.3	18.3	50.3	-
11B	14.4	34.4	51.1	-
11C	16.4	30.0	36.6	17.0
11 ALL	20.9	27.7	47.3	4.2

Table 22. *Percentage of PASA Students at Each Performance Level for the 2014 PASA Science*

Level	Emerging	Novice	Proficient	Advanced
4A	20.2	26.3	53.5	-
4B	7.2	36.7	56.2	-
4C	13.6	26.0	48.0	12.4
4 ALL	14.7	30.1	53.9	1.3
8A	25.4	24.7	49.9	-
8B	6.9	29.9	63.3	-
8C	11.7	27.2	45.7	15.5
8 ALL	14.0	27.6	54.8	3.7
11A	46.4	24.3	29.2	-
11B	45.7	39.1	15.2	-
11C	30.7	37.1	23.5	8.7
11 ALL	42.6	32.7	22.7	2.0

Chapter 10: Validity Argument for the *PASA*

Validity Studies for the Pennsylvania Alternate System of Assessment (*PASA*)

In order to address the validity argument that has been established for the *PASA*, a supplemental report was developed to accompany the 2013 technical manual. The validity study supplemental report provides summaries of the validity studies that have been conducted for the *PASA Reading and Math* during the 2009-10, 2010-11, 2011-12 and 2012-13 school years as well as all of the validity studies that have been conducted related to the *PASA Science*, which was administered initially during the 2007-08 school year.

The validity studies present evidence that informs the validity argument being established for the *PASA*. The evidence-based argument links to the intended purposes of the test, which are:

- 1) to measure the degree to which students attain the knowledge and skills described in the statewide alternate eligible content, which is linked to the state academic content standards;
- 2) to provide information regarding district and school accountability; and
- 3) to improve curricular and instructional practice for students with significant cognitive disabilities and increase student learning.

The validity studies that have been conducted for the *PASA* are highlighted in the following tables. Brief summaries of several of these studies are presented in the 2013 Supplemental Validity Report (available upon request) and detailed summaries are presented in the Appendices to that report. Additional studies have been summarized in previous technical reports, such as those related to standard setting and PLDs.

Table 23. Sources of Validity Evidence for the PASA Reading, Math, and Science

Description	Evidence	Validity Concern	Findings	Uses/Changes
Pilot Proficiency Study	Item frequencies of proficient A students taking B items and proficient B students taking C items	Construct	There were some items from higher level test that students could do. Students performed less well on items from higher test level than on items at their assigned test level	Study provided preliminary information about student performance on higher level items, but only proficient students were assessed. Prompted a large scale study as a follow up.
Proficiency Study 2011-12	Item frequencies of proficient A students taking B items and proficient B students taking C items	Construct	There were several items from each higher level test form that students could do, including some items for which a large percentage of students (e.g., above 60%) assigned to a lower test level could earn a score of 5.	Results will be used in conjunction with results from the 2012-13 proficiency study to examine any needed restructuring of the PASA. Additional item level analyses are currently being explored to further examine learning progressions.
Proficiency Study 2012-13	Item frequencies of students at each grade level on items within the same content strand across grades	Construct	Results from the Level B and Level C administrations clearly show an increased proficiency on all test items across the grade spans. The results of Level A testing demonstrate NO such trends, suggesting that students who re assigned Level A are a unique subgroup whose show virtually no growth in achievement over the span of school years.	Results will be used in conjunction with results from the 2011-12 proficiency study to restructure the PASA, assigning test items to grades and levels based more on student performance data than on 'educated guesses' about student competence and achievement across grades and levels.
LCI Study	LCI data from teachers who administered PASA in 2010-11. Utilized subset of LCI responses that could be linked by student ID to PASA scores.	Consequential Construct	PASA students have similar learning characteristics to students taking AA-AAS across states. Some differences in learning characteristics of students taking PASA levels related to communication.	Methods for identifying students for the PASA will remain. Results suggest some differences in A, B and C level students. Information will be utilized with evidence from proficiency studies to inform any needed redesign of the PASA.

Description	Evidence	Validity Concern	Findings	Uses/Changes
Parent Score Report Study	Parent focus groups regarding score reports	Consequential	Parents would like to see specific information about tested content	Score report has been modified regularly based on feedback from TAC and earlier focus groups. Results from this study will inform future modifications.
Fidelity of Test Administration Study	Rescoring of 750 student assessments for fidelity of administration	General: Score interpretation and use	No systemic errors in administration were found.	Training of test administrators will be continued. No major changes to the process beyond the continuous improvement model that is implemented were deemed necessary.
Impact of Change to Scoring Rubric Study	Rescoring of 230 2008 student assessments using the revised scoring rubric from 2009	General: Score interpretation and use	Change in scoring rubric resulted in differences that would have caused some students to change performance level classifications. Many classifications remained.	The revised scoring rubric was maintained.
Score of 3 and 4 Study	Rescoring of items on that were assigned scores of 3 and 4 on a subset of student assessments	General: Score interpretation and use	The most common classifications for scores of 4 was because the teacher repeated directions, and for scores of 3 was because the teacher made the task easier.	The scoring rubric remained the same. Training for administrators and scorers is continuously updated and was updated to reflect common errors.

Table 24. *Additional Sources of Validity Evidence for PASA Reading*

Description	Evidence	Validity Concern	Findings	Uses/Changes
Reading Screening Study	Supplemental reading test administered to students taking the Level B and C PASA to estimate reading level	Criterion	A wide range of reading ability was observed on the measures of word and passage reading. Children who take the AA-AAS are performing substantially below grade level in word and passage reading.	Results from this study were considered and will inform the amount and degree of difficulty of reading on the PASA.

Table 25. *Additional Sources of Validity Evidence for PASA Science*

Description	Evidence	Validity Concern	Findings	Uses/Changes
Internal Alignment Study	Panelist ratings	Content	Majority of assessment content linked to content standards;	Assessment items related to an alternate assessment anchor that was not found to be linked to the regular education assessment anchors were phased out of the PASA Science.
External Alignment Study	Panelist ratings	Content	Majority of assessment content linked to content standards. Some content at certain grade levels not linked.	Revision to items and item writing procedures

Table 26. Sources of Evidence Related to Technical Quality of the Assessment Measuring Student Performance

Description	Evidence	Validity Concern	Findings	Uses/Changes
Technical Quality	PLD development	Construct	Panelists understood and had confidence in the process of PLD development and independent observations supported the procedural fidelity of the process	Used to set cut scores
	Standard setting	Construct	Panelists understood and had confidence in their participation in the standard setting process, across grade and test levels	Periodic recalibration of cut scores to assure accurate and reliable differentiation of groups of students into performance categories
	PLD analysis	Construct	Preliminary evaluation of definition and placement of PLDs within performance categories—overall, students’ performance on items matched that predicted by PLDs; Results continue to be tracked to inform whether item level data patterns should impact changes in PLDs	Continuous analysis that informs item development and will inform future standard settings and potentially impact PLDs
	Reliability of Scoring		Overall reliability of scoring from team to team and from team to standard consistently over 85% agreement	Assessment of scoring team performance and performance of individual test items

The tables presented summarize the main aspects of the validity argument for the PASA and show how the information has and will continue to be utilized. Initial findings have impacted subsequent steps of the validation process. For instance, alignment studies suggested that some changes were needed to the science content assessed at one grade level, which expanded the item development process for the assessment program. Development of PLDs and the subsequent and longitudinal analysis and comparison of actual test data to the underlying PLD framework continue to inform the content progressions that have been established for the assessment. Additionally, the more expansive studies proficiency studies, in which students are administered test items from adjacent higher test levels (B or C) that represent more cognitive demand, or students at all grade levels are administered the entire set of test items to examine the appropriate placement of skills by grade continue to inform the internal structure of the assessment and will impact the re-design of *PASA* for the 2015 test administration.

Aspects related to the administration, scoring and score reporting, such as on-line trainings, proficiency tests, and focus groups of parents continue to improve the administration and scoring aspects of the assessment program. As new technologies have been made available for computer based training, the assessment program has utilized these technologies whenever possible.

With respect to consequential validity, a number of sequential studies were planned and carried out, including a survey research study, artifact study, planned focus group study for science, which resulted in the establishment of a Leadership Institute. This sequence of studies provided several pieces of information. First, the survey and artifact studies provided information about the impact of the assessment program on and the current state of classroom instruction and assessment practice. Follow up focus group studies suggested the need for guidance and information sharing regarding instruction and assessment of students with significant cognitive disabilities, which resulted in the Leadership Institute and corresponding conference, which allowed for the dissemination of content and instructional ideas for teaching sequences of lessons to students with significant cognitive disabilities.

Evidence related to various aspects of the validity argument continue to be planned, collected, and utilized to improve the assessment system.

Chapter 11: Future Activities

On-Line Submission and Scoring of Student Assessments

For the 2013-14 administration of the *PASA*, *PASA* continued to encourage and evaluate the feasibility of online submission of student assessments. For the coming year, it is expected that several more service providers will attempt to submit student recordings on line, rather than through the mail. Programming efforts are being invested in making the uploading process more efficient and user-friendly. It is anticipated that about half of all student performances recorded for the *PASA* will be submitted on line in 2014-15.

On-Line Training of Scorers

On-line training modules for scorers and proficiency tests were developed and utilized for the 2013 administration and are found at <http://www.pasatest.com>. These modules will be updated and will continue to be used to train and select scorers for participation in future scoring conferences. For the 2014 test administration, only scorers who passed the proficiency test were asked to participate, and this criterion is also planned for future administrations.

Scoring Conferences

In the works is a plan to experiment in 2015 with 1-person scoring rather than scoring in teams of two. Additionally, changes are being made to simplify the scoring rubric.

On-Line Training of Test Administrators

On-line training modules for administering the *PASA* are updated yearly and can be found at <http://www.pasatest.com>. These modules will continue to be used to train and select scorers for participation in future scoring conferences. Bureau of Special Education/ PA Department of Education will advertise widely that test administrators **MUST** review the training modules before giving the 2015 *PASA test*.

Form and Item Revision

In March 2014, the PA legislature adopted revised and updated PA Core Standards that will guide instruction and assessments in reading and mathematics in the foreseeable future. The adoption outlines new core content to be assessed on the *PASA* beginning in 2014-15. A partial revision of *PASA Reading and Math* will be accomplished in time for the 2015 assessment; a complete revision is expected to be ready for the 2016 administration. Test revision will be influenced not only by the changes in content associated with newly adopted Alternate Eligible Content, but also by the data collected in recent validity studies of the *PASA* including 1) the study that examined the performance of students who have been assigned to take the Level A *PASA* on items from the Level B *PASA*, as well as the performance of students assigned to the Level B *PASA* on items from the Level C *PASA*; 2) the study that examined the performance of students on items that represent across grade level content progressions found on the *PASA*. In addition, 3) the study that considered the characteristics of students taking the *PASA*,

overall and at each level (A, B and C) measured by the Learning Characteristics Inventory (LCI) has been conducted. Together, results from these studies and the specifications of the newly adopted alternate assessment eligible content will be used to improve the design and placement of existing items on the *PASA*.

New Standard Setting and Alignment Studies

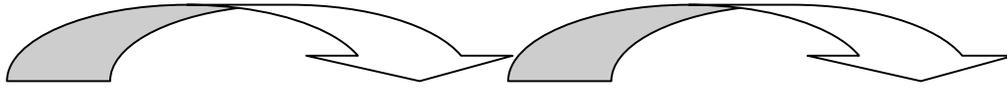
Standard setting for the partially revised 2015 *PASA* is scheduled for mid-May, 2015 to meet the Federal and State data reporting requirements as negotiated in the waiver agreements. Alignment studies are also planned for summer 2015.

APPENDICES

- Appendix A: General Skill Areas Identified for Math and Reading Used in Preliminary Item Development**
- Appendix B: Pennsylvania Alternate Academic Content Standards for Reading and Mathematics**
- Appendix C: Pennsylvania Alternate Anchors and Eligible Content for Reading, Mathematics and Science**
- Appendix D: Test Blueprints for the *PASA Reading, Math and Science***
- Appendix E: *PASA Administrator's Manual***
- Appendix F: Scoring Rubric for *PASA Reading, Math, and Science***
- Appendix G: Example of an Individual Student Score Report**
- Appendix H: Item to Item Correlations**
- Appendix I: Item Means and Standard Deviations**
- Appendix J: Item Frequency Distributions**

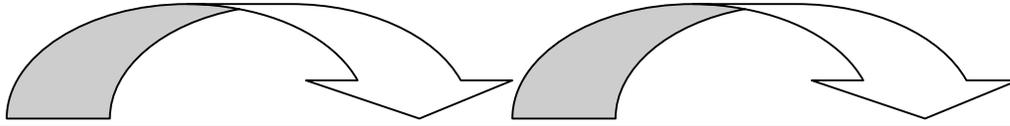
APPENDIX A
PRELIMINARY STAGES OF PASA DEVELOPMENT
CHAPTER 4 STANDARDS TO ESSENCES TO SKILLS

**AUTHENTIC AND RELEVANT APPLICATIONS OF PENNSYLVANIA STANDARDS IN
READING FOR CURRICULUM, INSTRUCTION, AND ASSESSMENT OF STUDENTS WITH
SEVERE DISABILITIES**



Pennsylvania Academic Standards		Essence of the Standards for Students with Severe Disabilities	Skills Embedded in Authentic and Relevant Performance Tasks
Reading	<p>1.1 Learning to read independently</p> <p>1.2 Reading critically in all content areas</p> <p>1.3 Reading, analyzing, and interpreting literature</p> <p>1.8 Research</p>	<p>Understands and responds to written, pictorial, or symbolic information</p> <p>Locates and uses 'literacy' information solve problems</p>	<ul style="list-style-type: none"> • Attends • Matches identical items • Selects item named • Reads • Locates identical items • Locates item named • Selects similar items by function • Selects related items • Defines words • Categorizes or sorts • Selects by function • Follows written instructions • Locates item described • Demonstrates or describes by function/meaning • Answers who, what, where, when, why, and how questions • Completes cloze passages • Sequences • Retells • Draws conclusions by integrating information

**AUTHENTIC AND RELEVANT APPLICATIONS OF PENNSYLVANIA STANDARDS IN
MATHEMATICS FOR CURRICULUM, INSTRUCTION, AND ASSESSMENT OF STUDENTS WITH
SEVERE DISABILITIES**



	Pennsylvania Academic Standards	Essence of the Standards for Students with Severe Disabilities	Skills Embedded in Authentic and Relevant Performance Tasks
Mathematics	2.1 Numbers, number systems, and number relationships 2.2 Computation and estimation 2.3 Measurement and estimation 2.6 Statistics and data analysis 2.7 Probability and predictions 2.8 Algebra and functions 2.9 Geometry	Understands quantity, uses numbers, and performs simple calculations Measures and estimates measurements	<ul style="list-style-type: none"> • Attends • Adds 2 or 3 quantities, prices • Subtracts 2 quantities, prices • Multiplies/Divides • Counts items by 1s and skip counts • Matches quantity to numeral/number word • Selects approximate numbers/quantities • Matches identical numbers/quantities • Selects numeral named • Reads number • Identifies value of dollars or coins • Reads prices • Identifies money - objects or value • Orders numbers/quantities • Identifies fractions • Evaluates probabilities • Determines mean and mode • Uses graphs • Uses tables • Evaluates length • Evaluates area • Evaluates volume • Evaluates weight • Understands time (digital and analog clock) • Sorts/files

APPENDIX B

***ALTERNATE CONTENT STANDARDS IN READING AND
MATHEMATICS***

Approved by PA State Board, June 2005

Alternate Academic Content Standards for Reading

For Students with the Most Severe Cognitive Disabilities



Pennsylvania Department of Education
Revised November 2006

I. TABLE OF CONTENTS

Introduction..... II.

THE ACADEMIC STANDARDS

Learning to Read Independently..... 1.1.

- Word Recognition Skills*
- Vocabulary Development*
- Comprehension and Interpretation*
- Fluency*

.

Alternate Academic Standards for Reading

II. INTRODUCTION

This document includes the Reading Standard:

1.1. Learning to Read Independently

...re-interpreted for students with the most significant cognitive disabilities.

The Alternate Reading Standards describe what students with the most significant cognitive disabilities should know and be able to do in literacy-related areas at four grade spans (third/fourth, fifth/sixth, seventh/eighth and eleventh). **The standards for each grade span were derived from the general education content standards for the equivalent grade that appear in the Chapter 4 Academic Standards for Reading, Writing, Listening, and Speaking as approved by the Pennsylvania Board of Education for all students, at the same grade levels as originally listed (the reference number to the original Chapter 4 Standard is provided in parentheses). The third/fourth grade alternate standards link to the third grade Chapter 4 standards; the eleventh grade alternate standards link to the eleventh grade Chapter 4 standards; and so on.** The alternate grade-level content standards provide the targets for instruction and student learning essential for success in the environments in and out of school that students with severe disabilities are likely to encounter. Although the standards are not a curriculum or a prescribed series of activities, school programs for students with the most significant disabilities will use them to develop a local curriculum that will meet local students' needs.

Literacy is the process by which students learn about and make sense of their world. Students do not just read printed or Braille text; they “read” everything they see or touch, including objects, pictures, and media of all sorts. Therefore, these Reading Standards address “reading” in its broadest sense. When students look at an object or touch an object and recognize what it is, or what it is for, or what it belongs with, they are “reading the object.” When students name a picture, or recognize a picture, or describe what is happening in a picture, they are “reading” the picture. And when students make meaning from print or Braille, they are also “reading.” The standards define the skills and strategies employed by students with the most significant disabilities who have attained proficiency in literacy skills defined very broadly; all teachers who interact with these students will assist them in learning these skills and strategies through multiple classroom situations in all the subject areas.

Alternate Academic Standards for Reading

The Alternate Reading Standards also provide parents and community members with information about what students with the most significant disabilities should know and be able to do as they progress through their educational program and at graduation. With a clearly defined target provided by the standards, parents, students, educators and community members become partners in learning success.

NOTE: The system used in this document to reference the standards is as follows.

Standards listed in boldface are the same standards that appear in the Chapter 4 Academic Standards for Mathematics as approved by the Pennsylvania Board of Education for all students, at the same grade levels as originally listed (the reference number to the original Chapter 4 Standard is provided in parentheses).

Specific skills that define the reinterpreted content standard for students with the most severe cognitive disabilities are provided in italics

1. Learning to Read Independently

GRADE 3/4	GRADE 5/6	GRADE 7/8	GRADE 11
<p><i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:</i></p>			
<p>Identify the purposes and types of text (e.g., literature, information) before reading. (1.1.3.A) <i>Identifies books</i> <i>Identifies books as source of information</i> <i>Predicts topic of story or book based on pictures</i></p> <p>Preview the text formats (e.g., title, headings, chapters and table of contents). (1.1.3.B) <i>Orients towards materials</i> <i>Locates parts of book (title, etc.)</i></p> <p>Use knowledge of phonics, word analysis (e.g., root words, prefixes and affixes), and syllabication, picture and context clues to decode and understand new words during reading. (1.1.3.C) <i>Makes discriminations between</i></p>	<p>A. Identify the purposes for reading a type of text (e.g., literature, information) before reading. (1.1.5.A) <i>Identifies books</i> <i>Identifies books as source of information</i> <i>Predicts topic of story or book based on pictures</i></p> <p>B. Select texts for a particular purpose using the format of the text as a guide. (1.1.5.B) <i>Identifies correct source for information</i></p> <p>C. Use knowledge of phonics, syllabication, prefixes, suffixes, the dictionary or context clues to decode and understand new words during reading. Use these words accurately in writing and speaking. (1.1.5.C) <i>Matches identical objects,</i></p>	<p>A. Locate appropriate texts (literature, information, documents) for an assigned purpose before reading. (1.1.8.A) <i>Chooses correct source for needed information</i></p> <p>B. Identify and use common structures and graphic features to comprehend information. (1.1.8.B) <i>Matches identical pictures, icons, words</i> <i>Locates pictures, icons, words named</i> <i>Uses titles, pictures etc to identify content of source</i></p> <p>C. Use knowledge of phonics, syllabication, prefixes, suffixes, root words as well as context clues and glossaries to understand vocabulary during reading. (1.1.8.C) <i>Discriminates beginning sounds</i></p>	<p>A. Locate various texts, media and traditional resources for assigned and independent projects before reading. (1.1.11.A) <i>Identifies content of material</i> <i>Chooses correct source for needed information</i></p> <p>B. Analyze the structure of informational materials (1.1.11.B) <i>Uses titles, pictures, etc to identify content of source</i></p> <p>C. Use knowledge of root words and words from literary works to recognize and understand the meaning of new words during reading. Use these words accurately in speaking and writing. (1.1.11.C)</p>

*objects, pictures, icons,
words, sounds*

*Matches identical objects,
pictures, icons, words*

*Labels objects pictures, icons
and words*

*Discriminates beginning sound
of objects and words*

- Acquire a reading vocabulary by identifying and correctly using words (e.g., antonyms, synonyms, categories of words). Use a dictionary when appropriate. (1.1.3.E)**

*Labels items, pictures, icons,
words*

*Identifies commonality of items
and groups them accordingly*

- Understand the meaning of and use correctly new vocabulary learned in various subject areas. (1.1.3.F)**
Identifies items, pictures (simple and complex), icons, or words described
Identifies similar and related

pictures, icons, words

Identifies words that rhyme

*Labels objects, pictures, icons
and words*

*Discriminates beginning sounds
of objects and words*

*Demonstrates letter- sound
knowledge*

- Identify the basic ideas and facts in text using strategies (e.g., prior knowledge, illustrations and headings) and information from other sources to make predictions about text. (1.1.5.D)**

*Predicts topic of text from
pictures/words*

- Acquire a reading vocabulary by correctly identifying and using words (e.g., synonyms, homophones, homographs, words with roots, suffixes, prefixes). Use a dictionary or related reference. (1.1.5.E)**
Labels items, pictures (simple

of objects and words

*Demonstrates letter- sound
knowledge*

Identifies words that rhyme

*Uses pictures and context to
identify words*

- Expand a reading vocabulary (1.1.8.E)**

*Identifies similar and related
pictures/words*

*Identifies categories of
pictures/words*

*Identifies function of
pictures/words*

*Identifies picture based on
characteristics*

named/described

Reads complex pictures

Reads words in isolation

- Understand the meaning of and apply key vocabulary across the various subject areas. (1.1.8.F)**
*Identifies function of item
presented as object, picture or
word*

- Establish a reading vocabulary by identifying and correctly using new words acquired through the study of their relationships to other words. Use a dictionary or related reference. (1.1.11.E)**

*Identifies similar and related
pictures/words*

*Identifies categories of
pictures/words*

*Identifies function of
pictures/words*

*Identifies picture based on
characteristics*

named/described

Reads complex pictures

Reads words in isolation

- Understand the meaning of and apply key vocabulary across the various subject areas. (1.1.11.F)**
*Identifies function of item
presented as object, picture or
word*
Defines words with examples

items, pictures, icons or words
Identifies object by function described
Indicates function of item

Demonstrate understanding and interpretation of word/text (1.1.3.G).
Defines words
Categorizes words by meaning
Chooses word to complete phrase/sentence

Demonstrate understanding of fiction after reading. (1.1.3.G)
Answers literal who, what, where, when comprehension questions after text is read
Sequences pictures based on text
Locates pictures illustrating text meaning
Follows 1-2 step instructions

and complex), icons, words
Identifies like items
Defines terms
Identifies terms with similar meanings
Identifies tense of words

F. Identify, understand the meaning of and use correctly key vocabulary from various subject areas. (1.1.5.F)
Labels items, pictures, icons and word across functional and academic curriculum
Identifies similar and related items, pictures, icons or words across functional and academic curriculum

G. Demonstrate understanding and interpretation of both fiction and nonfiction text. (1.1.5.G)
Identifies events in pictures/text
Orders events
Identifies picture/ story details

Defines words with examples
Demonstrates meaning of word by categorizing

G. Demonstrate after reading understanding and interpretation of both fiction and nonfiction text, including public documents. (1.1.8.G)
Identifies main event in picture/text
Identifies next event in picture/text
Sequences events
Identifies detail in picture/text
Identifies facts in narrative/expository text

Demonstrates meaning of word by categorizing

G. Demonstrate after reading understanding and interpretation of both fiction and nonfiction text, including public documents. (1.1.11.G)
Identifies main event in picture/text
Identifies next event in picture/text
Sequences events
Identifies detail in picture/text
Identifies facts in narrative/expository text

<p>Demonstrate fluency and comprehension in reading. (1.1.3.H) <i>Reads words in isolation</i> <i>Reads words in context</i></p>	<p>H. Demonstrate fluency and comprehension in listening and reading. (1.1.5.H) <i>Reads pictures, icons, word, phrases, and sentences</i> <i>Answers literal comprehension questions based on listening to and reading text</i> <i>Follows directions based on listening to and reading text</i></p>	<p><i>Locates information in text</i> <i>Identifies topic of story from picture/title</i> <i>Identifies function of word</i> <i>Identifies last word to complete sentence/passage</i> <i>Orders 3 phrases representing main ideas from text</i></p> <p>H. Demonstrate fluency and comprehension in reading. (1.1.8.H) <i>Reads words paired with pictures</i> <i>Reads words in context</i> <i>Read words in sentences/paragraphs</i> <i>Answers literal and inferential questions after text is read to student</i> <i>Answers comprehension questions after reading text</i> <i>Reads and/or follows 1-2 step directions</i></p>	<p><i>Locates information in text</i> <i>Identifies topic of story from picture/title</i> <i>Identifies function of word</i> <i>Identifies last word to complete sentence/passage</i> <i>Orders phrases representing main ideas from text</i></p> <p>H. Demonstrate fluency and comprehension in reading. (1.1.11.H) <i>Reads words paired with pictures</i> <i>Reads words in context</i> <i>Read words in sentences/paragraphs</i> <i>Answers literal and inferential questions after text is read to student</i> <i>Answers comprehension questions after reading text</i> <i>Reads and/or follows 1-2 step directions</i></p>
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Academic Standards for Mathematics

Alternate Academic Content Standards for Mathematics

For Students with the Most Severe Cognitive Disabilities



Pennsylvania Department of Education
Revised November 2006

Academic Standards for Mathematics

I. TABLE OF CONTENTS

Introduction..... II

THE ACADEMIC STANDARDS

Numbers, Number Systems and Number Relationships... 2.1. <i>Types of numbers (e.g., whole, prime, irrational, complex)</i> <i>Equivalent forms (e.g., fractions, decimals, percents)</i>	Statistics and Data Analysis..... 2.6. <i>Collecting and reporting Data (e.g., charts, graphs)</i> <i>Analyzing data</i>
Computation and Estimation..... 2.2. <i>Basic functions (+, -, x, ÷)</i> <i>Reasonableness of answers</i> <i>Calculators</i>	Probability and Predictions..... 2.7. <i>Validity of data</i> <i>Calculating probability to make predictions</i>
Measurement and Estimation..... 2.3. <i>Types of measurement (e.g., length, time)</i> <i>Units and tools of measurement</i> <i>Computing and comparing measurements</i>	Algebra and Functions..... 2.8. <i>Equations</i> <i>Patterns and functions</i>

Academic Standards for Mathematics

II. INTRODUCTION

This document includes Mathematics Standards:

- ◇ 2.1. Numbers, Number Systems and Number Relationships
- ◇ 2.2. Computation and Estimation
- ◇ 2.3. Measurement and Estimation
- ◇ 2.6. Statistics and Data Analysis
- ◇ 2.7. Probability and Predictions
- ◇ 2.8. Algebra and Functions

... re-interpreted for students with the most severe cognitive disabilities

The Alternate Mathematics Standards describe what students with the most severe cognitive disabilities should know and be able to do at four grade level spans (third/fourth, fifth/sixth, seventh/eighth, and eleventh). **The standards for each grade span were derived from the general education content standards for the equivalent grade that appear in the Chapter 4 Academic Standards for Mathematics as approved by the Pennsylvania Board of Education for all students, at the same grade levels as originally listed (the reference number to the original Chapter 4 Standard is provided in parentheses). The third/fourth grade alternate standards link to the third grade Chapter 4 standards; the eleventh grade alternate standards link to the eleventh grade Chapter 4 standards; and so on.** Those Chapter 4 grade-level content standards have been reinterpreted to be appropriate learning targets for students with the most severe cognitive disabilities, and at the same time link the learning goals for these students with those of their non-disabled grade-mates. The alternate academic content standards delineated in this document provide the targets for instruction and student learning essential for success in the environments in and out of school that students with severe disabilities are likely to encounter. Although the standards are not a curriculum or a prescribed series of activities, school programs for students with the most severe cognitive disabilities will use them to develop a local school curriculum that will meet local students' needs.

The Alternate Mathematics Standards define the skills and strategies employed by students with the most severe cognitive disabilities who have attained proficiency in numeracy skills defined very broadly; all teachers who interact with these students will assist them in learning these skills and strategies through multiple classroom situations in all the subject areas. The Alternate Mathematics Standards also provide parents and community members with information about what students with the most severe cognitive disabilities should know and be able to do as they progress through their educational program and at graduation. With a clearly defined target provided by the standards, parents, students, educators and community members become partners in learning success.

NOTE: The system used in this document to reference the standards is as follows.

Standards listed in boldface are the same standards that appear in the Chapter 4 Academic Standards for Mathematics as approved by the Pennsylvania Board of Education for all students, at the same grade levels as originally listed (the reference number to the original Chapter 4 Standard is provided in parentheses).

Standards listed in regular print are standards that are continued into additional grades for ongoing instruction for students with the most severe cognitive disabilities.

Specific skills that define the reinterpreted content standard for students with the most severe cognitive disabilities are provided in italics

Academic Standards for Mathematics

Numbers, Number Systems and Number Relationships Computation and Estimation			
GRADE 3/4	GRADE 5/6	GRADE 7/8	GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:</i>			
<p>Count using whole numbers (to 10,000) and by 2's, 3's, 5's, 10's, 25's and 100's. (2.1.3.A) Use concrete objects to count, order and group. (2.1.3.G) Demonstrate an understanding of one-to-one correspondence. (2.1.3.H)</p> <p><i>Rote counts by 1s up to 9</i> <u>Rationally counts single set of items by 1s up to 9 with and without teacher pointing</u> <i>Rationally counts groups of sets</i> <i>Orders sets of items by quantity</i> <i>Sorts objects into groups</i> <i>Creates sets of items (e.g., each set has one)</i> <i>Counts out quantity named up to 9</i></p>	<p>A. Count using whole numbers (to 10,000) and by 2's, 3's, 5's, 10's, 25's and 100's. B. Use concrete objects to count, order and group. C. Demonstrate an understanding of one-to-one correspondence</p> <p><i>Rote counts by 1s, 2s, and 5s up to 19</i> <i>Rationally counts by 1s, 2s, 5s up to 19 with and without teacher pointing; fixed/movable array</i> <i>Rationally counts groups of sets</i> <i>Orders sets of items by quantity</i> <i>Sorts items into groups</i> <i>Creates sets of items (e.g., each set has one)</i> <i>Counts out quantity named up to 19</i></p>	<p>A. Count using whole numbers (to 10,000) and by 2's, 3's, 5's, 10's, 25's and 100's. B. Use concrete objects to count, order and group. C. Demonstrate an understanding of one-to-one correspondence</p> <p><i>Rote counts by 1s, 2s, 5s, 10s, 20s, and 25s up to 99</i> <i>Rationally counts by 1s, 2s, 5s, 10s, 20s and 25s up to 99; fixed/movable array</i> <i>Counts out quantity named up to 99</i></p>	<p>A. Count using whole numbers (to 10,000) and by 2's, 3's, 5's, 10's, 25's and 100's B. Use concrete objects to count, order and group. C. Demonstrate an understanding of one-to-one correspondence</p> <p><i>Rote counts by 1s, 2s, 5s, 10s, 20s, 25s, and 100s up to 500</i> <i>Rationally counts by 1s, 2s, 5s, 10s, 20s, 25s, and 100s up to 500</i> <i>Counts out quantity named up to 500</i></p>

Academic Standards for Mathematics

Use whole numbers and fractions to represent quantities. (2.1.3.B)

***Identifies numerals (0-9)
Matches numbers to quantities (0 – 9)***

Represent equivalent forms of the same number through the use of concrete objects, drawings, word names and symbols. (2.1.3.C)

Matches numerals to quantities (0 – 9)
Matches sets with identical quantities
Reads numerals

Use drawings, diagrams or models to show the concept of fraction as part of a whole. (2.1.3.D)

Identifies object divided into halves

D. Use whole numbers and fractions to represent quantities.

*Identifies numerals (0 – 19)
Matches numbers to quantities (0 – 19)
Locates numerals in an array*

E. Apply number theory concepts to rename a number quantity (e.g., six, 6, $\frac{12}{2}$, 3×2 , 10 – 4). (2.1.5.B)

*Matches equivalent numerals, sets, notations (0-19)
Matches numerals to word (3 to three)*

F. Use models to represent fractions. (2.1.5.D)

Identifies objects divided into equal parts

D. Use whole numbers and fractions to represent quantities.

*Identifies numerals (0 – 99)
Matches numbers to quantities (0 –99)*

E. Apply number theory concepts to rename a number quantity (e.g., six, 6, $\frac{12}{2}$, 3×2 , 10 – 4).

*Matches equivalent numerals, sets, notations (0-99)
Matches numerals to word (3 to three)*

F. Use models to represent fractions.

*Identifies largest or smallest portions
Identifies diagram showing x parts of whole
Identifies diagram showing x pieces of whole (halves, fourths)
Identifies diagram showing sum of two portions (2 halves; 3 fourths)*

D. Use whole numbers and fractions to represent quantities.

*Identifies numerals (0 – 500)
Matches numbers to quantities (0 – 500)*

E. Apply number theory concepts to rename a number quantity (e.g., six, 6, $\frac{12}{2}$, 3×2 , 10 – 4).

*Matches equivalent numerals, sets, notations (0-500)
Matches numerals to word (3 to three)*

F. Use models to represent fractions.

Identifies largest or smallest portions
Identifies diagram showing x pieces of whole (halves, thirds, fourths, eights)

Academic Standards for Mathematics

Count, compare and make change using a collection of coins and one-dollar bills. (2.1.3.E)

Differentiates between “money” and non money
Differentiates between coins and bills
Identifies currency named (1,5 dollar bill)
Names currency
Reads price up to \$5/5¢

Apply number patterns (even and odd) and compare values of numbers on the hundred board. (2.1.3.F)

Sequentially orders consecutive numerals and quantities (0 – 9)

Apply addition and subtraction in everyday situations using concrete objects. (2.2.3.A)

Apply place-value concepts and numeration to counting, ordering and grouping. (2.1.3.I)

(1-9)

Matches numerals to quantities

Names numerals
Writes numerals
Identifies first, second, third, etc.

G. Count, compare and make change using a collection of coins and one-dollar bills. (up to 9)

H. Apply estimation strategies to a variety of problems including time and money. (2.2.5.E)

Identifies value of coins/bills

Differentiates bills
Counts pennies, one and five dollar bills
Estimates costs of items (relative and actual)

I. Apply number patterns (even and odd) and compare values of numbers on the hundred board.

Sequentially orders consecutive and non consecutive numerals and quantities (0 – 19)

J. Apply addition and subtraction in everyday situations using concrete objects.

K. Apply place-value concepts and numeration to counting, ordering and grouping.

(0-19)

Matches numerals to quantities

Names numerals
Writes numerals
Identifies first, second, third, etc.

G. Count, compare and make change using a collection of coins and one-dollar bills. (up to 99)

H. Apply estimation strategies to a variety of problems including time and money.

Identifies value of coins/bills
Counts bills with mixed denominations
Count bills and coins with mixed denominations
Identifies sufficient amounts for purchases
Estimates cost of items (relative and actual)

I. Apply number patterns (even and odd) and compare values of numbers on the hundred boards.

Sequentially orders consecutive and non consecutive numerals and quantities (0 – 99)

J. Apply addition and subtraction in everyday situations using concrete objects

K. Apply place-value concepts and numeration to counting, ordering and grouping.

(0-99)

Matches numeral to quantity

Names numerals
Writes numerals
Identifies first, second, third, etc.

G. Count, compare and make change using a collection of coins and one-dollar bills. (up to 500)

H. Apply estimation strategies to a variety of problems including time and money.

Counts bills with mixed denominations
Counts bills and coins
Identifies sufficiency for purchases
Estimates costs of items (relative and actual)

I. Apply number patterns (even and odd) and compare values of numbers on the hundred board.

Sequentially orders consecutive and non consecutive numerals and quantities (0 – 500)

J. Apply addition and subtraction in everyday situations using concrete objects.

K. Apply place-value concepts and numeration to counting, ordering and grouping.

(0-500)

Matches numerals to quantities

Names numerals
Writes numerals
Identifies first, second, third, etc.

Academic Standards for Mathematics

Orders consecutive and non consecutive numbers

Orders consecutive and non consecutive numbers

Orders consecutive and non consecutive numbers

Orders consecutive and non consecutive numbers

Estimate, approximate, round or use exact numbers as appropriate. (2.1.3.J)

*Identifies sets with many/few; most/fewest/least
Identifies subsets with all, some, most, none*

L. Estimate, approximate, round or use exact numbers as appropriate

*Identifies sets with many/few; most/fewest/least
Identifies subsets with all, some, most, none*
Identifies sufficiency for need

L. Estimate, approximate, round or use exact numbers as appropriate

*Identifies sets with many/few; most/fewest/least
Identifies subsets with all, some, most, none*
Identifies sufficiency for need

L. Estimate, approximate, round or use exact numbers as appropriate

*Identifies sets with many/few; most/fewest/least
Identifies subsets with all, some, most, none*
Identifies sufficiency for need

Demonstrate knowledge of basic facts in four basic operations. (2.1.3.L)

Solve single- and double-digit addition and subtraction problems with regrouping in vertical form. (2.2.3.B)

Demonstrate the concept of multiplication as repeated addition and arrays. (2.2.3.C)

Demonstrate the concept of division as repeated subtraction and as sharing. (2.2.3.D)
(0-9)

Adds/subtracts by counting

M. Demonstrate knowledge of basic facts in four basic operations.

N. Solve single- and double-digit addition and subtraction problems with regrouping in vertical form

O. Demonstrate the concept of multiplication as repeated addition and arrays.

P. Demonstrate the concept of division as repeated subtraction and as sharing
(0-19)

Identify symbols +, -, x, ÷
Writes equations for addition
Writes equations for subtraction

M. Demonstrate knowledge of basic facts in four basic operations.

N. Solve single- and double-digit addition and subtraction problems with regrouping in vertical form

O. Demonstrate the concept of multiplication as repeated addition and arrays.

P. Demonstrate the concept of division as repeated subtraction and as sharing
(0-99)

Identify symbols +, -, x, ÷
Write equations for addition
Write equations for subtraction
Adds single digit numbers*

M. Demonstrate knowledge of basic facts in four basic operations.

N. Solve single- and double-digit addition and subtraction problems with regrouping in vertical form

O. Demonstrate the concept of multiplication as repeated addition and arrays.

P. Demonstrate the concept of division as repeated subtraction and as sharing
(0-500)

Identify symbols +, -, x, ÷
Write equations for addition
Write equations for subtraction
Adds single digit numbers*

Academic Standards for Mathematics

Sorts items into groups

Adds 2 – 3 single digit numbers*

Adds single digit to double digit numbers, without renaming; with renaming*

*Adds two double digit numbers, without renaming; with renaming**

*Adds two three digit numbers, without renaming; with renaming**

*Subtracts one digit numbers**

*Subtracts one and two digit numbers without renaming; with renaming**

*Subtracts two three digit numbers without renaming; with renaming**

Continuously counts /separate sets of items

**With or without calculator*

Q. Develop and apply algorithms to solve word problems (2.2.5.B)

Adds single digit to double digit numbers, without renaming; with renaming*

*Adds two double digit numbers, without renaming; with renaming**

*Adds two three digit numbers, without renaming; with renaming**

*Subtracts one digit numbers**

*Subtracts one and two digit numbers without renaming; with renaming**

*Subtracts two three digit numbers without renaming; with renaming**

*Multiplies numbers**

*Divides numbers**

**With or without calculator*

Q. Develop and apply algorithms to solve word problems

F. Estimate amount of tips and discounts using ratios, proportions and percents. 2.2.8.D)

*Calculates tips**

*Calculates discounts**

**With or without calculator*

Adds single digit to double digit numbers, without renaming; with renaming*

*Adds two double digit numbers, without renaming; with renaming**

*Adds two three digit numbers, without renaming; with renaming**

Subtracts one digit numbers

*Subtracts one and two digit numbers without renaming; with renaming**

*Subtracts two three digit numbers without renaming; with renaming**

*Multiplies numbers**

Divides numbers*

**With or without calculator*

Q. Develop and apply algorithms to solve word problems

Selects appropriate operation for word problems

Academic Standards for Mathematics

Measurement and Estimation			
GRADE 3/4	GRADE 5/6	GRADE 7/8	GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills to:</i>			
<p>Compare measurable characteristics of different objects on the same dimensions (e.g., time, temperature, area, length, weight, capacity, perimeter). (2.3.3.A)</p> <p><i>Identifies lightest/heaviest, smallest/biggest, shortest/furthest, shortest/tallest, longest/shortest etc.*</i></p> <p><i>Matches items identical based on length, size, volume</i></p> <p><small>* differences are obvious and vary directly</small></p> <p>Determine the measurement of objects with non-standard and standard units (e.g., US customary and metric). (2.3.3.B)</p> <p>Determine the appropriate unit of</p>	<p>A. Compare measurable characteristics of different objects on the same dimensions (e.g., time, temperature, area, length, weight, capacity, perimeter).</p> <p><i>Identifies lightest/heaviest, smallest/biggest, shortest/furthest, shortest/tallest, longest/shortest, a lot/a little, all/some/most, etc.*</i></p> <p><i>Matches items identical based on length, size, volume*</i></p> <p><small>* differences less obvious and vary directly</small></p> <p>B. Select and use appropriate instruments and units for measuring quantities (e.g., perimeter, volume, area, weight, time, temperature). (2.3.5.A)</p>	<p>A. Compare measurable characteristics of different objects on the same dimensions (e.g., time, temperature, area, length, weight, capacity, perimeter).</p> <p><i>Identifies lightest/heaviest, smallest/biggest, shortest/furthest, shortest/tallest, longest/shortest, a lot/a little, all/some/most, etc.*</i></p> <p><i>Matches items to space</i></p> <p><i>Orders items by weight/size</i></p> <p><i>Understands meaning of temperatures</i></p> <p><i>Matches approximate numerals</i></p> <p><small>* differences obvious and vary on multiple dimensions</small></p> <p>B. Estimate, use and describe measures of distance, rate, perimeter, and area. (2.3.8.D)</p> <p>C. Select and use standard tools to measure the size of figures with</p>	<p>A. Compare measurable characteristics of different objects on the same dimensions (e.g., time, temperature, area, length, weight, capacity, perimeter).</p> <p><i>Identifies lightest/heaviest, smallest/biggest, shortest/furthest, shortest/tallest, longest/shortest, coldest/hottest, a lot/a little, all/some/most, etc.*</i></p> <p><i>Orders items by weight/size</i></p> <p>Sorts by weight</p> <p><i>Understands meaning of temperatures</i></p> <p><small>* differences less obvious vary on multiple dimensions</small></p> <p>B. Select and use appropriate units and tools to measure to the degree of accuracy required in particular measurement situations.</p> <p>C. Demonstrate the ability to produce</p>

Academic Standards for Mathematics

measure. (2.3.3.E)

*Measures in inches with fixed ruler
Uses objects (blocks) to measure
area and volume*

*Selects appropriate measurement
tool for activities of daily living
(clock for time; cup for cooking;
rulers for length, etc*

**Determine and compare elapsed
times. 2.3.3.C)**

**Tell time (analog and digital) to
the minute. (2.3.3.D)**

*Identifies clock
Reads digital times to hour/half
hour*

**C. Select and use standard tools to
measure the size of figures with
specified accuracy, including length,
width, perimeter and area. (2.3.5.B)**

***Selects cup; identifies 1 cup
measure line***

Measures in cups

Measures to within inch

***Matches measurement tool to
need***

*Identifies relative length/distance
when path direct*

D. Determine and compare elapsed times.

**E. Tell time (analog and digital) to the
minute.**

*Identifies clock
Matches activities and seasons
Matches analog and digital times to hour
Reads digital times to quarter hour
Reads analog time to hour*

specified accuracy, including length,
width, perimeter and area.

*Measures to within half inch
Identifies 1/2, 1/4 cup measures
Identifies 1/2, 1/4 cup line
Identifies relative length when path
not direct*

D. Determine and compare elapsed times.

**E. Tell time (analog and digital) to the
minute.**

Matches activities and seasons

*Matches activities to time of day
Matches activities with duration
Matches analog and digital times to half
hour
Reads digital times to minute
Reads analog time to quarter hour*

**measures with specified levels of
precision (2.3.11.C)**

*Identifies empty/half full/full items
Measures to within quarter inch
Identifies 1/2, 1/4 cup measures
Identifies 1/2, 1/4 cup line
Identifies shortest path between
multiple points*

**D. Determine and compare elapsed
times.**

**E. Tell time (analog and digital) to the
minute.**

Matches activities with duration

*Matches activities to time of day
Identifies duration of activity given start
and end time
Identifies ending time given start time
and duration of activity
Matches analog and digital times to 5
minute
Reads analog time to 5 minute*

Academic Standards for Mathematics

F. Determine the appropriateness of overestimating or underestimating in computation. (2.2.8.E)

Describes consequences of having too much/ not enough in common situations

F. Determine the appropriateness of overestimating or underestimating in computation.

Describes consequences of having too much/ not enough in common situations

Academic Standards for Mathematics

5. Statistics and Data Analysis
7. Probability and Predictions

GRADE 3/4	GRADE 5/6	GRADE 7/8	GRADE 11
<p><i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills to:</i></p>			
<p>Answer questions based on data shown on graphs. (2.6.3.A) Analyze data using the concepts of largest, smallest, most often, least often and middle. (2.7.3.D)</p> <p><i>Identifies value on graph ordered by size and with and without number prompts</i> <i>Biggest/smallest</i> <i>Most often/least often/middle</i></p> <p>Predict and measure the likelihood of events and recognize that the results of an experiment may not match predicted outcomes. (2.7.3.D)</p>	<p>A. Answer questions based on data shown on graphs. B. Construct simple conclusions based on data. (2.6.5.E)</p> <p style="text-align: center;"><i>Identifies value on graph with and without number prompts</i> <i>Biggest/smallest</i> <i>Most often/least often/middle</i></p> <p>C. Predict and measure the likelihood of events and recognize that the results of an experiment may not match predicted outcomes.</p>	<p>A. Answer questions based on data shown on graphs. B. Compare and contrast different plots of data using values mode, and range. (2.6.8.A)</p> <p style="text-align: center;"><i>Identifies value on graph with and without number prompts</i> <i>Biggest/smallest</i> <i>Most often/least often/middle</i></p> <p>C. Predict and measure the likelihood of events and recognize that the results of an experiment may not match predicted outcomes.</p> <p style="text-align: center;">Identifies most likely outcome based on data</p>	<p>A. Answer questions based on data shown on graphs. B,</p> <p style="text-align: center;"><i>Identifies value on graph</i> <i>Biggest/smallest</i> <i>Most often/least often/middle</i></p> <p>C. Predict and measure the likelihood of events and recognize that the results of an experiment may not match predicted outcomes.</p> <p style="text-align: center;">Identifies most/least likely outcome based on data</p>

Academic Standards for Mathematics

8. Algebra and Functions

GRADE 3/4	GRADE 5/6	GRADE 7/8	GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills to:</i>			

Academic Standards for Mathematics

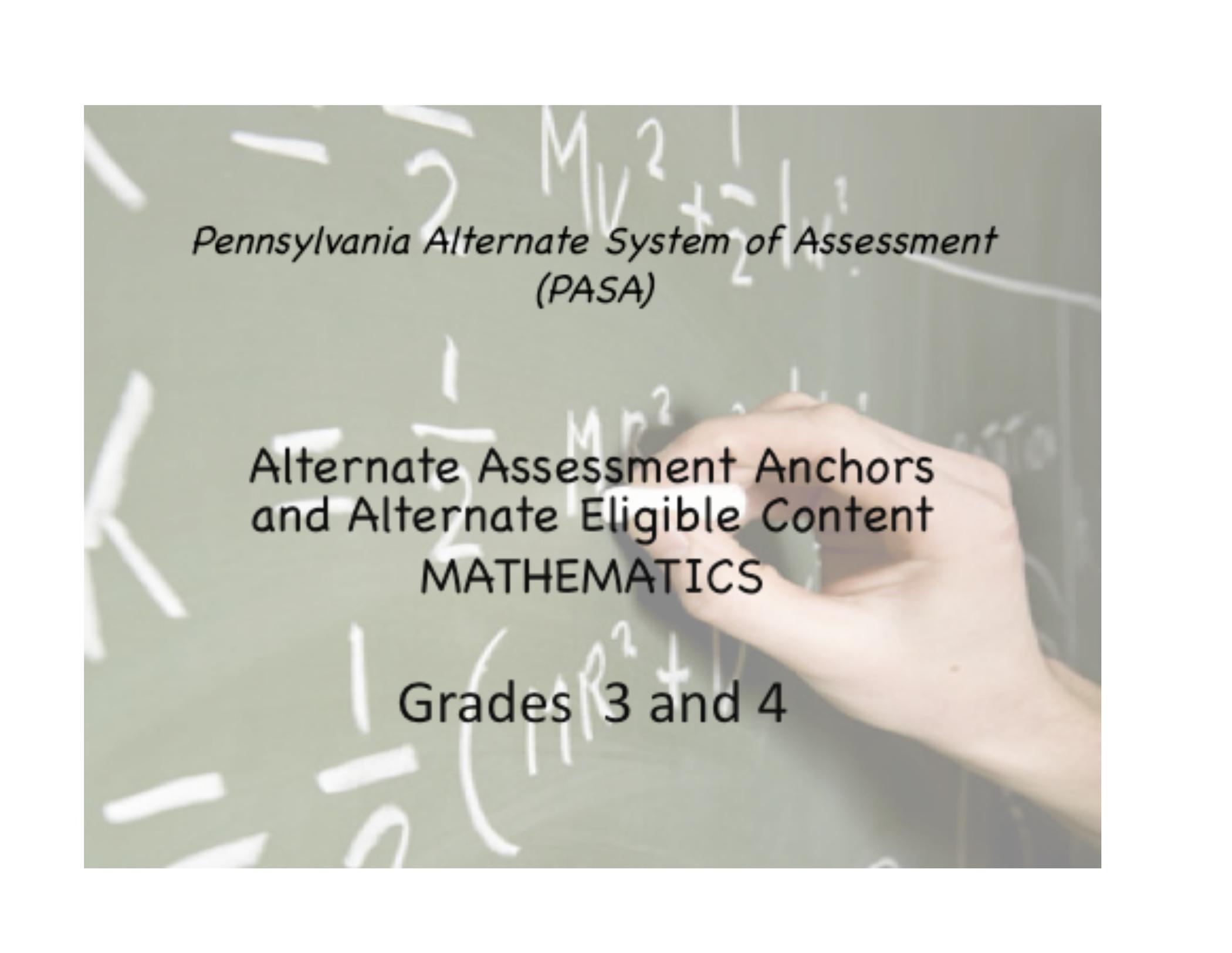
<p>Recognize, describe, extend, create and replicate a variety of patterns including attribute, activity, number and geometric patterns. (2.8.3.A)</p> <p><i>Sorts dissimilar items into groups with or without sample</i></p> <p>Describe and interpret the data shown in tables and charts. (2.8.3.H)</p> <p><u>Locates values identified in table of 6 numbers with column or row identified</u></p>	<p>A. Recognize, reproduce, extend, create and describe patterns, sequences and relationships verbally, numerically, symbolically and graphically, using a variety of materials. (2.8.5.A)</p> <p><i>Sorts dissimilar and similar items into groups with or without sample</i></p> <p>B. Describe and interpret the data shown in tables and charts.</p> <p><i>Locates values identified in table of 8 numbers with column or row identified</i></p>	<p>A. Recognize, reproduce, extend, create and describe patterns, sequences and relationships verbally, numerically, symbolically and graphically, using a variety of materials.</p> <p><i>Sorts similar items into groups with or without sample</i></p> <p>B. Describe and interpret the data shown in tables and charts.</p> <p><i>Locates values described in table of 10 numbers with column or row identified</i></p>	<p>A. Recognize, reproduce, extend, create and describe patterns, sequences and relationships verbally, numerically, symbolically and graphically, using a variety of materials.</p> <p><i>Sorts similar items into groups with or without sample</i></p> <p>B. Describe and interpret the data shown in tables and charts.</p> <p><i>Locates value described in table of 12 numbers with or without column or row identified</i></p>
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Academic Standards for Mathematics

Geometry			
GRADE 3/4	GRADE 5/6	GRADE 7/8	GRADE 11
<i>Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills to:</i>			
<p>Identify and label geometric shapes in two and three dimensions (e.g., circle/sphere, square/cube, triangle/pyramid, rectangle/prism).</p> <p><i>Matches items by shape Matches 3-D shapes Matches 2 D shape Sorts shapes (as real objects; as shapes) Selects shape that is different Selects shape named Names shape Completes simple - complex puzzles</i></p> <p>Build geometric shapes using concrete objects (e.g., manipulatives).</p> <p><i>Makes square from two triangles with/without model Makes circle from two half circles Makes house from triangle +square</i></p> <p>Draw two- and three-dimensional geometric shapes and construct triangles, squares and rectangles.</p>	<p>A. Give formal definitions of geometric figures.</p> <p><i>Defines/ describes square, circle, etc.</i></p> <p>B. Classify and compare triangles and quadrilaterals according to sides or angles.</p> <p><i>Sorts triangles and quadrilaterals into groups</i></p> <p>C. Identify and measure circles, their diameters and their radii.</p> <p>Orders circles by size</p> <p>D. Describe in words how geometric shapes are constructed.</p> <p>E. Construct two- and three-dimensional shapes and figures using manipulatives, geoboards and computer software.</p> <p>F. Find familiar solids in the environment and describe them.</p>	<p>A. Construct figures incorporating perpendicular and parallel lines, the perpendicular bisector of a line segment and an angle bisector using computer software.</p> <p>Draws squares on computer</p> <p>B. Draw, label, measure and list the properties of complementary, supplementary and vertical angles.</p> <p>C. Classify familiar polygons as regular or irregular up to a decagon.</p> <p>D. Identify, name, draw and list all properties of squares, cubes, pyramids, parallelograms, quadrilaterals, trapezoids, polygons, rectangles, rhombi, circles, spheres, triangles, prisms and cylinders.</p> <p><i>IDs and names squares, cubes, pyramids, rectangles, circles, spheres, triangles and cylinders</i></p>	<p>A. Construct geometric figures using dynamic geometry tools (e.g., Geometer's Sketchpad, Cabri Geometre).</p> <p>B. Prove that two triangles or two polygons are congruent or similar using algebraic, coordinate and deductive proofs.</p> <p>C. Identify and prove the properties of quadrilaterals involving opposite sides and angles, consecutive sides and angles and diagonals using deductive proofs.</p> <p>D. Identify corresponding parts in congruent triangles to solve problems.</p> <p>E. Solve problems involving inscribed and circumscribed polygons.</p> <p>F. Use the properties of angles, arcs, chords, tangents and secants to solve problems involving circles.</p> <p>G. Solve problems using analytic geometry.</p> <p>H. Construct a geometric figure and its image using various transformations.</p> <p>I. Model situations geometrically to formulate and solve problems.</p>

Academic Standards for Mathematics

<p>1 on the geoboard and on graph paper satisfying specific criteria.</p> <p><i>copies circle, triangle, square raw shapes</i></p> <p>Identify and describe geometric figures in real life.</p> <p><i>locates shapes in simple and complex pictures</i></p> <p>Identify and draw lines of symmetry geometric figures.</p> <p>Identify symmetry in nature.</p> <p><i>Notes which items are the same on both sides</i></p> <p>Fold paper to demonstrate the reflections about a line.</p> <p><i>Folds square/rectangle piece of paper to make halves selects that has equal halves (from math)</i></p> <p>Show relationships between and among figures using reflections.</p> <p>Predict how shapes can be changed by combining or dividing them.</p> <p><i>Identifies which shape can be formed from component pieces</i></p>	<p>G. Create an original tessellation.</p> <p>H. Describe the relationship between the perimeter and area of triangles, quadrilaterals and circles.</p> <p><i>Identifies shortest route</i></p> <p>I. Represent and use the concepts of line, point and plane.</p> <p>J. Define the basic properties of squares, pyramids, parallelograms, quadrilaterals, trapezoids, polygons, rectangles, rhombi, circles, triangles, cubes, prisms, spheres and cylinders.</p> <p>K. Analyze simple transformations of geometric figures and rotations of line segments.</p> <p>L. Identify properties of geometric figures (e.g., parallel, perpendicular, similar, congruent, symmetrical).</p>	<p>E. Construct parallel lines, draw a transversal and measure and compare angles formed (e.g., alternate interior and exterior angles).</p> <p>F. Distinguish between similar and congruent polygons.</p> <p>G. Approximate the value of π (pi) through experimentation.</p> <p>H. Use simple geometric figures (e.g., triangles, squares) to create, through rotation, transformational figures in three dimensions.</p> <p>I. Generate transformations using computer software.</p> <p>J. Analyze geometric patterns (e.g., tessellations, sequences of shapes) and develop descriptions of the patterns.</p> <p>K. Analyze objects to determine whether they illustrate tessellations, symmetry, congruence, similarity and scale.</p> <p>IDs if objects are the same on both sides</p> <p><i>IDs if objects are similar Orders objects by size</i></p>	<p>J. Analyze figures in terms of the kinds of symmetries they have.</p>
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A hand is shown writing mathematical formulas on a chalkboard. The formulas include $MV^2 + \frac{1}{2}kx^2$ and $(MR^2 + \frac{1}{2}kx^2)$. The background is a chalkboard with various mathematical symbols and formulas written in white chalk.

*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content
MATHEMATICS

Grades 3 and 4

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Math

PSSA Numbering system

Example: M3.A.1.1

M = Math
 3 = Grade
 A = Reporting category (e.g., Numbers & Operations, Measurement, Geometry, Algebraic Concepts, Data Analysis & Probability)
 1 = Assessment anchor
 1 = Sub assessment anchor

PASA Numbering system

Example: M3&4.AA.1.1a (LC)

M = Math
 3&4 = Grade
 1st A = Reporting category
 2nd A = Alternate assessment
 1 = Assessment anchor
 1 = Sub assessment anchor
 a = Eligible content
 LC = Level

PSSA Assessment Anchor

PASA Assessment Anchor

M3.A Numbers and Operations			
M4.A			
M3.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.		M3&4.AA.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
PSSA ASSESSMENT ANCHOR		PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 3			
M3.A.1.1 Apply place-value concepts and numeration to counting, ordering, grouping, and equivalency.	M4.A.1.1 Use models and/or words to represent quantities as decimals, fractions, or mixed numbers.	M3&4.AA.1.1 Apply numeracy concepts and use models and fractions to represent quantities as part of a whole or part of a set.	M3&4.AA.1.1 (LA) Matches 2 sets of items with 1 item each – difference between target and closest choice is 12 units – sets are cut to size M3&4.AA.1.1 (LB) Matches numeral to quantity ≤ 5 – the target and 1 set are within +/- 5 M3&4.AA.1.1a (LC) Matches numeral to quantity ≤ 9 – the target and 2 sets are within +/- 5 M3&4.AA.1.1b (LC) Selects item divided evenly...
M3.A.1.2 Use fractions to represent quantities as part of a whole or part of a set.			

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards - see 2007 PSSA Technical Report for Reading and Mathematics: Grades 3-8 and 11 (page A-2) (attached on the next page).

**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
MATH
GRADES 3 & 4**

M3.A M4.A Numbers and Operations			
M3.A.1 M4.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.		M3&4.AA.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
PSSA ASSESSMENT ANCHOR		PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 3	GRADE 4		
M3.A.1.1 Apply place-value concepts and numeration to counting, ordering, grouping, and equivalency.	M4.A.1.1 Use models and/or words to represent quantities as decimals, fractions, or mixed numbers.	M3&4.AA.1.1 Apply numeracy concepts and use models and fractions to represent quantities as part of a whole or part of a set.	M3&4.AA.1.1 (LA) Matches 2 sets of items with 1 item each
M3.A.1.2 Use fractions to represent quantities as part of a whole or part of a set.			M3&4.AA.1.1 (LB) Matches numeral to quantity
	M4.A.1.2 Compare quantities and magnitudes or numbers.	M3&4.AA.1.2 Compare quantities and numbers, including <ul style="list-style-type: none"> • orient, • compare quantities, • count, and • read numerals. 	M3&4.AA.1.1a (LC) Matches numeral to quantity M3&4.AA.1.1b (LC) Selects item divided evenly and in the number of pieces specified
			M3&4.AA.1.2a (LA) Orients toward materials M3&4.AA.1.2b (LA) Selects set with most/least –
			M3&4.AA.1.2a (LB) Counts aloud ≤ 5 items in unordered array M3&4.AA.1.2b (LB) Reads number ≤ 19
			M3&4.AA.1.2a (LC) Counts aloud ≤ 9 items in ordered array M3&4.AA.1.2b (LC) Orders 4 sets of evenly spaced items M3&4.AA.1.2c (LC) Orders 4 consecutive numbers M3&4.AA.1.2d (LC) Counts out ≤ 9 items from a larger unordered set

<p>M3.A.1.3 Count, compare and make change using a collection of coins and one-dollar bills.</p>	<p>M4.A.1.3 Develop and/or apply number theory to represent numbers in various ways.</p>	<p>M3&4.AA.1.3 Count, compare, and make change using a collection of coins and one-dollar bills, including</p> <ul style="list-style-type: none"> • identify coins and bills, • count coins and bills, and • read price. 	<p>M3&4.AA.1.3 (LA) Selects coin</p> <p>M3&4.AA.1.3a (LB) Counts aloud one-dollar bills or pennies</p> <p>M3&4.AA.1.3b (LB) Reads whole number price</p> <p>M3&4.AA.1.3a (LC) Selects one-, five-, ten-, or twenty-dollar bill</p> <p>M3&4.AA.1.3b (LC) Names penny, nickel, dime, or quarter</p> <p>M3&4.AA.1.3c (LC) Counts aloud one-dollar bills or pennies</p> <p>M3&4.AA.1.3d (LC) Counts out one-dollar bills from a larger set</p>
<p>M3.A.2 M4.A.2</p> <p>Understand the meanings of operations, use operations and understand how they relate to each other.</p>	<p>M3&4.AA.2 Understand the meanings of operations, use operations and understand how they relate to each other.</p>		
<p><i>M3.A.2.1 Understand various meanings of operations and the relationship between them.</i></p>			
	<p><i>M4.A.2.1 Use operations to solve problems (may include word problems).</i></p>		

M3.A.3 M4.A.3	Compute accurately and fluently and make reasonable estimates.	M3&4.AA.3 Compute accurately and fluently and make reasonable estimates	
<p>M3.A.3.1 Solve problems using addition, subtraction and multiplication (straight computation and word problems).</p>		<p>M3&4.AA.3.1 Solve problems using addition and subtraction.</p>	<p>M3&4.AA.3.1a (LC) Adds 2 sets of items with sums M3&4.AA.3.1b (LC) Adds 2 sets of similar items by counting M3&4.AA.3.1c (LC) Adds 3 sets of items by counting M3&4.AA.3.1d (LC) Adds 2 prices by counting one-dollar bills M3&4.AA.3.1e (LC) Subtracts 2 numbers by counting items M3&4.AA.3.1f (LC) Subtracts to identify part from whole M3&4.AA.3.1g (LC) Subtracts 2 prices</p>
	<p><i>M4.A.3.1 Apply rounding and/or estimation strategies to solve problems.</i></p>		
<p><i>M3.A.3.2 Use estimation skills to arrive at conclusions.</i></p>			
	<p><i>M4.A.3.2 Compute using fractions or decimals (written vertically or horizontally – straight computation only).</i></p>		

M3.B Measurement			
M3.B.1 M4.B.1		Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.	
M3&4.BA.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.			
M3.B.1.1 Determine or calculate time and elapsed time.	M4.B.1.1 Determine time and/or calculate elapsed time.	M3&4.BA.1.1 Determine time.	M3&4.BA.1.1 (LA) Selects clock M3&4.BA.1.1 (LB) Matches digital time at 30-minute intervals M3&4.BA.1.1a (LC) Reads digital time at 15-minute intervals M3&4.BA.1.1b (LC) Reads analog time at half-hour intervals
M3.B.1.2 Use the attributes of length, area, volume and weight of objects.		M3&4.BA.1.2 Use the attributes of objects, including <ul style="list-style-type: none"> • match and compare length, • match and compare area, • match and compare volume, and • match and compare capacity. 	M3&4.BA.1.2a (LA) Matches objects, pictures of items, photographs of items of same length – M3&4.BA.1.2b (LA) Matches identical shapes, objects, pictures, photographs of same size M3&4.BA.1.2c (LA) Selects biggest/smallest shape, object, picture, photograph M3&4.BA.1.2d (LA) Matches items with same volume M3&4.BA.1.2e (LA) Selects biggest/smallest object by volume M3&4.BA.1.2f (LA) Matches items with same capacity M3&4.BA.1.2g (LA) Selects item that holds the most/least M3&4.BA.1.2 (LB) Selects longest/shortest item

M3.B.2 Apply appropriate techniques, tools and formulas to determine measurements. M4.B.2		M3&4.BA.1 Apply appropriate techniques, tools and formulas to determine measurements.	
M3.B.2.1 Determine the measurement of objects with non-standard and standard units.	M4.B.2.1 Select and/or use appropriate tools and/or attributes for measuring quantities.	M3&4.BA.2.1 Determine the measurement of objects with non-standard and standard units, including <ul style="list-style-type: none"> • measure length, • measure area, and • measure volume. 	M3&4.BA.2.1a (LB) Measures length of item by counting M3&4.BA.2.1b (LB) Measures item area by counting M3&4.BA.2.1c (LB) Measures volume by counting M3&4.BA.2.1a (LC) Measures length of item M3&4.BA.2.1b (LC) Measures volume by counting
<i>M3.B.2.2 Estimate measurements of familiar objects.</i>	<i>M4.B.2.2 Estimate measurements of figures.</i>		

M3.C M4.C Geometry			
M3.C.1 Analyze characteristics and properties of two- and three-dimensional geometric shapes and demonstrate understanding of geometric relationships. M4.C.1		M3&4.CA.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.	
M3.C.1.1 Identify and/or describe two- and three-dimensional objects.	M4.C.1.1 Identify/describe the basic properties of geometric figures in two or three dimensions.	M3&4.CA.1.1 Identify and/or describe the basic properties of two- and three-dimensional geometric figures (sort).	M3&4.CA.1.1 (LA) Sorts 1 object into 1 of 3 existing groups M3&4.CA.1.1 (LB) Sorts 4 items into 4 groups M3&4.CA.1.1 (LC) Sorts 8 items into 4 groups
	<i>M4C.1.2 Represent and/or use properties or relationships of points, lines, line segments, rays, and angles.</i>		

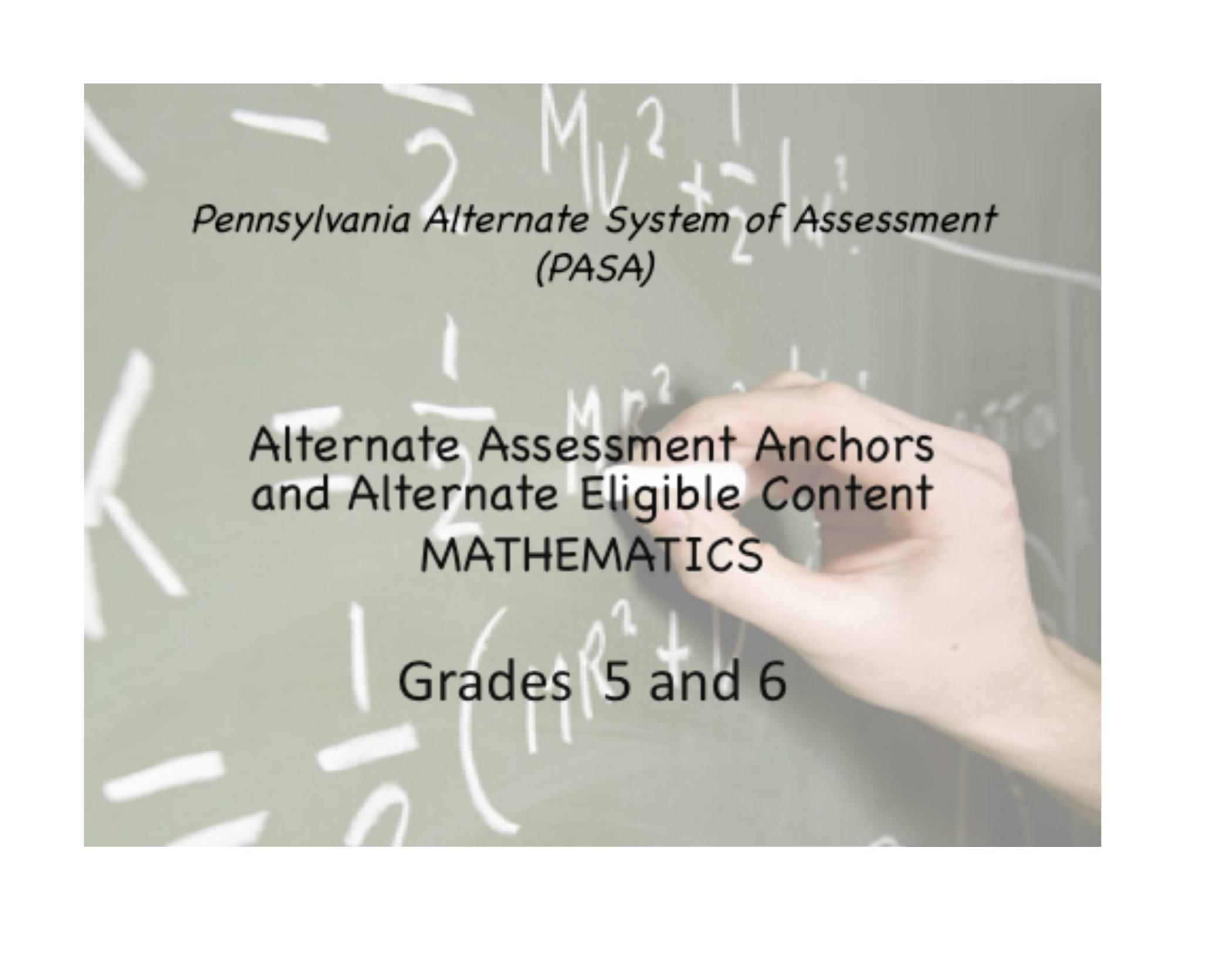
M3.C.2		Identify and/or apply concepts of transformations or symmetry.	
M4.C.2			
<i>M3.C.2.1</i>	<i>Apply the concepts of transformations and symmetry.</i>		
	<i>M4.C.2.1</i>	<i>Apply the concepts of reflection and symmetry.</i>	
M3.C.3		Locate points or describe relationships using the coordinate plane.	
M4.C.3			
<i>M4C.3.1</i>	<i>Locate points on a simple grid.</i>		

M3.D			
M4.D			
M3.D.1		Demonstrate an understanding of patterns, relations and functions.	
M4.D.1		M3&4.DA.1	
		Demonstrate an understanding of patterns, relations and functions.	
<i>M3.D.1.1</i>	<i>Recognize, describe, or extend a variety of patterns.</i>	<i>M4.D.1.1</i>	<i>Recognize, describe, extend, create, and/or replace a variety of patterns.</i>
	<i>M4.D.1.2</i>	<i>Apply simple function rules.</i>	

M3.D.2 M4.D.2	Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.		
<i>M3.D.2.1 Create/model expressions, equations and inequalities to match a problem situation.</i>			
	<i>M4.D.2.1 Use numbers and symbols to model the concepts of expression and/or equations.</i>		
<i>M3.D.2.2 Determine the missing number or symbol in a number sentence.</i>	<i>M4.D.2.2 Determine the missing number or symbol in a number sentence.</i>		
M3.D.3 M4.D.3	Analyze change in various contexts.		
<i>Not assessed.</i>			
M3.D.4 M4.D.4	Describe or use models to represent quantitative relationships.		
<i>Not assessed.</i>			

M3.E M4.E Data Analysis and Probability			
M3.E.1 M4.E.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.		M3&4.EA.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.	
M3.E.1.1 Answer questions based on data shown on tables, charts, and bar graphs.	M4.E.1.1 Interpret data shown on tables, charts, line graphs, bar graphs, or pictographs.	M3&4.EA.1.1 Interpret and answer questions based on data, including <ul style="list-style-type: none"> • interpret graphs, and • interpret tables. 	M3&4.EA.1.1a (LB) Selects largest/smallest value from graph M3&4.EA.1.1b (LB) Locates number described in a one-variable display with 4 entries M3&4.EA.1.1a (LC) Selects largest/smallest value from graph M3&4.EA.1.1b (LC) Locates number described in 5-6 item display
<i>M3E.1.2 Organize or display data using tables, charts, bar graphs.</i>	<i>M4.E.1.2 Organize or display data using tables, bar graphs, line graphs, or pictographs.</i>		
M3.E.2 M4.E.2 Select and/or use appropriate statistical methods to analyze data.			
<i>Not assessed.</i>			
M3.E.3 M4.E.3 Understand and/or apply basic concepts of probability or outcomes.		M3&4.EA.3 Understand and/or apply basic concepts of probability or outcomes.	
M4.E.3.1 Predict and/or measure the likelihood of events.		M3&4.EA.3.1 Predict and/or measure the likelihood of events.	M3&4.EA.3.1 (LC) Selects most/least likely outcome, given the characteristics of a population
M3.E.4 M4.E.4 Develop and/or evaluate inferences and predictions or draw			

conclusions based on data or data displays.		
<i>Not assessed.</i>		

A hand is shown writing on a chalkboard. The board is covered with various mathematical formulas, including MV^2 , $\frac{1}{2}mv^2$, and $(MR^2 + Mh^2)$. The text is overlaid on the board.

*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content
MATHEMATICS

Grades 5 and 6

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Math

PSSA Numbering system

Example: M3.A.1.1

M = Math
 3 = Grade
 A = Reporting category (e.g., Numbers & Operations, Measurement, Geometry, Algebraic Concepts, Data Analysis & Probability)
 1 = Assessment anchor
 1 = Sub assessment anchor

PASA Numbering system

Example: M3&4.AA.1.1a (LC)

M = Math
 3&4 = Grade
 1st A = Reporting category
 2nd A = Alternate assessment
 1 = Assessment anchor
 1 = Sub assessment anchor
 a = Eligible content
 LC = Level

PSSA Assessment Anchor

PASA Assessment Anchor

M3.A Numbers and Operations			
M4.A			
M3.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.		M3&4.AA.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
PSSA ASSESSMENT ANCHOR		PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 3			
M3.A.1.1 Apply place-value concepts and numeration to counting, ordering, grouping, and equivalency.	M4.A.1.1 Use models and/or words to represent quantities as decimals, fractions, or mixed numbers.	M3&4.AA.1.1 Apply numeracy concepts and use models and fractions to represent quantities as part of a whole or part of a set.	M3&4.AA.1.1 (LA) Matches 2 sets of items with 1 item each – difference between target and closest choice is 12 units – sets are cut to size M3&4.AA.1.1 (LB) Matches numeral to quantity ≤ 5 – the target and 1 set are within +/- 5 M3&4.AA.1.1a (LC) Matches numeral to quantity ≤ 9 – the target and 2 sets are within +/- 5 M3&4.AA.1.1b (LC) Selects item divided evenly...

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards

**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
MATH
GRADES 5 & 6**

M5.A M6.A		Numbers and Operations	
M5.A.1 M6.A.1		Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
M5&6.AA.1		Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
PSSA ASSESSMENT ANCHOR		PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 5	GRADE 6		
M5.A.1.1 Express numbers in equivalent forms.	M6.A.1.1 Express numbers in equivalent forms.	M5&6.AA.1.1 Express numbers in equivalent forms (match).	M5&6.AA.1.1 (LA) Matches 2 sets of items with 1-2 items each M5&6.AA.1.1 (LB) Matches numeral to quantity
<i>M5.A.1.2 Demonstrate understanding of place value of whole numbers and decimals.</i>			
M5.A.1.3 Compare quantities or magnitudes of numbers.	M6.A.1.2 Compare quantities and/or magnitudes of numbers.	M5&6.AA.1.2 Compare quantities and numbers and magnitudes, including <ul style="list-style-type: none"> • compare quantities and numbers, • count, and • identify and count money. 	M5&6.AA.1.2a (LA) Orients toward materials M5&6.AA.1.2b (LA) Selects set with most/least – M5&6.AA.1.2c (LA) Selects one-dollar bill M5&6.AA.1.2a (LB) Counts aloud M5&6.AA.1.2b (LB) Counts aloud one-dollar bills or pennies M5&6.AA.1.2c (LB) Selects coin named M5&6.AA.1.2d (LB) Orders 3 sets of evenly spaced items ⁹ M5&6.AA.1.2e (LB) Orders 3 consecutive numbers or prices ⁹

			<p>M5&6.AA.1.2a (LC) Counts aloud items, dollars, or pennies in ordered array starting at 2 or more without a bridge</p> <p>M5&6.AA.1.2b (LC) Counts aloud by 2s or 5s in ordered array, numbers or dollars</p> <p>M5&6.AA.1.2c (LC) Selects penny, nickel, dime, or quarter based on value</p> <p>M5&6.AA.1.2d (LC) Names value of coin</p> <p>M5&6.AA.1.2e (LC) Orders 4 sets of evenly spaced items</p> <p>M5&6.AA.1.2f (LC) Orders 4 nonconsecutive numbers</p>
<i>M5.A.1.4 Use simple applications of negative numbers (number line, counting, temperature).</i>			
	<i>M6.A.1.4 Use or develop models to represent percents.</i>		
M5.A.1.5 Use or develop models to represent fractions and/or mixed numbers.		M5&6.AA.1.5 Use or develop models to represent fractions.	<p>M5&6.AA.1.5a (LC) Selects simple fraction</p> <p>M5&6.AA.1.5b (LC) Selects item divided evenly and in the number of pieces specified</p>
<i>M5.A.1.6 Apply number theory concepts (i.e., primes, factors, multiples, composites).</i>	<i>M6.A.1.3 Apply number theory of concepts (i.e., factors, multiples).</i>		

M5.A.2		Understand the meanings of operations, use operations and understand how they relate to each other.		M5/4.AA.2 Understand the meanings of operations, use operations and understand how they relate to each other.	
<i>M5.A.2.1 Solve problems involving decimals, fractions and/or whole numbers (straight computations or word problems).</i>					
		<i>M6.A.2.1 Select and/or use operations to simplify or solve problems.</i>			
M5.A.3		Compute accurately and fluently and make reasonable estimates.		M5&6.AA.1 Compute accurately and fluently and make reasonable estimates.	
M6.A.3					
M5.A.3.1 Apply estimation strategies to a variety of problems.		M6.A.3.1 Apply estimation strategies to a variety of problems.		M5&6.AA.3.1 Apply estimation strategies to a variety of problems.	
M5.A.3.2 Compute accurately without the use of a calculator (straight computation or 1 operation word problems).		M6.A.3.2 Solve problems with and without the use of a calculator.		M5&6.AA.3.1 (LC) Selects quantity that is enough M5&6.AA.3.2a (LC) Adds 2 numbers named and shown using a calculator or paper and pencil M5&6.AA.3.2b (LC) Adds 3 sets of similar items by counting M5&6.AA.3.2c (LC) Adds 3 numbers or prices named and shown using a calculator or paper and pencil M5&6.AA.3.2e (LC) Subtracts 2 numbers or prices named and shown using a calculator or paper and pencil M5&6.AA.3.2f (LC) Subtracts to identify part from whole by counting items	

M5.B M6.B Measurement			
M5.B.1 M6.B.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.		M5&6.BA.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.	
<i>M5.B.1.1</i> <i>Select appropriate units (customary or metric) to measure specific attributes of objects.</i>			
	M6.B.1.1 Compare and/or determine elapsed time.	M5&6.BA.1.1 Determine time Including <ul style="list-style-type: none"> • match times and • read digital and analog time. 	M5&6.BA.1.1a (LB) Matches digital time at 5-minute intervals M5&6.BA.1.1b (LB) Reads digital time at 1-hour intervals M5&6.BA.1.1a (LC) Matches identical analog and digital times M5&6.BA.1.1b (LC) Reads digital time A.1.1c (LC) Reads analog time
<i>M5.B.1.2</i> <i>Solve problems using simple conversions and/or add and subtract measurements.</i>			
<i>M5.B.1.3</i> <i>Estimate and/or compare the perimeters or areas of 2 figures without computation.</i>			

M5.B.2 Apply appropriate techniques, tools and formulas to determine measurements. M6.B.2		M5&6.BA.2 Apply appropriate techniques, tools and formulas to determine measurements.	
M5.B.2.1 Use appropriate tools to determine measurements.	M6.B.2.1 Choose or use appropriate tools and/or units to determine measurements within the same system.	M5&6.BA.2.1 Use appropriate tools to determine measurements Including <ul style="list-style-type: none"> • measure time, • measure length, • measure area, and • measure volume. 	M5&6.BA.2.1 (LA) Selects clock
			M5&6.BA.2.1a (LB) Measures length of item by counting M5&6.BA.2.1b (LB) Measures item area by counting units ≤ 9 M5&6.BA.2.1c (LB) Selects 1-cup measure
			M5&6.BA.2.1a (LC) Measures length of item using a ruler M5&6.BA.2.1b (LC) Selects measuring cup filled to the 1-cup or 2-cup line M5&6.BA.2.1c (LC) Selects item most appropriate for filling a larger item
M5.B.2.2 Solve problems involving length, time, weight (mass), capacity, temperature, perimeter, and/or area.	M6.B.2.2 Solve problems involving length, perimeter, area, and/or volume of geometric figures.	M5&6.BA.2.2 Solve problems involving length, area, volume, and capacity Including <ul style="list-style-type: none"> • match and compare length, • match and compare area, • match and compare volume, and • match and compare capacity. 	M5&6.BA.2.2a (LA) Matches objects, pictures, photographs of items of same length – M5&6.BA.2.2b (LA) Selects longest/shortest object picture, photograph M5&6.BA.2.2c (LA) Matches identical shapes of same size, objects of same size, pictures or photographs of items of same size M5&6.BA.2.2d (LA) Selects biggest/smallest shape, object, picture, photograph M5&6.BA.2.2e (LA) Selects item that holds the most/least M5&6.BA.2.2f (LA) Matches items with same capacity M5&6.BA.2.2g (LA) Matches items with same volume M5&6.BA.2.2h (LA) Selects biggest/smallest object by volume
			M5&6.BA.2.2j (LA) Matches pictures of items of M5&6.BA.2.2 (LB) Selects longest/shortest flexible item

M6.B.2.3 <i>Identify, label, and/or list properties of angles or triangles.</i>			
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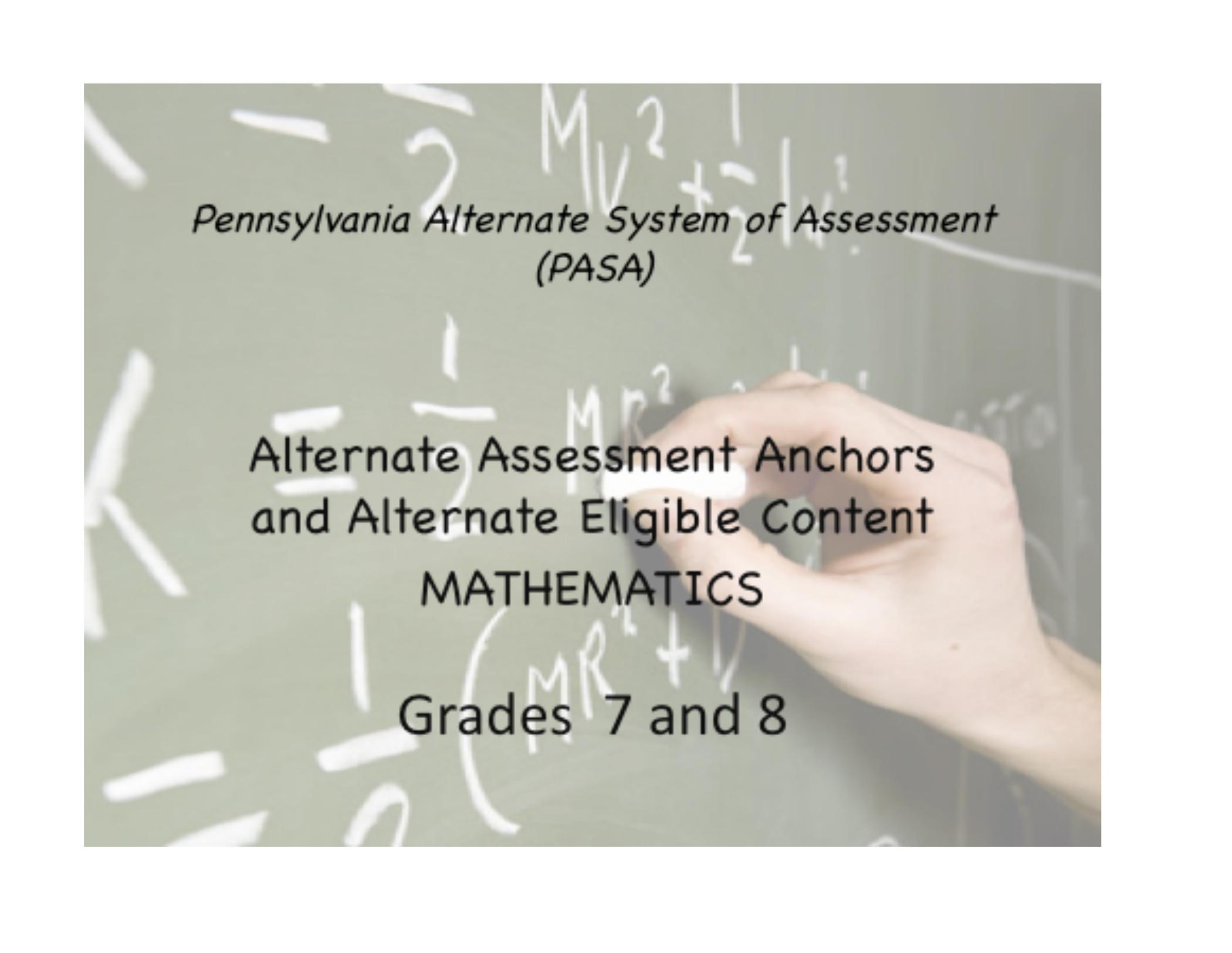
M5.C M6.C				Geometry			
M5.C.1 M6.C.1		Analyze characteristics and properties of two- and three-dimensional geometric shapes and demonstrate understanding of geometric relationships.		M5&6.CA.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.			
M5.C.1.1 Define and/or use basic properties of quadrilaterals (parallelograms, squares, rectangles, trapezoids, rhombi), triangles, circles, pyramids, cubes, and or prisms.		M6.C.1.1 Define and/or use basic properties of triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons, nonagons, decagons, and circles.		M5&6.CA.1.1 Use basic properties of 3-dimensional objects (sort).		M5&6.CA.1.1 (LA) Sorts 1 object into 1 of 3 existing groups	
						M5&6.CA.1.1 (LB) Sorts 4 items into 4 groups	
						M5&6.CA.1.1 (LC) Sorts 9 items into 4 groups –	
		<i>M6C.1.2 Represent and/or use properties of lines, line segments, rays, points, and planes.</i>					
M5.C.2 M6.C.2		Identify and/or apply concepts of transformations or symmetry.					
<i>M5.C.2.1 Analyze transformations and/or use symmetry to analyze mathematical situations.</i>							
M5.C.3 M6.C.3		Locate points or describe relationships using the coordinate plane.					
		<i>M6.C.3.1 Identify, plot, or match points given an ordered pair.</i>					

M5.D			
M6.D			
M5.D.1		Demonstrate an understanding of patterns, relations and functions.	
M6.D.1		Demonstrate an understanding of patterns, relations and functions.	
<i>M5.D.1.1</i>	<i>Create or extend patterns.</i>	<i>M6.D.1.1</i>	<i>Create or extend patterns.</i>
<i>M6.D.1.2</i>	<i>Analyze patterns.</i>		
M5.D.2		Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.	
M6.D.2		Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.	
<i>M5.D.2.1</i>	<i>Select and/or use appropriate strategies, including concrete materials, to solve or represent expressions or number sentences.</i>		
		<i>M6.D.2.1</i>	<i>Select and/or use appropriate strategies to solve number sentences.</i>
		<i>M6.D.2.2</i>	<i>Determine the missing number or symbol in a number sentence.</i>
		<i>M6.D.2.2</i>	<i>Create and/or interpret expressions or equations that model problem situations.</i>
M5.D.3		Analyze change in various contexts.	
M6.D.3		Analyze change in various contexts.	
<i>Not assessed.</i>			

M5.D.4	Describe or use models to represent quantitative relationships.	
M6.D.4		
<i>Not assessed.</i>		

M5.E	Data Analysis and Probability		
M6.E			
M5.E.1	Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.		M5&6.EA.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.
M6.E.1			
M5.E.1.1 Organize, display and or interpret data using pictographs, tallies, tables, charts, line, bar graphs.	6.E.1.1 Interpret data shown in frequency tables, histograms, circle, bar or double bar graphs, line or double line graphs or line plots.	M5&6.EA.1.1 Interpret data shown Including <ul style="list-style-type: none"> • interpret bar graphs and • interpret tables. 	M5&6.EA.1.1a (LB) Selects largest/smallest value M5&6.EA.1.1b (LB) Selects largest/smallest value from graph M5&6.EA.1.1c (LB) Locates number described in a one-variable display M5&6.EA.1.1a (LC) Selects largest/smallest value from graph M5&6.EA.1.1b (LC) Locates number described in a 7-8 item display
	<i>M6.E.1.2 Organize or display data using tables, bar graphs, line graphs, or pictographs.</i>		
M5.E.2	Select and/or use appropriate statistical methods to analyze data.		
M6.E.2			
<i>M5.E.2.1 Describe data sets using mean, median, mode, and/or range.</i>	<i>M6.E.2.1 Describe data sets using mean, median, mode, and/or range.</i>		

M5.E.3 M6.E.3 Understand and/or apply basic concepts of probability or outcomes.		M5&6.EA.3 Understand and/or apply basic concepts of probability or outcomes.	
M5.E.3.1 Predict or determine all possible combinations, outcomes and/or calculate the probability of a simple event.		M5&6.EA.3.1 Predict outcome and/or probability of a simple event.	M5&6.EA.3.1 (LC) Selects most/least likely outcome, given the characteristics of a population
	<i>M6.E.3.1 Determine all possible combinations, outcomes and/or calculate the probability of a simple event.</i>		
M5.E.4 M6.E.4 Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.			
<i>Not assessed.</i>			

A hand is shown writing on a chalkboard. The board is filled with various mathematical formulas and symbols, including MV^2 , $\frac{1}{2}mv^2$, MR^2 , and $(MR^2 + I)$. The text is overlaid on this background.

*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content

MATHEMATICS

Grades 7 and 8

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Math

PSSA Numbering system

Example: M3.A.1.1

M = Math
 3 = Grade
 A = Reporting category (e.g., Numbers & Operations, Measurement, Geometry, Algebraic Concepts, Data Analysis & Probability)
 1 = Assessment anchor
 1 = Sub assessment anchor

PASA Numbering system

Example: M3&4.AA.1.1a (LC)

M = Math
 3&4 = Grade
 1st A = Reporting category
 2nd A = Alternate assessment
 1 = Assessment anchor
 1 = Sub assessment anchor
 a = Eligible content
 LC = Level

PSSA Assessment Anchor

PASA Assessment Anchor

M3.A Numbers and Operations			
M4.A			
M3.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.		M3&4.AA.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
PSSA ASSESSMENT ANCHOR		PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 3			
M3.A.1.1 Apply place-value concepts and numeration to counting, ordering, grouping, and equivalency.	M4.A.1.1 Use models and/or words to represent quantities as decimals, fractions, or mixed numbers.	M3&4.AA.1.1 Apply numeracy concepts and use models and fractions to represent quantities as part of a whole or part of a set.	M3&4.AA.1.1 (LA) Matches 2 sets of items with 1 item each – difference between target and closest choice is 12 units – sets are cut to size M3&4.AA.1.1 (LB) Matches numeral to quantity ≤ 5 – the target and 1 set are within +/- 5 M3&4.AA.1.1a (LC) Matches numeral to quantity ≤ 9 – the target and 2 sets are within +/- 5 M3&4.AA.1.1b (LC) Selects item divided evenly...
M3.A.1.2 Use fractions to represent quantities as part of a whole or part of a set.			

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards

**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
MATH
GRADES 7 & 8**

M7.A		Numbers and Operations	
M8.A			
M7.A.1	Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	M7&8.AA.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
M8.A.1			
PSSA ASSESSMENT ANCHOR		PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 7	GRADE 8		
M7.A.1.1 Express numbers in equivalent forms.	M8.A.1.1 Represent numbers in equivalent forms.	M7&8.AA.1.1 Express equivalencies with numbers and quantities (match).	M7&8.AA.1.1a (LA) Matches identical numbers from 1-2 M7&8.AA.1.1b (LA) Matches 2 sets of items with 1-2 items each M7&8.AA.1.1 (LB) Matches numeral to quantity
M7.A.1.2 Compare quantities and/or magnitudes of numbers.		M7&8.AA.1.2 Compare quantities and magnitudes of numbers including <ul style="list-style-type: none"> • scan the array, • compare quantities, • count items, and • identify, count, and compare money/prices. 	M7&8.AA.1.2a (LA) Scans materials M7&8.AA.1.2b (LA) Selects set with 1 M7&8.AA.1.2c (LA) Selects set with most/least – M7&8.AA.1.2d (LA) Selects one- or five-dollar bill M7&8.AA.1.2a (LB) Counts aloud items or dollars starting at 2 or more with bridge M7&8.AA.1.2b (LB) Counts out items or dollars from a larger set M7&8.AA.1.2c (LB) Selects 1, 5, 10, or 25 cents based on value M7&8.AA.1.2d (LB) Orders 3 sets of evenly spaced items ≤ 19 M7&8.AA.1.2e (LB) Orders 3 consecutive numbers or prices

			<p>M7&8.AA.1.2a (LC) Counts aloud items or money using a combination of 1s and 5s or 1s and 10s</p> <p>M7&8.AA.1.2b (LC) Counts aloud coins</p> <p>M7&8.AA.1.2c (LC) Counts out a combination of one- and five-dollar bills or one- and ten-dollar bills from a larger set</p> <p>M7&8.AA.1.2d (LC) Counts out five-dollar bills to purchase item</p> <p>M7&8.AA.1.2e (LC) Selects item that can be purchased for the price named</p> <p>M7&8.AA.1.2f (LC) Orders 4 non consecutive numbers</p>
M7.A.2 M8.A.2	Understand the meanings of operations, use operations and understand how they relate to each other.	M7&8.AA.2 Understand the meanings of operations, use operations and understand how they relate to each other.	
M7.A.2.1 Complete calculations by applying the order of operations.	M8.A.2.1 Complete calculations by applying the order of operations.		
M7.A.2.2 Solve problems using ratios, proportions, percents, and/or rates.	M8.A.2.2 Represent or solve problems using rates, ratios, proportions, and/or percents.	M7&8.AA.2.2 Solve problems involving proportions (read, select, and determine sum of fractions).	M7&8.AA.2.2 (LB) Selects item divided evenly and in the number of pieces specified
			<p>M7&8.AA.2.2a (LC) Selects item divided evenly and in the number of pieces specified</p> <p>M7&8.AA.2.2b (LC) Selects picture with biggest/smallest fraction</p> <p>M7&8.AA.2.2c (LC) Reads simple fractions</p> <p>M7&8.AA.2.2d (LC) Selects sum of 2 moveable figures</p>
M7.A.3 M8.A.3	Compute accurately and fluently and make reasonable estimates.	M7&8.AA.3 Compute accurately and fluently and make reasonable estimates.	
M7.A.3.1 Apply estimation strategies to a variety of problems.		M7&8.AA.3.1 Apply estimation strategies (match approximately equal quantities).	M7&8.AA.3.1 (LC) Selects quantity that is enough

	<i>M8.A.3.1 Determine the appropriateness of overestimating, underestimating or calculating an exact answer in problem-solving situations.</i>		
M7.A.3.2 Compute accurately with and without use of a calculator.		M7&8.AA.3.2. Computes accurately (add, subtract, multiply, and divide).	<p>M7&8.AA.3.2a (LB) Adds 2 numbers or prices by counting M7&8.AA.3.2b (LB) Adds 3 numbers named and shown with sums ≤ 19 by counting M7&8.AA.3.2c (LB) Subtracts 2 numbers or dollars by counting items</p> <p>M7&8/AA.3.2a (LC) Adds 2 numbers or prices in a word problem M7&8.AA.3.2b (LC) Adds 3 numbers in a word problem M7&8.AA.3.2c (LC) Selects equation required to solve an addition word problem M7&8.AA.3.2d (LC) Subtracts 2 numbers or prices in a word problem M7&8.AA.3.2e (LC) Selects equation required to solve a subtraction word problem M7&8.AA.3.2f (LC) Multiplies numbers by counting M7&8.AA.3.2g (LC) Divides items by counting</p>
	<i>M8.A.3.2 Use estimation strategies in problem-solving situations.</i>		
M8.A.3.3 Compute and/or explain operations with integers, fractions, and/or decimals.			

M7.B M8.B Measurement			
M7.B.1 M8.B.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.		M7&8.BA.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.	
M7.B.1.1 Add, subtract, or convert measurements.	M8.B.1.1 Convert measurements.	M7&8.BA.1.1 Demonstrates understanding of measurements including <ul style="list-style-type: none"> • match and compare length, • match and compare area, • match and compare volume, • match and compare capacity, and • match and compare time. 	M7&8.BA.1.1a (LA) Matches objects, pictures of items of same length, photographs of items of same length M7&8.BA.1.1b (LA) Selects longest/shortest object, picture of item, photograph of item M7&8.BA.1.1c (LA) Matches identical shapes, objects, pictures, photographs of same size, M7&8.BA.1.1d (LA) Selects biggest/smallest shape, object, picture, photograph of item M7&8.BA.1.1e (LA) Matches items with same volume M7&8.BA.1.1f (LA) Selects biggest/smallest object by volume M7&8.BA.1.1g (LA) Matches items with same capacity M7&8.BA.1.1h (LA) Selects item that holds the most/least M7&8.BA.1.1i (LA) Matches item to space M7&8.BA.1.1j (LA) Selects full/empty item M7&8.BA.1.1k (LA) Selects clock by function M7&8.BA.1.1l (LA) Matches identical digital time
			M7&8.BA.1.1a (LB) Selects longest/shortest distance M7&8.BA.1.1b (LB) Reads analog time M7&8.BA.1.1c (LB) Reads digital time M7&8.BA.1.1d (LB) Selects activity that takes the most/least amount of time
			M7&8.BA.1.1a (LC) Matches closest digital

			<p>times</p> <p>M7&8.BA.1.1b (LC) Reads analog time</p> <p>M7&8.BA.1.1c (LC) Determines duration or wait time given 2 times</p> <p>M7&8.BA.1.1d (LC) Determines time in a word problem with hours and a starting time</p>
M7.B.2	Apply appropriate techniques, tools and formulas to determine measurements.	M7&8.BA.2	Apply appropriate techniques, tools and formulas to determine measurements.
M7.B.2.1	Develop, use, and/or describe strategies to find the measure of length, perimeter, circumference, area, or volume.	M7&8.BA.2.1	<p>Develop strategies for measurement including</p> <ul style="list-style-type: none"> • measure length, • measure area, and • measure volume.
			<p>M7&8.BA.2.1a (LB) Measures length of item</p> <p>M7&8.BA.2.1b (LB) Measures item area by counting</p> <p>M7&8.BA.2.1c (LB) Selects largest/smallest area by counting units</p> <p>M7&8.BA.2.1d (LB) Selects ½-cup measure</p>
			<p>M7&8.BA.2.1a (LC) Measures length of item to the 1/2-inch mark</p> <p>M7&8.BA.2.1b (LC) Measures to 1/2-cup using a measuring cup</p> <p>M7&8.BA.2.1c (LC) Measures whole number amount using 1/2 cup</p>
	<i>M8.B.2.1 Determine the measurement of a missing side(s) or angle(s) in a polygon.</i>		
M7.B.2.2	<i>Construct, interpret, and/or use scale drawings to solve real-world problems.</i>		
M8.B.2.2	<i>Use, describe, and/or develop procedures to determine measures of perimeter, circumference, area, surface area, and/or volume.</i>		

M7.C			
M8.C			
Geometry			
M7.C.1	Analyze characteristics and properties of two- and three-dimensional geometric shapes and demonstrate understanding of geometric relationships.	M7&8CA.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.	
M8.C.1			
M7.C.1.1 Define and/or apply basic properties of two- and three-dimensional geometric shapes.	M8.C.1.1 Identify, use, and/or describe properties of angles, triangles, quadrilaterals, circles, pyramids, cubes, prisms, spheres, cones, and/or cylinders.	M7&8.CA.1.1. Use basic properties of two- and three-dimensional figures (sort).	M7&8.CA.1.1 (LA) Sorts 1 object into 1 of 3 existing groups
			M7&8.CA.1.1 (LB) Sorts 8 items into 4 groups
			M7&8.CA.1.1 (LC) Sorts 9 items into 4 groups
<i>M7C.1.2 Identify congruence and/or similarity in polygons.</i>			
	<i>M8.C.1.2 Compute measures of sides of right triangles using the Pythagorean Theorem.</i>		
M7.C.2			
M8.C.2			
Identify and/or apply concepts of transformations or symmetry.			
<i>Not assessed.</i>			
M7.C.3			
M8.C.3			
Locate points or describe relationships using the coordinate plane.			
<i>M7.C.3.1 Locate, plot, and/or describe points on a coordinate plane.</i>	<i>M8.C.3.1 Plot and/or identify ordered pairs on a coordinate plane.</i>		

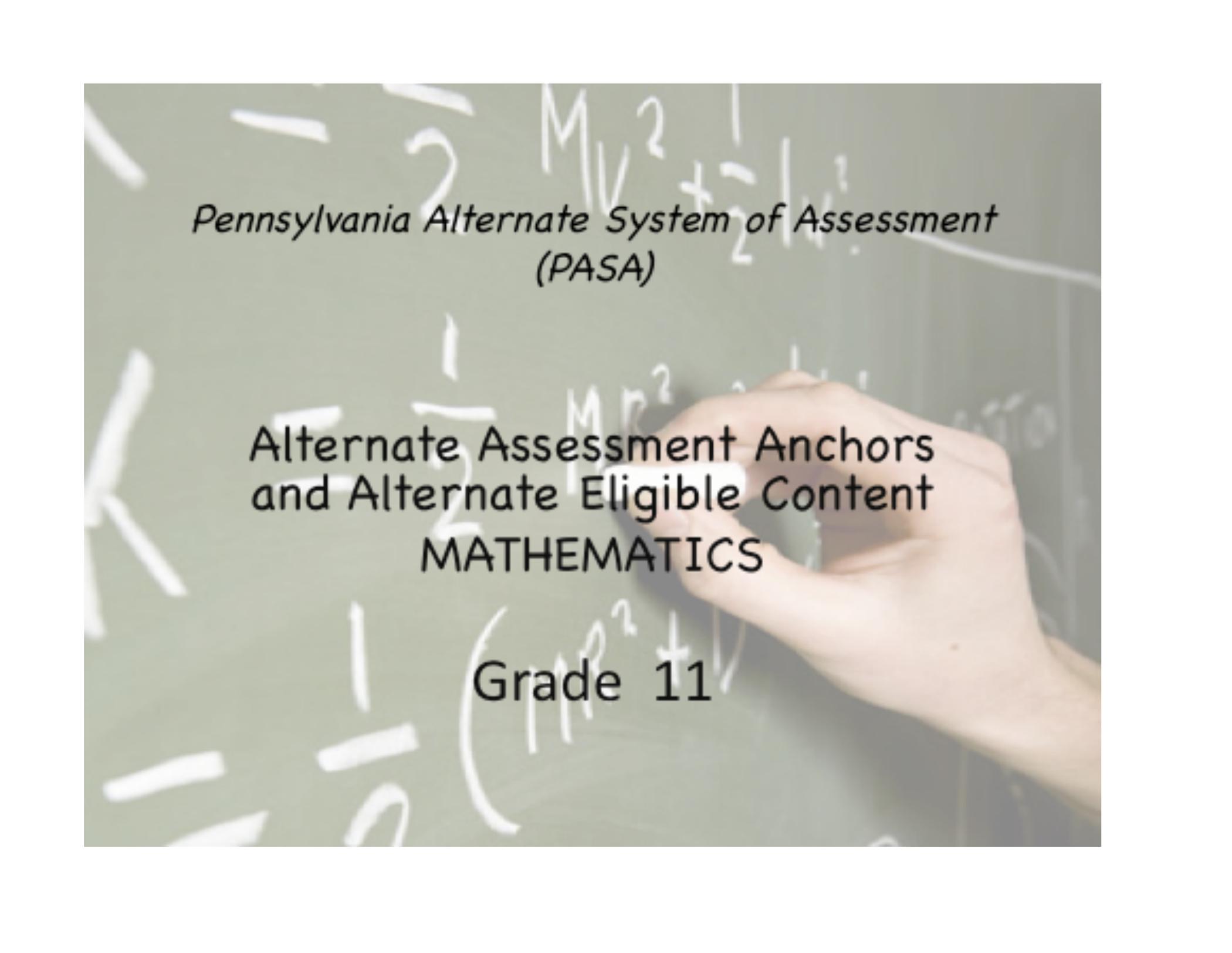
M7.D			
M8.D			
M7.D.1		M8.D.1	
Demonstrate an understanding of patterns, relations and functions.			
<i>M7.D.1.1</i> Recognize, reproduce, extend, and/or describe patterns.	<i>M8.D.1.1</i> Analyze, extend, or develop descriptions of patterns or functions.		
M7.D.2		M8.D.2	
Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.			
<i>M7.D.2.1</i> Select and/or use appropriate strategies to solve or represent equations or expressions.	<i>M8.D.2.1</i> Select and/or use a strategy to simplify an expression, solve an equation or inequality and/or check the solution for accuracy.		
<i>M7.D.2.2</i> Create and/or interpret expressions, equations, or inequalities that model problem situations	<i>M8.D.2.2</i> Create and/or interpret expressions, equations, or inequalities that model problem situations.		
M7.D.3		M8.D.3	
Analyze change in various contexts.			
<i>M7.D.3.1</i> Describe the relationship between two variables (e.g., time, temperature).			

M7.D.4 M8.D.4	Describe or use models to represent quantitative relationships.		
	<i>M8.D.4.1</i> <i>Represent relationships with tables or graphs on the coordinate plane.</i>		

M7.E M8.E	Data Analysis and Probability		
M7.E.1 M8.E.1	Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.	M7&8.EA.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.	
M7.E.1.1 Interpret data shown in complex data displays.	M8.E.1.1 Choose, display, or interpret data (tables, charts, graphs, etc.).	M7&8.EA.1.1 Interpret data displayed, including <ul style="list-style-type: none"> interpret graphs and interpret tables. 	M7&8.EA.1.1a (LB) Selects largest/smallest value M7&8.EA.1.1b (LB) Selects largest/smallest value from graph M7&8.EA.1.1c (LB) Locates number described in a 7-8 item display M7&8.EA.1.1 (LC) Locates number described in a 9-10 item, 3-variable display
		M7&8.EA.1.2 Describe data using mean, median, or mode.	M7&8.EA.1.2 (LC) Selects mode on graph
M7.E.2 M8.E.2	Select and/or use appropriate statistical methods to analyze data.	M7&8.E.2 Select and/or use appropriate statistical methods to analyze data.	
<i>M7.E.2.1</i> Describe, compare, and/or contrast data using mean, median, mode, or range.			

M7.E.3 M8.E.3	Understand and/or apply basic concepts of probability or outcomes.	M7&8.EA.3 Understand and/or apply basic concepts of probability or outcomes.	
M7.E.3.1 Determine theoretical or experimental probability.	M8.E.3.1 Calculate the probability of an event.	M7&8.EA.3.1 Determine the probability of an event.	M7&8.EA.3.1 (LC) Selects most/least likely item given the characteristics of a population
	<i>M8.E.3.2 Determine the number of combinations and/or permutations for an event.</i>		

M7.E.4 M8.E.4	Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.	M7&8.EA.4 Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.	
<i>M7.E.4.1 Draw conclusions and/or make predictions based on data displays.</i>	<i>M8.E.4.1 Draw conclusions, make inferences, and/or evaluate hypotheses based on statistical and data displays.</i>		

A hand is shown writing on a chalkboard. The board is covered with various mathematical formulas and symbols, including MV^2 , $\frac{1}{2}mv^2$, and $(mv^2 + v)$. The text is overlaid on the board.

*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content
MATHEMATICS

Grade 11

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Math

PSSA Numbering system

Example: M3.A.1.1

M = Math
 3 = Grade
 A = Reporting category (e.g., Numbers & Operations, Measurement, Geometry, Algebraic Concepts, Data Analysis & Probability)
 1 = Assessment anchor
 1 = Sub assessment anchor

PASA Numbering system

Example: M3&4.AA.1.1a (LC)

M = Math
 3&4 = Grade
 1st A = Reporting category
 2nd A = Alternate assessment
 1 = Assessment anchor
 1 = Sub assessment anchor
 a = Eligible content
 LC = Level

PSSA Assessment Anchor

PASA Assessment Anchor

M3.A Numbers and Operations			
M4.A			
M3.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.		M3&4.AA.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	
PSSA ASSESSMENT ANCHOR		PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 3			
M3.A.1.1 Apply place-value concepts and numeration to counting, ordering, grouping, and equivalency.	M4.A.1.1 Use models and/or words to represent quantities as decimals, fractions, or mixed numbers.	M3&4.AA.1.1 Apply numeracy concepts and use models and fractions to represent quantities as part of a whole or part of a set.	M3&4.AA.1.1 (LA) Matches 2 sets of items with 1 item each – difference between target and closest choice is 12 units – sets are cut to size M3&4.AA.1.1 (LB) Matches numeral to quantity ≤ 5 – the target and 1 set are within +/- 5 M3&4.AA.1.1a (LC) Matches numeral to quantity ≤ 9 – the target and 2 sets are within +/- 5 M3&4.AA.1.1b (LC) Selects item divided evenly...
M3.A.1.2 Use fractions to represent quantities as part of a whole or part of a set.			

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards .

**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
MATH
GRADE 11**

M11.A Numbers and Operations		
M11.A.1	Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.	M11.AA.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
M11.A.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, exponents, and scientific notation).	M11.AA.1.1 Demonstrate equivalencies (match and read numbers, sets, fractions).	M11.AA.1.1a (LA) Matches identical numbers M11.AA.1.1b (LA) Matches 2 sets of items with 1-5 items each
		M11.AA.1.1 (LB) Selects item divided evenly and in the number of pieces specified M11.AA.1.1a (LC) Selects item divided evenly and in the number of pieces specified M11.AA.1.1b (LC) Matches fraction shown to picture M11.AA.1.1c (LC) Reads mixed fractions M11.AA.1.1d (LC) Matches quantity to fraction M11.AA.1.1e (LC) Selects sum of 2 fixed figures M11.AA.1.1f (LC) Divides a group of items into fractional groups
M11.A.1.2 Apply number theory concepts to show relationships between real numbers in problem solving settings.	M11.AA.1.2 Compare quantities and numbers, including <ul style="list-style-type: none"> • scan materials, • compare quantities, • count, • identify and count money, and • identify fraction. 	M11.AA.1.2a (LA) Scans materials M11.AA.1.2b (LA) Selects set with 1 M11.AA.1.2c (LA) Selects set with most/least M11.AA.1.2d (LA) Selects one- or five- dollar bill M11.AA.1.2e (LA) Selects part or whole item
		M11.AA.1.2a (LB) Counts aloud items, dollars, or pennies starting at 10 or more without a bridge M11.AA.1.2b (LB) Counts aloud by 5s in an ordered array M11.AA.1.2c (LB) Counts out items or dollar bills from a larger set M11.AA.1.2f (LB) Names the value of a coin M11.AA.1.2g (LB) Orders 3 nonconsecutive

		numbers
		<p>M11.AA.1.2a (LC) Counts aloud items or money (bills or coins) by using a combination of 1s, 2s, 5s, 10s, or 20s</p> <p>M11.AA.1.2b (LC) Counts out a combination of one-, five-, ten-, and/or twenty-dollar bills</p> <p>M11.AA.1.2c (LC) Counts out various denominations of money to purchase item</p> <p>M11.AA.1.2d (LC) Selects item that can be purchased for the price named</p> <p>M11.AA.1.2e (LC) Orders 4 nonconsecutive numbers</p>
<i>M11.A.1.3 Estimate the value of an irrational number.</i>		
M11.A.2	Understand the meanings of operations, use operations and understand how they relate to each other.	
<i>M11.A.2.1 Apply ratio and/or proportions in problem-solving situations.</i>		
<i>M11.A.2.2 Use exponents, roots, and/or absolute value to solve problems.</i>		

M11.A.3	Compute accurately and fluently and make reasonable estimates.	M11.AA.3 Compute accurately and fluently and make reasonable estimates.	
M11.A.3.1 Apply the order of operations in computation and in problem-solving situations.	M11.AA.3.1 Computes accurately to solve problems (add, subtract, multiply, and divide).	<p>M11.AA.3.1a (LB) Adds 2 numbers or prices</p> <p>M11.AA.3.1b (LB) Adds 3 numbers</p> <p>M11.AA.3.1c (LB) Subtracts 2 numbers or prices</p> <p>M11.AA.3.1d (LB) Multiplies numbers by 2s or 5s with items by skip counting</p>	<p>M11.AA.3.1a (LC) Adds 2 numbers or prices in a word problem</p> <p>M11.AA.3.1b (LC) Adds 3 numbers in a word</p>

		<p>problem</p> <p>M11.AA.3.1c (LC) Selects equation required to solve an addition word problem with sums</p> <p>M11.AA.3.1d (LC) Subtracts 2 numbers or prices in a word problem</p> <p>M11.AA.3.1e (LC) Selects equation required to solve a subtraction word problem</p> <p>M11.AA.3.1f (LC) Multiplies numbers in a word problem</p> <p>M11.AA.3.1g (LC) Divides 2 numbers</p>
M11.A.3.2 Use estimation strategies in problem-solving situations.	M11.AA.3.2 Use estimation strategies in problem-solving situations (match similar quantities).	<p>M11.AA.3.2 (LB) Selects quantity that is enough</p> <p>M11.AA.3.2 (LC) Matches quantity that is enough</p>

M11.B Measurement		
M11.B.1	Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.	
Not assessed.		
M11.B.2	Apply appropriate techniques, tools and formulas to determine measurements.	M11.BA.2 Apply appropriate techniques, tools and formulas to determine measurements.
M11.B.2.1	Use and/or compare measurements of angles.	
M11.B.2.2	Use and/or develop procedures to determine or describe measures of perimeter, circumference, area, surface area, and/or volume. (May require conversions within the same system.)	<p>M11.BA.2.2 Determine measurements, including</p> <ul style="list-style-type: none"> • match, compare, and measure length; • match, compare, and measure area; • match, measure, and compare volume; • match and compare capacity; and, • match, read, and determine time. <p>M11.BA.2.2a (LA) Matches objects, pictures of items, photographs of items of same length</p> <p>M11.BA.2.2b (LA) Selects longest/shortest object, picture of item, photograph of item</p> <p>M11.BA.2.2c (LA) Matches identical shapes of same size, objects, pictures, photographs of same size</p> <p>M11.BA.2.2d (LA) Selects biggest/smallest shape</p> <p>M11.BA.2.2e (LA) Selects biggest/smallest object by area, picture, photograph</p> <p>M11.BA.2.2f (LA) Matches items with same volume</p>

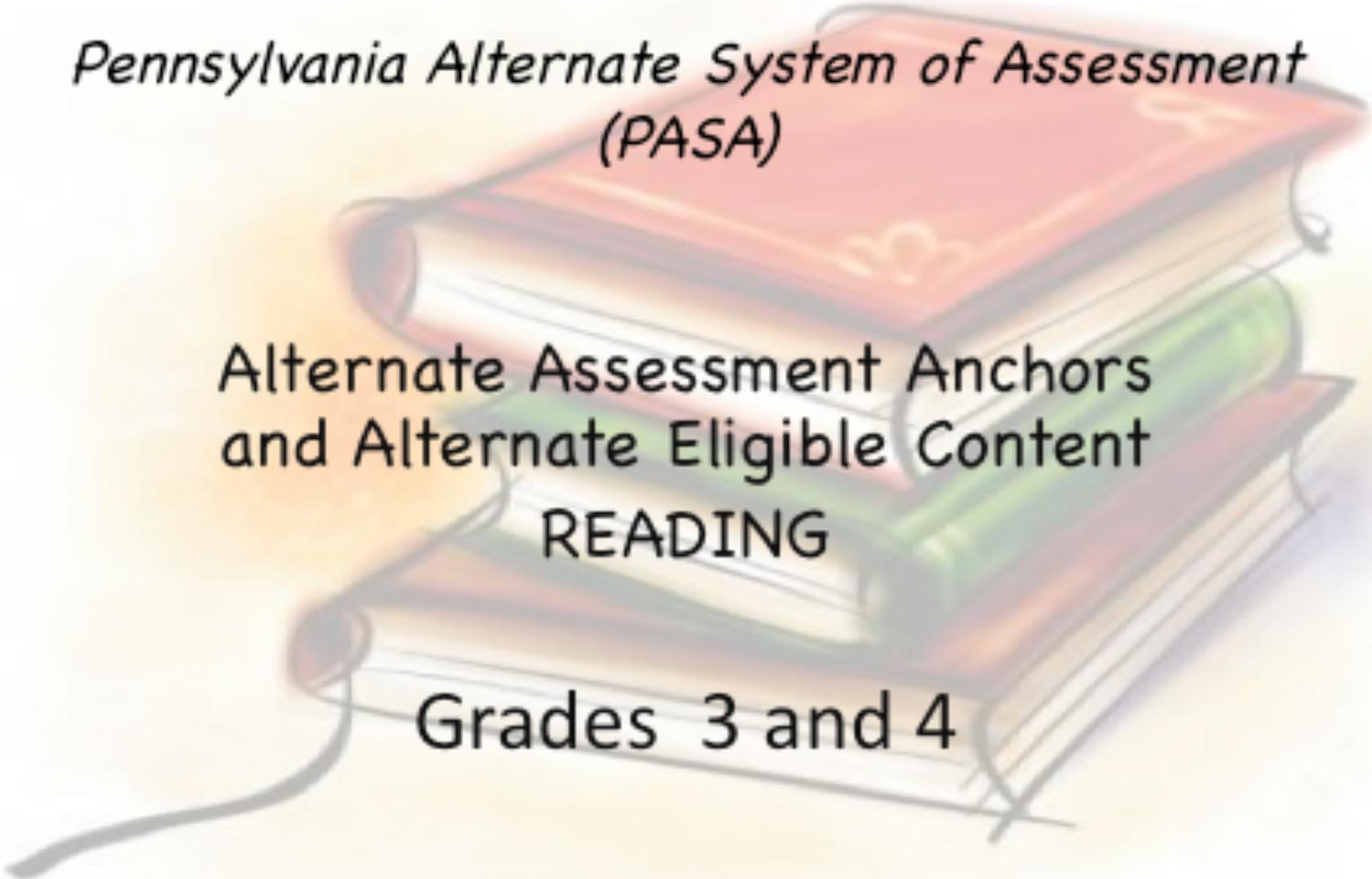
		<p>M11.BA.2.2g (LA) Selects biggest/smallest object by volume M11.BA.2.2h (LA) Matches items with same capacity M11.BA.2.2i (LA) Selects item that holds the most/least M11.BA.2.2j (LA) Matches item to space M11.BA.2.2k (LA) Selects half-filled item M11.BA.2.2l (LA) Matches identical digital times</p> <p>M11.BA.2.2a (LB) Measures length of item M11.BA.2.2b (LB) Measures composite item area by counting units M11.BA.2.2c (LB) Selects largest/smallest area in similar shapes M11.BA.2.2d (LB) Selects 1/4-cup measure M11.BA.2.2e (LB) Locates 1/2-cup or 1/4-cup line on a measuring cup M11.BA.2.2f (LB) Reads analog time M11.BA.2.2g (LB) Matches identical analog and digital times M11.BA.2.2h (LB) Selects activity that takes most/least amount of time</p> <p>M11.BA.2.2a (LC) Measures length of item M11.BA.2.2b (LC) Measures using a measuring cup M11.BA.2.2c (LC) Measures a larger amount using a fraction of a cup M11.BA.2.2d (LC) Matches closest digital and analog times M11.BA.2.2e (LC) Matches digital time to commonly used time phrases M11.BA.2.2f (LC) Determines duration or wait time given 2 times M11.BA.2.2g (LC) Determines time using a word problem with hours and a starting time</p>
<p>M11.B.2.3 Describe how a change in one dimension of a figure (2 or 3 dimensional) affects other measurements of that figure.</p>		

M11.C Geometry		
M11.C.1	Analyze characteristics and properties of two- and three-dimensional geometric shapes and demonstrate understanding of geometric relationships.	M11.CA.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.
ASSESSMENT ANCHOR	ALTERNATE ANCHOR	ALTERNATE SKILL ASSESSED
<i>M11.C.1.1 Identify and/or use parts of circles and segments associated with circles.</i>		
<i>M11.C.1.2 Recognize and/or apply properties of angles, triangles, and quadrilaterals.</i>		
M11.C.1.3 Use properties of congruence, correspondence and similarity in problem-solving settings involving two- and three-dimensional figures.	M11.CA.1.3 Use basic properties of two- and three-dimensional figures (sort).	M11.CA.1.3 (LA) Sorts 3 objects into each of 3 existing groups
		M11.CA.1.3 (LB) Sorts 9 items into 4 groups
		M11.CA.1.3 (LC) Sorts 9 items into 4 groups
<i>M11.C.1.4 Solve problems involving right triangles using the Pythagorean Theorem.</i>		
M11.C.2	Identify and/or apply concepts of transformations or symmetry.	
<i>Not assessed.</i>		
M11.C.3	Locate points or describe relationships using the coordinate plane.	
<i>M11.C.3.1 Solve problems using analytic geometry.</i>		

M11.D Algebraic Concepts		
M11.D.1	Demonstrate an understanding of patterns, relations and functions.	
	ASSESSMENT ANCHOR	ALTERNATE ANCHOR
		ALTERNATE SKILL ASSESSED
<i>M11.D.1.1</i>	<i>Analyze and/or use patterns or relations.</i>	
M11.D.2 Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.		
<i>M11.D.2.1</i>	<i>Write, solve, and/or graph linear equations and inequalities using various methods.</i>	
<i>M11.D.2.2</i>	<i>Simplify expressions involving polynomials.</i>	
M11.D.3 Analyze change in various contexts.		
<i>M11.D.3.1</i>	<i>Describe and/or determine change.</i>	
<i>M11.D.3.2</i>	<i>Compute and/or use the slope of a line.</i>	
M11.D.4 Describe or use models to represent quantitative relationships.		
<i>M11.D.4.1</i>	<i>Interpret and/or use linear, quadratic and/or exponential functions and their equations, graphs, or tables.</i>	

M11.E Data Analysis and Probability		
M11.E.1	Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.	M11.EA.1 Formulate or answer questions that can be addressed with data and/or organize, display, interpret, or analyze data.
ASSESSMENT ANCHOR	ALTERNATE ANCHOR	ALTERNATE SKILL ASSESSED
M11.E.1.1 Appropriately display and/or use data in problem-solving settings.	M11.EA.1.1 Interpret data shown, including <ul style="list-style-type: none"> • interpret bar graphs and • interpret tables. 	M11.EA.1.1a (LB) Selects largest/smallest value M11.EA.1.1b (LB) Selects largest/smallest value from graph M11.EA.1.1c (LB) Locates number described in a 9-10 item display
		M11.EA.1.1 (LC) Locates number described in 11-12 item, 3-variable display, with no teacher assistance in identifying the variables
	M11.EA.1.2 Use measures of central tendency to describe a set of data (select mean and mode).	M11.EA.1.2a (LC) Selects mode on graph M11.EA.1.2b (LC) Selects average value on graph M11.EA.1.2c (LC) Selects average across 4 values
M11.E.2	Select and/or use appropriate statistical methods to analyze data.	M11.EA.2 Select and/or use appropriate statistical methods to analyze data.
<i>M11.E.2.1 Use measures of central tendency to describe a set of data.</i>		
M11.E.3	Understand and/or apply basic concepts of probability or outcomes.	M11.EA.3 Understand and/or apply basic concepts of probability or outcomes.
M11.E.3.1 Apply probability and/or odds to practical situations.	M11.EA.3.1 Apply probability and/or odds to practical situations (select most/least likely outcome).	M.11.EA.3.1 (LC) Selects most/least likely outcome given the characteristics of a population
<i>M11.E.3.2 Apply counting techniques in problem-solving settings.</i>		

<p>M11.E.4 Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.</p>		
<p><i>M11.E.4.1 Make predictions using data displays and probability.</i></p>		
<p><i>M11.E.4.2 Analyze and/or interpret data on a scatter plot and/or use a scatter plot to make predictions.</i></p>		



*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content
READING

Grades 3 and 4

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Reading

PSSA Numbering system:

Example: R3.A.1&2.2

- R = Reading
- 3 = Grade
- A = Reporting category
- 1 & 2 = Assessment anchor (fiction and nonfiction have been collapsed together)
- 2 = Sub assessment anchor

PASA Numbering system:

Example: R3&4.AA.1&2.2a (LA)

- R = Reading
- 3&4 = Grade
- 1st A = Reporting category
- 2nd A – Alternate assessment
- 1&2 = Assessment anchor
- 2 = Sub assessment anchor
- a = Eligible content
- LA = Level

PSSA Assessment Anchor

PASA Assessment Anchor

R3.A R4.A Comprehension and Reading Skills		
R3.A.1&2 Understand fiction & nonfiction R4.A.1&2 appropriate to grade level.	R3&4.AA.1&2 Understand fiction & nonfiction that is age appropriate.	
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADES 3 AND 4 [Decoding Fiction & Nonfiction]		
R3.A.1&2.2 Identify and apply word recognition skills. R4.A.1&2.2 Identify and apply word recognition skills.	R3&4.AA.1&2.2 Identify and apply recognition skills, including <ul style="list-style-type: none"> • orienting, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	<p>R3&4.AA.1&2.2a (LA) Orients toward materials</p> <p>R3&4.AA.1&2.2b (LA) Matches identical objects – all choices look different from one another</p> <p>R3&4.AA.1&2.2a (LB) Matches identical words – all choices have same beginning and ending letters – words 4-5 letters in length</p> <p>R3&4.AA.1&2.2b (LB) Selects picture with same beginning sound named</p> <p>R3&4.AA.1&2.2a (LC) Selects 1 word named – all choices have same beginning 2 letters</p>

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards

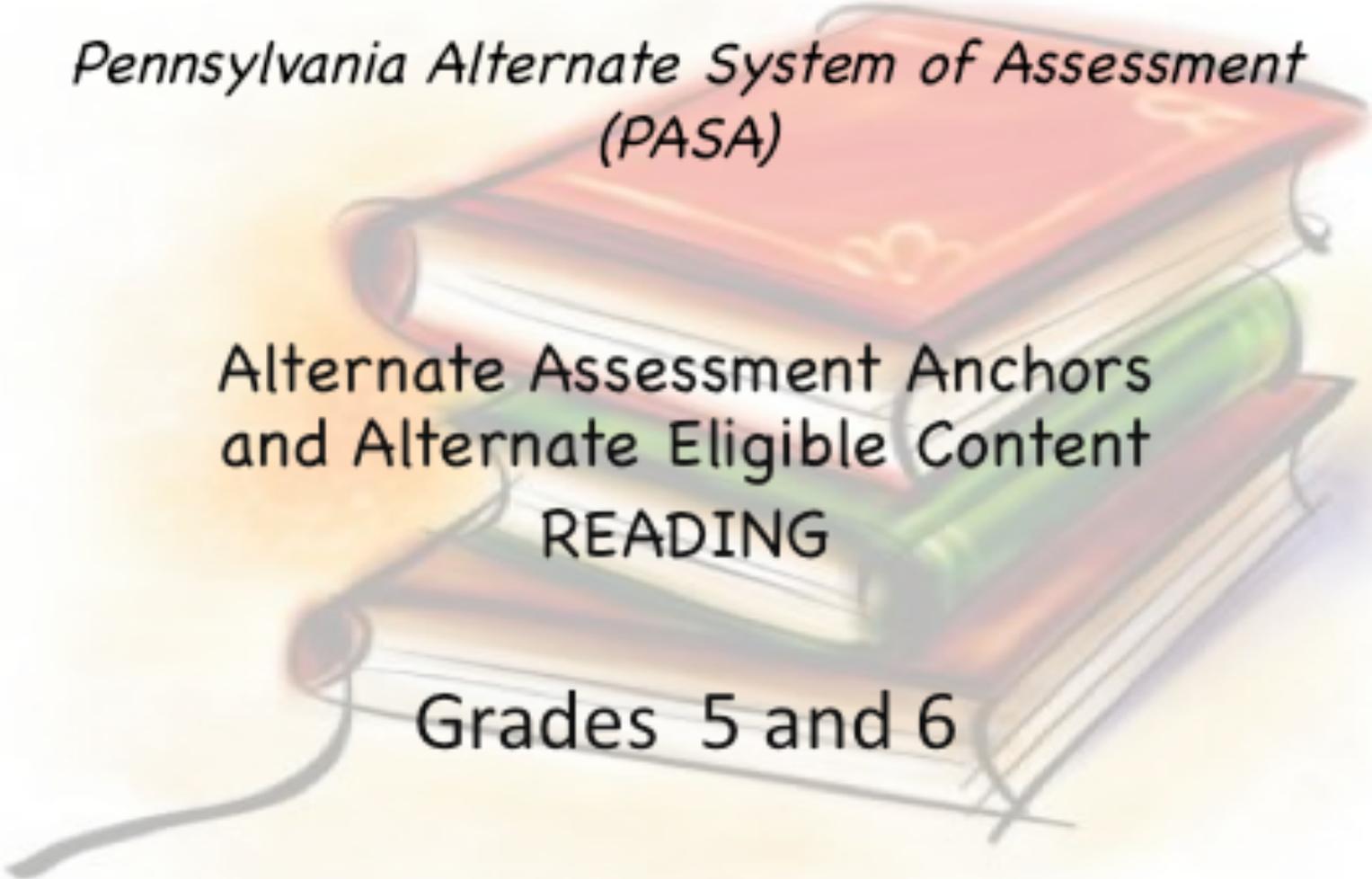
**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
READING
GRADES 3 & 4**

R3.A R4.A	Comprehension and Reading Skills	
R3.A.1&2 R4.A.1&2	Understand fiction & nonfiction appropriate to grade level.	R3&4.AA.1&2 Understand fiction & nonfiction that is age appropriate.
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADES 3 AND 4 [Decoding Fiction & Nonfiction]		
R3.A.1&2.2 Identify and apply word recognition skills. R4.A.1&2.2 Identify and apply word recognition skills.	R3&4.AA.1&2.2 Identify and apply recognition skills, including <ul style="list-style-type: none"> • orienting, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	R3&4.AA.1&2.2a (LA) Orients toward materials R3&4.AA.1&2.2b (LA) Matches identical objects R3&4.AA.1&2.2c (LA) Selects object named R3&4.AA.1&2.2a (LB) Matches identical words R3&4.AA.1&2.2b (LB) Selects picture with same beginning sound R3&4.AA.1&2.2c (LB) Selects picture of word that rhymes R3&4.AA.1&2.2d (LB) Names action in a complex picture R3&4.AA.1&2.2a (LC) Selects word named R3&4.AA.1&2.2b (LC) Selects picture of word read R3&4.AA.1&2.2c (LC) Selects word with same beginning sound R3&4.AA.1&2.2d (LC) Reads aloud 1 word embedded in a paragraph

<p>PSSA ASSESSMENT ANCHOR [Comprehension of Fiction & Nonfiction]</p>	<p>PASA ASSESSMENT ANCHOR</p>	<p>PASA ELIGIBLE CONTENT</p>
<p>R3.A.1&2.1 Identify and interpret the meaning of vocabulary. R4.A.1&2.1 Identify and interpret the meaning of vocabulary.</p>	<p>R3&4.AA.1&2.1 Identify the meaning of vocabulary, including</p> <ul style="list-style-type: none"> • relationship, • category, • function, and • definition. 	<p>R3&4.AA.1&2.1 (LA) Selects object by category, function, feature, or relationship R3&4.AA.1&2.1a (LB) Selects category of picture R3&4.AA.1&2.1b (LB) Selects icon by function R3&4.AA.1&2.1c (LB) Selects picture by feature, by part named, through association, to demonstrate meaning R3&4.AA.1&2.1d (LB) Matches pictures of the same item shown from different perspectives R3&4.AA.1&2.1e(LB) Locates item missing in a picture – open-ended response R3&4.AA.1&2.1a (LC) Selects another word within the same conceptual category R3&4.AA.1&2.1b (LC) Defines function of a word read</p>
<p>R3.A.1&2.4 Identify and explain the main ideas and relevant details. R4.A.1&2.4 Identify and explain the main ideas and relevant text.</p>	<p>R3&4.AA.1&2.4 Identify and explain the main ideas and relevant detail, including</p> <ul style="list-style-type: none"> • answering ‘w’ questions and • ordering events. 	<p>R3&4.AA.1&2.4 (LA) Answers literal comprehension questions: what, who R3&4.AA.1&2.4 (LB) Answers literal comprehension questions: what, who, where R3&4.AA.1&2.4a (LC) Answers literal comprehension questions: what’, who where, when R3&4.AA.1&2.4b (LC) Orders 3 pictures based on text</p>

NOT ASSESSED IN GRADES 3 & 4 ALTERNATE ASSESSMENT		
<i>R3.A.1&2.3 Make inferences and draw conclusions based on text.</i> <i>R4.A.1&2.3 Make inferences and draw conclusions based on text.</i>		
<i>R3.A.1&2.5 Summarize a fictional text as a whole.</i> <i>R4.A.1&2.5 Summarize a fictional text as a whole.</i>		
<i>R3.A.1&2.6 Identify genre of text.</i> <i>R4.A.1&2.6 Identify genre of text.</i>		

R3.B R4.B	Interpretation and Analysis of Fictional and Nonfictional Text
<i>NOT ASSESSED IN GRADES 3 & 4 ALTERNATE ASSESSMENT</i>	



*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content
READING

Grades 5 and 6

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Reading

PSSA Numbering system:

Example: R3.A.1&2.2

- R = Reading
- 3 = Grade
- A = Reporting category
- 1 & 2 = Assessment anchor (fiction and nonfiction have been collapsed together)
- 2 = Sub assessment anchor

PASA Numbering system:

Example: R3&4.AA.1&2.2a (LA)

- R = Reading
- 3&4 = Grade
- 1st A = Reporting category
- 2nd A – Alternate assessment
- 1&2 = Assessment anchor
- 2 = Sub assessment anchor
- a = Eligible content
- LA = Level

PSSA Assessment Anchor

PASA Assessment Anchor

R3.A R4.A Comprehension and Reading Skills		
R3.A.1&2 Understand fiction & nonfiction R4.A.1&2 appropriate to grade level.	R3&4.AA.1&2 Understand fiction & nonfiction that is age appropriate.	
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	
GRADES 3 AND 4 [Decoding Fiction & Nonfiction]	PASA ELIGIBLE CONTENT	
<p>R3.A.1&2.2 Identify and apply word recognition skills.</p> <p>R4.A.1&2.2 Identify and apply word recognition skills.</p>	<p>R3&4.AA.1&2.2 Identify and apply recognition skills, including</p> <ul style="list-style-type: none"> • orienting, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	<p>R3&4.AA.1&2.2a (LA) Orients toward materials</p> <p>R3&4.AA.1&2.2b (LA) Matches identical objects – all choices look different from one another</p> <p>R3&4.AA.1&2.2a (LB) Matches identical words – all choices have same beginning and ending letters – words 4-5 letters in length</p> <p>R3&4.AA.1&2.2b (LB) Selects picture with same beginning sound named</p> <p>R3&4.AA.1&2.2a (LC) Selects 1 word named – all choices have same beginning 2 letters</p>

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards

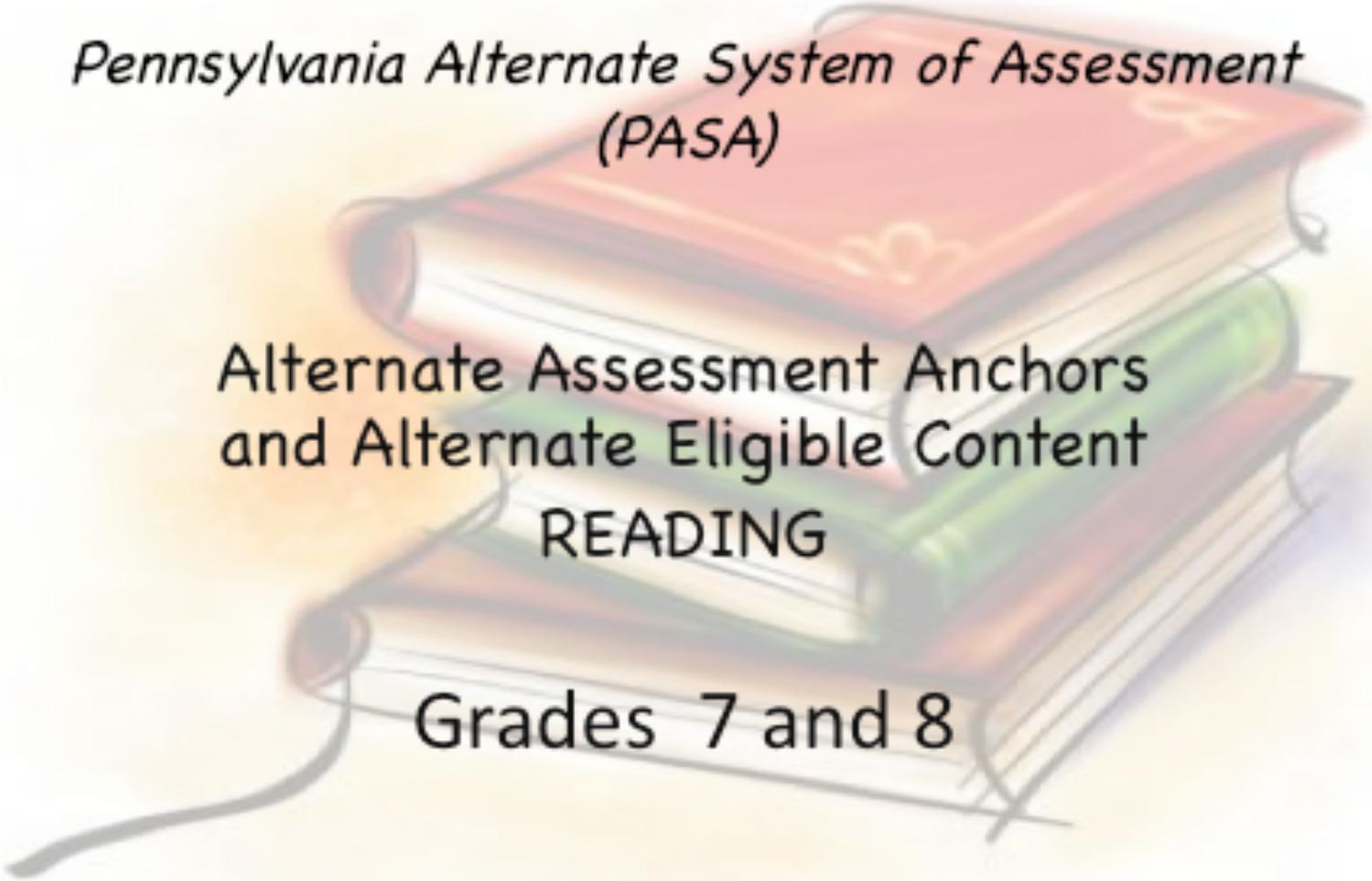
**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
READING
GRADE 5 & 6**

R5.A R6.A Comprehension and Reading Skills		
R5.A.1&2 Understand fiction & nonfiction R6.A.1&2 appropriate to grade level.	R5&6.AA.1&2 Understand fiction & nonfiction that is age appropriate.	
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADES 5 AND 6 [Decoding Fiction & Nonfiction]		
R5.A.1&2.2 Identify and apply word recognition skills. R6.A.1&2.2 Identify and apply word recognition skills.	R5&6.AA.1&2.2 Identify and apply word recognition skills, including, <ul style="list-style-type: none"> • orienting, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	R5&6.AA.1&2.2a (LA) Orients toward materials R5&6.AA.1&2.2b (LA) Matches identical objects R5&6.AA.1&2.2c (LA) Selects object named <hr/> R5&6.AA.1&2.2a (LB) Matches identical words R5&6.AA.1&2.2b (LB) Selects word named R5&6.AA.1&2.2c (LB) Selects picture with same beginning sound R5&6.AA.1&2.2d (LB) Selects picture of a word that does not rhymes R5&6.AA.1&2.2e (LB) Names place or activity in complex picture R5&6.AA.1&2.2f (LB) Names icon – open-ended response <hr/> R5&6.AA.1&2.2 (LC) Reads 2-10 words aloud

PSSA ASSESSMENT ANCHOR [Comprehension of Fiction & Nonfiction]	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
<p>R5.A.1&2.1 Identify and interpret the meaning of vocabulary.</p> <p>R6.A.1&2.1 Identify and apply the meaning of vocabulary.</p>	<p>R5&6.AA.1&2.1 Identify the meaning of vocabulary, including</p> <ul style="list-style-type: none"> • relationship, • category, • function, and • definition. 	<p>R5&6.AA.1&2.1 (LA) Selects object by relationship, category, function, feature target</p> <p>R5&6.AA.1&2.1a (LB) Selects category of a picture</p> <p>R5&6.AA.1&2.1b (LB) Selects icon by function</p> <p>R5&6.AA.1&2.1c (LB) Selects complex picture</p> <p>R5&6.AA.1&2.1d (LB) Gives an example of function of item in picture</p> <p>R5&6.AA.1&2.1 (LC) Demonstrates understanding of 2-10 word written command</p>
<p>R5.A.1&2.3 Make inferences, draw conclusions, and make generalizations based on text.</p> <p>R6.A.1&2.3 Make inferences, draw conclusions, and make generalizations based on text.</p>	<p>R5&6.AA.1&2.3 Make inferences and draws conclusions (completes a sentence).</p>	<p>R5&6.AA.1&2.3 (LB) Selects picture of last word missing in sentence</p> <p>R5&6.AA.1&2.3 (LC) Reads 2-10 word sentence and supplies word missing in sentence</p>
<p>R5.A.1&2.4 Identify and explain main ideas and relevant details.</p> <p>R6.A.1&2.4 Identify and explain main ideas and relevant details.</p>	<p>R5&6.AA.1&2.4 Identify and explain the main ideas and relevant details, including,</p> <ul style="list-style-type: none"> • answering ‘w’ questions and • ordering events. 	<p>R5&6.AA.1&2.4 (LA) Answers literal questions: what, who</p> <p>R5&6.AA.1&2.4a (LB) Answers literal questions: what, who, where, when</p> <p>R5&6.AA.1&2.4b (LB) Selects complex picture showing first or last event in story</p> <p>R5&6.AA.1&2.4a (LC) Answers literal questions: what, who, where, when, how</p> <p>R5&6.AA.1&2.4b (LC) Orders words representing main ideas from story</p>
<p>R5.A.1&2.5 Summarize a fictional/nonfictional text as a whole.</p> <p>R6.A.1&2.5 Summarize a fictional/nonfictional text as a whole.</p>	<p>R5&6.AA.1&2.5.1 Summarize a fictional/nonfictional text as a whole (describes events).</p>	<p>R5&6.AA.1&2.5a (LC) Describes 1 event from narrative text</p> <p>R5&6.AA.1&2.5b (LC) Names 1 fact from expository text</p>

NOT ASSESSED IN GRADES 5 & 6 ALTERNATE ASSESSMENT		
R5.A.1&2.6 Identify and describe genre of text.		
R6.A.1&2.6 Identify and describe genre of text.		

R5.B	Interpretation and Analysis of Fictional and Nonfictional Text
R6.B	
NOT ASSESSED IN GRADES 5 & 6 ALTERNATE ASSESSMENT	



*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content
READING

Grades 7 and 8

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Reading

PSSA Numbering system:

Example: R3.A.1&2.2

- R = Reading
- 3 = Grade
- A = Reporting category
- 1 & 2 = Assessment anchor (fiction and nonfiction have been collapsed together)
- 2 = Sub assessment anchor

PASA Numbering system:

Example: R3&4.AA.1&2.2a (LA)

- R = Reading
- 3&4 = Grade
- 1st A = Reporting category
- 2nd A – Alternate assessment
- 1&2 = Assessment anchor
- 2 = Sub assessment anchor
- a = Eligible content
- LA = Level

PSSA Assessment Anchor

PASA Assessment Anchor

R3.A R4.A Comprehension and Reading Skills		
R3.A.1&2 Understand fiction & nonfiction R4.A.1&2 appropriate to grade level.	R3&4.AA.1&2 Understand fiction & nonfiction that is age appropriate.	
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	
GRADES 3 AND 4 [Decoding Fiction & Nonfiction]	PASA ELIGIBLE CONTENT	
<p>R3.A.1&2.2 Identify and apply word recognition skills.</p> <p>R4.A.1&2.2 Identify and apply word recognition skills.</p>	<p>R3&4.AA.1&2.2 Identify and apply recognition skills, including</p> <ul style="list-style-type: none"> • orienting, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	<p>R3&4.AA.1&2.2a (LA) Orients toward materials</p> <p>R3&4.AA.1&2.2b (LA) Matches identical objects – all choices look different from one another</p> <p>R3&4.AA.1&2.2a (LB) Matches identical words – all choices have same beginning and ending letters – words 4-5 letters in length</p> <p>R3&4.AA.1&2.2b (LB) Selects picture with same beginning sound named</p> <p>R3&4.AA.1&2.2a (LC) Selects 1 word named – all choices have same beginning 2 letters</p>

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards

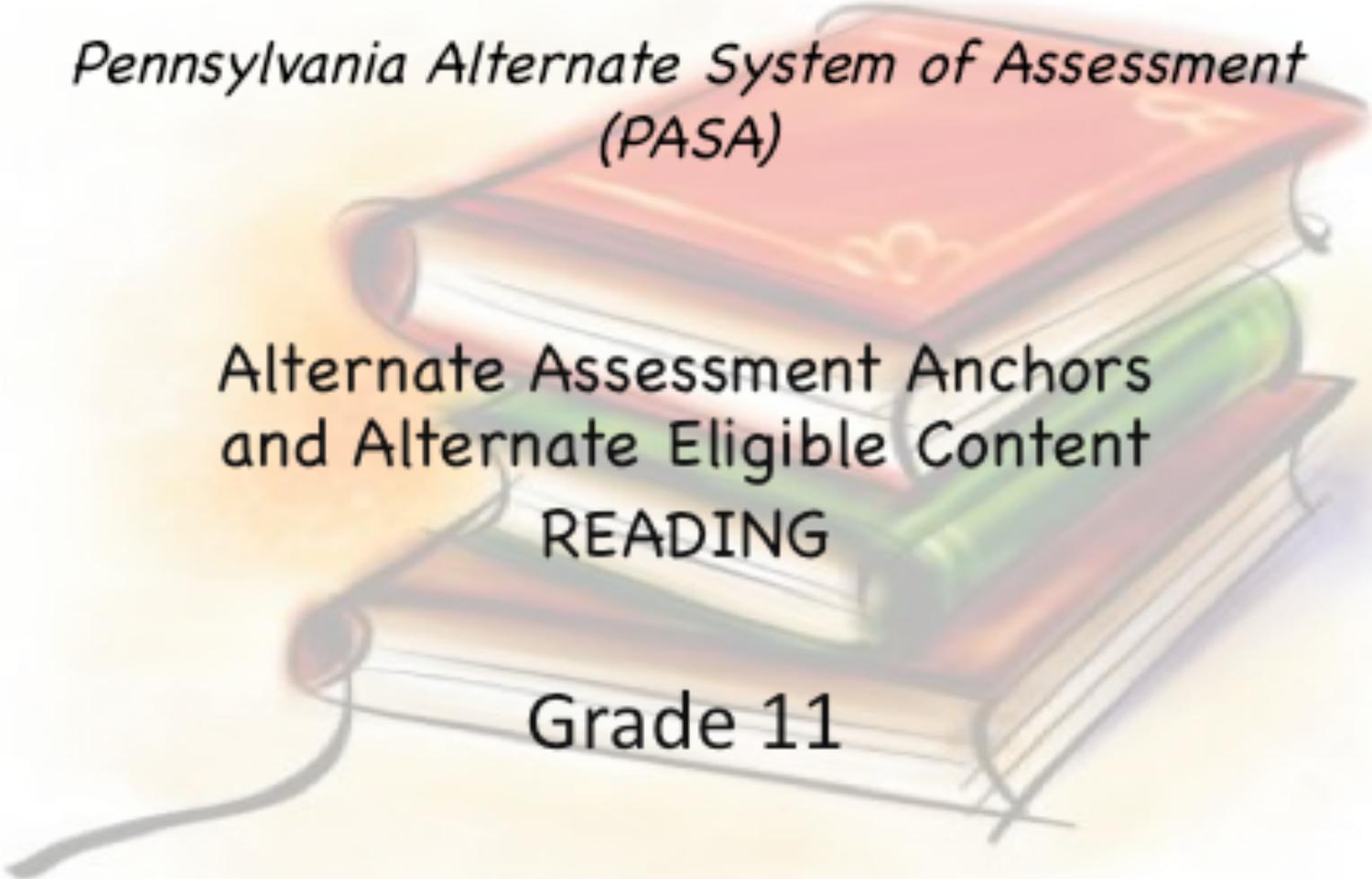
**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
READING
GRADE 7 & 8**

R7.A R8.A	Comprehension and Reading Skills	
R7.A.1&2 R8.A.1&2	Understand fiction & nonfiction appropriate to grade level.	R7&8.AA.1&2 Understand fiction & nonfiction that is age appropriate.
PSSA ASSESSMENT ANCHOR		
GRADES 7 AND 8 [Decoding Fiction & Nonfiction]		
	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
R7.A.1&2.2 Identify and apply word recognition skills. R8.A.1&2.2 Identify and apply word recognition skills.	R7&8.AA.1&2.2 Identify and apply word recognition skills, including, <ul style="list-style-type: none"> • scanning, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	R7&8.AA.1&2.2a (LA) Scans materials R7&8.AA.1&2.2b (LA) Matches identical pictures, photographs R7&8.AA.1&2.2c (LA) Selects picture or photograph named R7&8.AA.1&2.2a (LB) Selects word named R7&8.AA.1&2.2b (LB) Selects word with same beginning sound R7&8.AA.1&2.2c (LB) Selects picture of a word that rhymes R7&8.AA.1&2.2d (LB) Reads word with help of a complex picture R7&8.AA.1&2.2e (LB) Names 2 activities in a complex picture R7&8.AA.1&2.2 (LC) Reads 11-29 words out loud

PSSA ASSESSMENT ANCHOR [Comprehension of Fiction & Nonfiction]	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
<p>R7.A.1&2.1 Identify and apply the meaning of vocabulary.</p> <p>R8.A.1&2.1 Identify and apply the meaning of vocabulary.</p>	<p>R7&8.AA.1&2.1 Identify the meaning of vocabulary, including</p> <ul style="list-style-type: none"> • relationship, • category, • function, and • definition. 	<p>R7&8.AA.1&2.1 (LA) Selects similar pictures, related picture, category of picture or photograph, picture or photograph by function or feature</p> <p>R7&8.AA.1&2.1a (LB) Selects category of a word</p> <p>R7&8.AA.1&2.1b (LB) Selects complex picture showing 2 features named</p> <p>R7&8.AA.1&2.1c (LB) Gives an example of function of word</p> <p>R7&8.AA.1&2.1a (LC) Names item that can be used in place of another</p> <p>R7&8.AA.1&2.1b (LC) Demonstrates understanding of 11-29 word written command</p>
<p>R7.A.1&2.3 Make inferences, draw conclusions, and make generalizations based on text.</p> <p>R8.A.1&2.3 Make inferences, draw conclusions, and make generalizations based on text.</p>	<p>R7&8.AA.1&2.3 Make inferences and draws conclusions, including,</p> <ul style="list-style-type: none"> • completing a sentence and • answering inferential questions. 	<p>R7&8.AA.1&2.3 (LB) Selects last word missing in sentence</p> <p>R7&8.AA.1&2.3a (LC) Reads 11-29 word passage and supplies missing word</p> <p>R7&8.AA.1&2.3b (LC) Locates words by function</p> <p>R7&8.AA.1&2.3c (LC) Answers inferential questions: what, who, where, when'</p>
<p>R7.A.1&2.4 Identify and explain main ideas and relevant details.</p> <p>R8.A.1&2.4 Identify and explain main ideas and relevant details.</p>	<p>R7&8.AA.1&2.4 Identify and explain the main ideas and relevant details, including,</p> <ul style="list-style-type: none"> • answering literal comprehension questions and • sequencing events. 	<p>R7&8.AA.1&2.4 (LA) Answers literal questions: what, who, where</p> <p>R7&8.AA.1&2.4a (LB) Answers literal questions: who, what, where, when, why</p> <p>R7&8.AA.1&2.4b (LB) Selects complex picture showing next event in story</p> <p>R7&8.AA.1&2.4 (LC) Answers literal questions: what, who, where, when, why, how</p>
<p>R7.A.1&2.5 Summarize a fictional text as a whole.</p> <p>R8.A.1&2.5 Summarize a fictional text as a whole.</p>	<p>R7&8.AA.1&2.5 Summarize a fictional text as a whole.</p>	<p>R7&8.AA.1&2.5 (LB) Selects complex picture to identify main event from narrative text</p> <p>R7&8.AA.1&2.5a (LC) Describes 3 events from narrative text</p> <p>R7&8.AA.1&2.5b (LC) Names 3 facts from expository text</p>

NOT ASSESSED IN GRADES 7 & 8 ALTERNATE ASSESSMENT		
R7.A.1&2.6 Identify, describe, and analyze genre of text.		
R8.A.1&2.6 Identify, describe, and analyze genre of text.		

R7.B	Interpretation and Analysis of Fictional and Nonfictional Text
R8.B	
NOT ASSESSED IN GRADES 7 & 8 ALTERNATE ASSESSMENT	



*Pennsylvania Alternate System of Assessment
(PASA)*

Alternate Assessment Anchors
and Alternate Eligible Content
READING

Grade 11

The Layout of the PSSA Assessment Anchors and PASA Assessment Anchors Alignment Document

Reading

PSSA Numbering system:

Example: R3.A.1&2.2

- R = Reading
- 3 = Grade
- A = Reporting category
- 1 & 2 = Assessment anchor (fiction and nonfiction have been collapsed together)
- 2 = Sub assessment anchor

PASA Numbering system:

Example: R3&4.AA.1&2.2a (LA)

- R = Reading
- 3&4 = Grade
- 1st A = Reporting category
- 2nd A – Alternate assessment
- 1&2 = Assessment anchor
- 2 = Sub assessment anchor
- a = Eligible content
- LA = Level

PSSA Assessment Anchor

PASA Assessment Anchor

R3.A R4.A Comprehension and Reading Skills		
R3.A.1&2 Understand fiction & nonfiction R4.A.1&2 appropriate to grade level.	R3&4.AA.1&2 Understand fiction & nonfiction that is age appropriate.	
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	
GRADES 3 AND 4 [Decoding Fiction & Nonfiction]	PASA ELIGIBLE CONTENT	
<p>R3.A.1&2.2 Identify and apply word recognition skills.</p> <p>R4.A.1&2.2 Identify and apply word recognition skills.</p>	<p>R3&4.AA.1&2.2 Identify and apply recognition skills, including</p> <ul style="list-style-type: none"> • orienting, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	<p>R3&4.AA.1&2.2a (LA) Orients toward materials</p> <p>R3&4.AA.1&2.2b (LA) Matches identical objects – all choices look different from one another</p> <p>R3&4.AA.1&2.2a (LB) Matches identical words – all choices have same beginning and ending letters – words 4-5 letters in length</p> <p>R3&4.AA.1&2.2b (LB) Selects picture with same beginning sound named</p> <p>R3&4.AA.1&2.2a (LC) Selects 1 word named – all choices have same beginning 2 letters</p>

PSSA Sub Assessment Anchor

PASA Sub Assessment Anchor

PASA Eligible Content

The layout of this document reflects the organization of the PSSA assessment anchor content standards

**PASA ASSESSMENT ANCHORS AND ELIGIBLE CONTENT
READING
GRADE 11**

R11.A Comprehension and Reading Skills		
R11.A.1 Understand fiction & nonfiction appropriate to grade level.	R11.AA.1 Understand fiction & nonfiction that is age appropriate.	
PSSA ASSESSMENT ANCHOR	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
GRADE 11 [Decoding Fiction & Nonfiction]		
R11.A.1&2.2 Identify and apply word recognition skills.	R11.AA.1&2.2 Identify and apply word recognition skills, including, <ul style="list-style-type: none"> • scanning, • matching, • demonstrating phonemic awareness, • naming, and • reading. 	R11.AA.1&2.2a (LA) Scans materials
		R11.AA.1&2.2b (LA) Matches identical pictures or photographs
		R11.AA.1&2.2c (LA) Matches identical complex pictures
		R11.AA.1&2.2d (LA) Matches identical icons – other choices are pictures
		R11.AA.1&2.2e (LA) Selects picture or photograph named
		R11.AA.1&2.2a (LB) Selects word named
		R11.AA.1&2.2b (LB) Reads word in isolation
		R11.AA.1&2.2c (LB) Reads word in context
		R11.AA.1&2.2 (LC) Reads 30-50 words aloud

PSSA ASSESSMENT ANCHOR [Comprehension of Fiction & Nonfiction]	PASA ASSESSMENT ANCHOR	PASA ELIGIBLE CONTENT
R11.A.1&2.1 Identify and apply the meaning of vocabulary.	R11.AA.1&2.1 Identify the meaning of vocabulary, including <ul style="list-style-type: none"> • relationship, • category, and • function. 	R11.AA.1&2.1 (LA) Selects similar picture, related picture, category of picture or photograph, picture or photograph by function or feature R11.AA.1&2.1a (LB) Selects category of a word R11.AA.1&2.1b (LB) Selects complex picture showing 3 features named R11.AA.1&2.1c (LB) Gives an example of function of word read R11.AA.1&2.1a (LC) Identifies synonym for word read R11.AA.1&2.1b (LC) Demonstrates understanding of 30-50 word 2-step written command
R11.A.1&2.3 Make inferences, draw conclusions, and make generalizations based on text.	R11.AA.1&2.3 Make inferences and draws conclusions, including, <ul style="list-style-type: none"> • completing a sentence and • answering inferential questions. 	R11.AA.1&2.3 (LB) Selects last word missing in sentence using clue from picture R11.AA.1&2.3a (LC) Locates words by function in display of 30-50 words R11.AA.1&2.3b (LC) Reads 30-50 word passages and supplies missing word R11.AA.1&2.3c (LC) Answers inferential questions: who, what, where, when, how, why
R11.A.1&2.4 Identify and explain main ideas and relevant details.	R11.AA.1&2.4 Identify and explain the main ideas and relevant details, including, <ul style="list-style-type: none"> • answering literal comprehension questions and • sequencing events. 	R11.AA.1&2.4 (LA) Answers literal questions: what, who, where, R11.AA.1&2.4a (LB) Answers literal questions: what, who, where, when, why question – open-ended response R11.AA.1&2.4b (LB) Orders 3 complex pictures based on text R11.AA.1&2.4a (LC) Answers literal ‘when’ question – reading comprehension R11.AA.1&2.4b (LC) Answers literal ‘why’ question – reading comprehension R11.AA.1&2.4c (LC) Answers literal ‘how’ question – reading comprehension

<p>R11.A.1&2.5 Summarize a fictional text as a whole.</p>	<p>R11.AA.1&2.5 Summarize a fictional text as a whole.</p>	<p>R11.AA.1&2.5 (LB) Selects complex picture to identify main event from narrative text</p> <p>R11.AA.1&2.5a (LC) Describes 4 events from narrative text.</p> <p>R11.AA.1&2.5b (LC) Names 4 facts from expository text</p>
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NOT ASSESSED IN GRADE 11 ALTERNATE ASSESSMENT

<p>R11.A.1&2.6 Identify, describe, and analyze genre of text.</p>		
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R11.B Interpretation and Analysis of Fictional and Nonfictional Text

NOT ASSESSED IN GRADE 11 ALTERNATE ASSESSMENT

S4.B Biological Sciences

Reporting Category

S4.B.3 Ecological Behavior and Systems

ALTERNATE ASSESSMENT ANCHOR

ALTERNATE ELIGIBLE CONTENT

SKILL ASSESSED

S4.B.3.1

S4.B.3.1.1 Identify foods from plants and animals.

S4.B.3.1.1

Level C – Identify food that comes from plants or animals – all distracters are edible plants and food.

Level B – Identify food that comes from plants or animals – one distracter is food.

Level A – Selects object representing something that is edible.

S4.D Earth and Space Sciences

Reporting Category

S4.D.2 Weather, Climate, and Atmospheric Processes

ALTERNATE ASSESSMENT ANCHOR	ALTERNATE ELIGIBLE CONTENT	SKILL ASSESSED
S4.D.2.1	<p>S4.D.2.1.1 Identify common activities related to summer and winter.</p> <p>S4.D.2.1.2 Identify clothing related to summer and winter.</p> <p>S4.D.2.1.3 Identify a thermometer as an instrument to measure temperature.</p>	<p>S4.D.2.1.1 <u>Level C</u> - Identifies season associated with common activity. <u>Level B</u> - Identifies activity commonly associated with summer or winter – no overlap (overlap means that activities will typically only take place in specific season). <u>Level A</u> - Selects object associated with a common activity in summer and winter.</p> <p>S4.D.2.1.2 <u>Level C</u> - Names clothing related to summer and winter. <u>Level B</u> - Selects clothing worn in summer or clothing worn winter. <u>Level A</u> - Selects clothing worn in summer or worn in winter.</p> <p>S4.D.2.1.3 <u>Level C</u> - Describe function of thermometer. <u>Level B</u> - Selects thermometer. <u>Level A</u> – Matches thermometer in array – distracters all differ in appearance.</p>

	<p>S4.D.2.1.4 Identify weather conditions using observations.</p> <p>S4.D.2.1.5 Identify weather symbols on a weather map (sun, cloudy, rain, snow).</p> <p>S4.D.2.1.6 Identify appropriate precautions given an extreme weather condition.</p>	<p>S4.D.2.1.4 <u>Level C</u> - Places person describe within appropriate setting. <u>Level B</u> - Select complex picture of weather condition named. <u>Level A</u> –</p> <p>S4.D.2.1.5 <u>Level C</u> - Names weather symbol. <u>Level B</u> - Selects weather symbol. <u>Level A</u> – Matches items related to weather symbols – distracters are different in appearance.</p> <p>S4.D.2.1.6 <u>Level C</u> - Selects appropriate precaution to take in extreme weather from an array of 5 complex pictures. <u>Level B</u> - Selects picture representing item used in extreme weather. <u>Level A</u> – Selects item used to protect in extreme weather.</p>
<p>S4.D.2.2</p>	<p>S4.D.2.2.1 Identify trash from classroom or home that is commonly recycled.</p>	<p>S4.D.2.2.1 <u>Level C</u> – Identifies item within complex picture that is commonly recycled. <u>Level B</u> – Identify similar recycled item based on feature named. <u>Level A</u> – Matches identical objects that can be recycled.</p>

S4.D Earth and Space Sciences

Reporting Category

S4.D.2.2.2 Recognize examples of people wasting natural resources.

S4.D.2.2.2

Level C – Identifies complex picture of natural resources being wasted.

Level B – Identify means used to save a natural resource.

Level A

S8.B Biological Sciences

Reporting Category

S8.B.3 Ecological Behavior and Systems

ALTERNATE ASSESSMENT ANCHOR	ALTERNATE ELIGIBLE CONTENT	SKILL ASSESSED
S8.B.3.1	S8.B.3.1.1 Identifies natural resources that produce food products.	<p>S8.B.3.1.1</p> <p>Level C – Names what vegetable/animal a food product comes from.</p> <p>Level B – Selects picture of what vegetable/animal a food product comes from.</p> <p>Level A – Selects picture of vegetable/animal named – distracters are from difference categories.</p>

S8.D Earth and Space Sciences

Reporting Category

S8.D.2 Weather, Climate, and Atmospheric Processes

ALTERNATE ASSESSMENT ANCHOR	ALTERNATE ELIGIBLE CONTENT	SKILL ASSESSED
S8.D.2.1	S8.D.2.1.1 Identify various activities related to all four seasons.	<p>S8.D.2.1.1 <u>Level C</u> - Names season commonly related to an activity. <u>Level B</u> - Identifies activity commonly associated with one of the four seasons – 1 distracter overlaps (overlap means that activities will typically only take place in specific season). <u>Level A</u> - Selects picture associated with a season – no overlap.</p>
	S8.D.2.1.2 Identify clothing to wear related to extreme temperature differences.	<p>S8.D.2.1.2 <u>Level C</u> – Names article of clothing typically associated with a specific temperature. <u>Level B</u> – Identifies clothing typically associated with a specific temperature. <u>Level A</u> - Selects clothing associated with temperature – no overlap.</p>
	S8.D.2.1.3 Read a thermometer.	<p>S8.D.2.1.3 <u>Level C</u> – Reads a thermometer. <u>Level B</u> - Selects thermometer based on temperature. <u>Level A</u> – Matches temperature on thermometer in array – distracters 2x (means that the next closest temperature is twice as small/big as the target).</p>

	<p>S8.D.2.1.4 Describe weather conditions using observations.</p> <p>S8.D.2.1.5 Identify multiple weather conditions based on a weather map (sun, precipitation, cloud cover).</p> <p>S8.D.2.1.6 Describe appropriate precautions in given extreme weather conditions.</p>	<p>S8.D.2.1.4 <u>Level C</u> - Describes the weather within a complex picture. <u>Level B</u> - Names weather condition in a complex picture. <u>Level A</u> - Selects weather symbol named – distracters are different in appearance.</p> <p>S8.D.2.1.5 <u>Level C</u> - Names complex weather symbol. <u>Level B</u> - Selects complex weather symbol. <u>Level A</u> - Matches weather symbols on weather map – distracters are different in appearance.</p> <p>S8.D.2.1.6 <u>Level C</u> - Names 2 precautions to take in extreme weather. <u>Level B</u> - Names a precaution to take in extreme weather. <u>Level A</u> - Selects picture of item used to protect in extreme weather – distracters are different in appearance.</p>
<p>S8.D.2.2</p>	<p>S8.D.2.2.1 Categorize recyclable objects.</p>	<p>S8.D.2.2.1 <u>Level C</u> - Name two items commonly recycled from a specific category. <u>Level B</u> - Identifies two items within a complex picture that are commonly recycled. <u>Level A</u> - Matches pictures of items that can be recycled – distracters are not recyclable and differ in appearance.</p>

S8.D Earth and Space Sciences

Reporting Category

S8.D.2.2.2 Describe how to conserve natural resources.

S8.D.2.2.2

Level C – Name two ways natural resources can be conserved.

Level B – Identifies a way to conserve energy based on complex picture portraying wasting natural resources.

Level A

S11.B Biological Sciences

Reporting Category

S11.B.3 Ecological Behavior and Systems

ALTERNATE ASSESSMENT ANCHOR	ALTERNATE ELIGIBLE CONTENT	SKILL ASSESSED
S11.B.3.1	<p>S11.B.3.1.1 Identify steps of how products are made from natural resources.</p>	<p>S11.B.3.1.1 <u>Level C</u> – Sequences 4 pictures demonstrating steps in production process. <u>Level B</u> – Identifies first step in production process. <u>Level A</u> – Selects picture of natural resource to make a product – distracters are from similar category.</p>

S11.D Earth and Space Sciences

Reporting Category

S11.D.2 Weather, Climate, and Atmospheric Processes

ALTERNATE ASSESSMENT ANCHOR	ALTERNATE ELIGIBLE CONTENT	SKILL ASSESSED
S11.D.2.1	<p>S11.D.2.1.1 Identify effects of seasons on peoples' behavior and activities.</p> <p>S11.D.2.1.2 Uses a thermometer to compare temperatures of different substances.</p> <p>S11.D.2.1.3 Identify weather conditions using instruments.</p>	<p>S11.D.2.1.1 <u>Level C</u> - Compare/contrasts activities of the seasons. <u>Level B</u> - Identifies activity commonly associated with one of the four seasons – all distracters overlap (overlap means that activities will typically only take place in specific season). <u>Level A</u> - Selects picture associated with a season – 1 distracter similar in function.</p> <p>S8.D.2.1.2 <u>Level C</u> – Orders 4 temperatures on thermometers. <u>Level B</u> – Orders 3 temperatures on thermometers. <u>Level A</u> – Matches temperature on thermometer in array – distracters 1x (means that the next closest temperature is twice as small/big as the target).</p> <p>S11.D.2.1.3 <u>Level C</u> - Compare and contrast differences in amount of precipitation using instruments. <u>Level B</u> - Identify the most/least precipitation using an instrument. <u>Level A</u> – Matches picture of weather instruments – distracters look similar in appearance.</p>

S11.D Earth and Space Sciences

Reporting Category

	<p>S11.D.2.1.4 Compare weather conditions at different locations on a weather map (type of precipitation, amount of cloud cover).</p> <p>S11.D.2.1.5 Identify extreme weather conditions and describe appropriate precautions.</p>	<p>S11.D.2.1.4 <u>Level C</u> - Compare weather in various regions on weather map. <u>Level B</u> - Selects weather condition named on weather map. <u>Level A</u> – Matches weather symbols on weather map – distracters are similar in appearance.</p> <p>S11.D.2.1.5 <u>Level C</u> - Selects weather condition described by precautions that can be taken. <u>Level B</u> - Selects picture of weather condition described by precautions taken. <u>Level A</u> – Selects picture of item used to protect in extreme weather – distracters are similar in appearance.</p>
<p>S11.D.2.2</p>	<p>S11.D.2.2.1 Identify categories of recyclable and non-recyclable objects.</p>	<p>S11.D.2.2.1 <u>Level C</u> – Sorts 9 pictures of objects into recyclable or non-recyclable categories. <u>Level B</u> – Identifies category for a picture based on the recyclable product. <u>Level A</u> – Matches pictures of items that can be recycled – distracters are recyclable and similar in appearance.</p>

S11.D Earth and Space Sciences

Reporting Category

S11.D.2.2.2 Describe how pollution control related to conservation of natural resources.

S11.D.2.2.2

Level C – Describe how to conserve natural resources and how conservation affects pollution control.

Level B – Describes steps taken to reduce pollution and waste within a town.

Level A

APPENDIX F

PASA TEST BLUEPRINTS

2012/2014

PASA Math Grades 3 & 4 Level A Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M3&4.AA.1.1 M3&4.AA.1.2 M3&4.AA.1.3	M3&4.AA.1.1 (LA)	Matches 2 sets of items with 1 item each – difference between target and closest choice is 12 units - sets are cut to size	1	5	25
	M3&4.AA.1.2b (LA)	Selects set with most/least – difference between target and closest choice is 12 units - sets are cut to size	3		
	M3&4.AA.1.3 (LA)	Selects coin – all items differ in appearance	1		
Measurement M3&4.BA.1.1 M3&4.BA.1.2	M3&4.BA.1.1 (LA)	Selects clock - all items differ in appearance	1	13	65
	M3&4.BA.1.2a (LA)	Matches pictures of items of same length – difference between target and closest choice is 12 inches	1		
	M3&4.BA.1.2b (LA)	Matches objects of same length – difference between target and closest choice is 12 inches			
	M3&4.BA.1.2c (LA)	Matches photographs of items of same length – difference between target and closest choice is 12 inches	1		
	M3&4.BA.1.2d (LA)	Matches identical shapes of same size	1		
	M3&4.BA.1.2e (LA)	Matches objects of same size	1		
	M3&4.BA.1.2f (LA)	Matches photographs of items of same size	1		
	M3&4.BA.1.2g (LA)	Matches pictures of items of same size	1		
	M3&4.BA.1.2h (LA)	Selects biggest/smallest shape	2		
	M3&4.BA.1.2i (LA)	Selects biggest/smallest object by area	1		
	M3&4.BA.1.2j (LA)	Selects biggest/smallest photograph of item			
	M3&4.BA.1.2k (LA)	Selects biggest/smallest picture of item	1		
	M3&4.BA.1.2l (LA)	Matches objects with same volume	1		
	M3&4.BA.1.2m (LA)	Selects biggest/smallest object by volume			
	M3&4.BA.1.2n (LA)	Matches items with same capacity			
M3&4.BA.1.2o (LA)	Selects item that holds the most/least	1			
Geometry M3&4.CA.1.1	M3&4.CA.1.1 (LA)	Sorts 1 object into 1 of 3 existing groups – all groups differ in appearance	1	1	5
Algebra M3&4.DA.1.1	M3&4.DA.1.1 (LA)	Selects object that completes an ABAB repeating pattern - both distracter choices are not objects in the pattern	1	1	5

PASA Math Grades 5 & 6 Level A Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M5&6.AA.1.1 M5&6.AA.1.2	M5&6.AA.1.1 (LA)	Matches 2 sets of items with 1-2 items each – difference between target and closest choice is 9 units - sets are cut to size	1	5	25
	M5&6.AA.1.2b (LA)	Selects set with most/least – difference between target and closest choice is 9 units - sets are cut to size	3		
	M5&6.AA.1.2c (LA)	Selects one-dollar bill – all items differ in appearance	1		
Measurement M5&6.BA.2.1 M5&6.BA.2.2	M5&6.BA.2.1 (LA)	Selects clock - target and 1 other item are similar in appearance	1	13	65
	M5&6.BA.2.2a (LA)	Matches pictures of items of same length – difference between target and closest choice is 9 inches	1		
	M5&6.BA.2.2b (LA)	Matches objects of same length – difference between target and closest choice is 9 inches			
	M5&6.BA.2.2c (LA)	Matches photographs of items of same length – difference between target and closest choice is 9 inches	1		
	M5&6.BA.2.2d (LA)	Selects longest/shortest object - difference between target and closest choice is 9 inches	1		
	M5&6.BA.2.2e (LA)	Selects longest/shortest picture of item - difference between target and closest choice is 9 inches			
	M5&6.BA.2.2f (LA)	Selects longest/shortest photograph of item - difference between target and closest choice is 9 inches	1		
	M5&6.BA.2.2g (LA)	Matches identical shapes of same size	1		
	M5&6.BA.2.2h (LA)	Matches objects of same size	1		
	M5&6.BA.2.2i (LA)	Matches photographs of items of same size	1		
	M5&6.BA.2.2j (LA)	Matches pictures of items of same size	1		
	M5&6.BA.2.2k (LA)	Selects biggest/smallest shape	1		
	M5&6.BA.2.2l (LA)	Selects biggest/smallest object by area	1		
	M5&6.BA.2.2m (LA)	Selects biggest/smallest photograph of item			
	M5&6.BA.2.2n (LA)	Selects biggest/smallest picture of item			
	M5&6.BA.2.2o (LA)	Matches items with same volume	1		
	M5&6.BA.2.2p (LA)	Selects biggest/smallest object by volume	1		
	M5&6.BA.2.2q (LA)	Matches items with same capacity			
M5&6.BA.2.2r (LA)	Selects item that holds the most/least				
Geometry M5&6.CA.1.1	M5&6.CA.1.1 (LA)	Sorts 1 object into 1 of 3 existing groups – the target and 1 group are similar in appearance	1	1	5
Algebra M5&6.DA.1.1	M5&6.DA.1.1 (LA)	Selects object that completes an ABAB repeating pattern - one distracter choice is in the pattern and one distracter choice is not in the pattern	1	1	5

20 20 100

PASA Math Grades 7 & 8 Level A Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M7&8.AA.1.1 M7&8.AA.1.2	M7&8.AA.1.1a (LA)	Matches identical numbers from 1-2 - other items are pictures	1	5	25
	M7&8.AA.1.1b (LA)	Matches 2 sets of items with 1-2 items each – difference between target and closest choice is 6 units - sets are cut to size	1		
	M7&8.AA.1.2b (LA)	Selects set with 1 - difference between target and closest choice is 6 units - sets are cut to size	1		
	M7&8.AA.1.2c (LA)	Selects set with most/least – difference between target and closest choice is 6 units - sets are cut to size	2		
	M7&8.AA.1.2d (LA)	Selects one- or five-dollar bill – target and 1 other item are similar in appearance			
Measurement M7&8.BA.1.1	M7&8.BA.1.1a (LA)	Matches pictures of items of same length – difference between target and closest choice is 6 inches		13	65
	M7&8.BA.1.1b (LA)	Matches objects of same length – difference between target and closest choice is 6 inches			
	M7&8.BA.1.1c (LA)	Matches photographs of items of same length – difference between target and closest choice is 6 inches	1		
	M7&8.BA.1.1d (LA)	Selects longest/shortest object - difference between target and closest choice is 6 inches	1		
	M7&8.BA.1.1e (LA)	Selects longest/shortest picture of item - difference between target and closest choice is 6 inches			
	M7&8.BA.1.1f (LA)	Selects longest/shortest photograph of item - difference between target and closest choice is 6 inches	1		
	M7&8.BA.1.1g (LA)	Matches identical shapes of same size			
	M7&8.BA.1.1h (LA)	Matches objects of same size			
	M7&8.BA.1.1i (LA)	Matches photographs of items of same size	1		
	M7&8.BA.1.1j (LA)	Matches pictures of items of same size	1		
	M7&8.BA.1.1k (LA)	Selects biggest/smallest shape	1		
	M7&8.BA.1.1l (LA)	Selects biggest/smallest object by area	1		
	M7&8.BA.1.1m (LA)	Selects biggest/smallest photograph of item			
	M7&8.BA.1.1n (LA)	Selects biggest/smallest picture of item			
	M7&8.BA.1.1o (LA)	Matches items with same volume	1		
	M7&8.BA.1.1p (LA)	Selects biggest/smallest object by volume	1		
	M7&8.BA.1.1q (LA)	Matches items with same capacity			
	M7&8.BA.1.1r (LA)	Selects item that holds the most/least			
	M7&8.BA.1.1s (LA)	Selects item that will completely fit into a container - 2 choices do not fit into the container	1		
	M7&8.BA.1.1t (LA)	Selects full/empty item	1		
M7&8.BA.1.1u (LA)	Selects clock by function - all items are similar in appearance	1			
M7&8.BA.1.1v (LA)	Matches identical digital times from 1:00-2:00 - other items are pictures	1			

Geometry M7&8.CA.1.1.	M7&8.CA.1.1 (LA)	Sorts 1 object into 1 of 3 existing groups – all groups are similar in appearance	1	1	5
Algebra M7&8.DA.1.1	M7&8.DA.1.1 (LA)	Selects object that continues an ABCABC repeating pattern - both distracter choices are not objects in the pattern	1	1	5

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PASA Math Grades 11 Level A Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M11.AA.1.1 M11.AA.1.2	M11.AA.1.1a (LA)	Matches identical numbers from 1-5 - other items are icons	1	5	25
	M11.AA.1.1b (LA)	Matches 2 sets of items with 1-5 items each – difference between target and closest choice is 3 units - sets are on same-sized cards	2		
	M11.AA.1.2b (LA)	Selects set with 1 - difference between target and closest choice is 3 units - sets are on same-sized cards			
	M11.AA.1.2c (LA)	Selects set with most/least – difference between target and closest choice is 3 units - sets are on same-sized cards	1		
	M11.AA.1.2d (LA)	Selects one- or five-dollar bill – all items are similar in appearance			
	M11.AA.1.2e (LA)	Selects part or whole item	1		
Measurement M11.BA.2.2	M11.BA.2.2a (LA)	Matches pictures of items of same length – difference between target and closest choice is 3 inches	1	13	65
	M11.BA.2.2b (LA)	Matches objects of same length – difference between target and closest choice is 3 inches			
	M11.BA.2.2c (LA)	Matches photographs of items of same length – difference between target and closest choice is 3 inches	1		
	M11.BA.2.2d (LA)	Selects longest/shortest object - difference between target and closest choice is 3 inches	1		
	M11.BA.2.2e (LA)	Selects longest/shortest picture of item - difference between target and closest choice is 3 inches			
	M11.BA.2.2f (LA)	Selects longest/shortest photograph of item - difference between target and closest choice is 3 inches	1		
	M11.BA.2.2g (LA)	Matches identical shapes of same size			
	M11.BA.2.2h (LA)	Matches objects of same size			
	M11.BA.2.2i (LA)	Matches photographs of items of same size	1		
	M11.BA.2.2j (LA)	Matches pictures of items of same size	1		
	M11.BA.2.2k (LA)	Selects biggest/smallest shape	1		
	M11.BA.2.2l (LA)	Selects biggest/smallest object by area	1		
	M11.BA.2.2m (LA)	Selects biggest/smallest photograph of item			
	M11.BA.2.2n (LA)	Selects biggest/smallest picture of item			
	M11.BA.2.2o (LA)	Matches items with same volume	1		
	M11.BA.2.2p (LA)	Selects biggest/smallest object by volume	1		
	M11.BA.2.2q (LA)	Matches items with same capacity			
	M11.BA.2.2r (LA)	Selects item that holds the most/least			
	M11.BA.2.2s (LA)	Selects item that will completely fit into a container - one choice does not fit, one choice fits partially	1		
	M11.BA.2.2t (LA)	Selects half-filled item	1		
M11.BA.2.2u (LA)	Matches identical digital times from 1:00-5:00 - other items are numbers	1			

Geometry M11.CA.1.3	M11.CA.1.3 (LA)	Sorts 3 objects into each of 3 existing groups – all groups differ in appearance	1	1	5
Algebra M11.DA.1.1	M11.DA.1.1 (LA)	Selects object that continues an ABCABC repeating pattern - all choices are objects in the pattern	1	1	5
			20	20	100

PASA Math Grades 3 & 4 Level B Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012 & 2013	# of test items	% of test items
Numbers and Operations M3&4.AA.1.1 M3&4.AA.1.2 M3&4.AA.1.3	M3&4.AA.1.1 (LB)	Matches numeral to quantity ≤ 5 - the target and 1 set are within +/- 5	1	7	35%
	M3&4.AA.1.2a (LB)	Counts aloud ≤ 5 items in unordered array	2		
	M3&4.AA.1.2b (LB)	Reads number ≤ 19	1		
	M3&4.AA.1.3a (LB)	Counts aloud one-dollar bills or pennies $\leq \$5$ or 5¢	1		
	M3&4.AA.1.3b (LB)	Reads whole number price $\leq \$19$	2		
Measurement M3&4.BA.1.1 M3&4.BA.1.2 M3&4.BA.2.1	M3&4.BA.1.1 (LB)	Matches digital time at 30-minute intervals	1	7	35%
	M3&4.BA.1.2 (LB)	Selects longest/shortest item	2		
	M3&4.BA.2.1a (LB)	Measures length of item affixed to a ruler without numbers by counting ≤ 5 units	1		
	M3&4.BA.2.1b (LB)	Measures item area by counting ≤ 5 units	2		
	M3&4.BA.2.1c (LB)	Measures volume by counting ≤ 5 full units	1		
Geometry M3&4.CA.1.1	M3&4.CA.1.1 (LB)	Sorts 4 items into 4 groups - 2 groups are identical except for 1 feature - with model	1	1	5%
Data Analysis and Probability M3&4.EA.1.1	M3&4.EA.1.1a (LB)	Selects largest/smallest value from graph without numbers - ordered display	2	4	20%
	M3&4.EA.1.1b (LB)	Locates number described ≤ 5 in a one-variable display with 4 entries with teacher assistance in locating the appropriate row	2		
Algebra M3&4.DA.1.1	M3&4.DA.1.1 (LB)	Selects shape that is missing in an ABCABC pattern - distracters include all choices in the pattern	1	1	5%
Total			20	20	100%

PASA Math Grades 5 & 6 Level B Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M5&6.AA.1.1 M5&6.AA.1.2	M5&6.AA.1.1 (LB)	Matches numeral to quantity ≤ 9 - the target and 2 sets are within +/- 5	2	8	40%
	M5&6.AA.1.2a (LB)	Counts aloud ≤ 9 items in unordered array	1		
	M5&6.AA.1.2b (LB)	Counts aloud one-dollar bills or pennies $\leq \$9$ or 9¢	1		
	M5&6.AA.1.2c (LB)	Selects coin named - all items are money	2		
	M5&6.AA.1.2d (LB)	Orders 3 sets of evenly spaced items ≤ 9	1		
	M5&6.AA.1.2e (LB)	Orders 3 consecutive numbers ≤ 9			
	M5&6.AA.1.2f (LB)	Orders 3 consecutive prices $\leq \$9$	1		
Measurement M5&6.BA.1.1 M5&6.BA.2.1	M5&6.BA.1.1a (LB)	Matches digital time at 5-minute intervals	2	7	35%
	M5&6.BA.1.1b (LB)	Reads digital time at 1-hour intervals	1		
	M5&6.BA.2.1a (LB)	Measures length/width of item affixed to a ruler without numbers by counting ≤ 9 units	1		
	M5&6.BA.2.1b (LB)	Measures item area by counting units ≤ 9	1		
	M5&6.BA.2.1c (LB)	Selects 1-cup measure - choices are measuring cups and measuring spoons	1		
	M5&6.BA.2.2 (LB)	Selects longest/shortest flexible item	1		
Geometry M5&6.CA.1.1	M5&6.CA.1.1 (LB)	Sorts 4 items into 4 groups - 2 pairs of groups are identical except for one feature - with model	1	1	5%
Data Analysis and Probability M5&6.EA.1.1	M5&6.EA.1.1a (LB)	Selects largest/smallest value ≤ 9 in ordered display	1	3	15%
	M5&6.EA.1.1b (LB)	Selects largest/smallest value from graph without numbers - unordered display	1		
	M5&6.EA.1.1c (LB)	Locates number described ≤ 9 in a one-variable display with 5 entries with teacher assistance in locating the appropriate row	1		
Algebra M5&6.DA.1.1	M5&6.DA.1.1 (LB)	Selects shape that is missing in an ABBABB pattern - distracters include all choices in the pattern	1	1	5%
Total			20	20	100%

PASA Math Grades 7 & 8 Level B Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M7&8.AA.1.1 M7&8.AA.1.2 M7&8.AA.2.2	M7&8.AA.1.1 (LB)	Matches numeral to quantity ≤ 19 - all sets are within ± 5	1	9	45
	M7&8.AA.1.2a (LB)	Counts aloud ≤ 19 items starting at 2 or more with bridge			
	M7&8.AA.1.2b (LB)	Counts out items ≤ 19 from a larger unordered set			
	M7&8.AA.1.2c (LB)	Counts aloud one-dollar bills or pennies $\leq \$19$ or 19¢ starting at 2 or more with bridge	1		
	M7&8.AA.1.2d (LB)	Counts out one-dollar bills $\leq \$19$ from a larger set	1		
	M7&8.AA.1.2e (LB)	Selects 1, 5, 10, or 25 cents based on value - all choices are coins	1		
	M7&8.AA.1.2f (LB)	Orders 3 sets of evenly spaced items ≤ 19	1		
	M7&8.AA.1.2g (LB)	Orders 3 consecutive numbers from ≤ 19			
	M7&8.AA.1.2h (LB)	Orders 3 consecutive prices from \$10 to \$19	1		
	M7&8.AA.2.2 (LB)	Selects item divided evenly and in the number of pieces specified - the target and 1 other item are divided into equal parts	1		
	M7&8.AA.3.2a (LB)	Adds 2 numbers named and shown with sums ≤ 19 by counting			
	M7&8.AA.3.2b (LB)	Adds 3 numbers named and shown with sums ≤ 19 by counting			
	M7&8.AA.3.2c (LB)	Adds 2 prices with sums $\leq \$19$ by counting one-dollar bills	1		
	M7&8.AA.3.2d (LB)	Subtracts 2 numbers ≤ 19 by counting items	1		
M7&8.AA.3.2e (LB)	Subtracts 2 prices $\leq \$19$ by counting one-dollar bills				
Measurement M7&8.BA.1.1 M7&8.BA.2.1	M7&8.BA.1.1a (LB)	Selects longest/shortest distance - all have different 10s place	1	6	30
	M7&8.BA.1.1b (LB)	Reads analog time at 1-hour intervals	1		
	M7&8.BA.1.1c (LB)	Reads digital time at 5-minute intervals			
	M7&8.BA.1.1d (LB)	Selects activity that takes the most/least amount of time from a 7-8 item table of 4 times with hours	1		
	M7&8.BA.2.1a (LB)	Measures length/width of item affixed to a ruler with 1-inch markings	1		
	M7&8.BA.2.1b (LB)	Measures item area by counting units ≤ 19			
	M7&8.BA.2.1c (LB)	Selects largest/smallest area by counting units ≤ 19 - orientation of items in array differs	1		
	M7&8.BA.2.1d (LB)	Selects 1/2-cup measure - choices are measuring cups and measuring spoons	1		
Geometry M7&8.CA.1.1.	M7&8.CA.1.1 (LB)	Sorts 8 items into 4 groups - all groups are similar in appearance - no model	1	1	5

Data Analysis and Probability M7&8.EA.1.1.1	M7&8.EA.1.1a.(LB)	Selects largest/smallest value ≤ 19 in unordered display	1	3	15
	M7&8.EA.1.1b (LB)	Selects largest/smallest value from graph of ordered numbers ≤ 19	1		
	M7&8.EA.1.1c (LB)	Locates number described ≤ 19 in a 7-8 item display with teacher assistance in locating the appropriate row	1		
Algebra M7&8.DA.1.1	M7&8.DA.1.1 (LB)	Selects number missing in an odd/even number pattern ≤ 19 - distracters include 2 adjacent numbers	1	1	5

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PASA Math Grades 11 Level B Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M11.AA.1.1 M11.AA.1.2 M11.AA.3.1 M11.AA.3.2	M11.AA.1.1 (LB)	Selects item divided evenly and in the number of pieces specified - the target and 2 other items are divided into equal parts	1	10	50
	M11.AA.1.2a (LB)	Counts aloud ≤ 99 items starting at 10 or more without a bridge	1		
	M11.AA.1.2b (LB)	Counts aloud ≤ 95 items by 5s in ordered array	1		
	M11.AA.1.2c (LB)	Counts out items ≤ 99 from a larger unordered set			
	M11.AA.1.2d (LB)	Counts aloud one-dollar bills or pennies $\leq \$99$ or 99¢ starting at 10 or more without a bridge			
	M11.AA.1.2e (LB)	Counts out one-dollar bills $\leq \$99$ from a larger set	1		
	M11.AA.1.2f (LB)	Names the value of a coin	1		
	M11.AA.1.2g (LB)	Orders 3 nonconsecutive numbers ≤ 99	1		
	M11.AA.3.1a (LB)	Adds 2 numbers named and shown with sums ≤ 99 using a calculator or paper and pencil	1		
	M11.AA.3.1b (LB)	Adds 3 numbers named and shown with sums ≤ 99 using a calculator or paper and pencil			
	M11.AA.3.1c (LB)	Adds 2 prices named and shown with sums $\leq \$99$ using a calculator or paper and pencil			
	M11.AA.3.1d (LB)	Subtracts 2 numbers named and shown with numbers ≤ 99 using a calculator or paper and pencil			
	M11.AA.3.1e (LB)	Subtracts 2 prices named and shown with numbers $\leq \$99$ using a calculator or paper and pencil	1		
	M11.AA.3.1f (LB)	Multiplies numbers by 2s or 5s with items by skip counting with products ≤ 99	1		
M11.AA.3.2 (LB)	Selects quantity that is enough ≤ 19 - the target and 2 sets are within +/- 5	1			
Measurement M11.BA.2.2	M11.BA.2.2a (LB)	Measures length/width of item using a ruler with 1-inch markings	1	5	25
	M11.BA.2.2b (LB)	Measures composite item area by counting units ≤ 99	1		
	M11.BA.2.2c (LB)	Selects largest/smallest area in similar shapes			
	M11.BA.2.2d (LB)	Selects 1/4-cup measure - choices are measuring cups	1		
	M11.BA.2.2e (LB)	Locates 1/2-cup or 1/4-cup line on a measuring cup with 4 marked quantities			
	M11.BA.2.2f (LB)	Reads analog time at 15-minute intervals	1		
	M11.BA.2.2g (LB)	Matches identical analog and digital times at 15-minute intervals			
	M11.BA.2.2h (LB)	Selects activity that takes the most/least amount of time	1		
Geometry M11.CA.1.3	M11.CA.1.3 (LB)	Sorts 9 items into 4 groups - 2 groups are identical except for 1 feature - no model	1	1	5

Data Analysis and Probability M11.EA.1.1	M11.EA.1.1a (LB)	Selects largest/smallest value ≤ 99 in unordered display	1	3	15
	M11.EA.1.1b (LB)	Selects largest/smallest value from graph of unordered numbers ≤ 99	1		
	M11.EA.1.1c (LB)	Locates number described ≤ 99 in a 9-10 item display without teacher assistance in locating the appropriate row	1		
Algebra M11.DA.1.1	M11.DA.1.1 (LB)	Selects number missing in an odd/even number pattern ≤ 99 - distracters include 2 adjacent numbers	1	1	5

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PASA Math Grades 3 & 4 Level C Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M3&4.AA.1.1 M3&4.AA.1.2 M3&4.AA.1.3 M3&4.AA.3.1	M3&4.AA.1.1a (LC)	Matches numeral to quantity ≤ 9 - the target and 2 sets are within ± 5	1	11	55
	M3&4.AA.1.1b (LC)	Selects item divided evenly and in the number of pieces specified - the target and 1 other item are divided into equal parts	1		
	M3&4.AA.1.2a (LC)	Counts aloud ≤ 9 items in ordered array	1		
	M3&4.AA.1.2b (LC)	Orders 4 sets of evenly spaced items ≤ 9	1		
	M3&4.AA.1.2c (LC)	Orders 4 consecutive numbers ≤ 9			
	M3&4.AA.1.2d (LC)	Counts out ≤ 9 items from a larger unordered set			
	M3&4.AA.1.3a (LC)	Selects one-, five-, ten-, or twenty-dollar bill - all choices differ in appearance	1		
	M3&4.AA.1.3b (LC)	Names penny, nickel, dime, or quarter	1		
	M3&4.AA.1.3c (LC)	Counts aloud one-dollar bills or pennies $\leq \$9$ or 9¢			
	M3&4.AA.1.3d (LC)	Counts out one-dollar bills $\leq \$9$ from a larger set	1		
	M3&4.AA.3.1a (LC)	Adds 2 sets of items with sums ≤ 9 by counting			
	M3&4.AA.3.1b (LC)	Adds 2 sets of similar items with sums ≤ 9 by counting			
	M3&4.AA.3.1c (LC)	Adds 3 sets of items with sums ≤ 9 by counting	1		
	M3&4.AA.3.1d (LC)	Adds 2 prices with sums $\leq \$9$ by counting one-dollar bills	1		
	M3&4.AA.3.1e (LC)	Subtracts 2 numbers ≤ 9 by counting items	1		
	M3&4.AA.3.1f (LC)	Subtracts to identify part from whole by counting items ≤ 9			
	M3&4.AA.3.1g (LC)	Subtracts 2 prices $\leq \$9$ by counting one-dollar bills			
	M3&4.DA.2.1a (LC)	Selects equation that matches the word problem with numbers ≤ 9 - addition			
	M3&4.DA.2.1b (LC)	Selects equation that matches the word problem with numbers ≤ 9 - subtraction	1		
Measurement M3&4.BA.1.1 M3&4.BA.2.1	M3&4.BA.1.1a (LC)	Reads digital time at 15-minute intervals	1	4	20
	M3&4.BA.1.1b (LC)	Reads analog time at half-hour intervals	1		

	M3&4.BA.2.1a (LC)	Measures length/width of item affixed to a ruler with 1-inch markings	1		
	M3&4.BA.2.1b (LC)	Measures volume by counting ≤ 9 full units	1		
Geometry M3&4.CA.1.1	M3&4.CA.1.1 (LC)	Sorts 8 items into 4 groups - all groups are similar in appearance - no model	1	1	5
Data Analysis and Probability M3&4.EA.1.1 M3&4.EA.3.1	M3&4.EA.1.1a (LC)	Selects largest/smallest value from graph of ordered numbers ≤ 9	1	3	15
	M3&4.EA.1.1b (LC)	Locates number described ≤ 9 in 5-6 item display with teacher assistance in locating the appropriate row	1		
	M3&4.EA.3.1 (LC)	Selects most/least likely outcome, given the characteristics of a population - extreme proportions (difference is 5x)	1		
Algebra M3&4.DA.1.1	M3&4.DA.1.1 (LC)	Selects number that extends a pattern ≤ 9 - odd/even numbers	1	1	5
			20	20	100

PASA Math Grades 5 & 6 Level C Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M5&6.AA.1.2 M5&6.AA.3.1 M5&6.AA.3.2	M5&6.AA.1.2a (LC)	Counts aloud ≤ 19 items in ordered array starting at 2 or more without a bridge		10	50
	M5&6.AA.1.2b (LC)	Counts aloud ≤ 19 items by 2s or 5s in ordered array			
	M5&6.AA.1.2c (LC)	Counts aloud one-dollar bills or pennies $\leq \$19$ or 19¢ starting at 2 or more without a bridge	1		
	M5&6.AA.1.2d (LC)	Counts aloud $\leq \$15$ using five-dollar bills	1		
	M5&6.AA.1.2e (LC)	Selects penny, nickel, dime, or quarter based on value – all choices are coins			
	M5&6.AA.1.2f (LC)	Names value of coin	1		
	M5&6.AA.1.2g (LC)	Orders 4 sets of evenly spaced items ≤ 19 with all numbers within 10	1		
	M5&6.AA.1.2h (LC)	Orders 4 nonconsecutive numbers ≤ 19			
	M5&6.AA.1.5a (LC)	Selects simple fraction	1		
	M5&6.AA.1.5b (LC)	Selects item divided evenly and in the number of pieces specified – the target and 2 other items are divided into equal parts			
	M5&6.AA.3.1 (LC)	Selects quantity that is enough ≤ 19 - the target and 2 sets are within +/- 5	1		
	M5&6.AA.3.2a (LC)	Adds 2 numbers named and shown with sums ≤ 19 using a calculator or paper and pencil	1		
	M5&6.AA.3.2b (LC)	Adds 3 sets of similar items with sums ≤ 19 by counting			
	M5&6.AA.3.2c (LC)	Adds 3 numbers named and shown with sums ≤ 19 using a calculator or paper and pencil			
	M5&6.AA.3.2d (LC)	Adds 2 prices named and shown with sums $\leq \$19$ using a calculator or paper and pencil	1		
	M5&6.AA.3.2e (LC)	Subtracts 2 numbers named and shown with numbers ≤ 19 using a calculator or paper and pencil			
	M5&6.AA.3.2f (LC)	Subtracts to identify part from whole by counting items ≤ 19	1		
	M5&6.AA.3.2g (LC)	Subtracts 2 prices named and shown with numbers $\leq \$19$ using a calculator or paper and pencil			
	M5&6.DA.2.1a (LC)	Selects equation that matches the word problem with numbers ≤ 19 - addition			
	M5&6.DA.2.1b (LC)	Selects equation that matches the word problem with numbers ≤ 19 - subtraction	1		
Measurement M5&6.BA.1.1 M5&6.BA.2.1 M5&6.BA.2.2	M5&6.BA.1.1a (LC)	Matches identical analog and digital times at 1-hour intervals		5	25
	M5&6.BA.1.1b (LC)	Reads digital time at 1-minute intervals	1		
	M5&6.BA.1.1c (LC)	Reads analog time at 15-minute intervals	1		
	M5&6.BA.2.1a (LC)	Measures length/width of item using a ruler with 1-inch markings	1		

	M5&6.BA.2.1b (LC)	Selects measuring cup filled to the 1-cup or 2-cup line - measuring cups with 5 marked quantities	1		
	M5&6.BA.2.1c (LC)	Selects item most appropriate for filling a larger item	1		
Geometry M5&6.CA.1.1	M5&6.CA.1.1 (LC)	Sorts 9 items into 4 groups - 2 groups are identical except for 1 feature - no model	1	1	5
Data Analysis and Probability M5&6.EA.1.1 M5&6.EA.3.1	M5&6.EA.1.1a (LC)	Selects largest/smallest value from graph of unordered numbers ≤ 19	1	3	15
	M5&6.EA.1.1b (LC)	Locates number described ≤ 19 in 7-8 item display with teacher assistance in identifying the variables	1		
	M5&6.EA.3.1 (LC)	Selects most/least likely outcome, given the characteristics of a population - similar proportions (difference is $2x$)	1		
Algebra M5&6.DA.1.1	M5&6.DA.1.1 (LC)	Selects number that extends a pattern ≤ 19 - odd/even numbers	1	1	5

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PASA Math Grades 7 & 8 Level C Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M7&8.AA.1.2 M7&8.AA.2.2 M7&8.AA.3.1 M7&8.AA.3.2	M7&8.AA.1.2a (LC)	Counts aloud ≤ 99 items by using a combination of 1s and 5s or 1s and 10s		11	55
	M7&8.AA.1.2.b (LC)	Counts aloud $\leq \$99$ using a combination of one- and five- or one- and ten-dollar bills	1		
	M7&8.AA.1.2c (LC)	Counts coins aloud $\leq \$1$	1		
	M7&8.AA.1.2d (LC)	Counts out a combination of one- and five-dollar bills or one- and ten-dollar bills $\leq \$99$ from a larger set			
	M7&8.AA.1.2e (LC)	Counts out five-dollar bills $\leq \$95$ to purchase item			
	M7&8.AA.1.2f (LC)	Selects item that can be purchased for the price named $\leq \$99$	1		
	M7&8.AA.1.2g (LC)	Orders 4 nonconsecutive numbers ≤ 99			
	M7&8.AA.2.2a (LC)	Selects item divided evenly and in the number of pieces specified - the target item and 3 other items are divided into equal parts			
	M7&8.AA.2.2b (LC)	Selects picture with biggest/smallest fraction			
	M7&8.AA.2.2c (LC)	Reads simple fractions			
	M7&8.AA.2.2d (LC)	Selects sum of 2 moveable figures - all choices < 1	1		
	M7&8.AA.3.1 (LC)	Selects quantity that is enough ≤ 99 - the target and 3 sets are within ± 5	1		
	M7&8.AA.3.2a (LC)	Adds 2 numbers in a word problem with sums ≤ 99 using a calculator or paper and pencil	1		
	M7&8.AA.3.2b (LC)	Adds 3 numbers in a word problem with sums ≤ 99 using a calculator or paper and pencil			
	M7&8.AA.3.2c (LC)	Adds 2 prices in a word problem with sums $\leq \$99$ using a calculator or paper and pencil			
	M7&8.AA.3.2d (LC)	Selects equation required to solve an addition word problem with sums ≤ 99			
	M7&8.AA.3.2e (LC)	Subtracts 2 numbers in a word problem with numbers ≤ 99 using a calculator or paper and pencil			
	M7&8.AA.3.2f (LC)	Subtracts 2 prices in a word problem with numbers $\leq \$99$ using a calculator or paper and pencil	1		
	M7&8.AA.3.2g (LC)	Selects equation required to solve a subtraction word problem with numbers ≤ 99	1		
	M7&8.AA.3.2h (LC)	Multiplies numbers by counting with products ≤ 99	1		
	M7&8.AA.3.2i (LC)	Divides items by counting ≤ 99	1		
M7&8.DA.2.1c (LC)	Determines the value of a missing number in an equation ≤ 99 - addition				
M7&8.DA.2.1d (LC)	Determines the value of a missing number in an equation ≤ 99 - subtraction	1			
Measurement	M7&8.BA.1.1a (LC)	Reads analog time at 5-minute intervals		4	20

M7&8.BA.1.1 M7&8.BA.2.1	M7&8.BA.1.1b (LC)	Matches closest digital times at 30-minute intervals	1		
	M7&8.BA.1.1c (LC)	Determines duration given 2 times - times are on the hour			
	M7&8.BA.1.1d (LC)	Determines wait time between 2 times - times are on the hour			
	M7&8.BA.1.1e (LC)	Determines end time given a start time and duration	1		
	M7&8.BA.2.1a (LC)	Measures length/width of item to the 1/2-inch mark	1		
	M7&8.BA.2.1b (LC)	Measures to 1/2-cup using a measuring cup with 5 marked quantities			
	M7&8.BA.2.1c (LC)	Measures whole number amount using 1/2 cup	1		
Geometry M7&8.CA.1.1	M7&8.CA.1.1 (LC)	Sorts 9 items into 4 groups - 2 pairs of groups are identical except for 1 feature - no model	1	1	5
Data Analysis and Probability M7&8.EA.1.1.1 M7&8.EA.1.1.2 M7&8.EA.3.1	M7&8.EA.1.1 (LC)	Locates number described ≤ 99 in 9-10 item, 3-variable display with teacher assistance in identifying the variables	1	3	15
	M7&8.EA.1.2 (LC)	Selects mode on graph ≤ 99 - mode is ± 5 of all other numbers	1		
	M7&8.EA.3.1 (LC)	Selects most/least likely item given the characteristics of a population ≤ 99 - extreme proportions (difference is 5x)	1		
Algebra M7&8.DA.1.1	M7&8.DA.1.1 (LC)	Selects number that extends a pattern ≤ 99 - additive pattern (2s or 5s)	1	1	5

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PASA Math Grades 11 Level C Blueprint

Reference to Alternate Assessment Anchor	Reference to Alternate Eligible Content	Skill assessed	2012	# of test items	% of test items
Numbers and Operations M11.AA.1.1 M11.AA.1.2 M11.AA.3.1	M11.AA.1.1a (LC)	Selects item divided evenly and in the number of pieces specified - all items are divided into equal parts	1	11	55
	M11.AA.1.1b (LC)	Matches fraction shown to picture - all choices are \leq	1		
	M11.AA.1.1c (LC)	Reads mixed fractions			
	M11.AA.1.1d (LC)	Matches quantity to fraction			
	M11.AA.1.1e (LC)	Selects sum of 2 fixed figures - all choices < 1	1		
	M11.AA.1.1f (LC)	Divides a group of items into fractional groups			
	M11.AA.1.2a (LC)	Counts aloud ≤ 500 items by using a combination of 1s, 2s, 5s, 10s, or 20s			
	M11.AA.1.2b (LC)	Counts aloud $\leq \$500$ using a combination of one-, five-, ten-, and/or twenty-dollar bills			
	M11.AA.1.2c (LC)	Counts aloud a combination of coins $\leq \$5$	1		
	M11.AA.1.2d (LC)	Counts out a combination of one-, five-, ten-, and/or twenty-dollar bills $\leq \$500$ from a larger set			
	M11.AA.1.2e (LC)	Counts out various denominations of money $\leq \$500$ to purchase item			
	M11.AA.1.2f (LC)	Selects item that can be purchased for the price named $\leq \$500$	1		
	M11.AA.1.2g (LC)	Orders 4 nonconsecutive numbers ≤ 500			
	M11.AA.3.1a (LC)	Adds 2 numbers in a word problem with sums ≤ 500 using a calculator or paper and pencil	1		
	M11.AA.3.1b (LC)	Adds 3 numbers in a word problem with sums ≤ 500 using a calculator or paper and pencil			
	M11.AA.3.1c (LC)	Adds 2 prices in a word problem with sums $\leq \$500$ using a calculator or paper and pencil			
	M11.AA.3.1d (LC)	Selects equation required to solve an addition word problem with sums ≤ 500			
	M11.AA.3.1e (LC)	Subtracts 2 numbers in a word problem with numbers ≤ 500 using a calculator or paper and pencil			
	M11.AA.3.1f (LC)	Subtracts 2 prices in a word problem with numbers $\leq \$500$ using a calculator or paper and pencil	1		
	M11.AA.3.1g (LC)	Selects equation required to solve a subtraction word problem with numbers ≤ 500	1		
M11.AA.3.1h (LC)	Multiplies numbers in a word problem with products ≤ 500 using a calculator or paper and pencil	1			

	M11.AA.3.1i (LC)	Divides 2 numbers shown ≤ 500 using a calculator or paper and pencil	1		
	M11.AA.3.2 (LC)	Selects quantity that is enough ≤ 99 - the target and 3 sets are within ± 5			
	M11.DA.2.1c (LC)	Determines the value of a missing number in an equation ≤ 500 - addition	1		
	M11.DA.2.1d (LC)	Determines the value of a missing number in an equation ≤ 500 - subtraction			
Measurement M11.BA.2.2	M11.BA.2.2a (LC)	Measures length/width of item to the 1/4-inch mark	1	4	20
	M11.BA.2.2b (LC)	Measures using a measuring cup with 5 marked quantities	1		
	M11.BA.2.2c (LC)	Measures a larger amount using a fraction of a cup			
	M11.BA.2.2d (LC)	Matches closest digital and analog times to 15-minute intervals	1		
	M11.BA.2.2e (LC)	Matches digital time to commonly used time phrases			
	M11.BA.2.2f (LC)	Determines duration given 2 times - times are on the 1/2 hour	1		
	M11.BA.2.2g (LC)	Determines wait time - times are on the 1/2 hour			
	M11.BA.2.2h (LC)	Determines time using a word problem with hours and a starting time - multiple hours			
Geometry M11.CA.1.3	M11.CA.1.3 (LC)	Sorts 9 items into 4 groups - all groups are identical except for 2 features - no model	1	1	5
Data Analysis and Probability M11.EA.1.1 M11.EA.1.2	M11.EA.1.1 (LC)	Locates number described in 11-12 item, 3-variable display, with no teacher assistance in identifying the variables	1	3	15
	M11.EA.1.2a (LC)	Selects mode on graph ≤ 500 - the mode is \pm of all other numbers			
	M11.EA.1.2b (LC)	Selects average value on graph with values ≤ 500 - all numbers are within ± 25 of target	1		
	M11.EA.1.2c (LC)	Selects average across 4 values ≤ 500 by - all numbers are within ± 25 of target			
	M.11.EA.3.1 (LC)	Selects most/least likely outcome given the characteristics of a population of different items ≤ 500 - close proportions (within ± 50 of target)	1		
Algebra M11.DA.1.1	M11.DA.1.1 (LC)	Selects number that extends a pattern ≤ 500 - subtractive pattern (2s or 5s)	1	1	5

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2012 PASA Reading Grades 3 & 4 Level A Blueprint

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R3&4.AA.1&2.2	5	25%	R3&4.AA.1&2.2b (LA)	Matches identical objects - all choices look different from one another	2
			R3&4.AA.1&2.2c (LA)	Selects object named - all choices look different from one another	3
Comprehension R3&4.AA.1&2.1 R3&4.AA.1&2.4	15	75%	R3&4.AA.1&2.1a (LA)	Selects related object - all choices are conceptually unrelated	3
			R3&4.AA.1&2.1b (LA)	Selects category of object - all choices are conceptually unrelated	2
			R3&4.AA.1&2.1c (LA)	Selects object by function - all choices are conceptually unrelated	3
			R3&4.AA.1&2.1d (LA)	Selects object by feature – all choices are conceptually unrelated	2
			R3&4.AA.1&2.4a (LA)	Answers literal 'what' question by selecting object - all choices are conceptually unrelated	3
			R3&4.AA.1&2.4b (LA)	Answers literal 'who' question by selecting object - all choices are conceptually unrelated	2
Total	20	100%			20

2012 PASA Reading Grades 5 & 6 Level A Blueprint

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R5&6.AA.1&2.2	5	25%	R5&6.AA.1&2.2b (LA)	Matches identical objects - one choice looks similar to the target and one choice looks different from the target	2
			R5&6.AA.1&2.2c (LA)	Selects object named - one choice looks similar to the target and one choice looks different from the target	3
Comprehension R5&6.AA.1&2.1 R5&6.AA.1&2.4	15	75%	R5&6.AA.1&2.1a (LA)	Selects related object - one choice is conceptually related to the target and one choice is not conceptually related to the target	3
			R5&6.AA.1&2.1b (LA)	Selects category of object - one choice is conceptually related to the target and one choice is not conceptually related to the target	2
			R5&6.AA.1&2.1c (LA)	Selects object by function - one choice is conceptually related to the target and one choice is not conceptually related to the target	3
			R5&6.AA.1&2.1d (LA)	Selects object by feature - one choice is conceptually related to the target and one choice is not conceptually related to the target	2
			R5&6.AA.1&2.4a (LA)	Answers literal 'what' question by selecting object - one choice is conceptually related to the target and one choice is not conceptually related to the target	3
			R5&6.AA.1&2.4b (LA)	Answers literal 'who' question by selecting object - one choice is conceptually related to the target and one choice is not conceptually related to the target	2
Total	20	100%			20

2012 PASA Reading Grades 7 & 8 Level A Blueprint

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R7&8.AA.1&2.2	5	25%	R7&8.AA.1&2.2b (LA)	Matches identical pictures – all choices look different from one another	1
			R7&8.AA.1&2.2c (LA)	Matches identical photographs – all choices look different from one another	1
			R7&8.AA.1&2.2d (LA)	Selects picture named – all choices look different from one another	3
			R7&8.AA.1&2.2e (LA)	Selects photograph named – all choices look different from one another	0
Comprehension R7&8.AA.1&2.1 R7&8.AA.1&2.4	15	75%	R7&8.AA.1&2.1a (LA)	Selects similar picture – all choices are conceptually unrelated	1
			R7&8.AA.1&2.1b (LA)	Selects related picture – all choices are conceptually unrelated	2
			R7&8.AA.1&2.1c (LA)	Selects category of picture – all choices are conceptually unrelated	1
			R7&8.AA.1&2.1d (LA)	Selects category of photograph – all choices are conceptually unrelated	1
			R7&8.AA.1&2.1e (LA)	Selects picture by function – all choices are conceptually unrelated	1
			R7&8.AA.1&2.1f (LA)	Selects photograph by function – all choices are conceptually unrelated	1
			R7&8.AA.1&2.1g (LA)	Selects picture by feature – all choices are conceptually unrelated	1
			R7&8.AA.1&2.4a (LA)	Answers literal 'what' question by selecting picture – all choices are conceptually unrelated	1
			R7&8.AA.1&2.4b (LA)	Answers literal 'what' question by selecting photograph – all choices are conceptually unrelated	1
			R7&8.AA.1&2.4c (LA)	Answers literal 'who' question by selecting picture – all choices are conceptually unrelated	2
			R7&8.AA.1&2.4d (LA)	Answers literal 'who' question by selecting photograph – all choices are conceptually unrelated	1
			R7&8.AA.1&2.4e (LA)	Answers literal 'where' question by selecting picture – all choices are conceptually unrelated	1
R7&8.AA.1&2.4f (LA)	Answers literal 'where' question by selecting photograph – all choices are conceptually unrelated	1			
Total	20	100%			20

2012 PASA Reading Grade 11 Level A Blueprint

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R11.AA.1&2.2	5	25%	R11.AA.1&2.2b (LA)	Matches identical pictures or photographs	1
			R11.AA.1&2.2c (LA)	Matches identical complex pictures – all choices look different from one another	1
			R11.AA.1&2.2d (LA)	Matches identical icons – other choices are pictures	1
			R11.AA.1&2.2e (LA)	Selects picture or photograph named - all choices look similar to one another	2
Comprehension R11.AA.1&2.1 R11.AA.1&2.4	15	75%	R11.AA.1&2.1a (LA)	Selects similar picture – one choice is conceptually related to the target and one choice is not conceptually related to the target	1
			R11.AA.1&2.1b (LA)	Selects related picture – all choices are conceptually related	2
			R11.AA.1&2.1c (LA)	Selects category of picture –one choice is conceptually related to the target and one choice is not conceptually related to the target	1
			R11.AA.1&2.1d (LA)	Selects category of photograph – one choice is conceptually related to the target and one choice is not conceptually related to the target	1
			R11.AA.1&2.1e (LA)	Selects picture by function – all choices are conceptually related	2
			R11.AA.1&2.1f (LA)	Selects photograph by function – all choices are conceptually related	0
			R11.AA.1&2.1g (LA)	Selects picture by feature – all choices are conceptually related	1
			R11.AA.1&2.4a (LA)	Answers literal ‘what’ question by selecting picture – all choices are conceptually related	2
			R11.AA.1&2.4b (LA)	Answers literal ‘what’ question by selecting photograph –all choices are conceptually related	0
			R11.AA.1&2.4c (LA)	Answers literal ‘who’ question by selecting picture – all choices are conceptually related	1
			R11.AA.1&2.4d (LA)	Answers literal ‘who’ question by selecting photograph – all choices are conceptually related	2
			R11.AA.1&2.4e (LA)	Answers literal ‘where’ question by selecting picture – all choices are conceptually related	1
R11.AA.1&2.4f (LA)	Answers literal ‘where’ question by selecting photograph – all choices are conceptually related	1			
Total	20	100%			20

2012 PASA Reading Grade 3/4 Level B

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R3&4.AA.1&2.2	7	35%	R3&4.AA.1&2.2a (LB)	Matches identical words – all choices have same beginning and ending letters – words 4-5 letters in length	1
			R3&4.AA.1&2.2b (LB)	Selects picture with beginning sound named	2
			R3&4.AA.1&2.2c (LB)	Selects picture of a word that rhymes with a picture	2
			R3&4.AA.1&2.2d (LB)	Names action in a complex picture – open-ended response	2
Comprehension R3&4.AA.1&2.1 R3&4.AA.1&2.4	13	65%	R3&4.AA.1&2.1a (LB)	Selects category of a picture – all choices are conceptually related	1
			R3&4.AA.1&2.1b (LB)	Selects icon by function	2
			R3&4.AA.1&2.1c (LB)	Selects picture by feature	0
			R3&4.AA.1&2.1d (LB)	Matches pictures of the same item shown from different perspectives	1
			R3&4.AA.1&2.1e (LB)	Selects picture of item with a part named – all choices are conceptually related	1
			R3&4.AA.1&2.1f (LB)	Locates item missing in a picture – open-ended response	2
			R3&4.AA.1&2.1g (LB)	Selects picture through association – all choices are conceptually related	1
			R3&4.AA.1&2.1h (LB)	Selects picture named - all choices are conceptually related	1
			R3&4.AA.1&2.4a (LB)	Answers literal 'what' question by selecting picture – all choices are conceptually related	1
			R3&4.AA.1&2.4b (LB)	Answers literal 'who' question by selecting picture – all choices are conceptually related	2
R3&4.AA.1&2.4c (LB)	Answers literal 'where' question by selecting picture – all choices are conceptually related	1			

**2012 PASA Reading Grade 5/6
Level B**

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R5&6.AA.1&2.2	9	45%	R5&6.AA.1&2.2a (LB)	Matches identical words – all choices differ by one letter only – words 4-5 letters in length	1
			R5&6.AA.1&2.2b (LB)	Selects word named – all choices have different beginning and ending letters	2
			R5&6.AA.1&2.2c (LB)	Selects picture with same beginning sound as target picture named	1
			R5&6.AA.1&2.2d (LB)	Selects picture of word that does not rhyme	2
			R5&6.AA.1&2.2e (LB)	Names complex picture – synthesizes information to give noun – open-ended response	1
			R5&6.AA.1&2.2f (LB)	Names activity in a complex picture – open-ended response	1
			R5&6.AA.1&2.2g (LB)	Names icon – open-ended response	1
Comprehension R5&6.AA.1&2.1 R5&6.AA.1&2.3 R5&6.AA.1&2.4	11	55%	R5&6.AA.1&2.1a (LB)	Selects category of a picture – all choices are conceptually related	1
			R5&6.AA.1&2.1b (LB)	Selects icon by function	1
			R5&6.AA.1&2.1c (LB)	Selects complex picture showing 1 feature named	1
			R5&6.AA.1&2.1d (LB)	Gives an example of function of item in picture – open-ended response	1
			R5&6.AA.1&2.4b (LB)	Answers literal 'who' question by selecting picture – all choices are conceptually related	2
			R5&6.AA.1&2.4a (LB)	Answers literal 'what' question by selecting picture – all choices are conceptually related	1
			R5&6.AA.1&2.4c (LB)	Answers literal 'where' question by selecting picture – all choices are conceptually related	1
			R5&6.AA.1&2.4d (LB)	Answers literal 'when' question – open-ended response	1
			R5&6.AA.1&2.3 (LB)	Selects picture of last word missing in sentence using clue from picture – all choices are conceptually related	1
			R5&6.AA.1&2.4e (LB)	Selects complex picture showing first or last event in story	1
Total	20	100%			20

2012 PASA Reading Grade 7/8 Level B

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R7&8.AA.1&2.2	7	35%	R7&8.AA.1&2.2a (LB)	Selects word named – all choices have same beginning and different ending letters	1
			R7&8.AA.1&2.2b (LB)	Selects word with same beginning sound as target picture named	1
			R7&8.AA.1&2.2c (LB)	Selects picture of a word that rhymes with a word	2
			R7&8.AA.1&2.2d (LB)	Reads 1 word with a complex picture	2
			R7&8.AA.1&2.2e (LB)	Names 2 activities in a complex picture – open-ended response	1
Comprehension R7&8.AA.1&2.1 R7&8.AA.1&2.3 R7&8.AA.1&2.4 R7&8.AA.1&2.5	13	65%	R7&8.AA.1&2.1a (LB)	Selects category of a word – all choices are conceptually related	1
			R7&8.AA.1&2.1b (LB)	Selects complex picture showing 2 features named	1
			R7&8.AA.1&2.1c (LB)	Gives an example of function of word – open-ended response	1
			R7&8.AA.1&2.3 (LB)	Selects last word missing in sentence using clue from picture – all choices are conceptually related	1
			R7&8.AA.1&2.4a (LB)	Answers literal 'who' question – open-ended response	2
			R7&8.AA.1&2.4b (LB)	Answers literal 'what' question – open-ended response	1
			R7&8.AA.1&2.4c (LB)	Answers literal 'where' question – open-ended response	1
			R7&8.AA.1&2.4d (LB)	Answers literal 'when' question – open-ended response	2
			R7&8.AA.1&2.4e (LB)	Answers literal 'why' question – open-ended response	1
			R7&8.AA.1&2.4f (LB)	Selects complex picture showing next event in story	1
			R7&8.AA.1&2.5 (LB)	Selects complex picture to identify main event from narrative text	1
Total	20	100%			20

2012 PASA Reading Grade 11 Level B

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R11.AA.1&2.2	5	25%	R11.AA.1&2.2a (LB)	Selects word named – all choices have same beginning and ending letters	2
			R11.AA.1&2.2b (LB)	Reads 1 word in isolation – common sight words	1
			R11.AA.1&2.2c (LB)	Reads 1 word in context – 3-4 letters in length and regularly decodable	2
Comprehension R11.AA.1&2.1 R11.AA.1&2.3 R11.AA.1&2.4 R11.AA.1&2.5	15	75%	R11.AA.1&2.1a (LB)	Selects category of a word – all choices are conceptually related	1
			R11.AA.1&2.1b (LB)	Selects complex picture showing 3 features named	1
			R11.AA.1&2.1c (LB)	Gives an example of function of word read – open-ended response	1
			R11.AA.1&2.3 (LB)	Selects last word missing in sentence using clue from picture – all choices are conceptually related	2
			R11.AA.1&2.4b (LB)	Answers literal 'who' question – open-ended response	1
			R11.AA.1&2.4a (LB)	Answers literal 'what' question – open-ended response	2
			R11.AA.1&2.4c (LB)	Answers literal 'where' question – open-ended response	2
			R11.AA.1&2.4d (LB)	Answers literal 'when' question – open-ended response	2
			R11.AA.1&2.4e (LB)	Answers literal 'why' question – open-ended response	1
			R11.AA.1&2.4f (LB)	Orders 3 complex pictures based on text	1
R11.AA.1&2.5 (LB)	Selects complex picture to identify main event from narrative text	1			
Total	20	100%			20

2012 PASA Reading Grade 3/4 Level C

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R3&4.AA.1&2.2	8	40%	R3&4.AA.1&2.2a (LC)	Selects 1 word with beginning sound named	2
			R3&4.AA.1&2.2b (LC)	Selects picture of 1 word read	1
			R3&4.AA.1&2.2c (LC)	Selects 1 word named with all choices having same beginning two letters	1
			R3&4.AA.1&2.2d (LC)	Reads aloud 1 word embedded in a paragraph	4
Comprehension R3&4.AA.1&2.1 R3&4.AA.1&2.4	12	60%	R3&4.AA.1&2.1a (LC)	Selects word within the same conceptual category as another word	2
			R3&4.AA.1&2.1b (LC)	Defines function of a word read	2
			R3&4.AA.1&2.4b (LC)	Answers literal 'who' question after hearing 3 sentences	3
			R3&4.AA.1&2.4a (LC)	Answers literal 'what' question after hearing 3 sentences	1
			R3&4.AA.1&2.4c (LC)	Answers literal 'where' question after hearing 3 sentences	1
			R3&4.AA.1&2.4d (LC)	Answers literal 'when' question after hearing 3 sentences	2
R3&4.AA.1&2.4e (LC)	Orders 3 pictures based on text	1			
Total	20	100%			20

2012 PASA Reading Grade 5/6 Level C

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R5&6.AA.1&2.2	0	0%	R5&6.AA.1&2.2 (LC)	Reads 2-10 words aloud	0
Comprehension R5&6.AA.1&2.1 R5&6.AA.1&2.3 R5&6.AA.1&2.4 R5&6.AA.1&2.5	20	100%	R5&6.AA.1&2.1 (LC)	Demonstrates understanding of 2-10 word written command	2
			R5&6.AA.1&2.3 (LC)	Reads 2-10 word sentence and supplies word missing in sentence using clue from picture	3
			R5&6.AA.1&2.4b (LC)	Answers literal 'who' question – listening comprehension	1
			R5&6.AA.1&2.4a (LC)	Answers literal 'what' question – listening comprehension	2
			R5&6.AA.1&2.4c (LC)	Answers literal 'where' question – listening comprehension	3
			R5&6.AA.1&2.4d (LC)	Answers literal 'when' question – listening comprehension	3
			R5&6.AA.1&2.4e (LC)	Answers literal 'how' question – listening comprehension	2
			R5&6.AA.1&2.4f (LC)	Orders words representing main ideas from story	1
			R5&6.AA.1&2.5a (LC)	Describes 1 event from narrative text	1
			R5&6.AA.1&2.5b (LC)	Names 1 fact from expository text	2
Total	20	100%			20

2012 PASA Reading Grades 7 & 8 Level C Blueprint

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading/Decoding R7&8.AA.1&2.2	0	0%	R7&8.AA.1&2.2 (LC)	Reads 11-29 words aloud	0
Comprehension R7&8.AA.1&2.1 R7&8.AA.1&2.3 R7&8.AA.1&2.4 R7&8.AA.1&2.5	20	100%	R7&8.AA.1&2.1a (LC)	Names item that can be used in place of another	1
			R7&8.AA.1&2.1b (LC)	Demonstrates understanding of 11-29 word written command	1
			R7&8.AA.1&2.3a (LC)	Reads 11-29 word passage and supplies missing word	2
			R7&8.AA.1&2.3b (LC)	Locates words by function in display of 11-29 words or in real materials – inferential question	1
			R7&8.AA.1&2.3c (LC)	Answers inferential 'what' question – reading comprehension	2
			R7&8.AA.1&2.3d (LC)	Answers inferential 'who' question – reading comprehension	1
			R7&8.AA.1&2.3e (LC)	Answers inferential 'where' question – reading comprehension	1
			R7&8.AA.1&2.3f (LC)	Answers inferential 'when' question – reading comprehension	1
			R7&8.AA.1&2.4a (LC)	Answers literal 'what' question – reading comprehension	1
			R7&8.AA.1&2.4b (LC)	Answers literal 'who' question - reading comprehension	1
			R7&8.AA.1&2.4c (LC)	Answers literal 'where' question – reading comprehension	1
			R7&8.AA.1&2.4d (LC)	Answers literal 'when' question – reading comprehension	1
			R7&8.AA.1&2.4e (LC)	Answers literal 'how' question – reading comprehension	2
			R7&8.AA.1&2.4f (LC)	Answers literal 'why' question – reading comprehension	1
			R7&8.AA.1&2.5a (LC)	Describes 3 events from narrative text	1
R7&8.AA.1&2.5b (LC)	Names 3 facts from expository text	2			
Total	20	100%			20

2012 PASA Reading Grade 11 Level C Blueprint

Reference to Alternate Assessment Anchor	# of test items	% of test items	Reference to Alternate Eligible Content	Skill assessed	# of times the skills were assessed
Reading R11.AA.1&2.2	0	0%	R11.AA.1&2.2 (LC)	Reads 30-50 words aloud	0
Comprehension R11.AA.1&2.1 R11.AA.1&2.3 R11.AA.1&2.4 R11.AA.1&2.5	20	100%	R11.AA.1&2.1a (LC)	Identifies synonym for word read	2
			R11.AA.1&2.1b (LC)	Demonstrates understanding of 30-50 word 2-step written command	1
			R11.AA.1&2.3a (LC)	Locates words by function in display of 30-50 words or in real materials - inferential question	1
			R11.AA.1&2.3b (LC)	Reads 30-50 word passages and supplies missing word	1
			R11.AA.1&2.3c (LC)	Answers inferential 'who' question – reading comprehension	1
			R11.AA.1&2.3d (LC)	Answers inferential 'what' question – reading comprehension	2
			R11.AA.1&2.3e (LC)	Answers inferential 'where' question – reading comprehension	1
			R11.AA.1&2.3f (LC)	Answers inferential 'when' question – reading comprehension	1
			R11.AA.1&2.3g (LC)	Answers inferential 'how' question – reading comprehension	2
			R11.AA.1&2.3h (LC)	Answers inferential 'why' question – reading comprehension	2
			R11.AA.1&2.4a (LC)	Answers literal 'when' question – reading comprehension	1
			R11.AA.1&2.4b (LC)	Answers literal 'why' question – reading comprehension	1
			R11.AA.1&2.4c (LC)	Answers literal 'how' question – reading comprehension	1
			R11.AA.1&2.5a (LC)	Describes 4 events from narrative text	1
R11.AA.1&2.5b (LC)	Names 4 facts from expository text	2			
Total	20	100%			20

PASA

Administrator's Manual

2013-2014



www.PASAssessment.org



pennsylvania
DEPARTMENT OF EDUCATION

Pennsylvania Alternate System of Assessment

Administrator's Manual

2013 – 2014

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PENNSYLVANIA ALTERNATE SYSTEM OF ASSESSMENT

Abstract

The Pennsylvania Alternate System of Assessment (*PASA*) is a statewide alternate assessment designed for students with the most significant cognitive disabilities. Specifically, it is intended for those who are unable to participate meaningfully in the Pennsylvania System of School Assessment (*PSSA*) even with accommodations. By administering the *PASA* to students with severe disabilities, schools achieve compliance with federal laws and the Pennsylvania School Code that require that all students participate in the statewide accountability system.

The *PASA* is an individually administered test given each spring to students by their teacher or another certified professional who knows the student well. Test administration can be adapted so that even students with the most significant cognitive disabilities can participate in the assessment and receive a score. The test, administered to students in the equivalent of grades 3 through 8 and 11, consists of 20 test items related to reading standards; 20 test items related to math standards; and, for students in grades 4, 8, and 11, 20 or 21 test items related to science standards. Each test item represents an authentic, relevant, and age-appropriate skill related to reading, mathematics, or science. There are three levels of difficulty within each grade for each content area. Level A contains the least complex reading-, math-, or science-related skills. Level B consists of intermediate skills, and Level C consists of the most complex skills. Like the *PSSA*, the *PASA* is designed to take a snapshot of students' typical performance on a small sample of academic skills derived from the PA Academic Standards.

Student performance is recorded via video and submitted for scoring to the contractor at the University of Pittsburgh. Teams of scorers (comprised of primarily practicing teachers and administrative school personnel) are trained to use a scoring rubric to evaluate student performance. Once scoring has been completed, aggregated results are submitted to the state for inclusion with scores from the *PSSA*. In addition, *PASA* reports are generated at the state, home district, service provider, and student levels.

The PASA Project wishes to thank all of the teachers, students, and their families, administrators, technical support providers, and others who helped in the creation, piloting, distribution, and scoring of the Pennsylvania Alternate System of Assessment.

The PASA Project, a contractor funded by the Pennsylvania Department of Education (PDE), and located at the University of Pittsburgh, produced this document. The PASA Project Leadership Team, and not the Commonwealth, PDE, or its Bureau of Special Education, assumes all responsibility for any errors and/or discrepancies herein.

Pennsylvania Alternate System of Assessment

*A Statewide Assessment for Students
with the Most Significant Cognitive Disabilities*

Part I: Introduction

A. What is the purpose of the *PASA*?

The purpose of the *Pennsylvania Alternate System of Assessment (PASA)* is to take a snapshot of a small sample of a student’s present skills aligned with the Pennsylvania Academic Standards in Reading, Mathematics, and Science. The *PASA* is designed to capture a student’s “typical” performance. If this is the first time you are assessing a student using the *PASA*, or if you need more detailed background information about the *PASA*, see Appendix A.

B. To whom should the *PASA* be given?

All students attending designated grades in public schools in the Commonwealth of Pennsylvania must participate in the annual statewide assessment of reading, mathematics, and science. For some students with the most significant cognitive disabilities, the student’s IEP team may determine that the regular statewide assessment, the *Pennsylvania System of School Assessment (PSSA)*, is not appropriate even with accommodations; the IEP team may recommend that the student take the *PASA* instead. Students are eligible to take the *PASA* if all of the following questions are answered with a “yes.”

1. During the school year in which this IEP will be operative, will the student be in grade 3, 4, 5, 6, 7, 8, or 11?	yes
AND	
2. Does the student have very severe cognitive disabilities?	yes
AND	
3. Does the student require very intensive instruction to learn?	yes
AND	
4. Does the student require very extensive adaptation and support to perform and/or participate meaningfully and productively in the everyday life activities of integrated school, home, community, and work environments?	yes
AND	
5. Does the student require very substantial modifications to the general education curriculum?	yes
AND	
6. Does the student’s participation in the general education curriculum differ very substantially in form and/or substance from that of most other students (i.e., different objectives, materials, or activities)?	yes

Students must be formally enrolled to take the *PASA* each school year. The district Assessment Coordinator enrolls students using our online enrollment system and each student's assessor verifies his/her enrollment record to ensure accurate information is submitted. The enrollment period dates are announced on the *PASA* website (www.PASAassessment.org). If you did not already access the online system to enroll your students for testing this year, please contact your Assessment Coordinator.

If, when you get your test materials, the name of a student you were planning on testing with *PASA* is not on your Teacher Roster, contact your Assessment Coordinator immediately to make sure that your student has been enrolled.

Enrollments received after the enrollment deadline will be accepted only for students (a) who have moved into the district after the deadline or (b) whose IEP teams determined, after the deadline, that the PASA was the appropriate statewide test for the student.

The recorded and submitted test videos of students who are not enrolled will not be scored and the student will be counted as "not participating" in the school and district reports.

C. Who should administer the test?

A person with whom the student is very familiar and who is a certified school professional (teacher, psychologist, etc.) should administer the test. In most cases, the Test Administrator will be the student's teacher.

D. When should the test be given?

Test windows. Test windows for this school year are as follows:

- **Reading and Math:** February 17, 2014 – March 28, 2014
- **Science:** after Reading & Math are done* – May 9, 2014

* Science testing materials will be sent out with Reading and Math testing materials this year. You may begin administering the Science tests at any point after you finish administering the Reading and Math tests.

Session duration. The test can be given in one sitting or spread throughout one day or multiple days, depending on the needs of the student. You are free to start and stop the test as needed.

Part II: Preparing to Administer the Test

A. How should Test Administrators get trained to administer the test?

Successful administration of the *PASA* is dependent on Test Administrator preparation, which includes becoming familiar with the test and its formats, preparing materials, planning for adaptations, and arranging for recording. Also important is administrator understanding of the process for completing forms and returning materials. This can be accomplished by completing the following.

Complete online training. A series of training videos and proficiency tests have been developed and can be accessed through the *PASA* website (www.PASAassessment.org). The videos include information about preparing for testing, test administration, procedures for recording student performance, and procedures for returning students' tests for scoring. Also described is the scoring rubric used to score students' performance on the *PASA*. ***For Test Administrators who completed this training in the past, a separate, brief training that covers only what is new and different for 2013-2014 is also available on the training site.***

Read the *Administrator's Manual*. This *Administrator's Manual* includes detailed information designed to aid testers and to enhance student performance. Test Administrators should read it in its entirety.

Participate in webinars. In January of each year, three webinars are conducted: (a) one designed as a review and update, focusing primarily on what is new this year; (b) another on adaptations for students who have visual impairments and whose functional vision requires the use of tactile and auditory presentation of the *PASA*; and (c) one on adaptations for students who are hearing but cannot produce oral responses. For more information about the scheduled webinars, please visit the *PASA* website (www.PASAassessment.org).

Read materials on the web. Additional background information, curriculum resources, and administration updates can be viewed on the web at www.PASAassessment.org.

Follow the *PASA: Start to Finish* checklist. Use the *PASA: Start to Finish* checklist, illustrated on the following page, as a guide to aid you before and after administering the test to ensure that essential steps are followed.

Copies of this are in Appendix F of this document and at the beginning each Test Booklet.

PASA: START TO FINISH

Before the test

- Complete PASA test administrator training
- Read *PASA Test Administrator's Manual*
- Identify *Test Booklet* (A, B, or C) assigned to student for reading, math, or science
- Thoroughly review *Test Booklet*
- Gather/assemble/adapt materials - see *PASA Test Administrator's Manual for Adapting Test Administration* or www.PASAassessment.org
- Review student's IEP to determine what method of recording was agreed upon with the parents (video or narrative notes)
(If narrative notes, secure permission from PDE and forms from PASA)
- Make schedule for test administration
 - Find someone to video record [or take narrative notes of] student performance
 - Find location in which to administer test
- Notify student's parents of date of test administration
- Help student become familiar with being recorded
- Tell student about the test and what he or she can expect on test day
- Remind student that test day has arrived

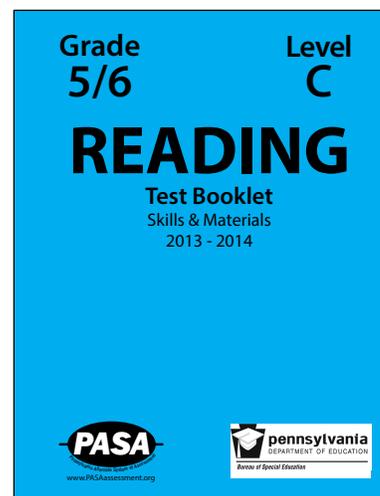
After the test

- Review media on a device other than one used for recording to determine if recording was successful and that entire test was recorded
- If recording onto a DVD, finalize it
- Affix pre-printed student label on media container (not directly on DVDs) and on *Supporting Documentation* form
- Affix pre-printed student label to media bag provided
- Provide information required on the media bag label
- Complete *Supporting Documentation* form
- Put media (or narrative notes, if approved by PASA) and *Supporting Documentation* form in media bag
- Write the approximate recording duration for each subject on media bag
- Return sealed bag to Assessment Coordinator
- In separate container, return all test booklets (skills) to Assessment Coordinator
- Return test kits (objects and printed materials) directly to PASA Project unless they are being used by another teacher

B. How should Test Administrators prepare for the testing session?

Read Test Booklets. Prior to the testing window, teachers receive Test Booklets to be used with enrolled students. The Test Booklets include directions specific to the grade level and level of difficulty assigned. A careful review of the Test Booklets is critical to successful implementation of the test.

Students are assigned tests at a specific level of difficulty (A, B, or C) for reading, mathematics, and science and may in some cases be assigned different difficulty levels (A, B, or C) for different test subjects. If, after you review the Test Booklet and associated test materials, you decide that the level selected is not a proper match for your student, ask your Assessment Coordinator to submit a level change request form available within each student's expanded enrollment record online. Your coordinator will be asked to provide a rationale for changing the level of difficulty, so be sure you communicate this information, along with the desired test level, to him/her when you ask for the request to be submitted. The new level you select should present some challenge to your student without being overwhelming. Students are not expected to answer every test item perfectly with no support. If you need more information regarding the difficulty levels of the *PASA*, see the *PASA* website.



NOTE: DO NOT CHANGE THE LEVEL OF DIFFICULTY WITHOUT RECEIVING PRIOR APPROVAL FROM *PASA*.

Determine need for adapted Test Booklets and replacement test items.

The *PASA* student enrollment form includes three “yes/no” questions to help identify students with particular disability characteristics who may need to use a *PASA*-produced adapted version of the test as an accommodation. If your Assessment Coordinator indicated “yes” to any of the three questions for a particular student on his/her enrollment form, a printed copy of the corresponding adapted version or replacement test items will be sent to that student’s teacher along with the standard *PASA* Test Booklet for him or her. If your Assessment Coordinator indicated “no”

on the student's enrollment form, but he or she would benefit from using one of the adapted versions listed below, Test Administrators may still obtain and use them. The adapted versions will be available to download from the *PASA* website (www.PASAassessment.org) in February. Whether they receive in the mail or download a copy, Test Administrators should review the skills in both the standard and adapted versions of the test and decide which items are most appropriate for their particular student. *They are not required to use an adapted version just because it has been sent to them.*

For **students who have visual impairments and whose functional vision requires the use of tactile and auditory presentation**, general guidelines and a completely adapted version of every grade, level, and subject of the *PASA* are available.

Colored versions of printed test materials are also available for those students who need this test accommodation. They can be downloaded from the *PASA* website.

For **students who are Deaf or hard of hearing**, there are replacement skills available for test items that require hearing (Levels B & C of Reading only). Test items to be replaced from the standard *PASA* test are designated with "D/HOH" in the top right hand corner of the page.

For **students who are hearing but cannot use speech to answer open-ended questions**, some test items in Levels B and C only are changed to enable accurate assessment of particular knowledge and skills. These items are designated with "AAC" (i.e., augmentative and alternative communication) in the top right hand corner of relevant pages in the Test Booklet.

Prepare, gather, and organize test materials. Test Administrators receive most or all of the materials needed for testing in Test Kits sent in the mail and/or in the Test Booklets (or Materials Booklet if part of the digital initiative) they receive from their Assessment Coordinator. Some materials, like coins, are not provided by *PASA* and must be gathered by the Test Administrator prior to testing. Test Kits containing bins of objects are organized by subject, grade, and level (e.g., 3/4 A Math Test



Kit). Some Test Administrators are required to share a Test Kit within their school, district, or IU, but each Test Administrator receives their own personal set of printed paper materials that do not need to be shared.

All materials needed for a specific subject, grade, and level of the test are noted in the materials list included in the Booklet for that test. If the test requires only objects, a materials list is included in the Test Kit. An abbreviated sample of a materials list follows.

Materials List Grade 3 / 4 Math C				
<i>Skill</i>	<i>Type of Material</i>	<i>Description of Material</i>	<i>Provided?</i>	<i>Location</i>
1	Bar chart	Numbers of difference appliances	Yes	Materials Booklet
2	Objects	Measuring cups	Yes	Test Kit
10	Objects	2 one dollar bills	No	

Substitute materials if needed. You are permitted to substitute materials when needed and appropriate, but only if the changes do not modify the skill tested. For example, if the targeted skill involves counting materials and the recommended materials are of such high interest that your student is likely to play with the materials instead of counting them, other materials can be substituted. However, be sure that the test is not unintentionally modified with the substitution, which could cause the student to receive a lower score.

More complete guidelines regarding substituting materials and the effect on scores are provided later in this manual.

Determine method for recording testing session. Review the student’s IEP to determine which method of recording was agreed upon with the parents – video or narrative notes.

The use of narrative notes requires prior approval from the Pennsylvania Department of Education’s Bureau of Special Education. Assessment Coordinators must submit a “Request for Use of Narrative Notes on the *PASA*” form for each student requiring the use of narrative notes **no later than December 6, 2013**. A link for the form is available on the *PASA* website (www.PASAassessment.org).

Identify equipment needed for recording and someone to record each testing session for students you are responsible for testing. Specific instructions regarding video recording are located in Appendix B.

Schedule test administration. Develop a schedule for test administration, planning for all details including location, availability of equipment and materials, and videographer or note-taker. Notify the student's parents of the date. Please note: it is not necessary to receive parent permission to video record test administration. More information about this is in Appendix C.

Help student become comfortable for testing. Help the student become familiar with the process of testing and with being recorded or watched by the note-taker. Tell the student about the test and what he or she can expect on the test day.

Part III: Administering the Test

A. What should Test Administrators do during testing?

Introduce the student and the test on video. Prior to the first test item in the Test Booklet is a directions page (illustrated below) that will guide you through this important step.

At the Start of the Test

Before beginning each test...

1. Turn on camera.
2. Introduce yourself:
“I am [name of the person administering the test].”
3. Introduce student:
“This is [student first and last name].”
4. Add:
“He [or she] is taking...
 - ✓ *the reading [math or science] test,*
 - ✓ *grade [3, 4, 5, 6, 7, 8, or 11],*
 - ✓ *level [A, B, or C].”*
 - ✓ (If applicable say:
“I am using the [nonverbal, deaf/hard-of-hearing, or blind] version of the PASA.”)
5. Explain to the student that you are going to ask him/her to do some things.
6. Present the materials for Test Item 1 and ask the student to look at or feel the materials.

Then, begin the test . . .

Present materials. Place the materials used for each test item within the student's reach and visual field and in the order illustrated in the thumbnail sketch in the Test Booklet. (Be sure to capture the materials in your recording.) Some students select an answer based on location/position, and failure to place the materials in the order specified in the Test Booklet may be judged as a skill modification and result in a lower score. (See Appendix E for more information about *PASA* scoring criteria and procedures.)

Use effective communication modes. Provide instructions to and obtain responses from the student using the mode of communication that is typically used with him or her.

Narrate the student's performance. If the student's responses are unclear, please narrate the student's performance. Narrating the student's performance means explaining what the student pointed to, said, or signed to make sure that the scorers can make accurate judgments about the student's performance. For example, it may be helpful to say, "I see that you are pointing to the bar for bears." Acknowledge whether a student's response is correct or incorrect by saying, "That's right. You chose the number 12." or "No, it's not that one. Why don't you try again?" It is extremely important that you also hold up for the recording the student's selection or written answer when possible to ensure it is captured on the recording; scorers need to see the response to support your verbal narration.

Provide sufficient opportunities to respond. Allow the student time to respond after giving the beginning prompt and before giving a second prompt. This "wait time" can reduce the amount of assistance needed by the student and increase his or her score. Allow the student to answer each of the test items to the best of his or her ability. You can provide all levels and types of assistance normally provided during instruction to encourage the student to make correct responses; however, the level and type of prompting you offer can affect the student's score. Read the next section of this manual for more information on prompts and their impact on scores.

Encourage partial participation. The student will be given credit for all that he or she is able to accomplish and participate in (even completing the skill with full hand-over-hand assistance).

Present skills in order. Complete all skills in the order specified in the Test Booklet. Rearranging the order of skills can result in scoring errors. Remember that the student will receive a higher score if an item is attempted than if it is skipped.

Use prompting purposefully. There are two kinds of prompts in the script provided for *PASA* test items: beginning prompts and alternate prompts.

Beginning prompts. Beginning prompts are essentially the first question or command given to initiate the student's response; particular wording is designated as the beginning prompt on the *PASA* test item pages.

Alternate prompts. Alternate prompts are listed below the beginning prompt and are simply alternative wording options that are acceptable to use instead of or after the beginning prompt; the alternate prompts do not modify the skill and are considered to be equivalent to the beginning prompt. **The student can still receive the highest score possible if you use one of the alternate prompts.** You can also further alter the language to reflect what you typically use during instruction without affecting the student's score, as long as it does not change the essential characteristics of the test item.

For scoring purposes, *PASA* also recognizes one other general category of prompts: additional prompts. Additional prompts occur along with or after the beginning prompt. These prompts can be verbal, physical, gestural, or silent. While independent performance of the assessed skills is desired, it may be necessary to provide additional prompts to aid the student in demonstrating the skill. Test Administrators can use additional prompts to help students earn higher scores by doing the following:

- repeat the beginning prompt or deliver an alternate prompt after incorrect responses
- give the least intensive prompting required to avoid unnecessarily modifying the skill, but to enable the student to perform the skill as independently as possible
- limit the use of extensive prompts (e.g., hand-over-hand assistance) to only those occasions when the student is unable to complete even a modified test item independently

The following are the three main types of additional prompts, each with a unique impact on students' scores.

Repeated prompts. These occur after the student fails to respond or responds incorrectly to the beginning prompt. The use of one repeated prompt will lower the student's possible score from a 5 to a 4 and the use of two or more (with enough time in between for the student to give a response) will reduce the score to a 3 (provided the student responds correctly in the end). Repeated prompts include:

- restating the beginning prompt
- redirecting the student's attention to the materials
- asking the student to try again
- not accepting an incorrect response, not saying anything, and waiting for another response (i.e., silent prompt)

Prompts that change the difficulty of the item. These prompts lower the student's possible score from a 5 to a 3 (provided the student responds correctly in the end). Examples include:

- removing one or more of the answer choices (provided that at least two choices remain)
- gesturing to show differences in sizes
- pointing to objects as the student is counting (unless pointing is specified as part of the directions to the administrator)
- helping the student count by providing some numbers
- giving the beginning sound of a word or object pictured when the skill being measured is 'read a single word/picture'
- showing the student where the information can be found after asking the student a reading comprehension question
- helping the student to solve a problem by giving a strategy

Prompts that ensure the correct response. These will lower the student's maximum possible score from a 5 to a 2. Examples include:

- reducing the number of answer choices to one
- having the student simply repeat the correct answer or behavior modeled by the Test Administrator
- telling or showing the student the correct answer while keeping the array out
- using hand-over-hand assistance to guide the student to the correct answer

Motivate the student to perform. Provide the same types of reinforcements the student receives on a regular basis in the classroom during *PASA* test administration. If during the test the student is unable or unwilling to continue and/or the student's behavior is considered unusual, stop the test and reschedule it for another time during the day or on another day. Test sessions may be attempted as many times as necessary in order to capture the student's typical performance, provided that all sessions occur within the designated test window. Do not use the test process to teach the skills being assessed; instead, capture what the student can already do. Erase from the media all student performances that were aborted or considered "practice sessions," so that scorers will view only performances that are supposed to be scored.

Discontinue the test. If the student is unable to participate meaningfully in the Reading, Math, or Science test despite the accommodations and modifications provided, discontinue the test. This lack of meaningful participation is demonstrated to the scorers by **three consecutive skills in which the student is only passively participating (earning a score of 1)**. The attempts to complete the three skills must be captured on video or narrative notes and must occur within the first four skills of the test for the given subject. **Do not discontinue testing just because three consecutive incorrect responses occur in the middle of the test;** discontinue if you believe the student is unable to participate meaningfully. When you discontinue the test, the student will earn the lowest performance level (emerging) in that subject area, but he or she will be included in the accountability process.

Adapt the test as needed. A script for administering each test item is provided in the Test Booklets. Although the *PASA* is designed to be accessible to students with the most severe cognitive disabilities, there are three levels of the test at each grade, and alternate versions of the test and test items are available for students with some specific needs, many students might benefit from some other adaptations to the test. This section includes a description of the differences between accommodations and modifications along with information about some of the ways the test can be adapted. Test Administrators are encouraged to make other adaptations if it will enhance their student's performance on the test; however, care must be taken to make sure that a balance is maintained between standardization and individualization.

Accommodations. Accommodations are changes to the skills that remove or reduce the influence of the student's disability on factors that are not related to the content skill being assessed. They do not change the level of difficulty of the test item and do not affect scoring.

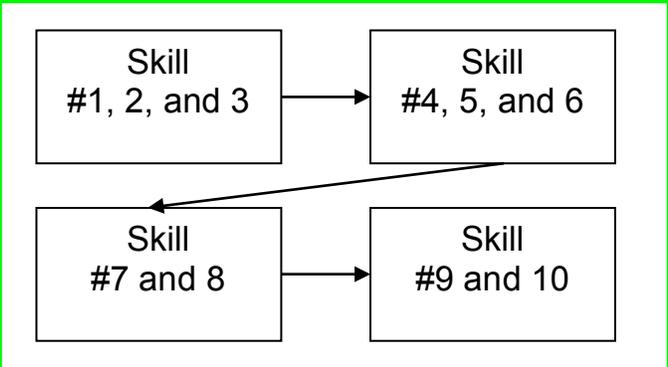
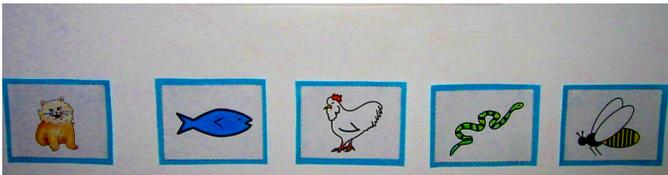
Modifications. Modifications are changes to skills that lower the difficulty level and consequently the student's score. They should not be made unless the student cannot proceed with the test item without this change.

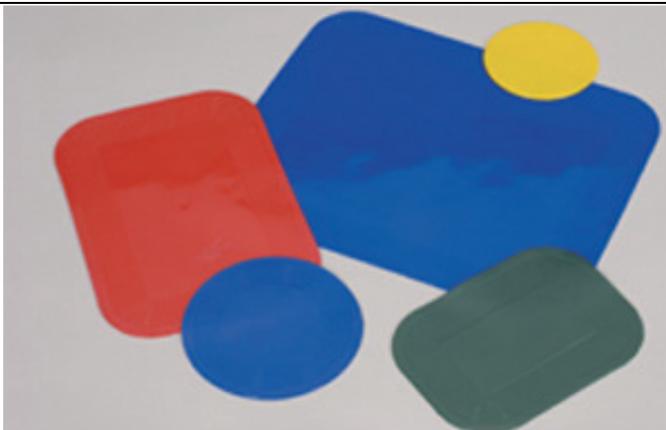
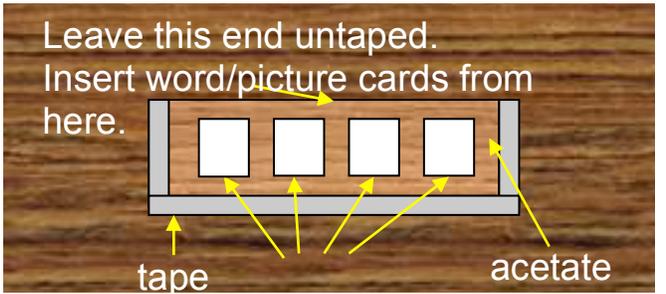
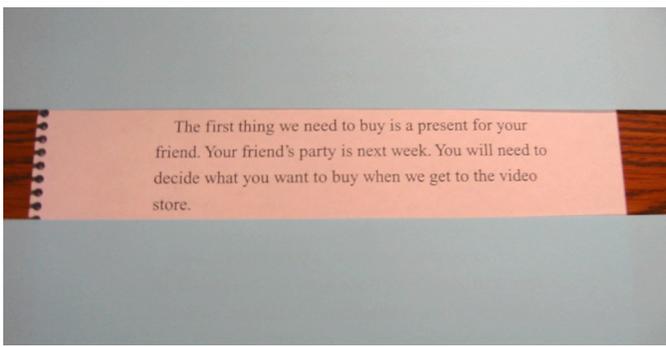
Adaptations may be made to the general presentation of test materials and the mode of student responses. Each type of adaptation is discussed below.

Presentation adaptations. The standard procedure for introducing a skill is to place the materials on a table in front of the student. However, if other procedures are typically used in instruction, they can be used in the test as well. For example, instead of placing on the table all materials in a match-to-sample skill, the answer choice array could be placed on the table while the material to be matched is held by the administrator or handed to the student so he or she can take it and put in on the correct choice in the array.

Other suggestions appear on the following pages.

Presentation Adaptations

SUGGESTION	ILLUSTRATION
<p>Use several tables to set up materials for different skills to minimize time needed to rearrange materials. Arrange materials for skill #1, 2, and 3 on the first table and so forth.</p>	 <pre> graph LR A[Skill #1, 2, and 3] --> B[Skill #4, 5, and 6] B --> C[Skill #7 and 8] C --> D[Skill #9 and 10] </pre>
<p>Present materials and secure them to the table with Velcro®.</p>	
<p>Present materials on a magnetic board or a chalkboard.</p>	
<p>Present materials on a slant board or a tabletop easel.</p>	

<p>Stabilize materials using Dycem®, etc.</p>	
<p>Secure materials by placing picture and word cards underneath a clear acetate sheet taped to the table.</p>	 <p>Leave this end untaped. Insert word/picture cards from here.</p> 
<p>Allow the student to use a sheet of paper to mask and progressively unveil the passage to be read. (Score is not reduced if the student does this independently.)</p>	

Materials adaptations. Most of the skills require materials that are either provided or recommended. These materials should be used if they are appropriate. If they are not appropriate for a particular student, the materials should be considered to be guides as to what can be substituted to engage a student in the test activities. As long as the alternative materials meet the specifications of the skill assessed and do not alter the difficulty level of the skill, the student will have the opportunity to receive

full credit for the item. When material substitutions deviate from the specifications for selecting materials, the student's highest possible score on that skill could be lowered from a 5 to a 3.

Mode of response adaptations. Some students will not be able to respond in the ways that are suggested in the Test Booklet. Test Administrators can restructure the response so that the student can use his or her typical mode of responding (e.g., signing, eye gaze, or other augmentative or alternative means of communicating). In such cases, it will be possible for the student to receive full credit for the item, provided that the number of answer choices is not restricted and the changes meet parameters specified in the adapted version.

If the change in the mode of responding makes the item easier to answer, the student's highest possible score will be reduced from 5 to 3. Such changes might include providing fewer than the required number of answer choices, changing from a production to a selection response, or not allowing the student to respond to every option if a multiple-choice item is converted to a series of yes/no questions.

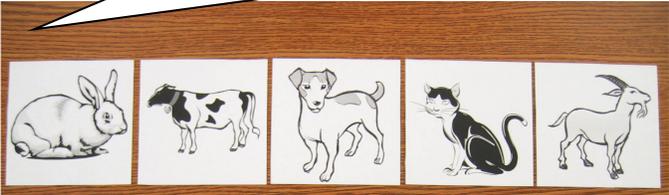
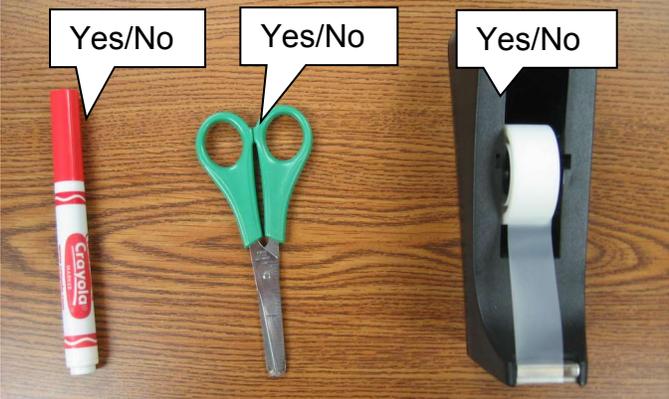
Reminder: Adapted versions of the test and replacement pages for specific skills for students needing them will be shipped to you if the Enrollment Form indicated such need. They can also be downloaded from the PASA website www.PASAassessment.org. Adaptations are for:

- *Students who are blind or have very limited functional vision*
- *Students who are Deaf or hard of hearing*
- *Students who are hearing but cannot produce oral responses to open-ended questions*

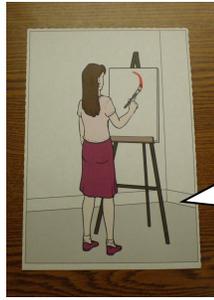
Examples of adaptations to the mode of responding are on the following pages. They are organized based on disability characteristics:

- students with expressive communication impairments
- students who are Deaf or hard of hearing
- students with visual impairments
- students with physical impairments

Adaptations for Students who are Hearing but Cannot Produce Oral Responses

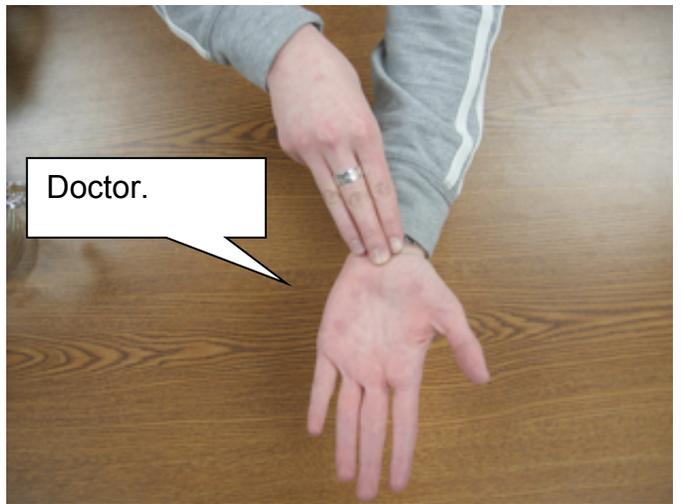
GENERAL CONSIDERATION	ILLUSTRATION
<p>Change a production response to a multiple-choice response. Allow the student to respond by pointing or eye gaze. The field of choices must include the number of answer choices typically required by that test level (B Level = 4 choices; C Level = 5 choices) <u>and</u> meet the parameters for distracters in order to earn full credit. Use the test items from the Adapted Version. The picture or word choices must be captured on video.</p>	<p>What kind of animal did the children feed?</p>  <p>Level B (listens to sentence): They picked corn, milked a cow, and fed the goats.</p>
<p>Allow the student to use his/her typical augmentative communication device (DynaMyte[®], Tech Talk[®], keyboard, Big Mack[®], IntelliKeys[®], etc.). The field of choices must include the number of answer choices typically required by that test level (B Level = 4 choices; C Level = 5 choices) <u>and</u> meet the parameters for distracters in order to earn full credit. Use the test items from the Adapted Version. The choices on the assistive device must be captured on video.</p>	
<p>If the student is responding by answering yes/no to each choice, all materials in the array must be presented in order for the student to earn full credit.</p>	

Some test items cannot be assessed using picture or word choices (e.g., names action in a complex picture), because the picture choices may give the answer away. The choices must be presented orally.

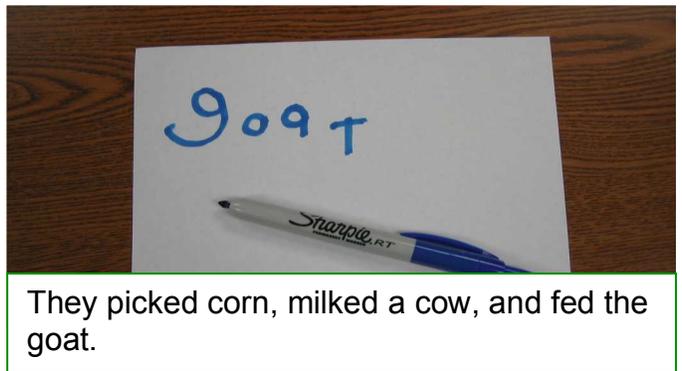


Is the girl jumping, painting, cleaning, or sleeping? (Ask the question without pictures)

Allow the student to use sign language (ASL or Signed English, finger spelling, etc.). If the student uses individually created signs, **provide a voice-over describing the response.**

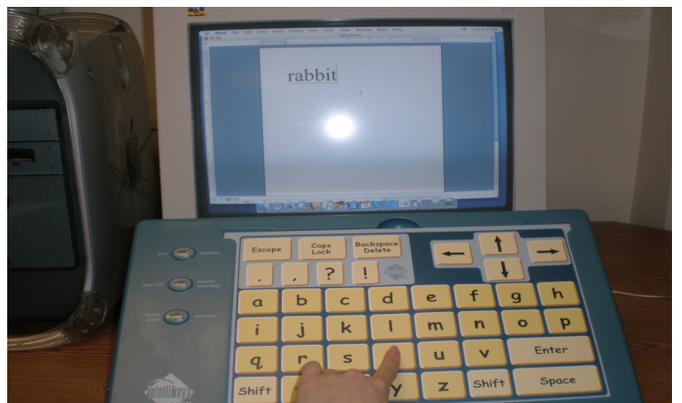


If the student is capable of using written communication, allow him/her to respond in writing. Written responses are not allowed for skills like reading word(s), numbers, digital times, and fractions, because it changes the skill to copying. **The written responses must be captured on video.**

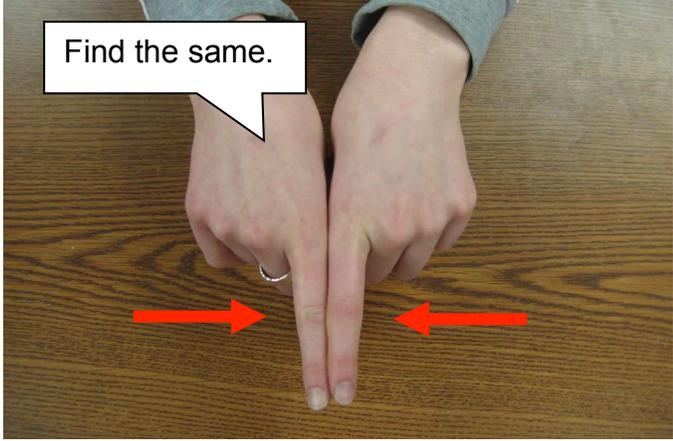
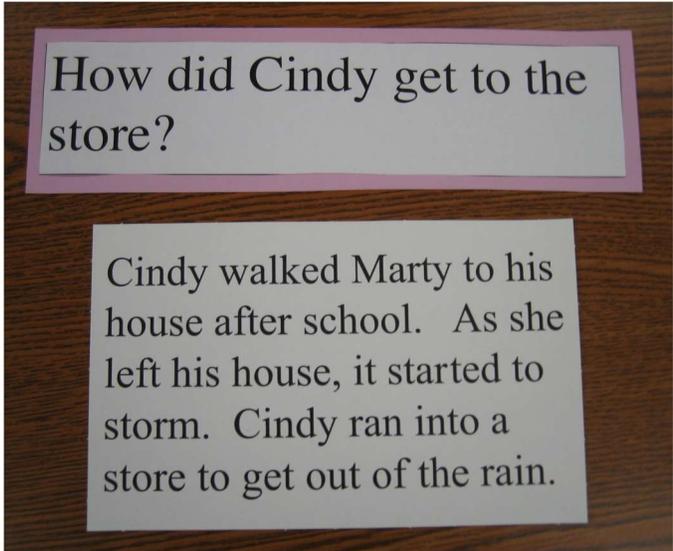


They picked corn, milked a cow, and fed the goat.

If the student is capable of typing, allow him/her to respond using a regular computer keyboard or his/her assistive technology device. Typed responses are not allowed for skills like reading word(s), numbers, digital times, and fractions, because it changes the skill to copying. **The keyboard, the screen, and the student's typing behaviors must be captured on video.**



Adaptations for Students who are Deaf/Hard of Hearing

GENERAL CONSIDERATIONS	ILLUSTRATION
Supplement or replace verbal instructions with sign language.	 <p>Find the same.</p> <p>The illustration shows a pair of hands in a light blue long-sleeved shirt positioned on a wooden surface. The hands are in a specific ASL configuration for the word 'same'. Two red arrows point horizontally towards the center of the hands from the left and right sides.</p>
Supplement or replace verbal instructions with written instructions.	 <p>How did Cindy get to the store?</p> <p>Cindy walked Marty to his house after school. As she left his house, it started to storm. Cindy ran into a store to get out of the rain.</p> <p>The illustration shows two rectangular signs with a purple border on a wooden surface. The top sign contains the question 'How did Cindy get to the store?'. The bottom sign contains a paragraph of text: 'Cindy walked Marty to his house after school. As she left his house, it started to storm. Cindy ran into a store to get out of the rain.'</p>
Allow the student to use sign language (ASL or Signed English, finger spelling, etc.). If the student uses individually created signs, provide a voice-over describing the response.	 <p>Shoe.</p> <p>The illustration shows a pair of hands in a light blue long-sleeved shirt positioned on a wooden surface. The hands are in a specific ASL configuration for the word 'shoe'. Two red arrows point horizontally towards the center of the hands from the left and right sides.</p>

If the student is capable of using written communication, allow him/her to respond in writing. Written responses are not allowed for skills like reading word(s), numbers, digital times, and fractions, because it changes the skill to copying. **The written responses must be captured on video.**



Guidelines for testing specific skills for students who are Deaf/hard of hearing

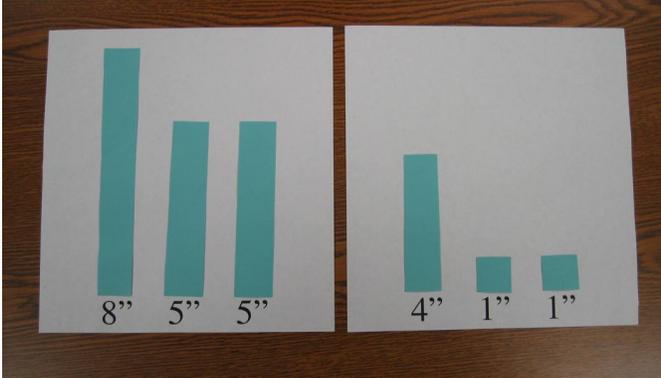
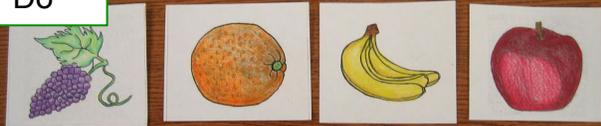
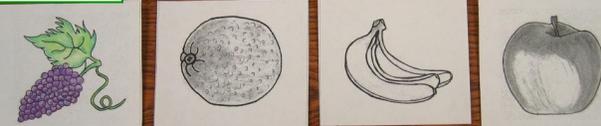
Skill: Adds, subtracts, multiplies, or divides

SPECIFIC SKILL	ILLUSTRATION
<p>If the student is capable of reading simple sentences, present the item as a written question highlighting the key information. The text should remain essentially the same as the verbal statement in order for the student to earn full credit.</p>	

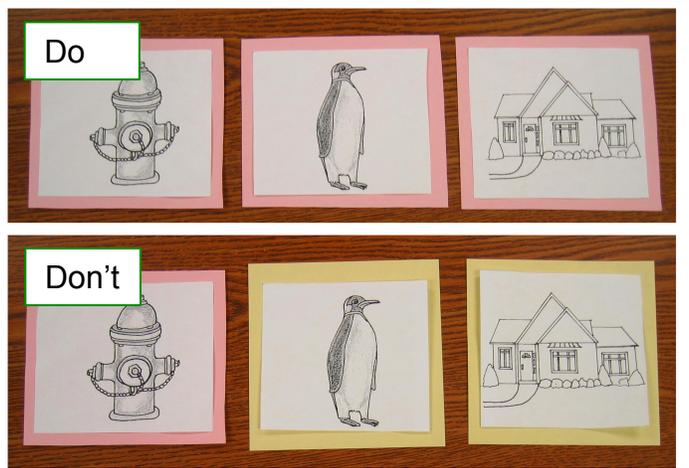
Skill: Counts

SPECIFIC SKILL	ILLUSTRATION
<p>Have the student sign each number as he/she counts. The student must sign each number (not just the final total quantity) in order to earn full credit.</p>	

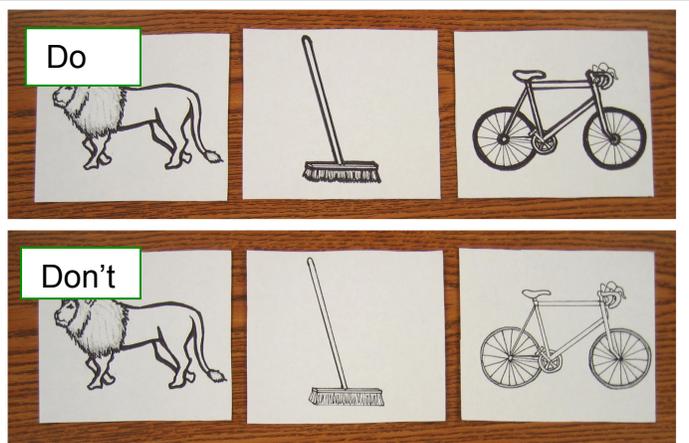
Adaptations for Students with Visual Impairments

GENERAL CONSIDERATIONS	ILLUSTRATION
<p>Enlarge materials, ensuring that all materials maintain the set variation in the size of the original materials in order to earn full credit. For example, if the skill is to select the longest/shortest and the original materials are 4", 1", and 1", the size difference of the original materials (i.e., a 3" difference between the longest and next choice) must be maintained. The new materials should be 8", 5", and 5".</p>	
<p>Allow the student to use his/her typical low vision devices.</p>	
<p>Increase the contrast of materials by using colors. In order to earn full credit, it is necessary to treat all materials equally. If coloring materials, then color all materials instead of just the correct answer. The correct item should not be the only colored one in the array.</p> <p>*All printed test materials are available in color as an accommodation for students with visual impairments and can be downloaded from the web www.PASAassessment.org.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="background-color: #e0ffe0; display: inline-block; padding: 2px 5px;">Do</p>  </div> <div style="border: 1px solid black; padding: 5px;"> <p style="background-color: #e0ffe0; display: inline-block; padding: 2px 5px;">Don't</p>  </div>

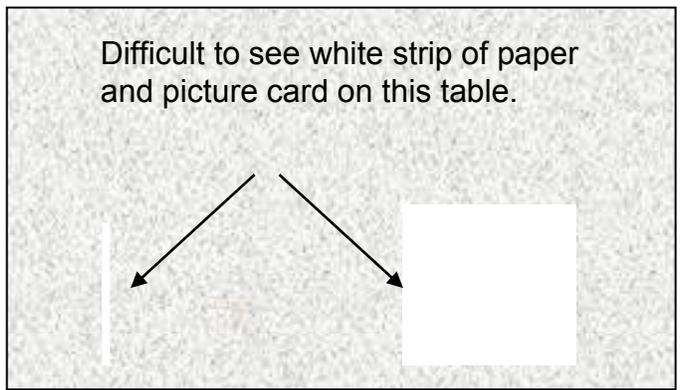
Increase the contrast of materials by using contrasting backgrounds. In order to earn full credit, it is necessary to treat all materials equally and not just change the item that is the correct response. Do not just add a background to the item that is the correct response. If colored paper is used for the background, use the same background color for all materials presented in the array.



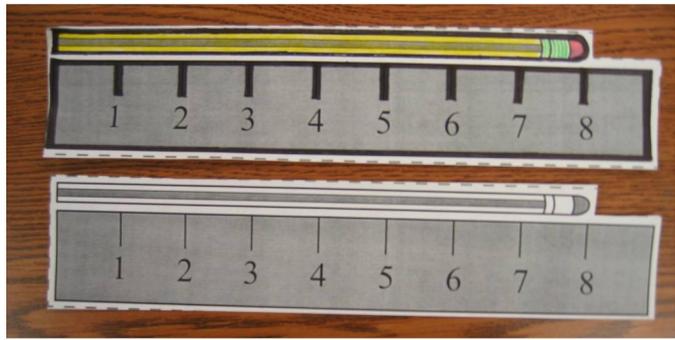
Increase the contrast of materials by using bolder lines. In order to earn full credit, it is necessary to treat all materials equally and not just change the item that is the correct response. Do not just darken the outlines of the item that is the correct response. If darkening outlines, do so for all materials presented in the array.



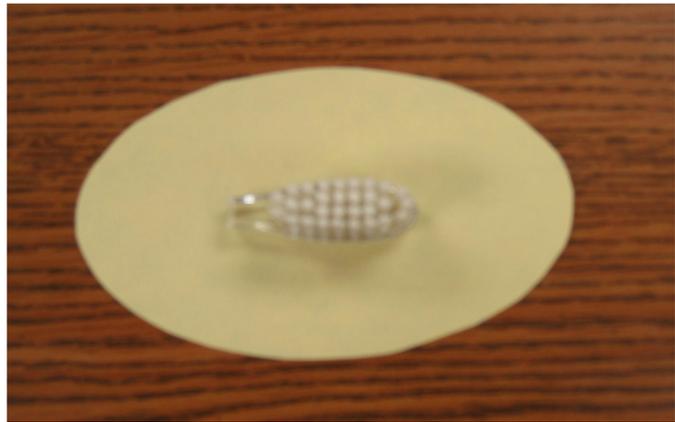
Increase the color contrast between the table and materials.



Use puff paint or thicker border to indicate key features (outlines of a ruler).



Use tactile symbols (e.g., toothbrush).



Use objects (candles) instead of pictures (of candles) for counting. There will be no reduction in the score if this is indicated on the *Supporting Documentation* form.

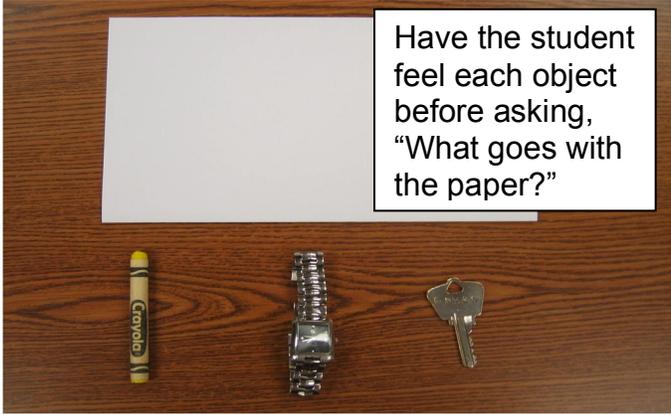


Use a divided tray or other device to keep the students oriented to the materials.

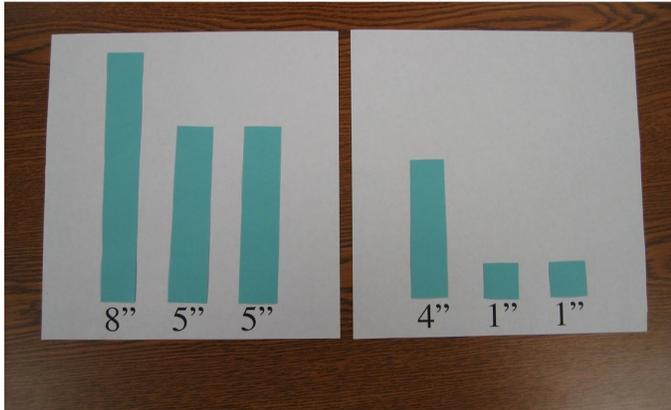
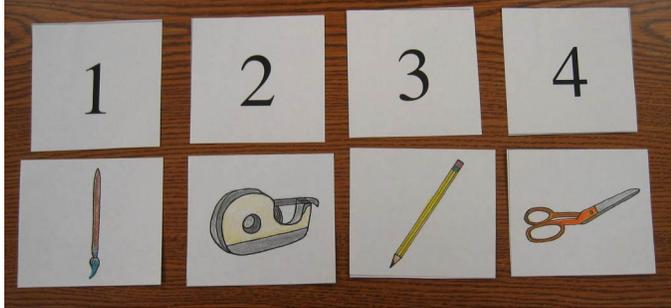
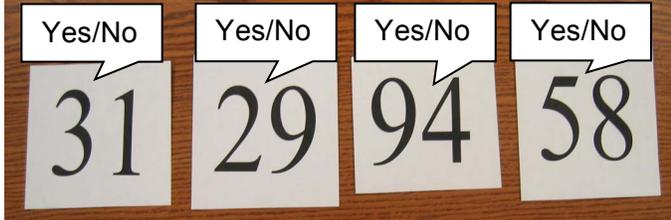


Guidelines for testing specific skills of students with visual impairments

Skill: Selects identical materials, selects similar objects, selects related objects, identifies a category, or matching

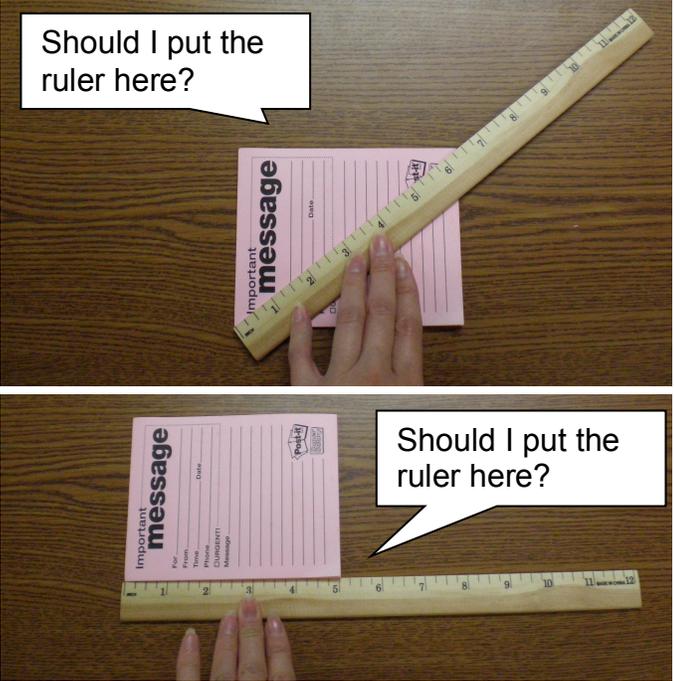
SPECIFIC SKILL	ILLUSTRATION
Allow the student to feel each object/picture/set on the desk or table prior to presentation of the next item.	 <p>Have the student feel each object before asking, "What goes with the paper?"</p>
When presenting the object to be matched in a matching skill, allow the student to feel the object/picture/set before asking the question.	 <p>Have the student feel each before saying, "Find the same."</p>

Adaptations for Students with Physical Impairments

GENERAL CONSIDERATIONS	ILLUSTRATION
<p>Enlarge materials, ensuring that all materials maintain the set variation in the size of the original materials in order to earn full credit. For example, if the skill is to select the longest/shortest and the original materials are 4", 1", and 1", the size difference of the original materials (i.e., a 3" difference between the longest and next choice) must be maintained. The new materials should be 8", 5", and 5".</p>	
<p>Have the student use eye gaze or a head/mouth-pointer instead of pointing to identify the correct answer.</p>	
<p>Have the student provide a verbal response indicating ordinal position instead of pointing to an answer. The student may select #4 on an assistive device to indicate that the answer is the scissors.</p>	
<p>Point to each answer and ask the student to respond by answering yes/no. All materials in the array must be presented in order for the student to earn full credit.</p>	

Guidelines for testing specific skills for students with physical impairments

Skills requiring motor responses (pouring or scooping specific amounts, using a ruler):

SPECIFIC SKILL	ILLUSTRATION
<p>Do the scooping or pouring for the student and have the student tell the Test Administrator to stop when the proper amount has been reached. In order for the student to earn full credit, the Test Administrator should not stop the activity until the student tells him/her to do so.</p>	 <p>Start pouring... and stop!</p>
<p>Position the ruler to where the student directs the Test Administrator or ask the student how the ruler should be positioned. The Test Administrator should not automatically place the ruler in the correct position.</p>	 <p>Should I put the ruler here?</p> <p>Should I put the ruler here?</p>

Part IV: Returning Materials

A. How should materials be prepared for return and scoring?

Prepare media. Make sure that the media contains a complete recording of the student's performance that can be viewed by the scorers, and is labeled with the student identifying information in a way that does not interfere with playback. Pay attention to the following important information.

Finalize the DVD. If student performance was recorded on a DVD camera, be certain to finalize the DVD before removing it from the camera. Instructions for finalizing come with the camera. DVDs cannot be played back if this last step is not completed! **Failure to finalize a DVD or to identify the recording device may result in our inability to score the student's performance.**

Check that test was recorded. Watch the entire recording to check that all of the test skills have been recorded in their entirety and that prompts, responses, and materials can be seen and/or heard. If submitting a videotape, rewind it so it is ready for viewing.

Affix labels or mark disc. Take care with labels so that they do not affect playback. Please do not put labels directly on discs or wrapped around tapes. Instead, write the Student ID # on the disc with a marker and put a label on the case. If more than one disc/tape was required to capture the student's performance, create a label (or use one of the extras provided) and affix it to the case of the second recording. Provide the same information that is on the preprinted label (student's name, student identification number, and the name of the service provider). Write 1 of 2 on the first label and 2 of 2 on the second label.

Record information on media bag. Complete the steps below for each student's media bag label (also pictured below). **Be sure you return the media for each test subject in the appropriate bag. Science media returned in a Reading & Math bag will not be scored.**

- Place preprinted student label on the media bag
- Check if foreign or sign language interpreter will be needed
- Check if a PASA-prepared adapted version was used, and if so, which one
- Check that the media was played on a device other than that used for recording to be sure it recorded correctly
- Record the duration of the recording for each test

 <h2 style="margin: 0;">Reading & Math</h2> <div style="border: 1px dashed black; padding: 20px; margin: 10px auto; width: 80%;"> <p style="text-align: center;"><i>Place preprinted student label here</i></p> </div>
<p><i>Return this bag to Assessment Coordinator with the following:</i></p> <p>❶ Recording medium with a preprinted label attached <i>OR</i> completed narrative note-taking forms with a preprinted label attached.</p> <p>❷ Completed Supporting Documentation form with a preprinted label attached.</p>
<p>❸ <input checked="" type="checkbox"/> Check all that apply:</p> <p><input type="checkbox"/> Interpreter needed:</p> <p style="padding-left: 20px;"><input type="checkbox"/> sign language</p> <p style="padding-left: 20px;"><input type="checkbox"/> foreign language (specify) _____</p> <p><input type="checkbox"/> PASA-prepared adapted version used:</p> <p style="padding-left: 20px;"><input type="checkbox"/> None <input type="checkbox"/> Tactual (blind)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Deaf/Hard of Hearing <input type="checkbox"/> Non-verbal</p>
<p>❹ <input type="checkbox"/> I checked to make sure media played on device other than the one used for recording.</p>
<p>❺ Indicate the approximate duration of each test for this student.</p> <p>Reading: <input style="width: 50px;" type="text"/> <i>minutes</i> Math: <input style="width: 50px;" type="text"/> <i>minutes</i></p>

 <h2 style="margin: 0;">Science</h2> <div style="border: 1px dashed black; padding: 20px; margin: 10px auto; width: 80%;"> <p style="text-align: center;"><i>Place preprinted student label here</i></p> </div>
<p><i>Return this bag to Assessment Coordinator with the following:</i></p> <p>❶ Recording medium with a preprinted label attached <i>OR</i> completed narrative note-taking forms with a preprinted label attached.</p> <p>❷ Completed Supporting Documentation form with a preprinted label attached.</p>
<p>❸ <input checked="" type="checkbox"/> Check all that apply:</p> <p><input type="checkbox"/> Interpreter needed:</p> <p style="padding-left: 20px;"><input type="checkbox"/> sign language</p> <p style="padding-left: 20px;"><input type="checkbox"/> foreign language (specify) _____</p> <p><input type="checkbox"/> PASA-prepared adapted version used:</p> <p style="padding-left: 20px;"><input type="checkbox"/> None <input type="checkbox"/> Tactual (blind)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Non-verbal</p>
<p>❹ <input type="checkbox"/> I checked to make sure media played on device other than the one used for recording.</p>
<p>❺ Indicate the approximate duration of the test for this student.</p> <p style="text-align: center;">Science: <input style="width: 50px;" type="text"/> <i>minutes</i></p>

Prepare Supporting Documentation form. A Supporting Documentation form, (shown below) must be completed and submitted for each student tested. The white form should be returned in the media bag with the white Reading & Math label and the green form should be returned in the media bag with the green Science label. Scorers use the information recorded on this form to understand more about the student and the adaptations made for him or her during the test. See Appendix D to view a larger copy of the form.



Pennsylvania Alternate System of Assessment

2014 SUPPORTING DOCUMENTATION

Test Administrator's Name: _____

Work Telephone Number: () _____

Place Student label here

READING

GRADE
○○○○○○○○

LEVEL
④③②

Did you request a Change of Level?
① Yes ② No

What level did you change from?
④③②

ADAPTED VERSION USED?*

Non-Verbal Tactual (Blind) Deaf/HoH

PASA STUDENT ID#
(6 Digit number following student's name on labels provided)

○○○○○○

METHODS USED DURING TESTING
TEST DIRECTION AND RESPONSES

(Mark all that apply)

	Used to present to student	Used by student to respond
Speech	<input type="checkbox"/>	<input type="checkbox"/>
Assistive listening device	<input type="checkbox"/>	<input type="checkbox"/>
Manual signs/gestures	<input type="checkbox"/>	<input type="checkbox"/>
Yes/no	<input type="checkbox"/>	<input type="checkbox"/>
Pointing:		

MATH

GRADE
○○○○○○○○

LEVEL
④③②

Did you request a Change of Level?
① Yes ② No

What level did you change from?
④③②

ADAPTED VERSION USED?*

Non-Verbal Tactual (Blind)

ADDITIONAL DISABILITY SECTION

Non-verbal or hard of hearing

Visual impairment in the IEP

Primary vision

Uses vision and other senses (e.g., tactile & auditory)

Primary cortical vision condition (e.g., cortical blindness)

*See www.PASAssessment.org for appropriate use of adapted materials and to download materials for use

SCIENCE

GRADE
○○○○○○○○

LEVEL
④③②

Did you request a Change of Level?
① Yes ② No

What level did you change from?
④③②

ADAPTED VERSION USED?*

Non-Verbal Tactual (Blind)



Pennsylvania Alternate System of Assessment

2014 SUPPORTING DOCUMENTATION

Test Administrator's Name: _____

Work Telephone Number: () _____

Place Student label here

METHODS USED DURING TESTING
TEST DIRECTION AND RESPONSES

(Mark all that apply)

	Used to present to student	Used by student to respond
Speech	<input type="checkbox"/>	<input type="checkbox"/>
Assistive listening device	<input type="checkbox"/>	<input type="checkbox"/>
Manual signs/gestures	<input type="checkbox"/>	<input type="checkbox"/>
Yes/no	<input type="checkbox"/>	<input type="checkbox"/>
Pointing:		
Digit/hand	<input type="checkbox"/>	<input type="checkbox"/>
Eye	<input type="checkbox"/>	<input type="checkbox"/>
Headstick/optical pointer	<input type="checkbox"/>	<input type="checkbox"/>
Selection with switch	<input type="checkbox"/>	<input type="checkbox"/>

PASA STUDENT ID#
(6 Digit number following student's name on labels provided)

○○○○○○

MATERIAL CHARACTERISTICS
(Mark all that apply)

Enlarged materials	<input type="checkbox"/>	<input type="checkbox"/>
Magnification device	<input type="checkbox"/>	<input type="checkbox"/>
Braille	<input type="checkbox"/>	<input type="checkbox"/>
Tactile objects	<input type="checkbox"/>	<input type="checkbox"/>

AUGMENTATIVE AND ALTERNATIVE "HIGH" TECH DEVICES USED

	to present to student	by student to select responses	by student to produce responses
iPad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DynaVox	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alphasmart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ADDITIONAL DISABILITY SECTION

Non-verbal but not deaf or hard of hearing

Visual impairment documented in the IEP (choose one)

Primarily uses vision

Uses a combination of vision and other senses

Primarily uses other senses (e.g., tactile & auditory)

Vision condition (e.g., cortical visual impairment): _____

*See www.PASAssessment.org for appropriate use of adapted materials and to download materials for use

***RETURN THIS FORM IN THE STUDENT'S SCIENCE MEDIA BAG.**

Return tests to Assessment Coordinator. Please gather the following to return materials after test administration:

- Media bag with student preprinted label which holds:
 - Media case marked with student label (or writing on the CD/DVD) or the narrative notes
 - *Supporting Documentation* form with student label affixed
- All other *PASA* documents and materials including all used and unused test documents

Please note: Reading/Math and Science media and documentation must be returned separately in their respective media bags in order to be scored.

Return Test Kit materials. It is the responsibility of the last or only Test Administrator who uses the Test Kit to return all of the bins of objects to the box, affix the UPS label included in the box, and arrange for shipment back to *PASA*.

Part V: Scoring and Reporting

A. How are the tests scored?

Scoring rubric. Recordings of students’ performances are scored by teams of trained scorers who view media and/or read narrative notes and use the *PASA Scoring Rubric* and scoring criteria (Appendix E) to assign a score of 0 – 5 to each of the test items. The assigned scores are based on both the accuracy of the student’s response and the amount of assistance provided by the Test Administrator during the test.

PASA Scoring Rubric					
5	4	3	2	1	0
Performed target skill correctly and independently with beginning prompt only	Performed target skill correctly with beginning prompt and one additional prompt, redirection, or correction	Performed correctly but the beginning prompt was not heard or a modified (easier) version of the skill or at least one but not all of the steps of a multistep skill or with the array reduced or with beginning prompt and two or more additional prompts	Performed incorrectly or Demonstrated skill completely different from the targeted skill or Actively engaged and the teacher ensured the correct response or Actively engaged but the response was not seen nor heard	Passively participated and administrator ensured correct response	Entire skill was not recorded (skipped, not able to be seen nor heard)

Scoring conferences. Scoring conferences scheduled between early April and late June bring together professionals who use the *PASA Scoring Rubric* to score the students’ performance on the *PASA*. Professionals selected to serve as scorers are certified school personnel who teach in PA school districts, intermediate units, charter schools, or approved private schools. **Those who meet the above criteria must complete the *PASA Scorer Training* online, pass the associated scoring proficiency test, and**

submit a scorer application to be considered for participation in a scoring conference. Applicants who teach students with the most significant cognitive disabilities are given priority in the selection of participants.

The online *PASA* Scorer Training and proficiency test is available via the *PASA* website (www.PASAassessment.org) from **January 17, 2014 to February 28, 2014**. The proficiency test and scorer application will not be available after this window closes.

More information about the training, proficiency tests, application procedures and scoring conference can be viewed on the web at www.PASAassessment.org.

B. How are student performance levels determined?

Raw scores students receive on the tests are converted into performance levels (Emerging, Novice, Proficient, or Advanced). Converting scores to performance levels brings the *PASA* in compliance with the requirements of the Individuals with Disabilities Education Act (IDEA 2004) and No Child Left Behind (NCLB), and allows the scores of students who took the *PASA* to be aggregated with scores of students who took the *PSSA* for the purpose of district accountability. For more specific information on the performance levels, please see the *PASA* web site at www.PASAassessment.org.

Appendix A

Background Information

Consistent with the standards-based reform movement, the Commonwealth of Pennsylvania State Board of Education revised and enacted Chapter 4 of the Pennsylvania School Code. Chapter 4 specifies standards in school subjects that are to be attained by all students in the Commonwealth. In the case of reading and mathematics, Chapter 4 stipulates that school districts administer a statewide accountability test through which students will demonstrate attainment of state standards. These tests also satisfy the requirements of the No Child Left Behind Act of 2001.

Federal laws that require standards-based reform and accountability efforts use language that clearly indicates that all students are to be included in the reform (see Section 504 of the Rehabilitation Act, Title II of the Americans with Disabilities Act of 1990, Title I of the Elementary and Secondary Education Act, and the Individuals with Disabilities Education Act (IDEA) Amendments of 1997 and 2004). The Pennsylvania Alternate System of Assessment (*PASA*) is a vehicle that permits students with the most severe cognitive disabilities to participate in the statewide accountability process.

The *PASA* consists of approximately 20 test items in reading and approximately 2 test items in mathematics administered during a six-week window in the spring of the school year. In a separate four-week testing window later in the spring, a science test that consists of approximately 20 test items will be given. The *PASA* permits students with the most significant cognitive disabilities, who are unable to participate in the Pennsylvania System of School Assessment (*PSSA*) even with accommodations, to demonstrate mastery of skills and attainment of knowledge in an adapted set of academic standards based on the academic standards published in the Pennsylvania Department of Education regulations, 22 PA Code § 4.12.

A teacher or another Test Administrator who is a certified professional and who knows the student well administers the *PASA* on a one-to-one basis. Administration can be adapted so that even students with the most significant cognitive disabilities can participate in the assessment and receive points in the scoring. The test is administered to students in the equivalent of grades 3, 4, 5, 6, 7, 8, and 11, and like the *PSSA*, is designed to take a snapshot of students' typical performance on a small sample of academic skills derived from the Pennsylvania Academic Standards.

Student performance is recorded via video or narrative notes and submitted along with the *Supporting Documentation* form to the contractor at the University of Pittsburgh. Teams of scorers (comprised of practicing teachers, administrative school personnel, and college/university faculty) are trained to review the videos and/or read the narrative notes and apply a specific rubric to score students' performances.

Appendix B

Recording Student Performance

Directions for Recording on Video

The purpose of the video recording is to provide a record of all student and Test Administrator behaviors, including everything that each person says or does during the test. A clear account of these behaviors during the test will be critical in accurately scoring the student's performance.

Before the Test

1. Read the *Directions for Recording on Video* and the completed *Supporting Documentation* form to become familiar with the recording procedures and the student's mode of communication.
2. Make certain that all equipment is functioning properly, that you know how to use it, and that you have a supply of fresh batteries. If you have already recorded one section of the test (Reading, Math, or Science) for the student, ensure that sufficient space remains on the medium to capture the remaining skills and that what has already been recorded is not inadvertently recorded over. Do a sound and lighting check before beginning the recording.
3. Secure a separate new, blank medium for each student you will film. Re-using an old medium can distort the quality of the video.
4. Review test procedures with the Test Administrator and address any questions you may have. Make sure that you are aware of any adaptations, accommodations, and/or specialized equipment likely to be used during the test so that these can be recorded.

During the Test

1. Begin by recording the materials. Record the Test Administrator introducing (a) the name of the student, (b) the name of the Test Administrator, (c) the subject (reading, math, or science) being assessed, and (d) the grade and difficulty level (A, B, or C) of the test being administered.
2. Record the student until he or she has completed all of the skills in the Reading, Math or Science Test Booklet.

3. Re-position yourself without disrupting the test whenever necessary to capture both student and Test Administrator behavior and communication, and the materials being used. If you “zoom in” to record the display of materials, remember to “zoom” back out again so that you can capture both the student and the Test Administrator as the test continues. Make sure both the Test Administrator and student can be seen and heard at all times. If they cannot be heard or seen, move closer and/or ask them to speak up.

After the Test

1. View the media to make certain the test was recorded.
2. **Affix the preprinted student label to the medium in a manner and location that will not affect replay.** Do not put labels directly on discs. Write the student ID # on the disc with a marker and put the label on the disc case. If more than one medium is used, label the second with the same information as is on the preprinted label (student’s name, student identification number, and the name of the teacher or service provider). Write ‘1 of 2’ on the first and ‘2 of 2’ on the second.
3. If you are using a DVD recorder, be sure to **finalize** the DVD. Failure to finalize may result in the inability of the scorers to view the student’s performance and provide the student with a score. Also, please be aware that DVD-RAMs can only be viewed on the devices on which they were recorded, and scorers will not be able to view and score any test recorded on this medium.
4. Give the media to the Test Administrator.
5. Remind the Test Administrator to review the entire recording to ensure that all skills were recorded.
6. If a VHS tape was used, rewind the tape before placing it in the media bag.

Appendix C

Consent and Notice Considerations for Recording and Scoring Student Performance on the *PASA*

Both IDEA and state regulations require that individuals with disabilities be included in assessments. See 20 U.S.C. §1412(a)(17)(A) and 22 Pa. Code §4.52(g). Prior parental consent is not required for participation in such assessments, and the individual test information must be maintained in a student's educational record in a manner that is consistent with the Federal Educational Rights and Privacy Act (FERPA), 20 U.S.C. §1232g. See 22 Pa. Code §4.52(f). Student performance on the *PASA* will be recorded either by video or narrative notes. The method for recording student performance should be discussed at the IEP meeting. Prior written parental approval of the method for recording a child's *PASA* performance is not required; however, if parents object to the recording of their child on video, note-taking should be the method used to record student performance.

The University of Pittsburgh is the contractor for the development, administration, and scoring of the *PASA*. University of Pittsburgh will select, train, and supervise a cadre of scorers to score videos and narrative notes of student performance. Under IDEA and FERPA, it is permissible for the Pennsylvania Department of Education to contract for the scoring of the tests and to do so without obtaining prior written parental consent.

IDEA does not require parental consent for release of information when information is released to "participating agencies" 34 C.F.R. §300.571(1). The Department of Education is a participating agency under IDEA, which defines "participating agency" as "any agency or institution that collects, maintains, or uses personally identifiable information, or from which information is obtained, under Part B of the Act." 34 C.F.R. §300.560

Section 99.31 of FERPA lists exceptions to when parental consent is required before disclosure of information. No consent is required when a disclosure is made to "authorized representatives" of State and local educational authorities. See 34 C.F.R. §99.31(a)(3)(iii). This exception applies to information provided to the University of Pittsburgh pursuant to its scoring agreement with the Department.

The videos or narrative notes of student performance are protected in a manner that does not permit personal identification of individuals by anyone except the scorers. All applicable state and federal regulations related to maintenance or destruction of student records apply to the videos and narrative notes.

Appendix D

Supporting Documentation Form



Pennsylvania Alternate System of Assessment

2014 SUPPORTING DOCUMENTATION

Test Administrator's Name: 2

Work Telephone Number: ()

1

Place Student label here

READING

GRADE

③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

LEVEL

Ⓐ Ⓑ Ⓒ

Did you request a Change of Level?
 Yes No

What level did you change from?
 Ⓐ Ⓑ Ⓒ

ADAPTED VERSION USED?*

Non-Verbal Tactual (Blind) Deaf/HoH

PASA STUDENT ID#
(6 Digit number following student's on labels provided)

5

0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
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4	5	6	7	8	9
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6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
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4	5	6	7	8	9
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6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
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6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
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6	7	8	9	0	1
2	3	4	5	6	7
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4	5	6	7	8	9
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6	7	8	9	0	1
2	3	4	5	6	7
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4	5	6	7	8	9
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6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3
4	5	6	7	8	9
0	1	2	3	4	5
6	7	8	9	0	1
2	3	4	5	6	7
8	9	0	1	2	3

1

Information provided here will aid scorers in understanding the student's responses in the narrative notes and video. Be specific.

RECEPTIVE COMMUNICATION USED

AMPLIFICATION AIDS USED

VISUAL AIDS USED

EXPRESSIVE COMMUNICATION METHODS USED

Production

TACTILE AIDS USED

Selection

OTHER ADAPTATIONS (Describe)

1. Provide additional disability and student information and describe accommodations used during testing

Appendix E

PASA Scoring Rubric and Descriptions of Scores

5	4	3	2	1	0
<p>Performed target skill correctly and independently with beginning prompt only</p>	<p>Performed target skill correctly with beginning prompt and one additional prompt, redirection, or correction</p>	<p>Performed correctly but the beginning prompt was not heard <i>or</i> a modified (easier) version of the skill <i>or</i> at least one but not all of the steps of a multistep skill <i>or</i> with the array reduced <i>or</i> with beginning prompt and two or more additional prompts</p>	<p>Performed incorrectly <i>or</i> Demonstrated skill completely different from the targeted skill <i>or</i> Actively engaged and the teacher ensured the correct response <i>or</i> Actively engaged but the response was not seen nor heard</p>	<p>Passively participated <i>and</i> administrator ensured correct response</p>	<p>Entire skill was not recorded (skipped, not able to be seen nor heard)</p>
<p><i>Beginning prompt only Lucky guess Self-corrections</i></p>	<p><i>Beginning prompt + one additional prompt Silent prompt Confirmation</i></p>	<p><i>Easier Reduced array Hints, more info, strategies Some steps done; not all Beginning prompt missing</i></p>	<p><i>Engaged but ... Response wrong Different skill Responses ensured</i></p>	<p><i>Not engaged Administrator ensured response</i></p>	<p><i>Skill omitted Not recorded</i></p>

Descriptions and Examples at Each Score Level

5	<p>Performed target skill <i>correctly and independently with beginning prompt only (or string of beginning prompts)</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student correctly responded after the beginning prompt or a “string” (i.e., a series of beginning prompts without a sufficient pause to give the student time to respond). <ul style="list-style-type: none"> • Beginning prompt written: “Show me the fire truck.” • Beginning prompt given with no pauses between sentences: “Here are some pictures.” “Pick out the fire truck.” “Show me the fire truck in these pictures.” “Can you tell me which is the fire truck?” <input type="checkbox"/> Student correctly responded with only the beginning prompt even though the response appeared to be a lucky guess. <input type="checkbox"/> Student self-corrected without additional prompts from the administrator.
	<p><i>correctly and independently completed a multi-step skill</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student sorted, described, or sequenced the required number of items, events, or details.
4	<p>Performed target skill <i>correctly with beginning prompt + one additional prompt, redirection, or correction that did not modify (make easier) the skill assessed</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student received one additional prompt that did not modify the skill assessed. <input type="checkbox"/> Administrator: <ul style="list-style-type: none"> • gave the beginning prompt, student did not respond, and administrator gave prompt one additional time after pausing between prompts (silent prompt). <input type="checkbox"/> Student: <ul style="list-style-type: none"> • asked for clarification and the administrator responded with one additional prompt. • answered incorrectly and the administrator prompted the student once to try again.
	<p><i>correctly completed a multi-step skill with beginning prompt + one additional prompt that did not modify (make easier) the skill assessed</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student correctly completed all steps with beginning prompt and one additional prompt that did not modify the skill. <ul style="list-style-type: none"> • to sort all items • to give required number of responses to question (e.g. name 2 events and student named only one, then was prompted for the second).

3	Performed correctly <i>but beginning prompt was not heard</i>	<input type="checkbox"/> Administrator's beginning prompt(s) was not recorded but the student's response observed was correct.
	<i>a modified (easier) version of the skill</i>	<input type="checkbox"/> Administrator: <ul style="list-style-type: none"> • pointed while student read or counted (except when told to do so). • corrected student's reading when student was to read independently. • named a material that was not supposed to be named. • presented materials in an ordered array instead of an unordered array as specified. • eliminated or added space between materials to be counted, added, or subtracted. • presented easier question than specified. <ul style="list-style-type: none"> - changed 'where' question to 'who.' - changed inferential question to literal. - changed open-ended question to fill-in-the-blank. <input type="checkbox"/> Student: <ul style="list-style-type: none"> • answered question in a form easier than specified. • reread entire sentence instead of answering question in his or her own words. • answered open-ended question with a partially correct or a possible, but not likely, answer.
	<i>at least one but not all of the steps of a multi-step skill</i>	<input type="checkbox"/> Student: <ul style="list-style-type: none"> • named, described, sequenced, or sorted at least one, but not all, of the materials. • was to count out loud and give answer but student just gave the answer. • counted materials incorrectly but came up with the correct answer. • counted materials correctly but teacher stopped student when correct count was reached.
	<i>with the array reduced (but including at least 2 choices)</i>	<input type="checkbox"/> Administrator: <ul style="list-style-type: none"> • presented fewer choices than specified in the test, but at least two remained. • removed choice after student selected wrong choice, but at least two choices remained.

<p>3 cont.</p>	<p><i>with beginning prompt and two or more additional prompts</i></p>	<p><input type="checkbox"/> Administrator:</p> <ul style="list-style-type: none"> • gave the beginning prompt two or more additional times after pausing between prompts. • gave the beginning prompt, waited for a response, received none, and repeated beginning prompt (silent prompt) two or more additional times. • gave the beginning prompt two or more additional times when student asked for clarification or gave incorrect answer.
<p>2</p>	<p><i>Performed incorrectly</i></p>	<p><input type="checkbox"/> Student responded but response was incorrect and administrator moved on.</p> <ul style="list-style-type: none"> • final response for single step item was incorrect. • no step of multi-step item was correct. • no words in connected text were read correctly.
	<p><i>Demonstrated skill completely different from the targeted skill</i></p>	<p><input type="checkbox"/> Student responded to administrator prompts, but the skill demonstrated was completely different than required.</p> <ul style="list-style-type: none"> • required skill was “Reads word,” student matched word.
	<p><i>Actively engaged and the teacher ensured the correct response</i></p>	<p><input type="checkbox"/> Administrator:</p> <ul style="list-style-type: none"> • reduced materials in array to one choice. • led student’s hand to correct choice. • gave the student the correct answer. • pointed to the correct answer and student imitated the response. • demonstrated what to do and the student imitated the response. • required skill was “Read word(s) ,” student repeated word(s) after administrator said word(s).
	<p><i>Actively engaged but the response was not seen nor heard</i></p>	<p><input type="checkbox"/> Test item, including beginning prompt, was presented but</p> <ul style="list-style-type: none"> • response was not recorded. • scorer could not determine if response was correct or incorrect.

1	<i>Passively participated and administrator ensured correct response</i>	<input type="checkbox"/> There was no sign of the student being engaged with the test materials. <ul style="list-style-type: none"> • Student was not oriented to the materials used for the skills tested, even after prompting, and the administrator led the student's hand to the correct answer.
	<i>Only beginning prompt was presented</i>	<input type="checkbox"/> Administrator: <ul style="list-style-type: none"> • presented the beginning prompt, but the student was not engaged, and no response was observed. <input type="checkbox"/> Student: <ul style="list-style-type: none"> • was not engaged in the skill and the administrator did not complete the test item. • did not appear engaged during the setup and no response was recorded.
0	<i>Skill was not recorded (skipped, not able to be seen nor heard)</i>	<input type="checkbox"/> Entire skill was skipped (neither the instruction nor the response was recorded).

Scoring Notes: Wording of Math Skills Tested and Impact on Scoring

Concept	Acceptable wording	Wording/action that modifies the skill resulting in a reduction of scores
Area	<ul style="list-style-type: none"> • Large/big • Small/little 	<ul style="list-style-type: none"> • Biiigggest with gesture showing size
Length	<ul style="list-style-type: none"> • Long, longer, longest • Short, shorter, shortest 	<ul style="list-style-type: none"> • Big, bigger, biggest • Small, smaller, smallest • Looonngggest with gesture showing length
Volume/Capacity	<ul style="list-style-type: none"> • Holds the most or holds the largest amount • Holds the least or holds the smallest amount 	<ul style="list-style-type: none"> • Biggest • Smallest • Presenting item as 2- instead of 3-dimensional (not opening paper bag on items related to volume) which changes skill from discrimination based on volume to discrimination based on size.
Weight	<ul style="list-style-type: none"> • Heavy, weighs the most • Light, weighs the least 	<ul style="list-style-type: none"> • Biggest • Smallest
Distance	<ul style="list-style-type: none"> • Longest, farthest • Shortest, closest 	<ul style="list-style-type: none"> • If item used numerals to express distance, asking for biggest/smallest instead
Time/ Speed	<ul style="list-style-type: none"> • Longest, slowest, most time, biggest amount of time • Shortest, quickest, fastest, least time, smallest amount of time 	<ul style="list-style-type: none"> • If item used numerals to express time/speed, asking for biggest/smallest number instead
Quantity or Frequency distribution (Bar chart)	<ul style="list-style-type: none"> • Most, biggest number, largest number • Least, smallest number • A few/a lot 	<ul style="list-style-type: none"> • Highest, tallest, longest, biggest • Lowest, shortest, smallest
Probability	<ul style="list-style-type: none"> • Most likely, best chance • Least likely 	<ul style="list-style-type: none"> • Most, biggest number • Least, smallest number

Appendix F

PASA: Start to Finish Checklist

PASA: START TO FINISH

Before the test

- Complete PASA test administrator training online or via webinar
- Download and read *PASA Test Administrator's Manual*
- Identify *Test Booklets* (A, B, or C) assigned to student for Reading and Math
- Thoroughly review *Test Booklets*
- Gather/assemble/adapt materials - see *PASA Test Administrator's Manual for Adapting Test Administration* or www.PASAassessment.org
- Review student's IEP to determine what method of recording was agreed upon with the parents (video or narrative notes)
(If narrative notes, secure permission from PDE and forms from PASA)
- Make schedule for test administration
 - o Find someone to video record [or take narrative notes of] student performance
 - o Find location in which to administer test
- Notify student's parents of date of test administration
- Help student become familiar with being recorded
- Tell student about the test and what he or she can expect on test day
- Remind student that test day has arrived

After the test

- Review media on a device other than one used for recording** to determine if recording was successful and that entire test was recorded
- If recording onto a disc, finalize it
- Affix pre-printed student label on media container (not directly on DVDs) and on *Supporting Documentation* form
- Affix pre-printed student label to media bag provided
- Provide information required on the media bag label
- Complete *Supporting Documentation* form
- Put media (or narrative notes, if approved by PDE) and *Supporting Documentation* form in media bag with **WHITE label**
- Write the approximate recording duration for each subject (Reading and Math) on media bag
- Return sealed bag to Assessment Coordinator
- In separate container, return all test booklets (skills) to Assessment Coordinator
- Return test kits (objects) and printed materials directly to PASA Project unless they are being used by another teacher



www.PASAassessment.org



**Scoring Rubric
&
Descriptions of Scores**

PASA Scoring Rubric

	4	3	2	1	
kill with pt only	Performed target skill correctly with beginning prompt and one additional prompt, redirection, or correction	Performed target skill correctly with beginning prompt and two or more additional prompts; with the array reduced ; or but the beginning prompt was not heard or Demonstrated a modified (easier) version of the skill or Demonstrated at least one but not all of the steps of a multistep skill	Performed target skill incorrectly or Demonstrated skill completely different from the target skill or Actively engaged and the teacher ensured the correct response or Actively engaged but the response was not seen nor heard	Passively participated <u>and</u> administrator ensured correct response	Entire test recorded (able to be heard)
<i>only Lucky</i>	<i>Beginning prompt + one additional prompt Silent prompt Confirmation</i>	<i>Easier Reduced array Hints, more info Strategy given Some steps done; not all Beginning prompt inaudible</i>	<i>Engaged but... Response wrong Different skill Response ensured</i>	<i>Not engaged Administrator ensured response</i>	<i>Skill omitted Not recorded</i>

Descriptions and Examples at Each Score Level

<p>formed target skill</p> <p>rectly and independently with beginning prompt only (or string of beginning prompts)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student correctly responded after the beginning prompt or a “string of beginning prompts without a sufficient pause to give the student time to respond). <ul style="list-style-type: none"> • Beginning prompt written: “Show me the fire truck.” • Beginning prompt given with no pauses between sentences: “Here are the pictures.” “Pick out the fire truck.” “Show me the fire truck in these pictures.” “Can you tell me which is the fire truck?” <input type="checkbox"/> Student correctly responded with only the beginning prompt even though the response appeared to be a lucky guess. <input type="checkbox"/> Student self-corrected without additional prompts from the administrator.
<p>rectly and independently completed a multi-step skill</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student sorted, described, or sequenced the required number of items or details.
<p>formed target skill</p> <p>rectly with beginning prompt + one additional prompt, redirection, or correction that did not modify (make easier) the skill assessed</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student received one additional prompt that did not modify the skill assessed <input type="checkbox"/> Administrator: <ul style="list-style-type: none"> • gave the beginning prompt, student did not respond, and administrator gave one additional time after pausing between prompts. • gave silent prompt (student responded but administrator did/said nothing and waited for another response) <input type="checkbox"/> Student: <ul style="list-style-type: none"> • asked for clarification and the administrator responded with one additional prompt. • answered incorrectly and the administrator prompted the student one or more times again.
<p>rectly completed a multi-step skill with beginning prompt + one additional prompt that did not modify (make easier) the skill assessed</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Student correctly completed all steps with beginning prompt and one additional prompt that did not modify the skill <ul style="list-style-type: none"> • to sort all items • to give required number of responses to question (e.g. name 2 items; student named only one, then was prompted for the second).

<p><i>performed correctly</i></p> <p><i>but beginning prompt was not heard</i></p>	<p><input type="checkbox"/> Administrator's beginning prompt(s) was not recorded but the student response observed was correct.</p>
<p><i>modified (easier) version of the skill</i></p>	<p><input type="checkbox"/> Administrator:</p> <ul style="list-style-type: none"> • pointed while student read or counted (except when told to do so). • corrected student's reading when student was to read independently. • named a material that was not supposed to be named. • presented materials in an ordered array instead of an unordered array as specified. • eliminated or added space between materials to be counted, added, or subtracted. • presented easier question than specified. <ul style="list-style-type: none"> - changed 'where' question to 'who.' - changed inferential question to literal. - changed open-ended question to fill-in-the-blank. <p><input type="checkbox"/> Student:</p> <ul style="list-style-type: none"> • answered question in a form easier than specified. • reread entire sentence instead of answering question in his or her own words. • answered open-ended question with a partially correct or a possibly likely answer.
<p><i>at least one but not all of the steps of a multi-step skill</i></p>	<p><input type="checkbox"/> Student:</p> <ul style="list-style-type: none"> • named, described, sequenced, or sorted at least one, but not all, materials. • was to count out loud and give answer but student just gave the answer. • counted materials incorrectly but came up with the correct answer. • counted materials correctly but teacher stopped student when count was reached.

<p><i>with the array reduced (but including at least 2 choices)</i></p>	<p><input type="checkbox"/> Administrator:</p> <ul style="list-style-type: none"> • presented fewer choices than specified in the test, but at least two remained. • removed choice after student selected wrong choice, but at least two choices remained.
<p><i>with beginning prompt and two or more additional prompts</i></p>	<p><input type="checkbox"/> Administrator:</p> <ul style="list-style-type: none"> • gave the beginning prompt two or more additional times after pause between prompts. • gave the beginning prompt, waited for a response, received none and repeated beginning prompt (silent prompt) two or more additional times. • gave the beginning prompt two or more additional times when student did not respond for clarification or gave incorrect answer.
<p><i>performed incorrectly</i></p>	<p><input type="checkbox"/> Student responded but response was incorrect and administrator recorded incorrect</p> <ul style="list-style-type: none"> • final response for single step item was incorrect. <p><input type="checkbox"/> no step of multi-step item was correct.</p>
<p><i>demonstrated skill completely different from the target skill</i></p>	<p><input type="checkbox"/> Student responded to administrator prompts, but the skill demonstrated was completely different than required.</p> <p><input type="checkbox"/> required skill was “Reads word,” student matched word.</p>
<p><i>actively engaged and the teacher ensured the correct response</i></p>	<p><input type="checkbox"/> Administrator:</p> <ul style="list-style-type: none"> • reduced materials in array to one choice. • led student’s hand to correct choice. • gave the student the correct answer. • pointed to the correct answer and student imitated the response. • demonstrated what to do and the student imitated the response. <p><input type="checkbox"/> required skill was “Read word(s),” student repeated word(s) after administrator said word(s).</p>
<p><i>actively engaged but the response was not seen nor heard</i></p>	<p><input type="checkbox"/> Test item, including beginning prompt, was presented but response was not recorded.</p> <p><input type="checkbox"/> scorer could not determine if response was correct or incorrect.</p>

<p><i>Passively participated and administrator ensured correct response</i></p>	<p><input type="checkbox"/> There was no sign of the student being engaged with the test material.</p> <ul style="list-style-type: none"> • Student was not oriented to the materials used for the skills test after prompting, and the administrator led the student's hand to the answer.
<p><i>Only beginning prompt was presented</i></p>	<p><input type="checkbox"/> Administrator:</p> <ul style="list-style-type: none"> • presented the beginning prompt, but the student was not engaged; no response was observed. <p><input type="checkbox"/> Student:</p> <ul style="list-style-type: none"> • was not engaged in the skill and the administrator did not correct the test item. • did not appear engaged during the setup and no response recorded.
<p><i>Skill was not recorded (skipped, not able to be seen nor heard)</i></p>	<p><input type="checkbox"/> Entire skill was skipped (neither the instruction nor the response was recorded).</p>

Math-Specific Scoring Considerations: Impact of Wording on Scoring

Concept	Acceptable wording	Wording/action that modifies the skill resulting in reduction of scores
	<ul style="list-style-type: none"> • Large/big • Small/little 	<ul style="list-style-type: none"> • Biiigggest with gesture showing size
	<ul style="list-style-type: none"> • Long, longer, longest • Short, shorter, shortest 	<ul style="list-style-type: none"> • Big, bigger, biggest • Small, smaller, smallest • Looonnggest with gesture showing length
city	<ul style="list-style-type: none"> • Holds the most or holds the largest amount • Holds the least or holds the smallest amount 	<ul style="list-style-type: none"> • Biggest • Smallest • Presenting item as 2- instead of 3-dimensional (e.g., paper bag on items related to volume) which changes focus from discrimination based on volume to discrimination based on size
	<ul style="list-style-type: none"> • Heavy, weighs the most • Light, weighs the least 	<ul style="list-style-type: none"> • Biggest • Smallest
	<ul style="list-style-type: none"> • Longest, farthest • Shortest, closest 	<ul style="list-style-type: none"> • If item used numerals to express distance, ask for biggest/smallest instead
	<ul style="list-style-type: none"> • Longest, slowest, most time, biggest amount of time • Shortest, quickest, fastest, least time, smallest amount of time 	<ul style="list-style-type: none"> • If item used numerals to express time/speed, ask for biggest/smallest number instead
distribution (Bar)	<ul style="list-style-type: none"> • Most, biggest number, largest number • Least, smallest number • A few/a lot 	<ul style="list-style-type: none"> • Highest, tallest, longest, biggest • Lowest, shortest, smallest
	<ul style="list-style-type: none"> • Most likely, best chance • Least likely 	<ul style="list-style-type: none"> • Most, biggest number • Least, smallest number

PASA SCIENCE, GRADE 11, LEVEL A

Activities on the PASA, Grade 11, Level A Science assessment involve some very early science concepts. Science concepts tested include: selecting values on a bar graph; matching line graphs; selecting technology needed to complete a particular task; selecting the part that may solve a problem with a man-made machine; selecting an animal that lives in a place named; selecting an animal body part used for a similar function by two different animals; selecting members of an animal class named; selecting energy source that causes pollution; selecting an item that will/will not change into a state of matter named; using a map to determine the position of an object; selecting the source of a product named; selecting equipment used to get natural resources; selecting clothing worn in specific temperature; selecting activity associated with weather; and selecting outcome associated with weather events. All questions are answered by selecting the correct choice from a group of 3 items or from analyzing a complex picture.

LEAH'S PASA SCIENCE PERFORMANCE ASSESSMENT RESULTS

SCIENCE SKILLS ASSESSED AT GRADE 11, LEVEL A	Performance Profile		
	Could not perform without teacher assistance	Performed correctly with teacher hints and prompts	Performed correctly and independently
NATURE OF SCIENCE			
Reads a line graph or bar graph; Selects most recent technology innovation; Selects technology needed for scenario described; Solves a problem related to a part from a man-made system		◆	
BIOLOGICAL SCIENCES			
Identifies basic needs of plants and animals; Identifies plant or animal structures used for a specific function; Identifies animals by class; Selects source of energy that pollutes environment		◆	
PHYSICAL SCIENCES			
Identifies items that will or will not melt; Identifies position and locations on a map		◆	
EARTH AND SPACE SCIENCE			
Identifies source of foods or products; Identifies equipment used to get natural resources; Identifies clothing related to varying temperatures and activities; Identifies outcome of a weather event		◆	

SCIENCE SCORE SUMMARY

EMERGING		NOVICE		PROFICIENT	
1	80	81	◆	90	91
Leah's score is 81 out of 100 points and is indicated by the ◆ above.					



Student Report

Dear Family,

As required by Federal Law, your child participated in the *Pennsylvania Alternate System of Assessment (PASA)* in the spring of 2014. This test was designed specifically as an alternate statewide assessment for students for whom the IEP team determined that the regular *Pennsylvania System of School Assessment (PSSA)* is inappropriate, even with accommodations and modifications. The PASA is a snapshot assessment of grade appropriate reading, math, and science skills, reinterpreted to be more appropriate for students with significant cognitive disabilities. We hope you will use the information in this report to discuss your child's performance with his/her teacher. A strong partnership between families and teachers is critical to your child's success.

Student Name:	Leah
PA Student ID:	
Service Provider:	
School:	
Test Date:	2014

Sincerely,

Patricia Hozella
Director of Bureau of Special Education

Summary of Leah's PASA performance by subject

SUBJECT	TEST GRADE AND LEVEL	PERFORMANCE LEVEL			
		EMERGING	NOVICE	PROFICIENT	ADVANCED
Reading	11 B NON	◆			
Mathematics	11 B NON		◆		
Science	11 A		◆		

NON: Specially adapted test for hearing students who use modes of communication other than speech

Remember: Scores on the PASA are just a single snapshot of your child's performance on a very specific set of test items at one point in time.



Bureau of Special Education
PASA Project

PASA READING, GRADE 11, LEVEL B

Activities on the PASA, Grade 11, Level B Reading assessment involve basic understanding of text that a student is likely to encounter in his/her environment. Test activities include reading high frequency words in isolation or in context; selecting the correct printed word; selecting words based on function, meaning, or from particular features described; determining in which category a word belongs; selecting the word that is missing from a sentence; answering 'who,' 'what,' 'where,' 'when,' or 'why' questions after listening to a sentence; selecting a picture to identify the main event of a story; and sequencing 3 events in a story. Questions may be open-ended or may involve selecting from an array of 4 words.

LEAH'S PASA READING PERFORMANCE ASSESSMENT RESULTS

READING SKILLS ASSESSED AT GRADE 11, LEVEL B	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
READING SINGLE WORDS			
Identifies word named		◆	
Reads 1 word in isolation or in context		◆	
LISTENING COMPREHENSION			
Identifies meaning of word/sentence		◆	
Identifies picture by feature		◆	
Answers literal 'who,' 'what,' 'where,' 'when,' or 'why' question after listening to a sentence		◆	
Sequences pictures of 3 events or identifies picture showing main event after listening to story		◆	

PASA MATH, GRADE 11, LEVEL B

Activities on the PASA, Grade 11, Level B Math assessment involve some computational, mathematical concepts, and numbers up through 99. Test activities include counting (objects, pennies, or bills) by 2s or 5s; naming the value of a coin; sequencing nonconsecutive numbers; solving addition and subtraction problems using a calculator; solving multiplication problems using manipulatives; measuring and comparing length, area, and volume; reading clock faces; sorting three-dimensional shapes; completing a repeating number pattern; and reading a graph or a table. Test questions may be open-ended or may involve selecting from a set of 4 choices in which incorrect choices are similar in some way to the correct answer.

LEAH'S PASA MATH PERFORMANCE ASSESSMENT RESULTS

MATH SKILLS ASSESSED AT GRADE 11, LEVEL B	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
NUMBERS AND OPERATIONS			
Identifies quantity up to 20 that is enough			◆
Counts between 10 and 99 items, one-dollar bills, or pennies by ones or fives		◆	
Gives the value of a coin (penny, nickel, dime, or quarter)			◆
Orders 3 nonconsecutive numbers up to 99		◆	
Selects item divided into an equal number of parts			◆
Adds 2 or 3 numbers or prices with sum less than 99			◆
Subtracts 2 numbers or prices with each number less than 99	◆		
Multiplies numbers by 2s or 5s with products less than 99		◆	
MEASUREMENT			
Measures length of item using a ruler with 1-inch markings		◆	
Compares and measures area and volume			◆
Understands time		◆	
GEOMETRY AND ALGEBRA			
Sorts 9 objects into 4 groups		◆	
Identifies number missing in pattern of odd/even numbers ≤ 99			◆
DATA ANALYSIS AND PROBABILITY			
Evaluates data presented in sets, graphs, and tables (all numbers ≤ 99)		◆	

READING SCORE SUMMARY

EMERGING		NOVICE		PROFICIENT	
1	◆ 71	72	89	90	100
Leah's score is 64 out of 100 points and is indicated by the ◆ above.					

MATH SCORE SUMMARY

EMERGING		NOVICE		PROFICIENT	
1	72	73	◆ 87	88	100
Leah's score is 77 out of 100 points and is indicated by the ◆ above.					

Student Report



Pennsylvania Department of Education
Bureau of Special Education



Only students in 4th, 8th and 11th grade are required to take the PASA Science test.

Dear Family,

As required by Federal Law, your child participated in the *Pennsylvania Alternate System of Assessment (PASA)* in the spring of 2014. This test was designed specifically as an alternate statewide assessment for students for whom the IEP team determined that the regular *Pennsylvania System of School Assessment (PSSA)* is inappropriate, even with accommodations and modifications. The *PASA* is a snapshot assessment of grade appropriate reading, math, and science skills, reinterpreted to be more appropriate for students with significant cognitive disabilities. We hope you will use the information in this report to discuss your child's performance with his/her teacher. A strong partnership between families and teachers is critical to your child's success.

Student Name:	Nathan
PA Student ID:	
Service Provider:	
School:	
Test Date:	2014

Sincerely,

Patricia Hozella
Director of Bureau of Special Education

Summary of Nathan's PASA performance by subject					
SUBJECT	TEST GRADE AND LEVEL	PERFORMANCE LEVEL			
		EMERGING	NOVICE	PROFICIENT	ADVANCED
Reading	3 C	♦			
Mathematics	3 C	♦			
Science					

Remember: Scores on the PASA are just a single snapshot of your child's performance on a very specific set of test items at one point in time.



PASA READING, GRADE 3/4, LEVEL C

The PASA, Grade 3/4, Level C Reading assessment involves understanding of basic text without the support of pictures. Test activities include reading high frequency words in isolation or embedded in a paragraph; selecting a picture after reading one word; and selecting a printed word with a particular beginning sound. Test activities for comprehension include reading one word and defining the function of the word or determining in which category the word belongs; answering 'who,' 'what,' 'where,' or 'when' comprehension questions after listening to a paragraph; and sequencing events from a story. Questions are typically open-ended; however, some involve selecting the correct answer from an array of 5 choices.

NATHAN'S PASA READING PERFORMANCE ASSESSMENT RESULTS

READING SKILLS ASSESSED AT GRADE 3/4, LEVEL C	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
READING SINGLE WORDS			
Identifies word named; Matches word to picture		◆	
Identifies word with beginning sound named		◆	
Reads aloud 1 word embedded in a paragraph	◆		
LISTENING COMPREHENSION			
Reads word and identifies another with similar meaning		◆	
Reads and defines noun by function		◆	
Answers literal 'who,' 'what' 'where', or 'when' question after listening to a 3 sentence story; Sequences pictures of 3 events after listening to story	◆		

READING SCORE SUMMARY

EMERGING		NOVICE		PROFICIENT		ADVANCED	
1	◆ 71	72	84	85	93	94	100
Nathan's score is 63 out of 100 points and is indicated by the ◆ above.							

PASA MATH, GRADE 3/4, LEVEL C

Activities on the PASA, Grade 3/4, Level C Math assessment involve basic math concepts and numbers up through nine. Test activities include counting up to 9 items (objects, pennies, dollar bills); adding and subtracting numbers using manipulatives; recognizing coins and specific denominations of bills; sequencing sets of items or numerals; measuring length and volume up to 9 units; reading digital time displays and analog clocks; sorting three-dimensional shapes; selecting an equation that solves a simple word problem; extending a number pattern; reading a simple graph or a table; and predicting a probable outcome. Most questions are open-ended; others involve choosing the correct answer from an array of 5 choices.

NATHAN'S PASA MATH PERFORMANCE ASSESSMENT RESULTS

MATH SKILLS ASSESSED AT GRADE 3/4, LEVEL C	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
NUMBERS AND OPERATIONS			
Counts 1 to 9 items, one-dollar bills, or pennies; Matches numeral to quantity ≤ 9 ; Orders 4 sets of items or numbers with values ≤ 9		◆	
Identifies coins of various values and bills of different denominations			◆
Identifies item divided evenly into the number of pieces specified			◆
Adds 2 or 3 sets of items or prices with sums ≤ 9		◆	
Subtracts 2 sets of items or prices ≤ 9		◆	
MEASUREMENT			
Reads digital clock set to quarter hour and analog clock set to half hour		◆	
Measures length of item with a ruler with 1-inch markings; Measures volume by counting units ≤ 9		◆	
GEOMETRY AND ALGEBRA			
Sorts 8 items into 4 groups		◆	
Identifies the equation that matches the word problem with numbers ≤ 9			◆
Identifies number that extends a pattern with odd/even numbers ≤ 9		◆	
DATA ANALYSIS AND PROBABILITY			
Reads and uses data presented in graphs and tables with numbers ≤ 9 ; Identifies most/least probable outcome		◆	

MATH SCORE SUMMARY

EMERGING		NOVICE		PROFICIENT		ADVANCED	
1	◆ 77	78	86	87	94	95	100
Nathan's score is 77 out of 100 points and is indicated by the ◆ above.							

Student Report



Pennsylvania Department of Education
Bureau of Special Education



Only students in 4th, 8th and 11th grade are required to take the PASA Science test.

Dear Family,

As required by Federal Law, your child participated in the *Pennsylvania Alternate System of Assessment (PASA)* in the spring of 2014. This test was designed specifically as an alternate statewide assessment for students for whom the IEP team determined that the regular *Pennsylvania System of School Assessment (PSSA)* is inappropriate, even with accommodations and modifications. The *PASA* is a snapshot assessment of grade appropriate reading, math, and science skills, reinterpreted to be more appropriate for students with significant cognitive disabilities. We hope you will use the information in this report to discuss your child's performance with his/her teacher. A strong partnership between families and teachers is critical to your child's success.

Student Name:	Adrianna
PA Student ID:	
Service Provider:	
School:	
Test Date:	2014

Sincerely,

Patricia Hozella
Director of Bureau of Special Education

Summary of Adrianna's PASA performance by subject					
SUBJECT	TEST GRADE AND LEVEL	PERFORMANCE LEVEL			
		EMERGING	NOVICE	PROFICIENT	ADVANCED
Reading	7 B			◆	
Mathematics	7 B		◆		
Science					

Remember: Scores on the PASA are just a single snapshot of your child's performance on a very specific set of test items at one point in time.



Bureau of Special Education
PASA Project

PASA READING, GRADE 7/8, LEVEL B

Activities on the PASA, Grade 7/8 Level B Reading assessment involve the transition from pictures to very commonly encountered printed words. Test activities for “reading” include selecting a word that is named; reading a word with help from an accompanying picture; identifying a word with the same beginning sound or that rhymes with a pictured word; and naming activities depicted in a picture. Test activities for comprehension include selecting words based on function or from a particular feature; determining in which category a word belongs; selecting the word that is missing from a sentence; answering ‘who,’ ‘what,’ ‘where,’ or ‘when’ questions after listening to a sentence; and selecting the first/last event or main event of a story. Questions may be open-ended or may involve selecting from a set of 4 words.

ADRIANNA’S PASA READING PERFORMANCE ASSESSMENT RESULTS

READING SKILLS ASSESSED AT GRADE 7/8, LEVEL B	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
READING SINGLE WORDS			
Identifies picture or word with same beginning or ending (rhyming) sound			◆
Identifies word named; Identifies activities depicted in a picture		◆	
Reads a single word describing a complex picture			◆
UNDERSTANDING COMPLEX PICTURES; LISTENING COMPREHENSION			
Identifies meaning of word/sentence			◆
Identifies picture by feature		◆	
Answers literal ‘who’, ‘what’, ‘where’, ‘when’, or ‘why’ question after listening to a sentence			◆
Identifies picture showing next event or main event after listening to a story		◆	

READING SCORE SUMMARY

EMERGING	NOVICE	PROFICIENT
1 71	72 86	87 ◆ 100

Adrianna’s score is 93 out of 100 points and is indicated by the ◆ above.

PASA MATH, GRADE 7/8, LEVEL B

Activities in the PASA, Grade 7/8, Level B Math assessment involve basic mathematical concepts and numbers up through 19. Test activities include counting (objects, pennies, or bills) starting from a number other than 1; identifying coins by value; sequencing objects, numerals, or prices; recognizing an item divided equally into specified numbers of parts; adding or subtracting numbers using manipulatives; measuring length, area, and volume; reading digital and analog clocks; sorting three-dimensional shapes; completing a repeating number pattern; and reading a graph or a table. Test questions may be open-ended or may be answered by selecting from a set of 4 in which incorrect choices are similar in some way to the correct answer choice.

ADRIANNA’S PASA MATH PERFORMANCE ASSESSMENT RESULTS

MATH SKILLS ASSESSED AT GRADE 7/8, LEVEL B	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
NUMBERS AND OPERATIONS			
Counts 1 to 19 items, one-dollar bills, or pennies; Matches numeral to quantity less than 19			◆
Orders 3 sets of 1 to 19 items, numbers, or prices		◆	
Selects item divided evenly into the number of pieces specified			◆
Selects coin worth 1, 5, 10, or 25 cents		◆	
Adds 2 or 3 numbers or prices with sums up to 19		◆	
Subtracts 2 numbers or prices each less than 19			◆
MEASUREMENT			
Measures length using ruler with 1-inch markings and compares distance			◆
Measures and compares area or volume			◆
Reads analog time at 1-hour intervals and digital time at 5-minute intervals; Evaluates time			◆
GEOMETRY AND ALGEBRA			
Sorts 8 objects into 4 groups		◆	
Identifies number missing in pattern of odd/even numbers ≤ 19		◆	
DATA ANALYSIS AND PROBABILITY			
Evaluates data presented in sets, graphs, and tables (all numbers ≤ 19)		◆	

MATH SCORE SUMMARY

EMERGING	NOVICE	PROFICIENT
1 77	78 ◆ 90	91 100

Adrianna’s score is 84 out of 100 points and is indicated by the ◆ above.

Student Report



Pennsylvania Department of Education
Bureau of Special Education



Only students in 4th, 8th and 11th grade are required to take the PASA Science test.

Dear Family,

As required by Federal Law, your child participated in the *Pennsylvania Alternate System of Assessment (PASA)* in the spring of 2014. This test was designed specifically as an alternate statewide assessment for students for whom the IEP team determined that the regular *Pennsylvania System of School Assessment (PSSA)* is inappropriate, even with accommodations and modifications. The *PASA* is a snapshot assessment of grade appropriate reading, math, and science skills, reinterpreted to be more appropriate for students with significant cognitive disabilities. We hope you will use the information in this report to discuss your child's performance with his/her teacher. A strong partnership between families and teachers is critical to your child's success.

Student Name:	Raymond
PA Student ID:	
Service Provider:	
School:	
Test Date:	2014

Sincerely,

Patricia Hozella
Director of Bureau of Special Education

Summary of Raymond's PASA performance by subject					
SUBJECT	TEST GRADE AND LEVEL	PERFORMANCE LEVEL			
		EMERGING	NOVICE	PROFICIENT	ADVANCED
Reading	6 A STOP	◆			
Mathematics	6 A STOP	◆			
Science					

STOP: Teacher began the assessment, but stopped the test before completing it

Remember: Scores on the PASA are just a single snapshot of your child's performance on a very specific set of test items at one point in time.



Bureau of Special Education
PASA Project

PASA READING, GRADE 5/6, LEVEL A

Activities on the *PASA*, Grade 5/6, Level A Reading assessment involve the use of objects that the student would commonly encounter in his/her environments. Test activities for “reading” include matching identical objects and selecting an item when given the name. Test activities for comprehension include selecting an object based on how it is used; matching 2 objects that are used in similar ways; determining in which category an object belongs; and answering ‘who’ or ‘what’ questions after listening to a sentence. All questions are answered by making a selection from a group of 3 objects. One incorrect answer choice looks very different from the correct choice. The second incorrect choice bears some similarity to the correct choice.

RAYMOND’S PASA READING PERFORMANCE ASSESSMENT RESULTS

READING SKILLS ASSESSED AT GRADE 5/6, LEVEL A	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
“READING” OBJECTS			
Matches identical objects	◆		
Selects object named	◆		
LISTENING COMPREHENSION			
Identifies relationships between objects	◆		
Identifies categories, functions, and features of objects	◆		
Answers literal ‘who’ or ‘what’ question after listening to a sentence	◆		

PASA MATH, GRADE 5/6, LEVEL A

Activities on the *PASA*, Grade 5/6, Level A Math assessment involve the use of objects that the student would commonly encounter in his/her environment. Test activities include matching or comparing sets of objects; distinguishing money from other objects and a clock from other objects; matching or comparing two- and three-dimensional objects based on length, area, or volume; sorting three-dimensional shapes; and extending a repeating pattern. All questions are answered by selecting from a group of 3 objects. In all cases, the correct answer looks very different from the other two choices.

RAYMOND’S PASA MATH PERFORMANCE ASSESSMENT RESULTS

MATH SKILLS ASSESSED AT GRADE 5/6, LEVEL A	Performance Profile		
	Could not perform	Performed correctly with teacher hints and prompts	Performed correctly and independently
NUMBERS AND OPERATIONS			
Matches sets of equal quantity	◆		
Identifies set with most/least	◆		
Differentiates dollar bill from other items	◆		
MEASUREMENT			
Matches items of equal length, size, or capacity	◆		
Identifies longest/shortest item	◆		
Identifies biggest/smallest item by area or capacity	◆		
Differentiates clock from other items	◆		
GEOMETRY AND ALGEBRA			
Adds object to group of others with the same shape	◆		
Identifies object that completes an ABAB pattern	◆		

READING SCORE SUMMARY

EMERGING		NOVICE		PROFICIENT	
1	◆	71	72	87	88
Raymond’s score is 13 out of 100 points and is indicated by the ◆ above.					

MATH SCORE SUMMARY

EMERGING		NOVICE		PROFICIENT	
1	◆	77	78	89	90
Raymond’s score is 8 out of 100 points and is indicated by the ◆ above.					

Appendix H: Interitem Correlations

Appendix H

Inter-Item Correlations

Appendix H: Interitem Correlations

Grade 3/4 Level A PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.38	1.00																		
R3	0.37	0.44	1.00																	
R4	0.39	0.42	0.48	1.00																
R5	0.41	0.40	0.43	0.47	1.00															
R6	0.48	0.43	0.46	0.47	0.49	1.00														
R7	0.47	0.38	0.43	0.45	0.49	0.51	1.00													
R8	0.41	0.41	0.47	0.49	0.48	0.52	0.49	1.00												
R9	0.42	0.41	0.50	0.53	0.50	0.50	0.51	0.49	1.00											
R10	0.42	0.45	0.48	0.52	0.53	0.50	0.50	0.54	0.56	1.00										
R11	0.42	0.40	0.41	0.50	0.51	0.47	0.50	0.47	0.50	0.56	1.00									
R12	0.38	0.43	0.46	0.47	0.45	0.51	0.52	0.56	0.48	0.52	0.47	1.00								
R13	0.40	0.41	0.55	0.48	0.50	0.50	0.48	0.56	0.54	0.51	0.46	0.55	1.00							
R14	0.40	0.39	0.42	0.41	0.41	0.45	0.42	0.47	0.45	0.48	0.43	0.48	0.49	1.00						
R15	0.45	0.38	0.44	0.43	0.40	0.51	0.43	0.45	0.50	0.49	0.49	0.48	0.49	0.47	1.00					
R16	0.44	0.42	0.47	0.51	0.53	0.48	0.52	0.53	0.58	0.56	0.55	0.51	0.53	0.46	0.48	1.00				
R17	0.40	0.39	0.44	0.50	0.45	0.45	0.46	0.47	0.53	0.49	0.48	0.47	0.51	0.44	0.50	0.54	1.00			
R18	0.43	0.46	0.43	0.44	0.48	0.50	0.52	0.46	0.46	0.51	0.53	0.48	0.49	0.45	0.49	0.53	0.47	1.00		
R19	0.38	0.39	0.46	0.46	0.44	0.45	0.43	0.47	0.50	0.47	0.44	0.50	0.55	0.44	0.46	0.50	0.51	0.47	1.00	
R20	0.40	0.40	0.39	0.42	0.46	0.47	0.51	0.47	0.48	0.49	0.46	0.46	0.50	0.45	0.45	0.53	0.50	0.57	0.46	1.00

Appendix H: Interitem Correlations

Grade 3/4 Level B PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.19	1.00																		
R3	0.19	0.22	1.00																	
R4	0.19	0.19	0.13	1.00																
R5	0.15	0.14	0.14	0.16	1.00															
R6	0.08	0.20	0.17	0.19	0.19	1.00														
R7	0.09	0.15	0.07	0.12	0.12	0.19	1.00													
R8	0.15	0.19	0.13	0.18	0.16	0.20	0.16	1.00												
R9	0.04	0.16	0.12	0.17	0.16	0.22	0.16	0.20	1.00											
R10	0.13	0.12	0.16	0.14	0.17	0.27	0.14	0.21	0.26	1.00										
R11	0.13	0.18	0.15	0.19	0.19	0.26	0.18	0.21	0.29	0.24	1.00									
R12	0.17	0.15	0.13	0.17	0.21	0.18	0.17	0.16	0.19	0.19	0.21	1.00								
R13	0.09	0.17	0.12	0.20	0.20	0.21	0.16	0.29	0.24	0.23	0.28	0.24	1.00							
R14	0.12	0.20	0.10	0.20	0.15	0.25	0.18	0.23	0.24	0.23	0.25	0.21	0.29	1.00						
R15	0.14	0.15	0.03	0.37	0.16	0.19	0.09	0.16	0.13	0.15	0.14	0.21	0.18	0.24	1.00					
R16	0.12	0.26	0.09	0.18	0.18	0.25	0.18	0.21	0.27	0.21	0.28	0.22	0.29	0.30	0.20	1.00				
R17	0.07	0.09	0.10	0.10	0.14	0.21	0.15	0.20	0.21	0.32	0.27	0.24	0.22	0.27	0.19	0.30	1.00			
R18	0.06	0.15	0.13	0.12	0.13	0.24	0.20	0.18	0.28	0.23	0.27	0.16	0.24	0.29	0.18	0.34	0.43	1.00		
R19	0.09	0.13	0.16	0.14	0.19	0.29	0.16	0.16	0.27	0.24	0.32	0.18	0.22	0.24	0.17	0.36	0.48	0.45	1.00	
R20	0.10	0.22	0.13	0.14	0.13	0.20	0.18	0.13	0.19	0.16	0.26	0.17	0.19	0.25	0.17	0.30	0.28	0.30	0.28	1.00

Appendix H: Interitem Correlations

Grade 3/4 Level C PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.26	1.00																		
R3	0.14	0.27	1.00																	
R4	0.21	0.28	0.32	1.00																
R5	0.24	0.23	0.27	0.26	1.00															
R6	0.18	0.36	0.25	0.31	0.18	1.00														
R7	0.28	0.39	0.26	0.24	0.38	0.30	1.00													
R8	0.21	0.47	0.13	0.30	0.15	0.50	0.28	1.00												
R9	0.16	0.28	0.31	0.35	0.27	0.26	0.29	0.22	1.00											
R10	0.12	0.19	0.25	0.35	0.26	0.29	0.29	0.20	0.49	1.00										
R11	0.18	0.20	0.17	0.17	0.22	0.15	0.34	0.18	0.27	0.16	1.00									
R12	0.25	0.30	0.17	0.28	0.25	0.33	0.41	0.43	0.25	0.32	0.18	1.00								
R13	0.17	0.20	0.23	0.19	0.24	0.23	0.32	0.21	0.30	0.32	0.23	0.25	1.00							
R14	0.20	0.42	0.23	0.25	0.19	0.46	0.34	0.50	0.19	0.18	0.21	0.38	0.26	1.00						
R15	0.10	0.07	0.25	0.34	0.24	0.18	0.13	0.12	0.24	0.28	0.17	0.14	0.18	0.14	1.00					
R16	0.12	0.35	0.13	0.20	0.12	0.36	0.20	0.49	0.18	0.11	0.18	0.29	0.14	0.45	0.15	1.00				
R17	0.07	0.22	0.29	0.37	0.24	0.34	0.21	0.27	0.36	0.40	0.16	0.27	0.28	0.26	0.32	0.31	1.00			
R18	0.06	0.18	0.22	0.29	0.21	0.31	0.22	0.26	0.42	0.40	0.20	0.25	0.22	0.18	0.24	0.25	0.47	1.00		
R19	0.14	0.25	0.33	0.35	0.21	0.37	0.23	0.29	0.38	0.36	0.22	0.29	0.19	0.29	0.26	0.35	0.49	0.47	1.00	
R20	0.11	0.29	0.20	0.30	0.10	0.45	0.18	0.28	0.26	0.27	0.21	0.24	0.17	0.29	0.18	0.35	0.36	0.27	0.39	1.00

Appendix H: Interitem Correlations

Grade 5/6 Level A PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.57	1.00																		
R3	0.35	0.41	1.00																	
R4	0.38	0.48	0.39	1.00																
R5	0.38	0.37	0.31	0.37	1.00															
R6	0.38	0.43	0.35	0.36	0.36	1.00														
R7	0.41	0.45	0.41	0.43	0.33	0.35	1.00													
R8	0.47	0.47	0.33	0.44	0.43	0.36	0.39	1.00												
R9	0.48	0.53	0.40	0.43	0.35	0.42	0.43	0.43	1.00											
R10	0.42	0.46	0.34	0.44	0.38	0.39	0.44	0.44	0.44	1.00										
R11	0.29	0.32	0.32	0.31	0.39	0.35	0.26	0.31	0.24	0.33	1.00									
R12	0.41	0.42	0.32	0.37	0.34	0.40	0.37	0.41	0.40	0.38	0.31	1.00								
R13	0.53	0.46	0.33	0.40	0.42	0.43	0.38	0.45	0.43	0.39	0.40	0.43	1.00							
R14	0.43	0.43	0.38	0.37	0.36	0.40	0.40	0.40	0.40	0.36	0.35	0.43	0.44	1.00						
R15	0.46	0.48	0.32	0.53	0.42	0.33	0.41	0.50	0.43	0.42	0.37	0.42	0.50	0.45	1.00					
R16	0.47	0.46	0.37	0.45	0.44	0.39	0.45	0.48	0.47	0.43	0.35	0.46	0.48	0.48	0.50	1.00				
R17	0.42	0.40	0.27	0.37	0.28	0.35	0.36	0.38	0.43	0.35	0.24	0.41	0.40	0.39	0.44	0.41	1.00			
R18	0.41	0.42	0.37	0.48	0.38	0.35	0.44	0.47	0.43	0.44	0.33	0.40	0.45	0.40	0.51	0.48	0.40	1.00		
R19	0.48	0.46	0.35	0.39	0.45	0.39	0.42	0.47	0.38	0.40	0.39	0.38	0.50	0.45	0.50	0.48	0.41	0.46	1.00	
R20	0.38	0.42	0.29	0.36	0.31	0.42	0.39	0.36	0.41	0.37	0.31	0.40	0.39	0.37	0.38	0.41	0.40	0.42	0.40	1.00

Appendix H: Interitem Correlations

Grade 5/6 Level B PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.22	1.00																		
R3	0.11	0.14	1.00																	
R4	0.12	0.12	0.40	1.00																
R5	0.20	0.32	0.23	0.23	1.00															
R6	0.18	0.34	0.12	0.13	0.28	1.00														
R7	0.20	0.31	0.19	0.12	0.24	0.28	1.00													
R8	0.16	0.25	0.24	0.21	0.26	0.22	0.20	1.00												
R9	0.16	0.25	0.16	0.11	0.21	0.37	0.27	0.21	1.00											
R10	0.16	0.22	0.15	0.12	0.22	0.25	0.24	0.31	0.26	1.00										
R11	0.12	0.31	0.23	0.16	0.22	0.26	0.32	0.28	0.28	0.27	1.00									
R12	0.13	0.28	0.19	0.19	0.25	0.28	0.25	0.34	0.30	0.33	0.38	1.00								
R13	0.18	0.31	0.23	0.18	0.29	0.31	0.30	0.34	0.34	0.37	0.45	0.39	1.00							
R14	0.16	0.25	0.13	0.10	0.26	0.29	0.23	0.16	0.25	0.19	0.20	0.19	0.27	1.00						
R15	0.14	0.26	0.12	0.12	0.26	0.31	0.22	0.18	0.29	0.24	0.22	0.25	0.28	0.27	1.00					
R16	0.29	0.30	0.19	0.19	0.35	0.28	0.29	0.26	0.22	0.24	0.22	0.24	0.28	0.22	0.21	1.00				
R17	0.15	0.24	0.08	0.08	0.23	0.22	0.25	0.19	0.22	0.23	0.25	0.27	0.27	0.20	0.23	0.25	1.00			
R18	0.12	0.17	0.38	0.30	0.26	0.19	0.18	0.31	0.19	0.17	0.29	0.25	0.32	0.18	0.20	0.27	0.25	1.00		
R19	0.17	0.21	0.16	0.15	0.24	0.22	0.24	0.22	0.19	0.20	0.19	0.18	0.23	0.22	0.15	0.32	0.26	0.25	1.00	
R20	0.16	0.29	0.15	0.12	0.21	0.25	0.27	0.18	0.28	0.25	0.31	0.26	0.33	0.23	0.22	0.21	0.28	0.28	0.27	1.00

Appendix H: Interitem Correlations

Grade 5/6 Level C PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.21	1.00																		
R3	0.16	0.19	1.00																	
R4	0.08	0.09	0.22	1.00																
R5	0.12	0.13	0.18	0.40	1.00															
R6	0.11	0.17	0.22	0.08	0.17	1.00														
R7	0.21	0.16	0.24	0.19	0.23	0.20	1.00													
R8	0.23	0.16	0.23	0.19	0.26	0.20	0.40	1.00												
R9	0.15	0.10	0.19	0.24	0.33	0.20	0.34	0.38	1.00											
R10	0.21	0.17	0.27	0.22	0.28	0.23	0.37	0.37	0.30	1.00										
R11	0.15	0.09	0.03	0.07	0.04	0.18	0.04	0.09	0.10	0.10	1.00									
R12	0.15	0.13	0.23	0.22	0.20	0.29	0.25	0.23	0.24	0.29	0.13	1.00								
R13	0.17	0.29	0.22	0.16	0.14	0.24	0.24	0.16	0.17	0.30	0.13	0.28	1.00							
R14	0.10	0.21	0.28	0.19	0.22	0.24	0.29	0.24	0.23	0.27	0.06	0.26	0.27	1.00						
R15	0.27	0.17	0.16	0.07	0.09	0.17	0.13	0.15	0.14	0.18	0.17	0.19	0.18	0.20	1.00					
R16	0.17	0.18	0.21	0.18	0.18	0.27	0.28	0.25	0.22	0.28	0.16	0.28	0.30	0.30	0.21	1.00				
R17	0.12	0.09	0.22	0.17	0.24	0.16	0.21	0.29	0.30	0.28	0.10	0.23	0.19	0.27	0.19	0.32	1.00			
R18	0.11	0.09	0.20	0.14	0.22	0.14	0.16	0.25	0.21	0.31	0.07	0.21	0.15	0.25	0.20	0.26	0.38	1.00		
R19	0.10	0.08	0.23	0.26	0.25	0.21	0.20	0.20	0.30	0.31	0.16	0.22	0.27	0.25	0.21	0.42	0.37	0.31	1.00	
R20	0.14	0.10	0.19	0.13	0.16	0.27	0.22	0.22	0.19	0.23	0.11	0.31	0.25	0.28	0.24	0.30	0.27	0.27	0.32	1.00

Appendix H: Interitem Correlations

Grade 7/8 Level A PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.49	1.00																		
R3	0.52	0.51	1.00																	
R4	0.41	0.44	0.46	1.00																
R5	0.55	0.46	0.53	0.43	1.00															
R6	0.39	0.36	0.43	0.48	0.40	1.00														
R7	0.53	0.57	0.53	0.46	0.51	0.39	1.00													
R8	0.44	0.44	0.49	0.57	0.45	0.48	0.46	1.00												
R9	0.53	0.48	0.54	0.47	0.53	0.42	0.53	0.49	1.00											
R10	0.45	0.41	0.45	0.51	0.48	0.44	0.46	0.51	0.50	1.00										
R11	0.46	0.50	0.45	0.50	0.43	0.36	0.51	0.49	0.47	0.41	1.00									
R12	0.46	0.39	0.50	0.46	0.47	0.46	0.43	0.49	0.46	0.55	0.41	1.00								
R13	0.44	0.43	0.51	0.41	0.47	0.30	0.44	0.40	0.49	0.43	0.47	0.51	1.00							
R14	0.41	0.42	0.44	0.58	0.45	0.38	0.48	0.47	0.46	0.40	0.57	0.44	0.42	1.00						
R15	0.46	0.44	0.52	0.38	0.50	0.38	0.48	0.42	0.44	0.46	0.43	0.44	0.47	0.45	1.00					
R16	0.42	0.48	0.49	0.54	0.43	0.38	0.51	0.49	0.48	0.42	0.57	0.41	0.46	0.61	0.42	1.00				
R17	0.37	0.41	0.47	0.44	0.39	0.38	0.43	0.45	0.43	0.39	0.47	0.41	0.44	0.40	0.44	0.49	1.00			
R18	0.40	0.46	0.41	0.38	0.43	0.30	0.52	0.38	0.49	0.40	0.50	0.36	0.44	0.48	0.42	0.53	0.42	1.00		
R19	0.44	0.40	0.45	0.48	0.48	0.41	0.46	0.49	0.55	0.50	0.41	0.52	0.41	0.49	0.45	0.52	0.43	0.49	1.00	
R20	0.41	0.51	0.49	0.46	0.45	0.35	0.55	0.46	0.45	0.44	0.50	0.42	0.48	0.47	0.50	0.56	0.45	0.57	0.49	1.00

Appendix H: Interitem Correlations

Grade 7/8 Level B PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.12	1.00																		
R3	0.09	0.19	1.00																	
R4	0.13	0.27	0.16	1.00																
R5	0.13	0.39	0.20	0.21	1.00															
R6	0.13	0.29	0.18	0.17	0.34	1.00														
R7	0.16	0.26	0.17	0.17	0.30	0.27	1.00													
R8	0.07	0.29	0.19	0.29	0.22	0.19	0.18	1.00												
R9	0.14	0.37	0.16	0.24	0.40	0.25	0.25	0.28	1.00											
R10	0.12	0.16	0.13	0.15	0.19	0.18	0.25	0.14	0.23	1.00										
R11	0.15	0.21	0.10	0.13	0.21	0.19	0.26	0.16	0.23	0.17	1.00									
R12	0.11	0.30	0.15	0.34	0.24	0.20	0.24	0.28	0.27	0.19	0.23	1.00								
R13	0.08	0.28	0.15	0.36	0.22	0.15	0.19	0.50	0.26	0.16	0.15	0.31	1.00							
R14	0.12	0.17	0.09	0.08	0.24	0.21	0.22	0.08	0.20	0.16	0.18	0.16	0.14	1.00						
R15	0.12	0.31	0.20	0.17	0.31	0.25	0.28	0.16	0.27	0.18	0.25	0.27	0.20	0.18	1.00					
R16	0.14	0.29	0.16	0.18	0.29	0.28	0.27	0.19	0.37	0.20	0.23	0.23	0.26	0.28	0.30	1.00				
R17	0.16	0.32	0.20	0.22	0.34	0.37	0.31	0.25	0.31	0.20	0.23	0.29	0.26	0.23	0.36	0.37	1.00			
R18	0.10	0.37	0.22	0.28	0.37	0.28	0.24	0.36	0.39	0.18	0.23	0.30	0.32	0.20	0.35	0.36	0.35	1.00		
R19	0.05	0.23	0.30	0.18	0.26	0.17	0.18	0.30	0.24	0.11	0.18	0.24	0.25	0.14	0.26	0.23	0.24	0.35	1.00	
R20	0.16	0.38	0.15	0.23	0.36	0.33	0.30	0.17	0.35	0.23	0.30	0.28	0.23	0.30	0.32	0.40	0.39	0.37	0.24	1.00

Appendix H: Interitem Correlations

Grade 7/8 Level C PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.28	1.00																		
R3	0.26	0.25	1.00																	
R4	0.23	0.22	0.30	1.00																
R5	0.31	0.24	0.34	0.32	1.00															
R6	0.19	0.22	0.29	0.30	0.31	1.00														
R7	0.15	0.19	0.25	0.27	0.21	0.31	1.00													
R8	0.22	0.21	0.24	0.28	0.32	0.29	0.27	1.00												
R9	0.28	0.24	0.25	0.28	0.28	0.33	0.24	0.29	1.00											
R10	0.31	0.32	0.27	0.23	0.34	0.31	0.20	0.23	0.28	1.00										
R11	0.14	0.15	0.22	0.29	0.29	0.28	0.30	0.31	0.23	0.24	1.00									
R12	0.22	0.25	0.21	0.08	0.22	0.12	0.10	0.15	0.14	0.24	0.15	1.00								
R13	0.18	0.19	0.28	0.22	0.31	0.20	0.19	0.24	0.20	0.23	0.41	0.26	1.00							
R14	0.22	0.19	0.19	0.25	0.27	0.27	0.22	0.27	0.49	0.23	0.33	0.17	0.27	1.00						
R15	0.20	0.20	0.22	0.16	0.25	0.19	0.12	0.25	0.17	0.28	0.21	0.21	0.24	0.21	1.00					
R16	0.19	0.27	0.23	0.20	0.24	0.22	0.13	0.22	0.19	0.30	0.26	0.22	0.23	0.23	0.27	1.00				
R17	0.16	0.12	0.21	0.28	0.22	0.19	0.25	0.21	0.17	0.19	0.25	0.08	0.19	0.20	0.19	0.20	1.00			
R18	0.21	0.20	0.28	0.36	0.31	0.32	0.25	0.31	0.30	0.26	0.42	0.16	0.25	0.31	0.21	0.26	0.32	1.00		
R19	0.26	0.29	0.30	0.24	0.31	0.28	0.22	0.27	0.27	0.33	0.21	0.31	0.26	0.23	0.31	0.30	0.22	0.33	1.00	
R20	0.27	0.23	0.26	0.32	0.30	0.29	0.23	0.27	0.55	0.27	0.25	0.14	0.23	0.48	0.22	0.20	0.25	0.38	0.31	1.00

Appendix H: Interitem Correlations

Grade 11 Level A PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.55	1.00																		
R3	0.57	0.56	1.00																	
R4	0.54	0.47	0.57	1.00																
R5	0.47	0.49	0.51	0.46	1.00															
R6	0.48	0.50	0.56	0.60	0.45	1.00														
R7	0.51	0.49	0.57	0.53	0.50	0.54	1.00													
R8	0.59	0.50	0.55	0.68	0.52	0.56	0.49	1.00												
R9	0.54	0.54	0.54	0.54	0.50	0.51	0.48	0.58	1.00											
R10	0.42	0.49	0.55	0.58	0.44	0.56	0.47	0.56	0.51	1.00										
R11	0.47	0.42	0.53	0.49	0.42	0.44	0.47	0.50	0.47	0.48	1.00									
R12	0.50	0.49	0.52	0.59	0.50	0.49	0.51	0.59	0.60	0.53	0.50	1.00								
R13	0.37	0.44	0.52	0.52	0.46	0.56	0.47	0.57	0.49	0.59	0.44	0.52	1.00							
R14	0.39	0.49	0.44	0.41	0.51	0.45	0.41	0.47	0.51	0.46	0.44	0.52	0.50	1.00						
R15	0.40	0.50	0.49	0.44	0.47	0.49	0.52	0.49	0.44	0.47	0.47	0.46	0.55	0.48	1.00					
R16	0.51	0.50	0.54	0.47	0.47	0.54	0.52	0.50	0.57	0.51	0.51	0.58	0.51	0.48	0.53	1.00				
R17	0.53	0.51	0.55	0.63	0.50	0.53	0.47	0.62	0.61	0.50	0.52	0.64	0.52	0.52	0.50	0.56	1.00			
R18	0.52	0.51	0.62	0.56	0.46	0.60	0.58	0.60	0.60	0.61	0.53	0.59	0.64	0.50	0.56	0.62	0.64	1.00		
R19	0.52	0.52	0.56	0.58	0.53	0.52	0.51	0.61	0.65	0.54	0.53	0.71	0.57	0.54	0.54	0.63	0.71	0.63	1.00	
R20	0.40	0.45	0.49	0.43	0.43	0.48	0.45	0.46	0.44	0.48	0.46	0.49	0.54	0.54	0.50	0.50	0.52	0.57	0.53	1.00

Appendix H: Interitem Correlations

Grade 11 Level B *PASA Reading* Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.34	1.00																		
R3	0.46	0.27	1.00																	
R4	0.40	0.37	0.38	1.00																
R5	0.29	0.37	0.35	0.37	1.00															
R6	0.38	0.23	0.34	0.33	0.30	1.00														
R7	0.22	0.32	0.30	0.35	0.41	0.24	1.00													
R8	0.27	0.34	0.32	0.36	0.39	0.26	0.37	1.00												
R9	0.38	0.20	0.34	0.29	0.32	0.28	0.27	0.26	1.00											
R10	0.30	0.21	0.33	0.30	0.23	0.31	0.29	0.23	0.25	1.00										
R11	0.20	0.28	0.23	0.27	0.28	0.19	0.32	0.29	0.30	0.27	1.00									
R12	0.25	0.24	0.24	0.25	0.27	0.22	0.29	0.34	0.25	0.18	0.25	1.00								
R13	0.27	0.21	0.31	0.31	0.25	0.24	0.27	0.36	0.26	0.26	0.23	0.26	1.00							
R14	0.26	0.27	0.27	0.31	0.40	0.23	0.36	0.36	0.28	0.25	0.25	0.38	0.29	1.00						
R15	0.23	0.18	0.23	0.28	0.21	0.29	0.23	0.21	0.18	0.35	0.20	0.26	0.27	0.33	1.00					
R16	0.07	0.24	0.09	0.28	0.28	0.10	0.28	0.32	0.15	0.11	0.28	0.26	0.21	0.32	0.17	1.00				
R17	0.10	0.16	0.23	0.14	0.22	0.06	0.23	0.15	0.18	0.12	0.18	0.14	0.17	0.16	0.09	0.20	1.00			
R18	0.31	0.29	0.26	0.31	0.32	0.26	0.31	0.44	0.29	0.25	0.26	0.37	0.31	0.36	0.23	0.29	0.17	1.00		
R19	0.17	0.19	0.20	0.27	0.25	0.11	0.25	0.22	0.30	0.11	0.25	0.15	0.25	0.25	0.16	0.21	0.12	0.23	1.00	
R20	0.32	0.29	0.28	0.38	0.40	0.27	0.44	0.43	0.29	0.25	0.27	0.41	0.37	0.46	0.33	0.32	0.20	0.46	0.26	1.00

Appendix H: Interitem Correlations

Grade 11 Level C PASA Reading Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.24	1.00																		
R3	0.05	0.27	1.00																	
R4	0.24	0.28	0.19	1.00																
R5	0.23	0.27	0.17	0.26	1.00															
R6	0.23	0.26	0.12	0.27	0.35	1.00														
R7	0.20	0.20	0.19	0.18	0.26	0.24	1.00													
R8	0.23	0.26	0.16	0.23	0.23	0.21	0.12	1.00												
R9	0.22	0.28	0.12	0.15	0.21	0.26	0.12	0.15	1.00											
R10	0.25	0.25	0.14	0.22	0.19	0.27	0.22	0.17	0.24	1.00										
R11	0.21	0.19	0.09	0.16	0.23	0.21	0.18	0.13	0.17	0.18	1.00									
R12	0.19	0.24	0.12	0.25	0.24	0.22	0.21	0.20	0.17	0.23	0.12	1.00								
R13	0.17	0.29	0.16	0.19	0.19	0.21	0.14	0.12	0.52	0.11	0.20	0.28	1.00							
R14	0.24	0.32	0.16	0.26	0.18	0.22	0.06	0.16	0.18	0.20	0.16	0.25	0.16	1.00						
R15	0.28	0.35	0.19	0.25	0.22	0.28	0.20	0.22	0.22	0.15	0.21	0.25	0.26	0.26	1.00					
R16	0.18	0.26	0.15	0.18	0.14	0.14	0.10	0.13	0.09	0.13	0.14	0.20	0.19	0.27	0.26	1.00				
R17	0.15	0.15	0.05	0.42	0.09	0.15	0.03	0.10	0.15	0.13	0.13	0.23	0.17	0.22	0.21	0.11	1.00			
R18	0.27	0.23	0.18	0.23	0.14	0.16	0.15	0.15	0.08	0.19	0.20	0.19	0.15	0.24	0.27	0.20	0.20	1.00		
R19	0.18	0.31	0.18	0.20	0.25	0.24	0.14	0.15	0.14	0.21	0.19	0.30	0.27	0.13	0.37	0.22	0.20	0.29	1.00	
R20	0.20	0.30	0.09	0.22	0.27	0.26	0.14	0.11	0.54	0.19	0.22	0.22	0.63	0.21	0.24	0.12	0.24	0.12	0.26	1.00

Appendix H: Interitem Correlations

Grade 3/4 Level A PASA Math Inter-Item Correlations

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20
R1	1.00																			
R2	0.49	1.00																		
R3	0.36	0.29	1.00																	
R4	0.37	0.38	0.27	1.00																
R5	0.44	0.35	0.31	0.36	1.00															
R6	0.39	0.32	0.32	0.45	0.36	1.00														
R7	0.43	0.40	0.29	0.43	0.37	0.44	1.00													
R8	0.47	0.40	0.36	0.37	0.36	0.45	0.43	1.00												
R9	0.44	0.43	0.31	0.48	0.36	0.43	0.51	0.44	1.00											
R10	0.32	0.38	0.19	0.37	0.30	0.33	0.33	0.36	0.35	1.00										
R11	0.33	0.24	0.36	0.24	0.27	0.31	0.28	0.37	0.29	0.24	1.00									
R12	0.42	0.44	0.28	0.51	0.36	0.43	0.50	0.42	0.60	0.39	0.32	1.00								
R13	0.38	0.34	0.26	0.36	0.34	0.36	0.37	0.42	0.35	0.32	0.31	0.35	1.00							
R14	0.49	0.48	0.34	0.45	0.40	0.52	0.59	0.46	0.57	0.36	0.36	0.58	0.40	1.00						
R15	0.43	0.37	0.30	0.43	0.34	0.52	0.50	0.41	0.47	0.36	0.33	0.49	0.38	0.62	1.00					
R16	0.43	0.35	0.30	0.43	0.40	0.44	0.44	0.43	0.45	0.32	0.32	0.45	0.42	0.51	0.50	1.00				
R17	0.38	0.33	0.40	0.31	0.30	0.33	0.36	0.33	0.36	0.21	0.35	0.35	0.31	0.41	0.39	0.35	1.00			
R18	0.41	0.47	0.26	0.38	0.32	0.37	0.38	0.41	0.38	0.44	0.29	0.41	0.37	0.41	0.36	0.36	0.26	1.00		
R19	0.40	0.43	0.29	0.35	0.32	0.34	0.42	0.39	0.44	0.34	0.26	0.45	0.34	0.45	0.38	0.40	0.36	0.42	1.00	
R20	0.39	0.35	0.26	0.50	0.37	0.46	0.42	0.40	0.52	0.38	0.27	0.52	0.37	0.48	0.51	0.50	0.31	0.40	0.42	1.00

Appendix H: Interitem Correlations

Grade 3/4 Level B PASA Math Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.08	1.00																		
M3	0.08	0.25	1.00																	
M4	0.15	0.16	0.20	1.00																
M5	0.08	0.27	0.25	0.21	1.00															
M6	0.07	0.14	0.21	0.17	0.21	1.00														
M7	0.13	0.31	0.31	0.24	0.29	0.22	1.00													
M8	0.30	0.05	0.04	0.10	0.05	0.04	0.13	1.00												
M9	0.07	0.20	0.21	0.17	0.24	0.20	0.23	0.06	1.00											
M10	0.11	0.05	0.13	0.21	0.11	0.22	0.11	0.10	0.11	1.00										
M11	0.09	0.24	0.24	0.18	0.30	0.18	0.32	0.04	0.26	0.13	1.00									
M12	0.11	0.15	0.16	0.28	0.21	0.20	0.16	0.13	0.14	0.27	0.23	1.00								
M13	0.13	0.25	0.32	0.18	0.24	0.21	0.29	0.12	0.21	0.14	0.29	0.26	1.00							
M14	0.14	0.20	0.26	0.11	0.23	0.19	0.25	0.08	0.25	0.02	0.20	0.11	0.19	1.00						
M15	0.06	0.19	0.33	0.22	0.32	0.28	0.22	0.07	0.21	0.21	0.22	0.26	0.26	0.21	1.00					
M16	0.04	0.07	0.15	0.16	0.15	0.43	0.14	0.04	0.14	0.20	0.16	0.18	0.19	0.16	0.28	1.00				
M17	0.26	0.10	0.15	0.16	0.16	0.13	0.15	0.26	0.09	0.17	0.16	0.25	0.22	0.11	0.19	0.19	1.00			
M18	0.08	0.21	0.25	0.16	0.24	0.23	0.30	0.07	0.37	0.11	0.29	0.17	0.25	0.31	0.21	0.19	0.13	1.00		
M19	0.11	0.17	0.19	0.19	0.20	0.24	0.24	0.05	0.25	0.16	0.25	0.16	0.24	0.22	0.26	0.26	0.18	0.28	1.00	
M20	0.12	0.21	0.17	0.22	0.24	0.18	0.36	0.01	0.22	0.15	0.29	0.20	0.25	0.20	0.19	0.18	0.15	0.32	0.31	1.00

Appendix H: Interitem Correlations

Grade 3/4 Level C PASA Math Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.31	1.00																		
M3	0.18	0.34	1.00																	
M4	0.12	0.23	0.25	1.00																
M5	0.35	0.25	0.20	0.19	1.00															
M6	0.22	0.20	0.25	0.21	0.30	1.00														
M7	0.13	0.25	0.17	0.09	0.17	0.23	1.00													
M8	0.07	0.24	0.34	0.13	0.13	0.29	0.13	1.00												
M9	0.17	0.16	0.18	0.19	0.16	0.25	0.13	0.12	1.00											
M10	0.08	0.15	0.28	0.19	0.16	0.19	0.09	0.21	0.18	1.00										
M11	0.12	0.18	0.15	0.07	0.10	0.23	0.11	0.11	0.15	0.15	1.00									
M12	0.16	0.34	0.26	0.23	0.12	0.16	0.19	0.21	0.16	0.18	0.22	1.00								
M13	0.11	0.24	0.29	0.19	0.16	0.19	0.11	0.35	0.16	0.26	0.17	0.25	1.00							
M14	0.13	0.23	0.25	0.25	0.15	0.14	0.16	0.14	0.12	0.20	0.19	0.31	0.20	1.00						
M15	0.10	0.18	0.25	0.23	0.05	0.20	0.15	0.20	0.18	0.27	0.19	0.21	0.19	0.22	1.00					
M16	0.14	0.26	0.24	0.17	0.15	0.15	0.23	0.14	0.11	0.11	0.14	0.24	0.26	0.26	0.16	1.00				
M17	0.21	0.33	0.27	0.17	0.28	0.21	0.20	0.22	0.16	0.19	0.22	0.23	0.27	0.28	0.26	0.32	1.00			
M18	0.10	0.25	0.28	0.20	0.15	0.33	0.21	0.22	0.14	0.31	0.24	0.24	0.28	0.20	0.25	0.20	0.35	1.00		
M19	0.01	0.17	0.21	0.16	0.20	0.19	0.18	0.29	0.14	0.19	0.21	0.11	0.26	0.15	0.22	0.25	0.37	0.39	1.00	
M20	0.13	0.23	0.16	0.15	0.28	0.19	0.10	0.14	0.09	0.12	0.23	0.22	0.22	0.27	0.23	0.30	0.41	0.24	0.30	1.00

Appendix H: Interitem Correlations

Grade 5/6 Level A *PASA Math* Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.48	1.00																		
M3	0.25	0.22	1.00																	
M4	0.39	0.43	0.24	1.00																
M5	0.50	0.41	0.20	0.35	1.00															
M6	0.43	0.46	0.23	0.51	0.35	1.00														
M7	0.40	0.38	0.32	0.38	0.33	0.34	1.00													
M8	0.36	0.44	0.18	0.31	0.34	0.40	0.32	1.00												
M9	0.45	0.47	0.24	0.52	0.36	0.58	0.37	0.34	1.00											
M10	0.40	0.39	0.25	0.54	0.31	0.46	0.43	0.33	0.49	1.00										
M11	0.44	0.47	0.24	0.54	0.38	0.52	0.41	0.31	0.53	0.50	1.00									
M12	0.38	0.42	0.18	0.34	0.33	0.37	0.31	0.41	0.38	0.35	0.37	1.00								
M13	0.46	0.40	0.25	0.45	0.43	0.45	0.43	0.29	0.51	0.48	0.48	0.31	1.00							
M14	0.39	0.45	0.21	0.35	0.36	0.37	0.37	0.44	0.37	0.36	0.41	0.42	0.40	1.00						
M15	0.42	0.40	0.28	0.52	0.37	0.47	0.40	0.32	0.51	0.60	0.56	0.38	0.48	0.38	1.00					
M16	0.34	0.32	0.31	0.36	0.29	0.35	0.38	0.28	0.36	0.32	0.38	0.27	0.39	0.30	0.37	1.00				
M17	0.39	0.39	0.24	0.44	0.36	0.51	0.36	0.34	0.56	0.49	0.48	0.36	0.49	0.38	0.52	0.36	1.00			
M18	0.33	0.33	0.31	0.34	0.29	0.34	0.31	0.27	0.35	0.31	0.35	0.25	0.36	0.28	0.37	0.48	0.34	1.00		
M19	0.31	0.33	0.24	0.35	0.27	0.29	0.30	0.29	0.33	0.32	0.32	0.32	0.33	0.33	0.34	0.32	0.36	0.33	1.00	
M20	0.42	0.39	0.23	0.44	0.36	0.46	0.37	0.34	0.53	0.50	0.48	0.38	0.51	0.39	0.50	0.34	0.58	0.31	0.40	1.00

Appendix H: Interitem Correlations

Grade 5/6 Level B PASA Math Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.28	1.00																		
M3	0.27	0.36	1.00																	
M4	0.22	0.34	0.31	1.00																
M5	0.24	0.28	0.29	0.32	1.00															
M6	0.20	0.30	0.37	0.34	0.27	1.00														
M7	0.19	0.24	0.24	0.29	0.28	0.33	1.00													
M8	0.20	0.32	0.19	0.21	0.22	0.23	0.18	1.00												
M9	0.13	0.25	0.36	0.33	0.22	0.42	0.30	0.17	1.00											
M10	0.13	0.28	0.31	0.29	0.27	0.34	0.24	0.24	0.36	1.00										
M11	0.18	0.35	0.29	0.41	0.34	0.38	0.34	0.28	0.32	0.34	1.00									
M12	0.24	0.35	0.31	0.27	0.32	0.27	0.27	0.29	0.28	0.26	0.37	1.00								
M13	0.18	0.13	0.11	0.10	0.16	0.13	0.13	0.12	0.11	0.11	0.16	0.17	1.00							
M14	0.11	0.17	0.24	0.25	0.20	0.30	0.25	0.15	0.40	0.21	0.26	0.21	0.14	1.00						
M15	0.19	0.30	0.48	0.23	0.25	0.37	0.26	0.24	0.33	0.33	0.30	0.31	0.14	0.25	1.00					
M16	0.13	0.16	0.24	0.23	0.17	0.29	0.19	0.15	0.27	0.23	0.25	0.16	0.09	0.25	0.21	1.00				
M17	0.23	0.37	0.28	0.25	0.24	0.27	0.22	0.41	0.25	0.27	0.32	0.35	0.13	0.16	0.32	0.21	1.00			
M18	0.20	0.22	0.25	0.25	0.40	0.23	0.22	0.26	0.21	0.27	0.35	0.31	0.16	0.22	0.24	0.19	0.28	1.00		
M19	0.16	0.25	0.40	0.30	0.31	0.36	0.23	0.22	0.37	0.31	0.35	0.28	0.15	0.27	0.34	0.24	0.28	0.31	1.00	
M20	0.17	0.25	0.29	0.34	0.26	0.40	0.32	0.18	0.49	0.34	0.34	0.28	0.10	0.36	0.31	0.29	0.26	0.30	0.36	1.00

Appendix H: Interitem Correlations

Grade 5/6 Level C PASA Math Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.21	1.00																		
M3	0.15	0.19	1.00																	
M4	0.26	0.15	0.12	1.00																
M5	0.28	0.16	0.17	0.20	1.00															
M6	0.25	0.23	0.18	0.13	0.24	1.00														
M7	0.08	0.20	0.09	0.06	0.13	0.21	1.00													
M8	0.12	0.14	0.06	0.13	0.10	0.14	0.21	1.00												
M9	0.19	0.16	0.09	0.08	0.21	0.18	0.15	0.19	1.00											
M10	0.18	0.17	0.14	0.12	0.20	0.23	0.15	0.12	0.20	1.00										
M11	0.16	0.06	0.10	0.11	0.16	0.14	0.14	0.12	0.11	0.11	1.00									
M12	0.13	0.27	0.11	0.06	0.18	0.17	0.17	0.20	0.24	0.20	0.10	1.00								
M13	0.23	0.12	0.15	0.19	0.18	0.16	0.15	0.10	0.16	0.16	0.14	0.09	1.00							
M14	0.11	0.12	0.11	0.12	0.07	0.09	0.13	0.07	0.12	0.08	0.14	0.16	0.14	1.00						
M15	0.15	0.15	0.13	0.07	0.18	0.12	0.17	0.17	0.13	0.24	0.06	0.21	0.13	0.18	1.00					
M16	0.17	0.16	0.09	0.17	0.23	0.22	0.22	0.20	0.18	0.15	0.12	0.19	0.17	0.19	0.22	1.00				
M17	0.15	0.11	0.19	0.13	0.19	0.38	0.18	0.09	0.17	0.14	0.12	0.20	0.16	0.18	0.18	0.26	1.00			
M18	0.23	0.26	0.19	0.15	0.26	0.27	0.19	0.14	0.22	0.25	0.15	0.26	0.23	0.19	0.25	0.29	0.27	1.00		
M19	0.29	0.16	0.15	0.16	0.32	0.24	0.11	0.05	0.14	0.22	0.15	0.18	0.18	0.17	0.24	0.24	0.25	0.32	1.00	
M20	0.16	0.19	0.17	0.12	0.21	0.23	0.20	0.14	0.15	0.19	0.14	0.24	0.18	0.13	0.25	0.22	0.25	0.31	0.32	1.00

Appendix H: Interitem Correlations

Grade 7/8 Level A PASA Math Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.43	1.00																		
M3	0.28	0.31	1.00																	
M4	0.41	0.35	0.34	1.00																
M5	0.37	0.39	0.40	0.39	1.00															
M6	0.39	0.40	0.42	0.47	0.39	1.00														
M7	0.48	0.47	0.26	0.42	0.32	0.37	1.00													
M8	0.35	0.39	0.25	0.29	0.34	0.31	0.40	1.00												
M9	0.38	0.39	0.41	0.51	0.37	0.59	0.39	0.36	1.00											
M10	0.42	0.42	0.40	0.44	0.36	0.56	0.43	0.38	0.63	1.00										
M11	0.45	0.39	0.31	0.46	0.36	0.53	0.43	0.39	0.57	0.53	1.00									
M12	0.40	0.41	0.31	0.45	0.36	0.48	0.38	0.39	0.48	0.49	0.48	1.00								
M13	0.41	0.37	0.43	0.50	0.43	0.56	0.37	0.31	0.55	0.52	0.51	0.47	1.00							
M14	0.47	0.42	0.37	0.50	0.40	0.58	0.42	0.32	0.58	0.54	0.60	0.47	0.56	1.00						
M15	0.40	0.42	0.38	0.42	0.39	0.45	0.42	0.32	0.45	0.45	0.41	0.46	0.49	0.45	1.00					
M16	0.41	0.37	0.24	0.40	0.33	0.34	0.45	0.35	0.34	0.39	0.39	0.38	0.34	0.43	0.39	1.00				
M17	0.40	0.43	0.38	0.42	0.42	0.49	0.38	0.34	0.47	0.48	0.48	0.48	0.50	0.53	0.53	0.39	1.00			
M18	0.46	0.42	0.36	0.50	0.39	0.52	0.44	0.35	0.54	0.55	0.55	0.50	0.54	0.60	0.48	0.46	0.51	1.00		
M19	0.34	0.34	0.33	0.33	0.34	0.40	0.34	0.32	0.46	0.42	0.36	0.40	0.47	0.38	0.41	0.31	0.38	0.40	1.00	
M20	0.45	0.44	0.34	0.41	0.40	0.41	0.43	0.36	0.42	0.42	0.42	0.47	0.46	0.44	0.48	0.42	0.50	0.47	0.40	1.00

Appendix H: Interitem Correlations

Grade 7/8 Level B PASA Math Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.28	1.00																		
M3	0.37	0.25	1.00																	
M4	0.24	0.13	0.26	1.00																
M5	0.37	0.19	0.33	0.25	1.00															
M6	0.32	0.18	0.32	0.22	0.38	1.00														
M7	0.25	0.18	0.23	0.27	0.35	0.30	1.00													
M8	0.34	0.29	0.38	0.24	0.36	0.31	0.30	1.00												
M9	0.27	0.17	0.28	0.23	0.30	0.24	0.26	0.28	1.00											
M10	0.31	0.21	0.28	0.22	0.29	0.34	0.25	0.30	0.34	1.00										
M11	0.33	0.23	0.29	0.21	0.32	0.28	0.24	0.30	0.25	0.29	1.00									
M12	0.32	0.25	0.33	0.19	0.26	0.26	0.18	0.33	0.25	0.26	0.33	1.00								
M13	0.28	0.17	0.31	0.24	0.40	0.36	0.35	0.26	0.30	0.28	0.30	0.27	1.00							
M14	0.20	0.14	0.21	0.20	0.25	0.23	0.24	0.22	0.24	0.21	0.24	0.23	0.32	1.00						
M15	0.27	0.24	0.31	0.20	0.32	0.29	0.23	0.31	0.27	0.29	0.28	0.38	0.36	0.24	1.00					
M16	0.36	0.21	0.36	0.26	0.48	0.35	0.32	0.37	0.30	0.32	0.32	0.31	0.43	0.33	0.36	1.00				
M17	0.29	0.22	0.32	0.19	0.33	0.30	0.27	0.34	0.27	0.29	0.35	0.34	0.33	0.24	0.36	0.40	1.00			
M18	0.29	0.17	0.30	0.28	0.34	0.34	0.29	0.34	0.30	0.33	0.30	0.25	0.34	0.30	0.33	0.44	0.35	1.00		
M19	0.28	0.20	0.24	0.11	0.25	0.21	0.13	0.19	0.13	0.17	0.23	0.22	0.30	0.20	0.21	0.28	0.19	0.27	1.00	
M20	0.20	0.16	0.22	0.16	0.24	0.23	0.19	0.20	0.20	0.24	0.20	0.24	0.29	0.22	0.25	0.30	0.25	0.29	0.29	1.00

Appendix H: Interitem Correlations

Grade 7/8 Level C PASA Math Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.26	1.00																		
M3	0.21	0.21	1.00																	
M4	0.20	0.24	0.17	1.00																
M5	0.25	0.28	0.16	0.19	1.00															
M6	0.13	0.25	0.12	0.22	0.23	1.00														
M7	0.20	0.30	0.15	0.22	0.21	0.22	1.00													
M8	0.22	0.28	0.20	0.19	0.21	0.16	0.33	1.00												
M9	0.10	0.22	0.12	0.18	0.19	0.27	0.26	0.25	1.00											
M10	0.15	0.14	0.11	0.11	0.15	0.18	0.14	0.33	0.19	1.00										
M11	0.13	0.20	0.09	0.20	0.19	0.20	0.17	0.20	0.26	0.17	1.00									
M12	0.13	0.26	0.15	0.19	0.11	0.16	0.24	0.22	0.22	0.15	0.24	1.00								
M13	0.16	0.23	0.13	0.12	0.15	0.19	0.24	0.24	0.24	0.17	0.25	0.26	1.00							
M14	0.12	0.21	0.10	0.14	0.15	0.16	0.24	0.21	0.24	0.16	0.21	0.23	0.28	1.00						
M15	0.11	0.27	0.13	0.16	0.19	0.18	0.25	0.28	0.19	0.23	0.22	0.24	0.29	0.27	1.00					
M16	0.15	0.19	0.15	0.14	0.19	0.11	0.22	0.22	0.17	0.14	0.17	0.17	0.25	0.25	0.38	1.00				
M17	0.19	0.25	0.14	0.21	0.18	0.19	0.29	0.30	0.25	0.23	0.22	0.31	0.28	0.24	0.34	0.31	1.00			
M18	0.16	0.11	0.09	0.13	0.13	0.15	0.21	0.20	0.23	0.19	0.20	0.19	0.23	0.21	0.26	0.23	0.28	1.00		
M19	0.14	0.17	0.10	0.12	0.15	0.11	0.21	0.25	0.14	0.19	0.21	0.25	0.23	0.25	0.33	0.29	0.35	0.27	1.00	
M20	0.00	0.03	0.05	0.09	0.07	0.16	0.08	0.10	0.20	0.14	0.15	0.06	0.14	0.14	0.11	0.17	0.16	0.19	0.15	1.00

Appendix H: Interitem Correlations

Grade 11 Level A *PASA Math* Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.49	1.00																		
M3	0.47	0.44	1.00																	
M4	0.44	0.61	0.40	1.00																
M5	0.33	0.40	0.40	0.40	1.00															
M6	0.42	0.58	0.42	0.51	0.39	1.00														
M7	0.49	0.45	0.46	0.42	0.35	0.55	1.00													
M8	0.40	0.64	0.40	0.55	0.39	0.53	0.45	1.00												
M9	0.43	0.55	0.44	0.47	0.38	0.59	0.55	0.55	1.00											
M10	0.43	0.50	0.44	0.50	0.39	0.50	0.48	0.51	0.57	1.00										
M11	0.46	0.36	0.41	0.41	0.32	0.37	0.51	0.39	0.54	0.53	1.00									
M12	0.45	0.65	0.36	0.59	0.35	0.54	0.44	0.57	0.58	0.55	0.40	1.00								
M13	0.45	0.43	0.45	0.43	0.37	0.41	0.42	0.46	0.51	0.56	0.49	0.49	1.00							
M14	0.47	0.53	0.42	0.46	0.36	0.47	0.48	0.46	0.57	0.57	0.48	0.50	0.56	1.00						
M15	0.41	0.55	0.33	0.58	0.34	0.50	0.43	0.59	0.51	0.51	0.42	0.60	0.43	0.49	1.00					
M16	0.40	0.48	0.38	0.48	0.33	0.52	0.48	0.50	0.57	0.49	0.44	0.57	0.42	0.50	0.60	1.00				
M17	0.48	0.40	0.43	0.46	0.40	0.37	0.43	0.39	0.36	0.40	0.42	0.39	0.43	0.41	0.47	0.46	1.00			
M18	0.40	0.47	0.39	0.42	0.35	0.49	0.39	0.51	0.50	0.44	0.41	0.52	0.37	0.46	0.58	0.66	0.47	1.00		
M19	0.36	0.31	0.38	0.37	0.35	0.34	0.32	0.37	0.36	0.40	0.33	0.34	0.39	0.36	0.37	0.40	0.42	0.41	1.00	
M20	0.36	0.41	0.41	0.41	0.38	0.37	0.29	0.47	0.42	0.47	0.42	0.42	0.46	0.43	0.45	0.40	0.39	0.42	0.45	1.00

Appendix H: Interitem Correlations

Grade 11 Level B *PASA Math* Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.32	1.00																		
M3	0.31	0.30	1.00																	
M4	0.36	0.43	0.38	1.00																
M5	0.19	0.26	0.21	0.32	1.00															
M6	0.15	0.22	0.11	0.19	0.09	1.00														
M7	0.25	0.27	0.20	0.28	0.18	0.17	1.00													
M8	0.19	0.23	0.23	0.30	0.18	0.14	0.17	1.00												
M9	0.11	0.18	0.22	0.23	0.20	0.08	0.12	0.24	1.00											
M10	0.26	0.25	0.22	0.25	0.15	0.12	0.23	0.13	0.08	1.00										
M11	0.15	0.22	0.17	0.23	0.13	0.15	0.13	0.16	0.14	0.20	1.00									
M12	0.22	0.28	0.25	0.38	0.20	0.20	0.27	0.24	0.22	0.28	0.25	1.00								
M13	0.22	0.28	0.45	0.33	0.18	0.16	0.20	0.18	0.19	0.16	0.24	0.29	1.00							
M14	0.31	0.34	0.32	0.39	0.26	0.19	0.30	0.29	0.19	0.24	0.24	0.39	0.32	1.00						
M15	0.34	0.36	0.34	0.40	0.24	0.15	0.31	0.27	0.23	0.24	0.30	0.38	0.35	0.48	1.00					
M16	0.27	0.26	0.24	0.28	0.18	0.12	0.19	0.15	0.15	0.23	0.26	0.29	0.29	0.34	0.36	1.00				
M17	0.30	0.33	0.25	0.31	0.19	0.22	0.31	0.16	0.12	0.28	0.25	0.34	0.36	0.37	0.46	0.30	1.00			
M18	0.03	0.02	0.02	0.04	0.04	0.04	0.02	0.09	0.08	0.08	0.09	0.03	0.12	0.12	0.03	0.11	0.09	1.00		
M19	0.14	0.19	0.05	0.22	0.22	0.08	0.10	0.21	0.17	0.13	0.16	0.20	0.15	0.23	0.23	0.19	0.15	0.18	1.00	
M20	0.14	0.15	0.27	0.24	0.14	0.08	0.18	0.23	0.18	0.18	0.19	0.26	0.25	0.27	0.31	0.32	0.20	0.13	0.28	1.00

Appendix H: Interitem Correlations

Grade 11 Level C *PASA Math* Inter-Item Correlations

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
M1	1.00																			
M2	0.17	1.00																		
M3	0.22	0.17	1.00																	
M4	0.24	0.15	0.37	1.00																
M5	0.18	0.19	0.24	0.24	1.00															
M6	0.10	0.13	0.25	0.34	0.22	1.00														
M7	0.19	0.15	0.28	0.50	0.30	0.36	1.00													
M8	0.03	0.23	0.13	0.08	0.11	0.05	0.12	1.00												
M9	0.16	0.15	0.26	0.30	0.22	0.26	0.35	0.10	1.00											
M10	0.21	0.17	0.39	0.36	0.30	0.33	0.40	0.18	0.26	1.00										
M11	0.05	0.07	0.06	0.19	0.19	0.15	0.18	0.03	0.10	0.19	1.00									
M12	0.21	0.18	0.31	0.34	0.17	0.22	0.38	0.12	0.29	0.32	0.21	1.00								
M13	0.16	0.15	0.30	0.36	0.17	0.28	0.30	0.02	0.32	0.33	0.16	0.27	1.00							
M14	0.29	0.09	0.18	0.14	0.11	0.12	0.12	0.10	0.14	0.18	0.12	0.20	0.15	1.00						
M15	0.20	0.17	0.24	0.22	0.22	0.25	0.23	0.08	0.23	0.23	0.23	0.30	0.24	0.15	1.00					
M16	0.15	0.13	0.27	0.38	0.29	0.34	0.41	0.17	0.26	0.44	0.21	0.31	0.37	0.22	0.25	1.00				
M17	0.16	0.15	0.08	0.14	0.15	0.12	0.12	0.06	0.14	0.14	0.13	0.22	0.19	0.14	0.22	0.24	1.00			
M18	0.14	0.10	0.16	0.28	0.18	0.28	0.28	0.12	0.20	0.35	0.08	0.28	0.25	0.19	0.17	0.30	0.25	1.00		
M19	0.12	0.25	0.32	0.26	0.29	0.27	0.29	0.26	0.29	0.38	0.12	0.29	0.30	0.26	0.21	0.36	0.24	0.41	1.00	
M20	0.16	0.14	0.22	0.24	0.20	0.22	0.34	0.20	0.26	0.29	0.13	0.32	0.26	0.15	0.21	0.30	0.24	0.32	0.37	1.00

Appendix H: Interitem Correlations

Grade 4 Level A PASA Science Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.53	1.00																		
S3	0.42	0.54	1.00																	
S4	0.57	0.60	0.51	1.00																
S5	0.51	0.57	0.49	0.60	1.00															
S6	0.48	0.48	0.45	0.52	0.54	1.00														
S7	0.48	0.54	0.47	0.57	0.62	0.53	1.00													
S8	0.46	0.55	0.48	0.56	0.56	0.55	0.55	1.00												
S9	0.54	0.63	0.52	0.62	0.60	0.60	0.61	0.59	1.00											
S10	0.48	0.53	0.49	0.54	0.57	0.50	0.54	0.55	0.56	1.00										
S11	0.47	0.48	0.43	0.51	0.49	0.59	0.52	0.55	0.56	0.47	1.00									
S12	0.50	0.58	0.61	0.57	0.57	0.48	0.57	0.56	0.61	0.57	0.53	1.00								
S13	0.53	0.57	0.49	0.62	0.59	0.59	0.57	0.59	0.66	0.52	0.58	0.61	1.00							
S14	0.41	0.50	0.45	0.51	0.51	0.49	0.51	0.51	0.50	0.49	0.49	0.59	0.52	1.00						
S15	0.50	0.53	0.53	0.57	0.55	0.56	0.55	0.53	0.64	0.54	0.56	0.62	0.62	0.54	1.00					
S16	0.55	0.58	0.50	0.61	0.61	0.53	0.59	0.59	0.61	0.58	0.53	0.63	0.65	0.59	0.64	1.00				
S17	0.50	0.52	0.48	0.57	0.55	0.53	0.54	0.51	0.60	0.51	0.51	0.58	0.59	0.50	0.62	0.56	1.00			
S18	0.59	0.61	0.52	0.69	0.63	0.50	0.60	0.58	0.63	0.61	0.51	0.67	0.63	0.59	0.61	0.69	0.60	1.00		
S19	0.39	0.48	0.40	0.47	0.50	0.50	0.49	0.50	0.48	0.48	0.49	0.53	0.51	0.50	0.50	0.53	0.51	0.55	1.00	
S20	0.49	0.57	0.47	0.56	0.59	0.49	0.53	0.51	0.57	0.58	0.46	0.64	0.58	0.53	0.56	0.63	0.51	0.70	0.48	1.00

Appendix H: Interitem Correlations

Grade 4 Level B *PASA Science* Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.35	1.00																		
S3	0.34	0.38	1.00																	
S4	0.42	0.33	0.43	1.00																
S5	0.12	0.19	0.23	0.16	1.00															
S6	0.28	0.29	0.29	0.23	0.20	1.00														
S7	0.26	0.33	0.35	0.34	0.22	0.39	1.00													
S8	0.10	0.14	0.16	0.13	0.29	0.21	0.21	1.00												
S9	0.13	0.27	0.23	0.24	0.25	0.29	0.37	0.19	1.00											
S10	0.15	0.18	0.17	0.13	0.17	0.28	0.23	0.24	0.29	1.00										
S11	0.15	0.19	0.23	0.22	0.23	0.26	0.37	0.22	0.28	0.18	1.00									
S12	0.28	0.23	0.23	0.19	0.27	0.34	0.33	0.25	0.31	0.28	0.31	1.00								
S13	0.29	0.26	0.25	0.28	0.25	0.37	0.34	0.26	0.31	0.40	0.35	0.49	1.00							
S14	0.19	0.17	0.15	0.18	0.27	0.26	0.27	0.28	0.29	0.34	0.22	0.45	0.47	1.00						
S15	0.14	0.17	0.16	0.16	0.30	0.26	0.26	0.25	0.28	0.26	0.27	0.34	0.44	0.35	1.00					
S16	0.26	0.16	0.20	0.28	0.22	0.33	0.35	0.19	0.29	0.32	0.34	0.43	0.52	0.39	0.31	1.00				
S17	0.14	0.18	0.13	0.19	0.28	0.27	0.28	0.27	0.29	0.28	0.30	0.37	0.45	0.39	0.35	0.38	1.00			
S18	0.27	0.24	0.25	0.25	0.17	0.35	0.38	0.20	0.29	0.25	0.41	0.40	0.46	0.37	0.30	0.48	0.40	1.00		
S19	0.24	0.27	0.22	0.26	0.22	0.31	0.41	0.23	0.26	0.27	0.36	0.37	0.39	0.27	0.36	0.40	0.33	0.44	1.00	
S20	0.23	0.24	0.23	0.24	0.23	0.34	0.33	0.23	0.27	0.23	0.25	0.36	0.38	0.28	0.29	0.38	0.31	0.36	0.37	1.00

Appendix H: Interitem Correlations

Grade 4 Level C PASA Science Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.27	1.00																		
S3	0.23	0.46	1.00																	
S4	0.17	0.33	0.27	1.00																
S5	0.21	0.19	0.19	0.26	1.00															
S6	0.20	0.32	0.30	0.19	0.21	1.00														
S7	0.21	0.25	0.24	0.18	0.27	0.15	1.00													
S8	0.20	0.23	0.15	0.35	0.20	0.19	0.21	1.00												
S9	0.20	0.23	0.20	0.19	0.29	0.21	0.11	0.27	1.00											
S10	0.21	0.20	0.24	0.16	0.24	0.18	0.17	0.19	0.29	1.00										
S11	-0.07	0.02	0.07	0.16	0.32	0.23	0.18	0.17	0.15	0.09	1.00									
S12	0.09	0.20	0.14	0.12	0.13	0.25	0.05	0.17	0.21	0.20	0.22	1.00								
S13	0.09	0.14	0.09	0.08	0.08	0.29	0.11	0.19	0.24	0.12	0.17	0.31	1.00							
S14	0.17	0.04	0.19	0.15	0.26	0.17	0.15	0.18	0.29	0.31	0.17	0.13	0.22	1.00						
S15	0.10	0.25	0.28	0.33	0.28	0.15	0.24	0.26	0.21	0.18	0.18	0.22	0.18	0.25	1.00					
S16	0.03	0.33	0.21	0.16	0.04	0.23	0.23	0.20	0.18	0.14	0.13	0.19	0.33	0.22	0.23	1.00				
S17	0.02	0.17	0.17	0.24	0.06	0.09	0.15	0.11	0.18	0.04	0.07	0.15	0.14	0.18	0.34	0.24	1.00			
S18	0.15	0.24	0.22	0.21	0.13	0.11	0.25	0.17	0.28	0.11	0.10	0.17	0.26	0.23	0.39	0.36	0.41	1.00		
S19	0.07	0.27	0.21	0.20	0.06	0.28	0.14	0.08	0.17	0.13	0.11	0.19	0.39	0.17	0.35	0.35	0.24	0.38	1.00	
S20	0.04	0.14	0.19	0.06	-0.01	0.08	0.07	0.12	0.19	0.06	0.18	0.03	0.26	0.07	0.16	0.25	0.21	0.23	0.33	1.00

Appendix H: Interitem Correlations

Grade 8 Level A PASA Science Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.53	1.00																		
S3	0.52	0.50	1.00																	
S4	0.49	0.44	0.39	1.00																
S5	0.59	0.51	0.57	0.48	1.00															
S6	0.54	0.55	0.52	0.48	0.62	1.00														
S7	0.54	0.53	0.51	0.51	0.57	0.61	1.00													
S8	0.53	0.57	0.49	0.48	0.61	0.61	0.59	1.00												
S9	0.52	0.46	0.43	0.49	0.51	0.53	0.53	0.56	1.00											
S10	0.51	0.58	0.52	0.50	0.56	0.61	0.60	0.65	0.55	1.00										
S11	0.47	0.45	0.53	0.43	0.53	0.57	0.51	0.55	0.49	0.57	1.00									
S12	0.47	0.41	0.48	0.40	0.48	0.49	0.47	0.49	0.46	0.53	0.57	1.00								
S13	0.56	0.51	0.49	0.48	0.54	0.58	0.56	0.57	0.57	0.59	0.50	0.51	1.00							
S14	0.55	0.58	0.55	0.48	0.55	0.67	0.63	0.64	0.54	0.68	0.57	0.55	0.62	1.00						
S15	0.54	0.55	0.54	0.46	0.60	0.66	0.60	0.63	0.53	0.66	0.60	0.53	0.62	0.67	1.00					
S16	0.49	0.49	0.49	0.46	0.53	0.55	0.57	0.54	0.49	0.62	0.52	0.51	0.54	0.60	0.59	1.00				
S17	0.54	0.53	0.49	0.51	0.59	0.58	0.63	0.61	0.58	0.65	0.52	0.50	0.65	0.63	0.60	0.57	1.00			
S18	0.49	0.53	0.50	0.45	0.55	0.55	0.54	0.64	0.50	0.61	0.53	0.52	0.56	0.59	0.63	0.56	0.60	1.00		
S19	0.49	0.50	0.47	0.43	0.54	0.59	0.58	0.62	0.50	0.61	0.51	0.49	0.62	0.61	0.59	0.54	0.61	0.57	1.00	
S20	0.48	0.50	0.49	0.42	0.49	0.54	0.52	0.57	0.49	0.63	0.47	0.45	0.52	0.60	0.57	0.55	0.55	0.61	0.55	1.00

Appendix H: Interitem Correlations

Grade 8 Level B *PASA Science* Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.32	1.00																		
S3	0.26	0.24	1.00																	
S4	0.30	0.30	0.34	1.00																
S5	0.23	0.29	0.29	0.29	1.00															
S6	0.34	0.37	0.31	0.33	0.30	1.00														
S7	0.19	0.29	0.25	0.33	0.31	0.29	1.00													
S8	0.25	0.33	0.28	0.34	0.35	0.32	0.38	1.00												
S9	0.23	0.30	0.30	0.34	0.31	0.37	0.32	0.43	1.00											
S10	0.28	0.27	0.26	0.29	0.28	0.28	0.21	0.27	0.28	1.00										
S11	0.30	0.30	0.26	0.27	0.24	0.33	0.22	0.29	0.24	0.30	1.00									
S12	0.28	0.24	0.24	0.28	0.23	0.28	0.18	0.29	0.32	0.27	0.29	1.00								
S13	0.31	0.34	0.40	0.34	0.36	0.42	0.35	0.41	0.40	0.27	0.29	0.29	1.00							
S14	0.29	0.29	0.30	0.27	0.29	0.32	0.27	0.32	0.31	0.27	0.30	0.32	0.38	1.00						
S15	0.19	0.28	0.27	0.28	0.22	0.30	0.28	0.30	0.28	0.22	0.25	0.18	0.31	0.29	1.00					
S16	0.45	0.30	0.36	0.33	0.26	0.34	0.22	0.28	0.30	0.28	0.35	0.32	0.38	0.37	0.32	1.00				
S17	0.36	0.31	0.26	0.27	0.22	0.28	0.16	0.29	0.27	0.21	0.28	0.28	0.29	0.31	0.23	0.47	1.00			
S18	0.28	0.32	0.29	0.34	0.32	0.30	0.32	0.31	0.35	0.37	0.32	0.28	0.28	0.36	0.23	0.32	0.32	1.00		
S19	0.22	0.29	0.22	0.23	0.23	0.25	0.22	0.22	0.25	0.23	0.37	0.20	0.26	0.28	0.21	0.26	0.26	0.35	1.00	
S20	0.21	0.20	0.19	0.21	0.18	0.19	0.16	0.24	0.17	0.21	0.20	0.18	0.21	0.21	0.13	0.29	0.22	0.30	0.27	1.00

Appendix H: Interitem Correlations

Grade 8 Level C PASA Science Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.38	1.00																		
S3	0.42	0.34	1.00																	
S4	0.27	0.29	0.27	1.00																
S5	0.25	0.26	0.24	0.34	1.00															
S6	0.22	0.15	0.20	0.12	0.17	1.00														
S7	0.18	0.14	0.26	0.18	0.22	0.14	1.00													
S8	0.25	0.18	0.23	0.19	0.23	0.19	0.26	1.00												
S9	0.19	0.17	0.20	0.18	0.28	0.29	0.18	0.31	1.00											
S10	0.26	0.21	0.24	0.18	0.19	0.16	0.22	0.24	0.19	1.00										
S11	0.31	0.13	0.28	0.26	0.24	0.26	0.25	0.32	0.26	0.25	1.00									
S12	0.19	0.17	0.17	0.17	0.22	0.16	0.14	0.25	0.17	0.23	0.20	1.00								
S13	0.18	0.20	0.23	0.17	0.23	0.28	0.23	0.24	0.30	0.31	0.33	0.20	1.00							
S14	0.14	0.12	0.17	0.09	0.16	0.22	0.07	0.14	0.14	0.19	0.13	0.12	0.20	1.00						
S15	0.21	0.11	0.12	0.14	0.21	0.15	0.17	0.26	0.23	0.18	0.20	0.19	0.24	0.17	1.00					
S16	0.29	0.18	0.31	0.37	0.29	0.20	0.27	0.35	0.22	0.30	0.41	0.20	0.35	0.20	0.25	1.00				
S17	0.17	0.19	0.21	0.17	0.25	0.18	0.12	0.26	0.29	0.21	0.26	0.13	0.34	0.19	0.26	0.28	1.00			
S18	0.18	0.15	0.26	0.18	0.27	0.16	0.21	0.20	0.19	0.26	0.25	0.22	0.37	0.28	0.20	0.33	0.31	1.00		
S19	0.18	0.10	0.21	0.15	0.16	0.23	0.18	0.19	0.17	0.26	0.31	0.21	0.31	0.24	0.14	0.29	0.31	0.34	1.00	
S20	0.27	0.22	0.38	0.26	0.26	0.19	0.24	0.19	0.14	0.28	0.30	0.30	0.28	0.19	0.21	0.36	0.29	0.35	0.38	1.00

Appendix H: Interitem Correlations

Grade 11 Level A PASA Science Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.38	1.00																		
S3	0.38	0.51	1.00																	
S4	0.43	0.51	0.60	1.00																
S5	0.46	0.54	0.60	0.62	1.00															
S6	0.41	0.36	0.38	0.46	0.39	1.00														
S7	0.39	0.47	0.44	0.55	0.52	0.50	1.00													
S8	0.42	0.46	0.56	0.63	0.59	0.47	0.53	1.00												
S9	0.42	0.45	0.52	0.58	0.61	0.50	0.53	0.70	1.00											
S10	0.41	0.47	0.51	0.61	0.57	0.54	0.55	0.64	0.66	1.00										
S11	0.38	0.50	0.56	0.65	0.58	0.45	0.56	0.65	0.63	0.63	1.00									
S12	0.41	0.42	0.43	0.53	0.55	0.49	0.52	0.62	0.61	0.63	0.59	1.00								
S13	0.43	0.48	0.55	0.62	0.58	0.51	0.54	0.68	0.70	0.63	0.64	0.65	1.00							
S14	0.42	0.50	0.51	0.59	0.54	0.48	0.57	0.60	0.58	0.62	0.66	0.58	0.64	1.00						
S15	0.35	0.40	0.36	0.39	0.42	0.42	0.46	0.53	0.52	0.55	0.48	0.52	0.52	0.50	1.00					
S16	0.38	0.50	0.54	0.64	0.60	0.50	0.60	0.68	0.70	0.72	0.68	0.61	0.68	0.69	0.53	1.00				
S17	0.39	0.43	0.52	0.61	0.57	0.47	0.51	0.67	0.64	0.60	0.60	0.58	0.66	0.58	0.51	0.71	1.00			
S18	0.34	0.49	0.40	0.49	0.47	0.38	0.52	0.51	0.51	0.50	0.53	0.52	0.52	0.54	0.50	0.60	0.53	1.00		
S19	0.38	0.42	0.44	0.50	0.53	0.44	0.49	0.60	0.63	0.57	0.53	0.54	0.62	0.56	0.51	0.65	0.66	0.50	1.00	
S20	0.38	0.38	0.38	0.52	0.48	0.50	0.53	0.60	0.58	0.57	0.54	0.56	0.64	0.52	0.53	0.71	0.63	0.52	0.62	1.00

Appendix H: Interitem Correlations

Grade 11 Level B *PASA Science* Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.19	1.00																		
S3	0.31	0.26	1.00																	
S4	0.19	0.29	0.24	1.00																
S5	0.22	0.21	0.28	0.19	1.00															
S6	0.21	0.30	0.26	0.36	0.15	1.00														
S7	0.25	0.11	0.20	0.17	0.17	0.23	1.00													
S8	0.21	0.17	0.15	0.19	0.08	0.22	0.23	1.00												
S9	0.25	0.23	0.25	0.25	0.11	0.30	0.27	0.30	1.00											
S10	0.31	0.22	0.22	0.24	0.09	0.29	0.26	0.34	0.35	1.00										
S11	0.33	0.24	0.31	0.21	0.22	0.30	0.25	0.24	0.23	0.27	1.00									
S12	0.21	0.30	0.28	0.22	0.24	0.27	0.14	0.19	0.23	0.24	0.24	1.00								
S13	0.33	0.25	0.31	0.26	0.18	0.28	0.30	0.20	0.30	0.32	0.29	0.26	1.00							
S14	0.28	0.24	0.24	0.21	0.15	0.30	0.29	0.28	0.36	0.38	0.28	0.33	0.31	1.00						
S15	0.23	0.25	0.14	0.25	0.09	0.23	0.19	0.23	0.26	0.22	0.25	0.23	0.26	0.28	1.00					
S16	0.19	0.26	0.33	0.26	0.21	0.25	0.19	0.23	0.30	0.26	0.27	0.35	0.30	0.33	0.31	1.00				
S17	0.17	0.12	0.17	0.12	0.15	0.14	0.18	0.17	0.20	0.14	0.19	0.09	0.19	0.22	0.18	0.17	1.00			
S18	0.16	0.19	0.18	0.19	0.19	0.23	0.13	0.18	0.16	0.13	0.23	0.29	0.18	0.22	0.17	0.30	0.15	1.00		
S19	0.20	0.15	0.17	0.12	0.16	0.15	0.20	0.23	0.19	0.29	0.19	0.17	0.30	0.28	0.20	0.25	0.19	0.13	1.00	
S20	0.27	0.26	0.28	0.34	0.20	0.35	0.27	0.18	0.30	0.29	0.35	0.31	0.36	0.38	0.29	0.36	0.13	0.25	0.22	1.00

Appendix H: Interitem Correlations

Grade 11 Level C *PASA Science* Inter-Item Correlations

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
S1	1.00																			
S2	0.10	1.00																		
S3	0.03	0.19	1.00																	
S4	0.16	0.32	0.29	1.00																
S5	-0.01	0.20	0.24	0.27	1.00															
S6	0.00	0.05	0.19	0.11	0.20	1.00														
S7	0.20	0.21	0.22	0.30	0.12	0.12	1.00													
S8	0.03	0.21	0.21	0.24	0.26	0.19	0.23	1.00												
S9	0.12	0.17	0.11	0.13	0.14	0.25	0.14	0.18	1.00											
S10	0.05	0.21	0.20	0.33	0.18	0.14	0.23	0.22	0.17	1.00										
S11	0.18	0.19	0.25	0.32	0.24	0.19	0.30	0.27	0.21	0.29	1.00									
S12	-0.05	0.22	0.23	0.25	0.24	0.21	0.16	0.31	0.19	0.21	0.21	1.00								
S13	0.12	0.14	0.19	0.18	0.09	0.21	0.18	0.19	0.07	0.29	0.20	0.16	1.00							
S14	0.07	0.30	0.36	0.43	0.30	0.17	0.26	0.34	0.19	0.30	0.32	0.32	0.20	1.00						
S15	0.14	0.17	0.16	0.16	0.04	0.19	0.23	0.11	0.16	0.19	0.21	0.14	0.20	0.20	1.00					
S16	-0.03	0.24	0.19	0.26	0.26	0.17	0.12	0.21	0.15	0.14	0.15	0.30	0.14	0.24	0.20	1.00				
S17	0.16	0.23	0.08	0.23	0.17	0.16	0.19	0.20	0.29	0.22	0.18	0.21	0.16	0.23	0.16	0.20	1.00			
S18	0.03	0.13	0.24	0.16	0.15	0.03	0.15	0.12	0.10	0.20	0.15	0.13	0.21	0.15	0.07	0.14	0.06	1.00		
S19	0.12	0.25	0.25	0.38	0.17	0.15	0.21	0.22	0.20	0.23	0.19	0.23	0.14	0.32	0.12	0.25	0.25	0.16	1.00	
S20	0.06	0.18	0.05	0.13	0.04	0.08	0.29	0.11	0.14	0.08	0.23	0.13	0.10	0.14	0.20	0.12	0.11	0.15	0.07	1.00

Appendix I

Item Level Descriptive Statistics

Grade 3/4 Level A PASA Reading

	n	Min	Max	M	SD
Reading_1	2100	0	5	4.66	0.863
Reading_2	2100	0	5	4.31	1.090
Reading_3	2100	0	5	4.26	1.147
Reading_4	2100	0	5	4.18	1.175
Reading_5	2100	0	5	4.13	1.175
Reading_6	2100	0	5	4.51	0.981
Reading_7	2100	0	5	4.32	1.119
Reading_8	2100	0	5	4.28	1.119
Reading_9	2100	0	5	4.14	1.189
Reading_10	2100	0	5	4.17	1.182
Reading_11	2100	0	5	4.32	1.132
Reading_12	2100	0	5	4.32	1.118
Reading_13	2100	0	5	4.20	1.193
Reading_14	2100	0	5	4.41	1.042
Reading_15	2100	0	5	4.57	0.971
Reading_16	2100	0	5	4.16	1.214
Reading_17	2100	0	5	4.33	1.120
Reading_18	2100	0	5	4.33	1.134
Reading_19	2100	0	5	4.22	1.178
Reading_20	2100	0	5	4.35	1.130

Grade 3/4 Level B PASA Reading

	n	Min	Max	M	SD
Reading_1	1783	0	5	4.72	0.702
Reading_2	1783	0	5	4.32	0.981
Reading_3	1783	0	5	4.89	0.504
Reading_4	1783	0	5	4.37	0.954
Reading_5	1783	0	5	4.74	0.646
Reading_6	1783	0	5	4.69	0.779
Reading_7	1783	0	5	4.69	0.714
Reading_8	1783	0	5	4.57	0.893
Reading_9	1783	0	5	4.85	0.574
Reading_10	1783	0	5	4.87	0.546
Reading_11	1783	0	5	4.66	0.787
Reading_12	1783	0	5	4.54	0.836
Reading_13	1783	0	5	4.54	0.988
Reading_14	1783	0	5	4.55	0.858
Reading_15	1783	0	5	4.18	1.087
Reading_16	1783	0	5	4.44	0.955
Reading_17	1783	0	5	4.90	0.545
Reading_18	1783	0	5	4.73	0.741
Reading_19	1783	0	5	4.84	0.596
Reading_20	1783	0	5	4.30	1.043

Grade 3/4 Level C PASA Reading

	n	Min	Max	M	SD
Reading_1	590	0	5	4.45	0.899
Reading_2	590	0	5	4.56	0.971
Reading_3	590	0	5	4.15	1.157
Reading_4	590	0	5	3.68	1.240
Reading_5	590	0	5	4.54	0.861
Reading_6	590	0	5	4.25	1.122
Reading_7	590	0	5	4.89	0.504
Reading_8	590	0	5	4.38	1.134
Reading_9	590	0	5	4.61	0.876
Reading_10	590	0	5	4.53	0.997
Reading_11	590	0	5	4.61	0.833
Reading_12	590	0	5	4.69	0.776
Reading_13	590	0	5	4.74	0.747
Reading_14	590	0	5	4.56	1.022
Reading_15	590	0	5	3.76	1.111
Reading_16	590	0	5	4.59	1.028
Reading_17	590	0	5	4.20	1.149
Reading_18	590	0	5	4.57	1.021
Reading_19	590	0	5	4.32	1.125
Reading_20	590	0	5	3.93	1.195

Grade 5/6 Level A PASA Reading

	n	Min	Max	M	SD
Reading_1	1324	0	5	4.38	1.093
Reading_2	1324	0	5	4.30	1.146
Reading_3	1324	0	5	4.15	1.167
Reading_4	1324	0	5	4.19	1.140
Reading_5	1324	0	5	3.82	1.193
Reading_6	1324	0	5	4.22	1.115
Reading_7	1324	0	5	4.17	1.168
Reading_8	1324	0	5	4.07	1.217
Reading_9	1324	0	5	4.55	0.991
Reading_10	1324	0	5	4.23	1.139
Reading_11	1324	0	5	3.76	1.219
Reading_12	1324	0	5	4.36	1.079
Reading_13	1324	0	5	4.18	1.188
Reading_14	1324	0	5	4.24	1.095
Reading_15	1324	0	5	4.31	1.092
Reading_16	1324	0	5	4.14	1.160
Reading_17	1324	0	5	4.46	1.007
Reading_18	1324	0	5	4.03	1.227
Reading_19	1324	0	5	3.79	1.242
Reading_20	1324	0	5	4.49	1.006

Grade 5/6 Level B PASA Reading

	n	Min	Max	M	SD
Reading_1	2148	0	5	4.20	1.026
Reading_2	2148	0	5	4.52	0.887
Reading_3	2148	0	5	4.78	0.651
Reading_4	2148	0	5	4.43	1.086
Reading_5	2148	0	5	4.02	1.065
Reading_6	2148	0	5	4.14	1.131
Reading_7	2148	0	5	4.53	0.901
Reading_8	2148	0	5	4.67	0.753
Reading_9	2148	0	5	4.55	0.876
Reading_10	2148	0	5	4.75	0.700
Reading_11	2148	0	5	4.82	0.626
Reading_12	2148	0	5	4.77	0.637
Reading_13	2148	0	5	4.70	0.728
Reading_14	2148	0	5	4.06	1.354
Reading_15	2148	0	5	4.06	1.105
Reading_16	2148	0	5	4.15	1.057
Reading_17	2148	0	5	4.65	0.806
Reading_18	2148	0	5	4.81	0.628
Reading_19	2148	0	5	4.24	1.029
Reading_20	2148	0	5	4.61	0.844

Grade 5/6 Level C PASA Reading

	n	Min	Max	M	SD
Reading_1	1107	0	5	3.54	1.197
Reading_2	1107	0	5	3.90	1.103
Reading_3	1107	0	5	4.33	0.957
Reading_4	1107	0	5	4.69	0.899
Reading_5	1107	0	5	4.80	0.756
Reading_6	1107	0	5	4.29	1.049
Reading_7	1107	0	5	4.44	0.958
Reading_8	1107	0	5	4.26	1.107
Reading_9	1107	0	5	4.72	0.809
Reading_10	1107	0	5	4.18	1.144
Reading_11	1107	0	5	4.23	1.112
Reading_12	1107	0	5	4.48	0.919
Reading_13	1107	0	5	4.22	1.034
Reading_14	1107	0	5	4.12	1.082
Reading_15	1107	0	5	4.01	1.193
Reading_16	1107	0	5	4.41	1.025
Reading_17	1107	0	5	4.46	0.978
Reading_18	1107	0	5	4.32	0.990
Reading_19	1107	0	5	4.46	1.068
Reading_20	1107	0	5	4.48	0.971

Grade 7/8 Level A PASA Reading

	n	Min	Max	M	SD
Reading_1	1156	0	5	4.29	1.101
Reading_2	1156	0	5	4.08	1.211
Reading_3	1156	0	5	4.12	1.186
Reading_4	1156	0	5	4.21	1.180
Reading_5	1156	0	5	4.29	1.111
Reading_6	1156	0	5	3.81	1.225
Reading_7	1156	0	5	4.16	1.205
Reading_8	1156	0	5	4.04	1.214
Reading_9	1156	0	5	4.38	1.109
Reading_10	1156	0	5	4.10	1.222
Reading_11	1156	0	5	4.19	1.194
Reading_12	1156	0	5	4.08	1.226
Reading_13	1156	0	5	4.09	1.208
Reading_14	1156	0	5	4.36	1.097
Reading_15	1156	0	5	4.02	1.207
Reading_16	1156	0	5	4.16	1.211
Reading_17	1156	0	5	3.95	1.240
Reading_18	1156	0	5	4.16	1.235
Reading_19	1156	0	5	4.35	1.197
Reading_20	1156	0	5	3.99	1.280

Grade 7/8 Level B PASA Reading

	n	Min	Max	M	SD
Reading_1	2046	0	5	4.59	0.815
Reading_2	2046	0	5	4.38	0.982
Reading_3	2046	0	5	4.37	0.950
Reading_4	2046	0	5	4.72	0.746
Reading_5	2046	0	5	4.34	1.015
Reading_6	2046	0	5	4.49	1.004
Reading_7	2046	0	5	4.62	0.823
Reading_8	2046	0	5	4.20	1.197
Reading_9	2046	0	5	4.63	0.832
Reading_10	2046	0	5	4.88	0.503
Reading_11	2046	0	5	4.51	0.831
Reading_12	2046	0	5	4.40	0.952
Reading_13	2046	0	5	4.54	0.973
Reading_14	2046	0	5	4.34	0.968
Reading_15	2046	0	5	4.14	1.036
Reading_16	2046	0	5	4.70	0.748
Reading_17	2046	0	5	4.08	1.052
Reading_18	2046	0	5	4.18	1.108
Reading_19	2046	0	5	3.96	1.100
Reading_20	2046	0	5	4.59	0.862

Grade 7/8 Level C PASA Reading

	n	Min	Max	M	SD
Reading_1	1433	0	5	3.44	1.292
Reading_2	1433	0	5	3.80	1.185
Reading_3	1433	0	5	4.39	0.995
Reading_4	1433	0	5	4.55	0.958
Reading_5	1433	0	5	4.32	1.069
Reading_6	1433	0	5	4.49	0.912
Reading_7	1433	0	5	4.76	0.712
Reading_8	1433	0	5	4.66	0.752
Reading_9	1433	0	5	4.04	1.033
Reading_10	1433	0	5	3.86	1.255
Reading_11	1433	0	5	4.85	0.563
Reading_12	1433	0	5	3.79	1.173
Reading_13	1433	0	5	4.79	0.665
Reading_14	1433	0	5	4.40	0.923
Reading_15	1433	0	5	4.35	0.989
Reading_16	1433	0	5	4.24	1.048
Reading_17	1433	0	5	4.63	0.856
Reading_18	1433	0	5	4.58	0.897
Reading_19	1433	0	5	4.15	1.152
Reading_20	1433	0	5	4.05	1.060

Grade 11 Level A PASA Reading

	n	Min	Max	M	SD
Reading_1	682	0	5	4.61	0.924
Reading_2	682	0	5	4.26	1.138
Reading_3	682	0	5	4.39	1.092
Reading_4	682	0	5	4.39	1.087
Reading_5	682	0	5	4.21	1.178
Reading_6	682	0	5	4.25	1.195
Reading_7	682	0	5	4.41	1.042
Reading_8	682	0	5	4.37	1.114
Reading_9	682	0	5	4.50	1.066
Reading_10	682	0	5	4.25	1.195
Reading_11	682	0	5	4.20	1.197
Reading_12	682	0	5	4.36	1.185
Reading_13	682	0	5	4.23	1.192
Reading_14	682	0	5	4.06	1.269
Reading_15	682	0	5	4.07	1.247
Reading_16	682	0	5	4.29	1.188
Reading_17	682	0	5	4.29	1.196
Reading_18	682	0	5	4.22	1.259
Reading_19	682	0	5	4.25	1.268
Reading_20	682	0	5	4.01	1.265

A. Grade 11 Level B PASA Reading

	n	Min	Max	M	SD
Reading_1	830	0	5	4.63	0.968
Reading_2	830	0	5	4.29	1.110
Reading_3	830	0	5	4.71	0.784
Reading_4	830	0	5	4.36	1.084
Reading_5	830	0	5	4.58	0.913
Reading_6	830	0	5	4.84	0.687
Reading_7	830	0	5	4.40	0.994
Reading_8	830	0	5	4.35	1.060
Reading_9	830	0	5	4.45	0.968
Reading_10	830	0	5	4.81	0.622
Reading_11	830	0	5	4.70	0.775
Reading_12	830	0	5	4.49	0.905
Reading_13	830	0	5	4.70	0.753
Reading_14	830	0	5	4.70	0.776
Reading_15	830	0	5	4.82	0.669
Reading_16	830	0	5	4.04	1.112
Reading_17	830	0	5	4.50	0.897
Reading_18	830	0	5	4.47	0.944
Reading_19	830	0	5	3.99	1.167
Reading_20	830	0	5	4.67	0.809

Grade 11 Level C PASA Reading

	n	Min	Max	M	SD
Reading_1	572	0	5	4.03	1.150
Reading_2	572	0	5	4.39	1.060
Reading_3	572	0	5	4.58	0.926
Reading_4	572	0	5	4.23	1.122
Reading_5	572	0	5	4.54	0.905
Reading_6	572	0	5	4.53	0.938
Reading_7	572	0	5	4.86	0.573
Reading_8	572	0	5	4.06	1.143
Reading_9	572	0	5	4.14	0.981
Reading_10	572	0	5	4.40	1.036
Reading_11	572	0	5	4.16	1.082
Reading_12	572	0	5	4.62	0.891
Reading_13	572	0	5	4.32	0.964
Reading_14	572	0	5	3.91	1.171
Reading_15	572	0	5	4.43	0.985
Reading_16	572	0	5	3.64	1.272
Reading_17	572	0	5	4.33	1.083
Reading_18	572	0	5	3.54	1.220
Reading_19	572	0	5	4.43	1.056
Reading_20	572	0	5	4.14	1.041

Grade 3/4 Level A PASA Math

	n	Min	Max	M	SD
Math_1	2217	0	5	4.49	1.013
Math_2	2217	0	5	4.34	1.105
Math_3	2217	0	5	4.14	1.086
Math_4	2217	0	5	4.28	1.094
Math_5	2217	0	5	4.56	1.018
Math_6	2217	0	5	4.27	1.138
Math_7	2217	0	5	4.23	1.182
Math_8	2217	0	5	4.41	1.029
Math_9	2217	0	5	4.31	1.114
Math_10	2217	0	5	3.92	1.214
Math_11	2217	0	5	4.07	1.132
Math_12	2217	0	5	4.24	1.165
Math_13	2217	0	5	4.27	1.205
Math_14	2217	0	5	4.18	1.208
Math_15	2217	0	5	4.29	1.166
Math_16	2217	0	5	4.46	1.062
Math_17	2217	0	5	4.10	1.158
Math_18	2217	0	5	4.31	1.126
Math_19	2217	0	5	4.00	1.198
Math_20	2217	0	5	4.37	1.093

Grade 3/4 Level B PASA Math

	n	Min	Max	M	SD
Math_1	1579	0	5	4.75	0.617
Math_2	1579	0	5	4.61	0.811
Math_3	1579	0	5	4.56	0.882
Math_4	1579	0	5	4.73	0.711
Math_5	1579	0	5	4.74	0.663
Math_6	1579	0	5	4.52	0.947
Math_7	1579	0	5	4.68	0.774
Math_8	1579	0	5	4.66	0.841
Math_9	1579	0	5	3.97	1.255
Math_10	1579	0	5	4.84	0.677
Math_11	1579	0	5	4.46	0.918
Math_12	1579	0	5	4.89	0.501
Math_13	1579	0	5	4.75	0.731
Math_14	1579	0	5	4.11	0.994
Math_15	1579	0	5	4.77	0.675
Math_16	1579	0	5	4.54	0.976
Math_17	1579	0	5	4.73	0.769
Math_18	1579	0	5	3.77	1.253
Math_19	1579	0	5	4.39	0.978
Math_20	1579	0	5	4.68	0.781

Grade 3/4 Level C PASA Math

	n	Min	Max	M	SD
Math_1	652	0	5	4.80	0.609
Math_2	652	0	5	4.46	0.955
Math_3	652	0	5	4.08	1.069
Math_4	652	0	5	3.56	1.112
Math_5	652	0	5	4.87	0.570
Math_6	652	0	5	4.68	0.875
Math_7	652	0	5	4.71	0.903
Math_8	652	0	5	4.08	1.121
Math_9	652	0	5	4.71	0.741
Math_10	652	0	5	3.98	1.099
Math_11	652	0	5	4.69	0.769
Math_12	652	0	5	4.21	1.159
Math_13	652	0	5	4.44	0.943
Math_14	652	0	5	4.07	1.105
Math_15	652	0	5	3.86	1.102
Math_16	652	0	5	4.50	0.983
Math_17	652	0	5	4.54	1.013
Math_18	652	0	5	4.06	1.264
Math_19	652	0	5	4.40	1.026
Math_20	652	0	5	4.55	0.927

Grade 5/6 Level A PASA Math

	n	Min	Max	M	SD
Math_1	1471	0	5	4.48	1.019
Math_2	1471	0	5	4.25	1.144
Math_3	1471	0	5	3.86	1.160
Math_4	1471	0	5	4.00	1.255
Math_5	1471	0	5	4.52	1.026
Math_6	1471	0	5	4.24	1.147
Math_7	1471	0	5	4.27	1.114
Math_8	1471	0	5	4.09	1.201
Math_9	1471	0	5	4.32	1.108
Math_10	1471	0	5	4.17	1.192
Math_11	1471	0	5	4.22	1.181
Math_12	1471	0	5	3.83	1.208
Math_13	1471	0	5	4.42	1.075
Math_14	1471	0	5	4.23	1.179
Math_15	1471	0	5	4.26	1.174
Math_16	1471	0	5	4.10	1.184
Math_17	1471	0	5	4.40	1.056
Math_18	1471	0	5	4.07	1.183
Math_19	1471	0	5	3.86	1.201
Math_20	1471	0	5	4.29	1.132

Grade 5/6 Level B PASA Math

	n	Min	Max	M	SD
Math_1	1877	0	5	4.78	0.655
Math_2	1877	0	5	4.71	0.724
Math_3	1877	0	5	4.62	0.814
Math_4	1877	0	5	4.60	0.833
Math_5	1877	0	5	4.78	0.663
Math_6	1877	0	5	4.14	1.162
Math_7	1877	0	5	4.68	0.803
Math_8	1877	0	5	4.67	0.784
Math_9	1877	0	5	4.03	1.080
Math_10	1877	0	5	4.49	0.873
Math_11	1877	0	5	4.66	0.789
Math_12	1877	0	5	4.66	0.852
Math_13	1877	0	5	4.56	0.893
Math_14	1877	0	5	4.14	1.054
Math_15	1877	0	5	4.59	0.809
Math_16	1877	0	5	3.93	1.156
Math_17	1877	0	5	4.61	0.815
Math_18	1877	0	5	4.79	0.694
Math_19	1877	0	5	4.52	0.914
Math_20	1877	0	5	4.17	1.079

Grade 5/6 Level C PASA Math

	n	Min	Max	M	SD
Math_1	1222	0	5	4.55	0.903
Math_2	1222	0	5	4.56	0.797
Math_3	1222	0	5	4.69	0.708
Math_4	1222	0	5	4.69	0.878
Math_5	1222	0	5	3.75	1.258
Math_6	1222	0	5	4.50	0.931
Math_7	1222	0	5	4.40	0.957
Math_8	1222	0	5	4.55	0.918
Math_9	1222	0	5	4.00	1.120
Math_10	1222	0	5	4.00	1.087
Math_11	1222	0	5	4.84	0.702
Math_12	1222	0	5	4.14	1.054
Math_13	1222	0	5	4.40	0.965
Math_14	1222	0	5	4.75	0.773
Math_15	1222	0	5	3.96	1.094
Math_16	1222	0	5	4.28	1.069
Math_17	1222	0	5	4.35	1.004
Math_18	1222	0	5	4.19	1.041
Math_19	1222	0	5	4.32	1.035
Math_20	1222	0	5	4.48	0.945

Grade 7/8 Level A PASA Math

	n	Min	Max	M	SD
Math_1	1265	0	5	4.30	1.115
Math_2	1265	0	5	4.22	1.134
Math_3	1265	0	5	3.78	1.199
Math_4	1265	0	5	4.05	1.238
Math_5	1265	0	5	4.07	1.179
Math_6	1265	0	5	4.28	1.167
Math_7	1265	0	5	4.02	1.246
Math_8	1265	0	5	3.85	1.224
Math_9	1265	0	5	4.13	1.222
Math_10	1265	0	5	4.09	1.236
Math_11	1265	0	5	4.21	1.201
Math_12	1265	0	5	3.94	1.211
Math_13	1265	0	5	4.34	1.162
Math_14	1265	0	5	4.30	1.191
Math_15	1265	0	5	4.06	1.255
Math_16	1265	0	5	3.92	1.249
Math_17	1265	0	5	4.14	1.223
Math_18	1265	0	5	4.19	1.172
Math_19	1265	0	5	3.79	1.270
Math_20	1265	0	5	4.12	1.212

Grade 7/8 Level B PASA Math

	n	Min	Max	M	SD
Math_1	1884	0	5	4.01	1.109
Math_2	1884	0	5	4.47	0.988
Math_3	1884	0	5	4.43	0.936
Math_4	1884	0	5	4.40	0.922
Math_5	1884	0	5	3.83	1.102
Math_6	1884	0	5	4.47	0.931
Math_7	1884	0	5	4.37	0.928
Math_8	1884	0	5	4.56	0.937
Math_9	1884	0	5	4.45	1.000
Math_10	1884	0	5	4.64	0.811
Math_11	1884	0	5	3.72	1.140
Math_12	1884	0	5	4.26	1.164
Math_13	1884	0	5	4.29	1.032
Math_14	1884	0	5	3.92	1.117
Math_15	1884	0	5	4.49	1.055
Math_16	1884	0	5	3.99	1.131
Math_17	1884	0	5	4.04	1.230
Math_18	1884	0	5	4.21	1.121
Math_19	1884	0	5	3.91	1.159
Math_20	1884	0	5	4.26	1.059

Grade 7/8 Level C PASA Math

	n	Min	Max	M	SD
Math_1	1465	0	5	4.66	0.809
Math_2	1465	0	5	4.30	1.010
Math_3	1465	0	5	4.48	0.903
Math_4	1465	0	5	4.23	1.061
Math_5	1465	0	5	4.46	0.909
Math_6	1465	0	5	3.68	1.156
Math_7	1465	0	5	3.78	1.211
Math_8	1465	0	5	4.28	1.052
Math_9	1465	0	5	2.99	1.193
Math_10	1465	0	5	4.15	1.134
Math_11	1465	0	5	3.95	1.140
Math_12	1465	0	5	4.27	1.045
Math_13	1465	0	5	4.17	1.140
Math_14	1465	0	5	4.16	1.062
Math_15	1465	0	5	4.35	1.020
Math_16	1465	0	5	4.26	1.170
Math_17	1465	0	5	4.30	1.115
Math_18	1465	0	5	4.14	1.079
Math_19	1465	0	5	4.68	0.819
Math_20	1465	0	5	3.48	1.104

Grade 11 Level A PASA Math

	n	Min	Max	M	SD
Math_1	691	0	5	4.39	1.101
Math_2	691	0	5	4.41	1.097
Math_3	691	0	5	4.12	1.186
Math_4	691	0	5	4.32	1.113
Math_5	691	0	5	3.93	1.216
Math_6	691	0	5	4.38	1.129
Math_7	691	0	5	4.27	1.237
Math_8	691	0	5	4.30	1.161
Math_9	691	0	5	4.39	1.140
Math_10	691	0	5	4.11	1.301
Math_11	691	0	5	4.16	1.229
Math_12	691	0	5	4.47	1.093
Math_13	691	0	5	4.23	1.254
Math_14	691	0	5	4.10	1.262
Math_15	691	0	5	4.22	1.211
Math_16	691	0	5	4.17	1.218
Math_17	691	0	5	4.18	1.221
Math_18	691	0	5	4.21	1.246
Math_19	691	0	5	3.66	1.282
Math_20	691	0	5	3.91	1.307

Grade 11 Level B PASA Math

	n	Min	Max	M	SD
Math_1	853	0	5	4.51	0.940
Math_2	853	0	5	4.30	1.104
Math_3	853	0	5	4.51	0.878
Math_4	853	0	5	4.15	1.133
Math_5	853	0	5	3.86	1.268
Math_6	853	0	5	4.67	1.002
Math_7	853	0	5	4.34	1.003
Math_8	853	0	5	4.12	1.069
Math_9	853	0	5	4.02	1.119
Math_10	853	0	5	4.60	0.847
Math_11	853	0	5	4.21	1.065
Math_12	853	0	5	4.08	1.131
Math_13	853	0	5	4.50	0.921
Math_14	853	0	5	4.35	1.061
Math_15	853	0	5	4.46	0.987
Math_16	853	0	5	4.25	1.151
Math_17	853	0	5	4.49	0.945
Math_18	853	0	5	3.61	1.235
Math_19	853	0	5	3.95	1.212
Math_20	853	0	5	4.41	1.017

Grade 11 Level C PASA Math

	n	Min	Max	M	SD
Math_1	516	0	5	4.73	0.695
Math_2	516	0	5	4.79	0.641
Math_3	516	0	5	4.00	1.191
Math_4	516	0	5	3.57	1.196
Math_5	516	0	5	4.13	1.190
Math_6	516	0	5	4.11	1.104
Math_7	516	0	5	3.77	1.206
Math_8	516	0	5	4.81	0.649
Math_9	516	0	5	3.18	1.208
Math_10	516	0	5	4.06	1.188
Math_11	516	0	5	4.22	1.102
Math_12	516	0	5	4.09	1.084
Math_13	516	0	5	4.22	1.104
Math_14	516	0	5	4.78	0.674
Math_15	516	0	5	3.90	1.232
Math_16	516	0	5	4.05	1.201
Math_17	516	0	5	4.75	0.771
Math_18	516	0	5	3.85	1.220
Math_19	516	0	5	4.25	1.175
Math_20	516	0	5	3.95	1.199

Grade 4 Level A PASA Science

	n	Min	Max	M	SD
Science_1	1174	0	5	4.56	0.986
Science_2	1174	1	5	4.44	1.026
Science_3	1174	0	5	4.35	1.115
Science_4	1174	0	5	4.24	1.251
Science_5	1174	0	5	4.40	1.157
Science_6	1174	0	5	3.87	1.319
Science_7	1174	0	5	4.33	1.175
Science_8	1174	0	5	4.04	1.295
Science_9	1174	0	5	4.22	1.268
Science_10	1174	0	5	4.32	1.214
Science_11	1174	0	5	3.86	1.315
Science_12	1174	0	5	4.39	1.221
Science_13	1174	0	5	4.17	1.300
Science_14	1174	0	5	3.85	1.325
Science_15	1174	0	5	4.17	1.318
Science_16	1174	0	5	4.42	1.199
Science_17	1174	0	5	3.94	1.370
Science_18	1174	0	5	4.33	1.264
Science_19	1174	0	5	3.88	1.296
Science_20	1160	0	5	4.42	1.189
Science_21	1160	0	5	3.48	1.490

Grade 4 Level B PASA Science

	n	Min	Max	M	SD
Science_1	849	0	5	4.78	0.645
Science_2	849	0	5	4.72	0.715
Science_3	849	0	5	4.84	0.584
Science_4	849	0	5	4.78	0.664
Science_5	849	0	5	3.41	1.109
Science_6	849	0	5	4.20	1.094
Science_7	849	0	5	4.63	0.770
Science_8	849	0	5	3.53	1.145
Science_9	849	0	5	4.41	0.984
Science_10	849	0	5	4.25	1.088
Science_11	849	0	5	4.43	0.916
Science_12	849	0	5	4.26	1.058
Science_13	849	0	5	4.26	1.087
Science_14	849	0	5	4.05	1.153
Science_15	849	0	5	3.84	1.149
Science_16	849	0	5	4.67	0.778
Science_17	849	0	5	4.14	1.128
Science_18	849	0	5	4.56	0.871
Science_19	849	0	5	4.49	0.965
Science_20	849	0	5	4.20	1.222
Science_21	849	0	5	4.24	1.236

Grade 4 Level C PASA Science

	n	Min	Max	M	SD
Science_1	249	0	5	4.85	0.694
Science_2	249	0	5	4.78	0.717
Science_3	249	0	5	4.75	0.714
Science_4	249	0	5	3.82	1.050
Science_5	249	0	5	2.83	1.072
Science_6	249	0	5	4.26	1.069
Science_7	249	0	5	3.52	1.335
Science_8	249	0	5	3.30	1.308
Science_9	249	0	5	4.21	1.053
Science_10	249	0	5	4.18	1.053
Science_11	249	0	5	3.08	0.936
Science_12	249	0	5	4.64	0.821
Science_13	249	0	5	4.74	0.787
Science_14	249	0	5	3.65	1.108
Science_15	249	0	5	3.99	1.016
Science_16	249	0	5	4.60	0.902
Science_17	249	0	5	3.82	1.321
Science_18	249	0	5	4.27	1.013
Science_19	249	0	5	4.63	0.880
Science_20	249	0	5	4.24	1.228
Science_21	249	0	5	2.89	1.533

Grade 8 Level A PASA Science

	n	Min	Max	M	SD
Science_1	707	0	5	4.37	1.120
Science_2	707	0	5	4.21	1.207
Science_3	707	0	5	4.16	1.163
Science_4	707	0	5	3.82	1.303
Science_5	707	0	5	4.22	1.274
Science_6	707	0	5	3.74	1.370
Science_7	707	0	5	3.92	1.349
Science_8	707	0	5	4.15	1.317
Science_9	707	0	5	4.04	1.358
Science_10	707	0	5	4.01	1.323
Science_11	707	0	5	4.06	1.251
Science_12	707	0	5	3.71	1.280
Science_13	707	0	5	4.09	1.383
Science_14	707	0	5	3.81	1.421
Science_15	707	0	5	3.70	1.410
Science_16	707	0	5	3.71	1.319
Science_17	707	0	5	4.12	1.358
Science_18	707	0	5	3.88	1.343
Science_19	707	0	5	3.95	1.393
Science_20	687	0	5	3.95	1.327
Science_21	687	0	5	3.95	1.448

Grade 8 Level B PASA Science

	n	Min	Max	M	SD
Science_1	1009	0	5	4.81	0.588
Science_2	1009	0	5	4.66	0.752
Science_3	1009	0	5	4.47	0.895
Science_4	1009	0	5	4.64	0.792
Science_5	1009	0	5	4.36	0.933
Science_6	1009	0	5	4.41	0.852
Science_7	1009	0	5	3.68	1.444
Science_8	1009	0	5	3.83	1.238
Science_9	1009	0	5	4.16	1.127
Science_10	1009	0	5	4.48	0.917
Science_11	1009	0	5	4.25	0.999
Science_12	1009	0	5	4.38	0.951
Science_13	1009	0	5	4.14	1.030
Science_14	1009	0	5	4.55	0.857
Science_15	1009	0	5	4.19	1.246
Science_16	1009	0	5	4.80	0.619
Science_17	1009	0	5	4.73	0.714
Science_18	1009	0	5	4.19	1.076
Science_19	1009	0	5	4.41	0.981
Science_20	1009	0	5	4.28	1.039
Science_21	1008	0	5	3.55	1.778

Grade 8 Level C PASA Science

	n	Min	Max	M	SD
Science_1	547	0	5	4.55	0.964
Science_2	547	0	5	4.61	0.914
Science_3	547	0	5	4.55	0.849
Science_4	547	0	5	4.40	1.084
Science_5	547	0	5	4.11	1.179
Science_6	547	0	5	4.10	0.959
Science_7	547	0	5	4.44	1.035
Science_8	547	0	5	3.96	1.197
Science_9	547	0	5	3.73	1.075
Science_10	547	0	5	4.64	0.796
Science_11	547	0	5	4.34	1.034
Science_12	547	0	5	3.95	1.341
Science_13	547	0	5	4.41	0.959
Science_14	547	0	5	4.02	0.998
Science_15	547	0	5	3.45	1.312
Science_16	547	0	5	4.23	1.148
Science_17	547	0	5	3.58	1.168
Science_18	547	0	5	4.29	1.020
Science_19	547	0	5	4.28	1.072
Science_20	547	0	5	4.45	1.005
Science_21	543	0	5	3.71	1.802

Grade 11 Level A PASA Science

	n	Min	Max	M	SD
Science_1	795	0	5	3.81	1.184
Science_2	795	0	5	3.81	1.309
Science_3	795	0	5	3.60	1.345
Science_4	795	0	5	3.93	1.361
Science_5	795	0	5	3.62	1.377
Science_6	795	0	5	3.78	1.351
Science_7	795	0	5	3.74	1.398
Science_8	795	0	5	4.00	1.425
Science_9	795	0	5	4.02	1.394
Science_10	795	0	5	4.16	1.372
Science_11	795	0	5	3.69	1.450
Science_12	795	0	5	3.93	1.373
Science_13	795	0	5	4.12	1.401
Science_14	795	0	5	3.79	1.445
Science_15	795	0	5	3.55	1.398
Science_16	795	0	5	4.13	1.428
Science_17	795	0	5	3.96	1.442
Science_18	795	0	5	3.64	1.446
Science_19	795	0	5	3.95	1.437
Science_20	785	0	5	3.99	1.428

Grade 11 Level B PASA Science

	n	Min	Max	M	SD
Science_1	775	0	5	4.21	1.098
Science_2	775	0	5	4.01	1.187
Science_3	775	0	5	4.45	0.993
Science_4	775	0	5	3.57	0.949
Science_5	775	0	5	4.78	0.652
Science_6	775	0	5	3.84	0.978
Science_7	775	0	5	3.63	1.063
Science_8	775	0	5	2.97	1.247
Science_9	775	0	5	3.08	1.248
Science_10	775	0	5	2.99	1.266
Science_11	775	0	5	4.47	0.961
Science_12	775	0	5	4.14	1.292
Science_13	775	0	5	3.69	0.986
Science_14	775	0	5	3.26	1.339
Science_15	775	0	5	3.64	1.223
Science_16	775	0	5	3.85	1.285
Science_17	775	0	5	3.60	1.144
Science_18	775	0	5	4.23	1.257
Science_19	775	0	5	3.66	1.188
Science_20	770	0	5	3.77	1.059

Grade 11 Level C PASA Science

	n	Min	Max	M	SD
Science_1	474	0	5	3.31	1.253
Science_2	474	0	5	3.89	1.235
Science_3	474	2	5	3.89	1.204
Science_4	474	0	5	3.72	1.406
Science_5	474	0	5	4.27	0.980
Science_6	474	0	5	4.02	1.209
Science_7	474	0	5	3.99	1.172
Science_8	474	0	5	4.38	1.060
Science_9	474	0	5	3.13	1.312
Science_10	474	0	5	3.86	1.114
Science_11	474	0	5	4.22	1.059
Science_12	474	0	5	4.45	1.037
Science_13	474	2	5	4.14	1.027
Science_14	474	0	5	3.95	1.285
Science_15	474	0	5	4.02	1.088
Science_16	474	0	5	4.54	0.917
Science_17	474	0	5	3.08	1.083
Science_18	474	2	5	4.22	0.965
Science_19	474	0	5	3.26	1.093
Science_20	474	0	5	4.16	1.137

Appendix J: Item Frequencies with Stopped Cases Excluded

Appendix J:
Item Frequencies

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 3/4 Reading Level A

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects object named - all choices look different from one another	0.2	0.6	4.8	5.4	5.2	83.7	0.617
2	answers literal 'who' question by selecting object - all choices are conceptually unrelated	0.3	0.5	10.0	12.3	10.4	66.4	0.621
3	selects object by feature - all choices are conceptually unrelated	0.1	0.5	13.4	11.8	8.0	66.2	0.679
4	matches identical objects - all choices look different from one another	0.3	0.5	14.2	13.1	10.0	61.8	0.701
5	selects related object - all choices are conceptually unrelated	0.1	0.8	14.2	14.7	10.8	59.4	0.699
6	selects object named - all choices look different from one another	0.2	0.9	6.8	8.1	7.9	76.1	0.714
7	answers literal 'what' question by selecting object - all choices are conceptually unrelated	0.2	0.9	11.8	9.4	9.7	68.1	0.711
8	selects object by function - all choices are conceptually unrelated	0.4	0.7	11.1	11.3	11.4	65.1	0.724
9	selects category of object - all choices are conceptually unrelated	0.1	0.8	15.2	13.1	10.0	60.8	0.743
10	selects related object - all choices are conceptually unrelated	0.4	0.7	13.9	13.3	9.8	62.0	0.754
11	matches identical objects - all choices look different from one another	0.5	0.8	11.0	10.3	8.9	68.5	0.713
12	answers literal 'what' question by selecting object - all choices are conceptually unrelated	0.2	0.8	11.4	10.1	9.4	68.0	0.722
13	selects object by function - all choices are conceptually unrelated	0.2	1.0	14.5	11.4	8.8	64.1	0.748
14	selects object by feature - all choices are conceptually unrelated	0.2	0.8	8.3	10.2	9.6	70.9	0.664
15	selects object named - all choices look different from one another	0.5	0.6	6.7	6.7	5.4	80.2	0.688
16	selects category of object - all choices are conceptually unrelated	0.3	0.6	15.9	12.4	7.8	63.0	0.759
17	selects related object - all choices are conceptually unrelated	0.5	0.9	10.4	10.6	9.0	68.7	0.709
18	answers literal 'who' question by selecting object - all choices are conceptually unrelated	0.5	0.8	11.0	10.1	7.5	70.0	0.721
19	answers literal 'what' question by selecting object - all choices are conceptually unrelated	0.5	1.0	12.4	12.8	9.0	64.3	0.696
20	selects object by function - all choices are conceptually unrelated	0.7	0.9	10.5	9.0	8.5	70.4	0.701

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 3/4 Reading Level B

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture with beginning sound named	0.1	0.0	2.2	6.8	6.8	84.0	0.331
2	answers literal 'who' question by selecting picture - all choices are conceptually related	0.1	0.0	7.6	13.4	18.0	60.9	0.467
3	selects icon by function	0.3	0.0	0.7	2.1	3.5	93.4	0.320
4	selects picture of a word that rhymes with a picture	0.2	0.0	5.3	15.6	15.0	63.9	0.471
5	matches identical words - all choices have same beginning and ending letters - words 4-5 letters in length	0.1	0.0	1.5	5.6	9.8	83.1	0.401
6	selects category of a picture - all choices are conceptually unrelated	0.3	0.0	3.1	7.4	5.3	83.9	0.509
7	answers literal 'where' question by selecting picture - all choices are conceptually related	0.1	0.0	2.2	7.1	9.8	80.9	0.389
8	locates item missing in a picture - open-ended response	0.2	0.0	6.2	7.2	9.4	76.9	0.478
9	selects picture of item with a part named - all choices are conceptually related	0.4	0.0	1.4	2.1	4.3	91.8	0.470
10	names action in a complex picture - open-ended response	0.3	0.1	1.2	2.5	3.0	93.0	0.461
11	selects picture through association - all choices are conceptually related	0.4	0.0	2.9	7.1	8.6	80.9	0.541
12	selects picture with beginning sound named	0.2	0.0	3.8	9.4	15.0	71.7	0.476
13	locates item missing in a picture - open-ended response	0.4	0.1	8.7	5.2	6.7	78.9	0.546
14	selects picture named - all choices are conceptually related	0.2	0.0	4.5	8.7	13.0	73.6	0.554
15	selects picture of a word that rhymes with a picture	0.3	0.0	9.4	20.1	12.2	57.9	0.481
16	answers literal 'who' question by selecting picture - all choices are conceptually related	0.4	0.0	6.3	10.3	14.3	68.7	0.588
17	names action in a complex picture - open-ended response	0.6	0.1	1.0	1.5	1.3	95.6	0.509
18	selects icon by function	0.6	0.1	2.3	4.1	8.9	84.1	0.540
19	matches pictures of the same item shown from different perspectives	0.6	0.0	0.8	2.9	5.0	90.7	0.540
20	answers literal 'what' question by selecting picture - all choices are conceptually related	0.8	0.1	7.2	13.7	17.1	61.1	0.516

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 3/4 Reading Level C

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects 1 word with beginning sound named	0.3	0.2	4.1	11.4	17.5	66.6	0.365
2	reads aloud 1 word embedded in a paragraph	0.7	0.3	6.8	5.6	8.0	78.6	0.560
3	answers literal 'when' question after hearing 3 sentences	1.0	0.2	10.7	17.3	12.7	58.1	0.508
4	answers literal 'who' question after hearing 3 sentences	0.8	0.2	21.0	24.9	13.7	39.3	0.604
5	selects word within the same conceptual category as another word	0.3	0.3	3.4	9.0	14.9	72.0	0.460
6	defines function of a word read	0.5	0.2	9.5	19.0	5.8	65.1	0.638
7	selects 1 word named with all choices having same beginning 2 letters	0.2	0.2	1.0	1.9	3.1	93.7	0.529
8	reads aloud 1 word embedded in a paragraph	0.5	0.3	12.4	8.1	4.7	73.9	0.602
9	answers literal 'where' question after hearing 3 sentences	0.3	0.2	5.1	6.8	7.8	79.8	0.586
10	answers literal 'who' question after hearing 3 sentences	0.7	0.3	6.8	8.0	6.4	77.8	0.569
11	selects 1 word with beginning sound named	0.3	0.0	4.2	6.6	11.4	77.1	0.417
12	selects picture of 1 word read	0.2	0.0	3.2	8.0	4.7	83.9	0.554
13	selects word within the same conceptual category as another word	0.3	0.0	3.4	4.7	4.2	87.3	0.462
14	reads aloud 1 word embedded in a paragraph	0.7	0.2	9.0	5.1	2.7	82.4	0.587
15	orders 3 pictures based on text	0.2	0.0	13.4	34.9	13.6	38.0	0.449
16	reads aloud 1 word embedded in a paragraph	1.2	0.2	8.0	3.9	2.5	84.2	0.536
17	answers literal 'who' question after hearing 3 sentences	0.3	0.2	12.7	15.3	8.8	62.7	0.633
18	answers literal 'what' question after hearing 3 sentences	1.5	0.2	6.1	5.3	5.4	81.5	0.570
19	answers literal 'when' question after hearing 3 sentences	0.8	0.2	10.7	10.8	9.5	68.0	0.649
20	defines function of a word read	0.3	0.2	14.7	26.1	7.8	50.8	0.566

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 5/6 Reading Level A								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects object named - one choice looks similar to the target and one choice looks different from the target	0.4	1.2	9.1	9.7	8.9	70.7	0.691
2	answers literal 'what' question by selecting object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.5	1.4	10.0	11.6	8.9	67.5	0.716
3	selects object by feature - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.2	0.9	13.5	13.2	12.8	59.4	0.581
4	matches identical objects - one choice looks similar to the target and one choice looks different from the target	0.2	1.3	11.3	13.9	13.1	60.3	0.666
5	selects related object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.2	1.0	17.1	22.9	16.2	42.7	0.619
6	answers literal 'who' question by selecting object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.2	1.0	10.6	14.3	12.7	61.3	0.621
7	selects object by function - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.3	1.2	13.0	11.9	14.2	59.4	0.649
8	selects category of object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.1	1.1	16.2	14.6	10.0	58.0	0.686
9	selects object named - one choice looks similar to the target and one choice looks different from the target	0.5	1.0	6.6	6.3	6.3	79.2	0.670
10	selects related object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.4	0.8	11.0	14.5	9.7	63.6	0.655
11	answers literal 'who' question by selecting object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.2	0.9	19.9	22.4	15.0	41.6	0.552
12	selects object by function - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.6	0.6	9.0	10.0	11.6	68.2	0.638
13	answers literal 'what' question by selecting object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.2	0.9	14.5	11.9	9.9	62.6	0.701
14	selects object by feature - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.2	0.8	10.2	13.4	14.2	61.3	0.658
15	matches identical objects - one choice looks similar to the target and one choice looks different from the target	0.1	0.6	10.7	12.2	9.2	67.1	0.713
16	selects related object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.1	1.1	12.5	16.8	10.6	59.1	0.718
17	selects object named - one choice looks similar to the target and one choice looks different from the target	0.3	0.8	7.1	8.9	10.3	72.5	0.608

Appendix J: Item Frequencies with Stopped Cases Excluded

18	selects category of object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.3	1.1	16.1	16.3	10.8	55.4	0.689
19	selects object by function - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.4	1.1	19.6	20.5	14.7	43.7	0.699
20	answers literal 'what' question by selecting object - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.3	0.9	6.8	9.2	7.2	75.6	0.615

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 5/6 Reading Level B								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture of word that does not rhyme	0.0	0.0	8.3	19.6	15.5	56.6	0.417
2	answers literal 'where' question by selecting picture - all choices are conceptually related	0.0	0.0	5.3	10.4	11.0	73.2	0.561
3	selects word named - all choices have different beginning and ending letters	0.1	0.0	2.0	5.6	4.0	88.3	0.412
4	names icon - open-ended response	0.5	0.0	11.1	8.3	4.6	75.5	0.402
5	selects picture with same beginning sound as target picture named	0.2	0.0	9.6	25.0	18.3	46.8	0.572
6	gives an example of function of item in picture - open-ended response	0.2	0.1	13.5	14.9	14.0	57.3	0.581
7	answers literal 'who' question by selecting picture - all choices are conceptually related	0.0	0.0	6.0	9.9	9.4	74.7	0.539
8	matches identical words - all choices differ by one letter only - words 4-5 letters in length	0.2	0.0	2.7	7.4	8.9	80.8	0.506
9	names activity in a complex picture - open-ended response	0.1	0.0	5.3	9.0	10.1	75.5	0.532
10	selects category of picture - all choices are conceptually related	0.2	0.0	2.7	5.2	5.4	86.5	0.497
11	selects icon by function	0.2	0.0	2.2	3.4	3.2	91.0	0.536
12	selects picture of last word missing in sentence using clue from picture - all choices are conceptually related	0.0	0.1	2.0	5.0	6.8	86.1	0.537
13	selects complex picture showing 1 feature named	0.0	0.0	2.9	6.9	7.4	82.8	0.615
14	answers literal 'when' question - open-ended response	3.3	0.1	14.3	12.1	10.2	60.0	0.528
15	names complex picture - synthesizes information to give noun - open-ended response	0.1	0.0	12.5	19.1	17.6	50.6	0.520
16	selects picture of word that does not rhyme	0.1	0.0	9.1	20.9	15.2	54.7	0.577
17	answers literal 'what' question by selecting picture - all choices are conceptually related	0.3	0.0	3.8	6.8	8.5	80.6	0.484
18	selects word named - all choices have different beginning and ending letters	0.2	0.0	1.8	4.2	3.8	90.0	0.504
19	selects complex picture showing first or last event in story	0.3	0.1	7.9	16.1	17.6	58.0	0.502
20	answers literal 'who' question by selecting picture - all choices are conceptually related	0.3	0.0	4.0	8.1	8.8	78.6	0.523

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 5/6 Reading Level C

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	reads 2-10 word sentence and supplies word missing in sentence using clue from picture	0.2	0.1	23.7	31.9	10.0	34.1	0.418
2	demonstrates understanding of 2-10 word written command	0.2	0.1	12.2	27.1	17.6	42.8	0.396
3	answers literal 'when' question	0.2	0.0	6.9	12.4	21.1	59.4	0.484
4	answers literal 'how' question	1.8	0.0	2.1	5.3	5.3	85.5	0.413
5	answers literal 'where' question	1.1	0.0	2.3	2.7	2.0	91.9	0.458
6	names 1 fact from expository text	0.0	0.0	9.3	16.8	9.5	64.4	0.482
7	answers literal 'who' question	0.1	0.0	6.8	12.3	10.8	70.0	0.533
8	answers literal 'where' question	0.6	0.0	10.3	14.5	11.4	63.2	0.555
9	answers literal 'what' question	0.8	0.0	3.3	4.4	5.1	86.3	0.514
10	answers literal 'when' question	1.1	0.0	11.3	13.2	16.2	58.3	0.603
11	reads 2-10 word sentence and supplies word missing in sentence using clue from picture	0.1	0.0	11.6	17.3	7.4	63.6	0.314
12	describes 1 event from narrative text	0.3	0.0	5.8	9.7	13.9	70.4	0.528
13	demonstrates understanding of 2-10 word written command	0.1	0.0	7.7	20.8	12.5	59.0	0.517
14	orders words representing main ideas from story	0.5	0.0	7.3	26.7	10.2	55.3	0.547
15	reads 2-10 word sentence and supplies word missing in sentence using clue from picture	0.5	0.0	14.7	22.0	8.7	54.2	0.455
16	answers literal 'what' question	0.4	0.0	8.6	11.0	9.3	70.7	0.583
17	answers literal 'where' question	1.1	0.1	5.5	7.4	16.9	69.0	0.536
18	answers literal 'when' question	0.6	0.0	6.3	12.8	20.3	59.9	0.491
19	answers literal 'how' question	1.4	0.0	7.9	7.4	8.8	75.6	0.569
20	Names 1 fact from expository text	0.5	0.1	5.4	13.3	6.7	74.1	0.521

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 7/8 Reading Level A

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture named - all choices look different from one another	0.2	1.3	9.3	13.0	11.3	65.0	0.682
2	answers literal 'who' question by selecting picture - all choices are conceptually unrelated	0.1	2.2	13.8	14.6	12.7	56.7	0.688
3	selects photograph by function - all choices are conceptually unrelated	0.0	1.9	12.9	15.1	12.1	58.0	0.730
4	matches identical pictures - all choices look different from one another	0.1	1.7	12.5	12.5	8.8	64.4	0.706
5	selects picture by feature - all choices are conceptually unrelated	0.2	1.6	9.3	12.5	11.1	65.4	0.702
6	selects similar picture - all choices are conceptually unrelated	0.1	2.1	17.2	21.0	16.1	43.5	0.610
7	answers literal 'where' question by selecting photograph - all choices are conceptually unrelated	0.2	1.8	13.6	12.4	10.2	61.9	0.736
8	selects category of picture - all choices are conceptually unrelated	0.1	2.0	14.3	16.3	12.5	54.8	0.709
9	selects picture named - all choices look different from one another	0.3	1.7	8.9	9.1	8.0	71.9	0.728
10	answers literal 'what' question by selecting photograph - all choices are conceptually unrelated	0.1	1.8	14.9	13.5	10.2	59.5	0.691
11	selects related picture - all choices are conceptually unrelated	0.2	1.7	12.9	12.7	9.2	63.3	0.711
12	selects picture by function - all choices are conceptually unrelated	0.3	1.6	14.4	15.1	10.1	58.4	0.689
13	answers literal 'who' question by selecting photograph - all choices are conceptually unrelated	0.3	1.7	13.7	14.8	12.1	57.4	0.677
14	matches identical photographs - all choices look different from one another	0.3	1.5	8.6	10.6	9.4	69.6	0.703
15	answers literal 'where' question by selecting picture - all choices are conceptually unrelated	0.3	2.0	13.1	17.2	14.8	52.6	0.681
16	selects category of photograph - all choices are conceptually unrelated	0.3	2.2	12.2	13.1	10.6	61.5	0.733
17	selects related picture - all choices are conceptually unrelated	0.6	1.8	14.4	19.2	12.9	51.1	0.657
18	answers literal 'what' question by selecting picture - all choices are conceptually unrelated	0.7	1.8	13.1	12.5	9.0	63.0	0.673
19	selects picture named - all choices look different from one another	1.1	1.9	9.9	7.9	6.0	73.3	0.709
20	answers literal 'who' question by selecting picture - all choices are conceptually unrelated	0.9	2.2	14.7	16.8	10.7	54.8	0.721

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 7/8 Reading Level B

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects word with same beginning sound as target picture named	0.1	0.0	3.0	10.6	10.1	76.2	0.295
2	answers literal 'when' question - open-ended response	0.0	0.0	7.2	14.0	12.1	66.6	0.602
3	selects picture of a word that rhymes with a word	0.3	0.0	5.7	13.6	17.7	62.8	0.408
4	selects word named - all choices have same beginning and different ending letters	0.3	0.0	2.7	6.2	5.9	84.8	0.465
5	answers literal 'who' question - open-ended response	0.1	0.0	8.6	13.3	13.1	64.9	0.603
6	gives an example of function of word - open-ended response	0.8	0.2	6.3	9.5	7.8	75.3	0.523
7	selects complex picture to identify main event from narrative text	0.1	0.1	3.8	9.1	7.2	79.7	0.515
8	reads 1 word with a complex picture	0.2	0.1	16.1	12.6	5.4	65.6	0.534
9	answers literal 'what' question - open-ended response	0.1	0.0	4.7	7.6	7.2	80.4	0.587
10	selects category of a word - all choices are conceptually related	0.1	0.0	1.3	2.4	2.8	93.4	0.371
11	selects complex picture showing 2 features named	0.1	0.0	3.5	9.8	18.3	68.2	0.447
12	selects last word missing in sentence using clue from picture - all choices are conceptually related	0.1	0.0	6.0	13.7	14.3	65.9	0.543
13	reads 1 word with a complex picture	0.3	0.0	7.5	9.1	3.8	79.2	0.534
14	answers literal 'who' question - open-ended response	0.2	0.1	6.8	12.7	19.1	61.1	0.418
15	selects complex picture showing next event in story	0.3	0.1	8.5	18.9	21.3	51.0	0.556
16	answers literal 'why' question - open-ended response	0.2	0.0	2.6	7.1	6.4	83.6	0.565
17	names 2 activities in a complex picture - open-ended response	0.3	0.1	6.5	28.4	13.4	51.2	0.623
18	answers literal 'where' question - open-ended response	0.3	0.0	12.2	13.9	16.2	57.4	0.651
19	selects picture of a word that rhymes with a word	0.4	0.1	10.7	25.4	18.3	45.1	0.516
20	answers literal 'when' question - open-ended response	0.4	0.0	4.5	7.1	11.2	76.6	0.615

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 7/8 Reading Level C

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	reads 11-29 word passage and supplies missing word	0.2	0.1	33.9	22.8	7.3	35.7	0.528
2	answers inferential 'what' question - reading comprehension	0.1	0.0	17.9	27.6	10.5	43.8	0.518
3	answers literal 'what' question - reading comprehension	0.3	0.0	6.6	14.4	11.0	67.8	0.551
4	answers literal 'who' question - reading comprehension	0.5	0.0	6.6	8.7	5.0	79.2	0.536
5	names item that can be used in place of another item	0.6	0.0	7.5	17.5	7.3	67.1	0.602
6	answers literal 'why' question - reading comprehension	0.1	0.0	4.8	13.2	9.6	72.3	0.545
7	answers literal 'how' question - reading comprehension	0.3	0.0	3.1	4.1	4.6	87.9	0.445
8	demonstrates understanding of 11-29 word written command	0.1	0.0	2.2	9.0	8.4	80.2	0.524
9	names 3 facts from expository text	0.1	0.1	3.8	38.0	7.5	50.5	0.582
10	reads 11-29 word passage and supplies missing word	0.1	0.0	21.8	19.9	8.0	50.2	0.592
11	answers literal 'where' question - reading comprehension	0.2	0.0	1.0	4.3	2.2	92.3	0.507
12	answers inferential 'what' question - reading comprehension	0.3	0.0	16.1	30.4	10.5	42.6	0.437
13	answers inferential 'when' question - reading comprehension	0.3	0.0	1.8	5.0	3.6	89.3	0.490
14	describes 3 events from narrative text	0.2	0.0	1.4	24.3	6.0	68.1	0.552
15	locates words by function in display of 11-29 words - inferential question	0.3	0.0	6.2	15.4	14.0	64.0	0.483
16	answers inferential 'who' question - reading comprehension	0.1	0.1	8.5	18.4	12.7	60.2	0.509
17	answers literal 'how' question - reading comprehension	0.3	0.0	5.2	6.0	7.7	80.7	0.438
18	answers literal 'when' question - reading comprehension	0.4	0.0	4.7	9.8	6.6	78.5	0.585
19	answers inferential 'where' question - reading comprehension	0.6	0.0	11.7	19.1	8.7	59.9	0.604
20	names 3 facts from expository text	0.3	0.0	4.5	37.3	5.3	52.6	0.609

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Reading Level A								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture named - all choices look similar to one another	0.1	0.9	6.2	5.6	4.8	82.4	0.689
2	answers literal 'what' question by selecting picture - all choices are conceptually related	0.1	0.7	12.0	13.2	8.4	65.5	0.704
3	selects picture by function - all choices are conceptually related	0.9	0.0	11.3	8.5	7.0	72.3	0.758
4	matches identical icons - other choices are pictures	0.1	0.7	10.7	9.1	6.9	72.4	0.747
5	selects related picture - all choices are conceptually related	0.3	0.9	13.2	13.0	7.9	64.7	0.684
6	answers literal 'who' question by selecting photograph - all choices are conceptually related	0.1	0.4	16.6	8.1	6.6	68.2	0.737
7	selects picture by feature - all choices are conceptually related	0.0	0.7	9.5	9.1	8.8	71.8	0.707
8	selects category by photograph - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.1	0.9	11.6	8.8	6.5	72.1	0.772
9	selects photograph named - all choices look similar to one another	0.7	0.9	8.8	5.3	5.6	78.7	0.751
10	answers literal 'where' question by selecting picture - all choices are conceptually related	0.6	0.7	14.4	8.7	8.9	66.7	0.731
11	selects similar picture - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	0.6	1.0	13.0	12.5	9.1	63.8	0.685
12	matches identical photographs - all choices look similar to one another	1.3	0.9	10.3	9.4	4.5	73.6	0.768
13	selects picture by function - all choices are conceptually related	0.6	0.9	13.3	10.9	8.8	65.5	0.735
14	answers literal 'who' question by selecting picture - all choices are conceptually related	1.0	0.7	16.3	14.2	9.1	58.7	0.690
15	selects related picture - all choices are conceptually related	0.9	0.7	15.8	13.5	10.9	58.2	0.704
16	answers literal 'where' question by selecting photograph - all choices are conceptually related	1.0	1.0	11.4	9.5	8.7	68.3	0.752
17	selects category of picture - one choice is conceptually related to the target and one choice is conceptually unrelated to the target	1.2	0.4	12.3	9.8	7.0	69.2	0.787
18	answers literal 'what' question by selecting picture - all choices are conceptually related	1.3	1.2	13.5	9.8	6.5	67.7	0.813
19	matches identical complex pictures - all choices look different from one another	1.8	1.2	12.3	9.4	6.2	69.2	0.812
20	answers literal 'who' question by selecting photograph - all choices are conceptually related	1.6	1.0	13.8	15.7	14.1	53.8	0.696

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Reading Level B								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	reads 1 word in isolation - common sight words	1.0	0.0	7.1	4.2	2.3	85.4	0.560
2	answers literal 'when' question - open-ended response	0.7	0.0	10.2	13.3	10.0	65.8	0.564
3	selects word named - all choices have same beginning and ending letters	0.7	0.0	3.1	3.9	8.1	84.2	0.568
4	gives an example of function of word read - open-ended response	0.5	0.0	10.1	12.0	7.3	70.0	0.641
5	answers literal 'who' question - open-ended response	0.4	0.0	6.1	7.5	6.4	79.6	0.633
6	reads 1 word in context - 3-4 letters in length and regularly decodable	0.7	0.0	2.9	1.1	1.2	94.1	0.485
7	orders 3 complex pictures based on text	0.1	0.0	6.6	16.3	7.0	70.0	0.617
8	answers literal 'where' question - open-ended response	0.1	0.0	11.0	10.6	10.2	68.1	0.640
9	selects last word missing in sentence using clue from picture - all choices are conceptually related	0.4	0.0	6.9	10.2	11.9	70.6	0.550
10	selects word named - all choices have same beginning and ending letters	0.1	0.0	2.3	3.5	4.7	89.4	0.472
11	selects complex picture showing 3 features named	0.4	0.0	3.9	4.3	8.0	83.5	0.519
12	answers literal 'what' question - open-ended response	0.1	0.0	6.0	9.2	13.6	71.1	0.542
13	selects category of a word - all choices are conceptually related	0.2	0.0	3.1	5.9	8.1	82.7	0.539
14	answers literal 'where' question - open-ended response	0.1	0.0	4.5	4.9	6.5	84.0	0.607
15	reads 1 word in context - 3-4 letters in length and regularly decodable	0.4	0.0	3.0	2.4	2.0	92.2	0.462
16	answers literal 'why' question - open-ended response	0.0	0.0	13.0	21.0	15.4	50.6	0.492
17	selects complex picture to identify main event from narrative text	0.0	0.1	5.8	9.6	12.7	71.8	0.365
18	answers literal 'what' question - open-ended response	0.1	0.1	6.9	9.5	12.7	70.7	0.612
19	selects last word missing in sentence using clue from picture - all choices are conceptually related	0.2	0.0	16.3	17.5	16.4	49.6	0.474
20	answers literal 'when' question - open-ended response	0.2	0.0	4.9	4.3	8.7	81.8	0.669

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Reading Level C								
Item	Skill Assesse	0	1	2	3	4	5	Correlation
1	reads 30-50 word passage and supplies missing word	0.2	0.0	14.2	20.5	12.9	52.3	0.513
2	answers inferential 'why' question - reading comprehension	0.3	0.0	10.0	10.8	7.9	71.0	0.604
3	answers inferential 'how' question - reading comprehension	1.0	0.2	4.5	5.4	12.1	76.7	0.371
4	identifies synonym for word read	0.3	0.2	9.8	19.9	4.9	64.9	0.552
5	answers literal 'when' question - reading comprehension	0.2	0.0	6.3	7.9	10.1	75.5	0.500
6	answers literal 'why' question - reading comprehension	0.5	0.0	6.3	7.3	10.5	75.3	0.523
7	answers inferential 'who' question - reading comprehension	0.3	0.0	1.6	2.3	2.6	93.2	0.367
8	demonstrates understanding of 30-50 word 2-step command	0.3	0.0	13.6	18.2	15.4	52.4	0.438
9	names 4 facts from expository text	0.0	0.2	2.6	33.2	11.4	52.6	0.499
10	answers inferential 'what' question - reading comprehension	0.3	0.0	8.7	11.9	8.2	70.8	0.468
11	answers literal 'how' question - reading comprehension	0.5	0.0	11.7	11.2	23.4	53.1	0.439
12	locates words by function in display of 30-50 words or in real materials - inferential question	0.5	0.0	5.4	6.3	6.6	81.1	0.505
13	describes 4 events from narrative text	0.3	0.2	1.6	26.2	8.6	63.1	0.538
14	answers inferential 'where' question - reading comprehension	0.2	0.0	14.5	27.8	8.6	49.0	0.512
15	answers inferential 'what' question - reading comprehension	0.3	0.2	7.0	10.7	12.4	69.4	0.575
16	answers inferential 'when' question - reading comprehension	0.5	0.3	24.7	24.1	10.0	40.4	0.449
17	identifies synonym for word read	0.7	0.2	7.5	17.0	6.6	68.0	0.428
18	answers inferential 'how' question - reading comprehension	0.3	0.2	25.3	26.9	13.3	33.9	0.488
19	answers inferential 'why' question - reading comprehension	0.5	0.3	8.7	9.8	7.0	73.6	0.531
20	names 4 facts from expository text	0.3	0.2	3.3	33.6	6.5	56.1	0.559

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 3/4 Math Level A								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects coin - all items differ in appearance	0.4	0.8	8.5	7.3	7.0	76.0	0.673
2	selects biggest/smallest shape	0.4	0.9	10.7	10.4	8.4	69.2	0.638
3	selects set with most/least - difference between target and closest choice is 12 units - sets are cut to size	0.3	0.8	10.6	14.8	20.6	52.9	0.519
4	matches photographs of items of same size	0.4	0.9	10.2	13.0	11.7	63.9	0.652
5	selects clock - all items differ in appearance	1.7	0.6	5.6	5.8	6.7	79.7	0.585
6	matches pictures of items of same length - difference between target and closest choice is 12 inches	0.7	0.7	12.0	10.7	10.9	65.0	0.665
7	matches objects with same volume	1.0	0.8	12.8	11.3	9.5	64.7	0.691
8	selects biggest/smallest picture of item	0.6	0.8	7.8	10.5	9.9	70.4	0.669
9	matches pictures of items of same size	0.6	0.7	11.6	10.2	9.3	67.6	0.710
10	selects set with most/least - difference between target and closest choice is 12 units - sets are cut to size	0.7	0.8	17.4	17.9	14.9	48.4	0.570
11	selects item that holds the most/least	1.3	0.7	10.9	14.4	23.6	49.0	0.522
12	matches photographs of items of same length - difference between target and closest choice is 12 inches	0.8	0.7	13.4	10.9	9.3	64.9	0.722
13	selects biggest/smallest object by area	2.2	0.7	10.0	10.5	9.8	66.8	0.603
14	matches identical shapes of same size	0.7	0.9	15.7	10.1	9.0	63.6	0.768
15	matches 2 sets of items with 1 item each - difference between target and closest choice is 12 units - sets are cut to size	0.9	0.9	12.8	8.3	9.3	67.7	0.707
16	sorts 1 object into 1 of 3 existing groups - all groups differ in appearance	1.2	0.8	8.2	7.3	7.8	74.8	0.680
17	selects set with most/least - difference between target and closest choice is 12 units - sets are cut to size	0.7	1.0	13.7	12.0	18.5	54.1	0.574
18	selects biggest/smallest shape	0.9	0.9	10.3	11.6	8.8	67.5	0.627
19	selects object that completes an ABAB repeating pattern - both distracter choices are not objects in the pattern	0.6	0.9	15.3	18.2	12.5	52.5	0.638
20	matches objects of same size by area	0.9	0.7	9.5	10.2	9.0	69.8	0.684

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 3/4 Math Level B

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	counts aloud ≤ 5 items in unordered array	0.3	0.0	1.1	5.8	9.6	83.2	0.301
2	selects largest/smallest value from graph without numbers - ordered display	0.3	0.1	3.7	8.7	10.2	77.0	0.446
3	selects longest/shortest item	0.4	0.0	4.8	10.2	7.9	76.6	0.514
4	measures item area by counting units ≤ 5	0.7	0.0	1.7	5.9	8.1	83.6	0.440
5	matches digital time at 30-minute intervals	0.3	0.0	2.1	5.8	8.4	83.4	0.506
6	reads whole number price $\leq \$19$	0.6	0.0	7.0	8.2	9.0	75.3	0.510
7	locates number described ≤ 5 in a one-variable display with 4 entries with teacher assistance in locating the appropriate row	0.3	0.0	4.0	6.4	7.1	82.1	0.563
8	counts aloud one-dollar bills or pennies $\leq \$5$ or 5¢	1.3	0.0	2.5	7.1	7.2	81.9	0.270
9	measures volume by counting ≤ 5 units	0.4	0.0	21.9	13.4	10.1	54.3	0.537
10	reads number ≤ 19	1.2	0.0	1.8	1.9	3.0	92.1	0.356
11	sorts 4 items into 4 groups - 2 groups are identical except for 1 feature - with model	0.9	0.0	1.9	17.1	10.8	69.2	0.537
12	measures item area by counting units ≤ 5	0.6	0.0	1.0	2.1	2.5	93.8	0.435
13	selects longest/shortest item	0.7	0.0	2.8	5.3	4.0	87.2	0.534
14	selects largest/smallest value from graph without numbers - ordered display	0.4	0.0	7.7	19.8	25.4	46.6	0.492
15	matches numeral to quantity ≤ 5 - the target and 1 set are within ± 5	0.6	0.0	2.1	5.2	4.8	87.4	0.523
16	reads whole number price $\leq \$19$	0.6	0.1	8.5	6.7	6.0	78.1	0.465
17	counts aloud ≤ 5 items in unordered array	1.1	0.0	2.1	5.0	6.8	84.9	0.415
18	measures length/width of item affixed to a ruler without numbers by counting units ≤ 5	1.0	0.0	21.4	21.8	12.2	43.6	0.592
19	selects shape that is missing in an ABCABC pattern - distracters include all choices in the pattern	0.7	0.0	5.6	15.1	11.4	67.2	0.537
20	locates number described ≤ 5 in a one-variable display with 4 entries with teacher assistance in locating the appropriate row	0.8	0.0	3.1	6.0	8.2	82.0	0.518

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 3/4 Math Level C								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	counts aloud ≤ 9 items in ordered array	0.5	0.0	1.2	3.8	6.9	87.7	0.338
2	adds 2 prices with sums $\leq \$9$ by counting one-dollar bills	0.5	0.0	5.5	13.4	9.3	71.3	0.556
3	orders 4 sets of evenly spaced items ≤ 9	0.5	0.0	7.6	27.3	12.8	51.8	0.574
4	locates number described ≤ 9 in 5-6 item display with teacher assistance in locating the appropriate row	0.3	0.0	18.8	34.9	16.3	29.7	0.463
5	selects one-, five-, ten-, or twenty-dollar bill - all choices differ in appearance	0.6	0.0	1.1	2.6	2.6	93.1	0.413
6	reads digital time at 15-minute intervals	0.8	0.3	4.7	5.0	3.7	85.5	0.505
7	names penny, nickel, dime, or quarter	2.1	0.0	2.3	3.7	4.3	87.7	0.398
8	adds 3 sets of items with sums ≤ 9 by counting	0.5	0.0	9.9	26.2	8.4	55.0	0.494
9	selects largest/smallest value from graph of ordered numbers ≤ 9	0.2	0.0	4.0	5.2	6.3	84.5	0.375
10	selects equation that matches the word problem with numbers ≤ 9 - subtraction	0.3	0.0	10.8	27.1	14.2	47.6	0.474
11	matches numeral to quantity ≤ 9 - the target and 2 sets are within ± 5	0.5	0.0	3.4	5.6	8.7	81.9	0.408
12	measures volume by counting ≤ 9 full units	0.9	0.2	11.7	15.1	9.8	62.3	0.529
13	subtracts 2 numbers ≤ 9 by counting items	0.3	0.2	5.3	13.4	11.4	69.4	0.528
14	sorts 8 items into 4 groups - all groups are similar in appearance - no model	0.8	0.0	6.9	30.8	7.5	54.1	0.506
15	selects most/least likely outcome given the characteristics of a population - extreme proportions (difference is 5x)	1.1	0.0	11.3	25.5	24.5	37.7	0.500
16	counts out one-dollar bills $\leq \$9$ from a larger set	1.8	0.2	3.0	8.8	14.0	72.1	0.491
17	measures length/width of item affixed to a ruler with 1-inch markings	1.7	0.2	5.9	6.1	7.9	78.2	0.604
18	reads analog time at half-hour intervals	1.2	0.0	16.5	16.6	5.9	59.8	0.594
19	selects number that extends a pattern ≤ 9 - odd/even numbers	0.9	0.0	6.1	14.3	8.5	70.1	0.520
20	selects item divided evenly and in the number of pieces specified - the target and 1 other item are divided into equal parts	1.1	0.0	4.0	9.3	9.5	76.2	0.502

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 5/6 Math Level A

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects one-dollar bill - all items differ in appearance	0.7	0.5	8.5	8.4	6.5	75.3	0.662
2	selects biggest/smallest shape	0.4	0.9	13.5	10.9	9.6	64.7	0.670
3	selects set with most/least - difference between target and closest choice is 9 units - sets are cut to size	0.6	0.8	15.9	20.9	20.5	41.3	0.439
4	matches identical shapes of same size	0.8	0.9	18.4	14.4	10.3	55.1	0.692
5	selects clock - target and 1 other item are similar in appearance	1.2	0.5	7.7	7.3	4.9	78.3	0.587
6	matches photographs of items of same length - difference between target and closest choice is 9 inches	0.7	0.8	13.1	11.1	10.4	63.9	0.693
7	selects biggest/smallest object by area	1.0	0.7	11.0	11.9	11.4	64.0	0.616
8	selects longest/shortest object - difference between target and closest choice is 9 inches	1.8	0.7	11.7	17.0	12.7	56.1	0.574
9	matches pictures of items of same size	0.8	0.6	11.5	11.6	7.7	67.8	0.722
10	matches 2 sets of items with 1-2 items each - difference between target and closest choice is 9 units - sets are cut to size	0.9	0.7	14.8	12.7	8.9	61.8	0.692
11	matches objects with same volume	1.3	0.7	12.7	12.7	8.2	64.3	0.718
12	selects set with most/least - difference between target and closest choice is 9 units - sets are cut to size	1.0	0.6	18.6	20.4	16.2	43.2	0.591
13	sorts 1 object into 1 of 3 existing groups - the target and 1 group are similar in appearance	1.2	0.8	9.0	8.9	7.6	72.6	0.690
14	selects biggest/smallest object by volume	2.1	0.7	10.1	12.4	12.1	62.6	0.622
15	matches pictures of items of same length - difference between target and closest choice is 9 inches	1.0	0.9	13.6	9.2	8.6	66.7	0.717
16	selects longest/shortest photograph of item - difference between target and closest choice is 9 inches	1.3	0.9	13.1	15.3	13.7	55.7	0.589
17	matches photographs of items of same size	1.1	0.7	8.7	10.1	9.4	70.1	0.696
18	selects set with most/least - difference between target and closest choice is 9 units - sets are cut to size	1.5	0.6	13.9	13.8	17.5	52.7	0.568
19	selects object that completes an ABAB repeating pattern - one distracter choice is in the pattern and one distracter choice is not in the pattern	1.2	0.5	17.0	21.4	15.8	44.2	0.558
20	matches objects of same size by area	1.3	0.6	11.2	10.3	11.3	65.2	0.695

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 5/6 Math Level B

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects coin named - all items are money	0.8	0.1	1.5	3.3	7.9	86.4	0.398
2	measures item area by counting units ≤ 9	0.5	0.1	2.3	7.1	7.1	83.0	0.549
3	matches numeral to quantity ≤ 9 - the target and 2 sets are within +/- 5	0.5	0.1	2.7	11.2	6.7	78.9	0.599
4	selects largest/smallest value from graph without numbers - unordered display	0.5	0.1	3.9	8.4	10.6	76.5	0.568
5	matches digital times at 5-minute intervals	0.7	0.0	1.5	5.0	5.6	87.2	0.527
6	measures length/width of item affixed to a ruler without numbers by counting ≤ 9 units	0.7	0.1	13.0	17.8	8.4	60.1	0.649
7	selects longest/shortest flexible item	0.7	0.1	3.5	6.8	6.1	82.8	0.518
8	counts aloud ≤ 9 items in unordered array	0.9	0.0	2.1	7.4	9.0	80.6	0.463
9	orders 3 consecutive prices $\leq \$9$	0.4	0.1	8.4	30.5	10.0	50.7	0.632
10	sorts 4 items into 4 groups - 2 pairs of groups are identical except for 1 feature - with model	0.7	0.0	1.4	17.5	9.5	70.9	0.564
11	locates number described ≤ 9 in a one-variable display with 5 entries with teacher assistance in locating the appropriate row	0.3	0.0	4.3	6.7	7.4	81.3	0.625
12	reads digital time at 1-hour intervals	0.4	0.1	5.8	6.0	4.0	83.6	0.565
13	selects coin named - all items are money	1.4	0.0	3.5	6.1	15.7	73.3	0.317
14	selects largest/smallest value ≤ 9 in an ordered display	0.5	0.1	7.8	23.1	14.1	54.3	0.522
15	matches numeral to quantity ≤ 9 - the target and 2 sets are within +/- 5	0.4	0.0	3.2	9.9	11.0	75.5	0.583
16	selects container with enough volume to hold measured amount	1.6	0.1	11.4	23.1	19.8	43.9	0.485
17	counts aloud one-dollar bills or pennies $\leq \$9$ or 9¢	0.5	0.0	3.0	10.8	7.8	77.9	0.545
18	matches digital times at 5-minute intervals	1.1	0.0	1.7	3.4	5.6	88.1	0.516
19	selects shape that is missing in an ABBABB pattern - distracters include all choices in the pattern	0.6	0.1	5.1	11.3	8.4	74.6	0.601
20	orders 3 sets of evenly spaced items ≤ 9	0.7	0.1	7.6	23.9	10.2	57.5	0.633

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 5/6 Math Level C								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	counts aloud one-dollar bills or pennies \leq \$19 or 19¢ starting at 2 or more without a bridge	0.7	0.0	3.3	13.4	5.9	76.5	0.478
2	selects largest/smallest value from graph of unordered numbers \leq 19	0.6	0.0	3.1	7.6	17.8	70.9	0.439
3	selects simple fraction	0.7	0.0	1.6	6.0	12.7	79.0	0.360
4	names value of coin	1.6	0.0	3.5	4.2	5.4	85.3	0.368
5	reads analog time at 15-minute intervals	0.7	0.0	22.8	22.8	9.0	44.6	0.533
6	adds 2 numbers shown with sums \leq 19 using a calculator or paper and pencil	0.7	0.0	5.5	11.8	8.5	73.6	0.519
7	sorts 9 items into 4 groups - 2 groups are identical except for 1 feature - no model	0.8	0.0	2.9	21.0	7.2	68.1	0.427
8	selects item most appropriate for filling a larger item	1.5	0.0	3.2	9.5	11.2	74.7	0.372
9	locates number described \leq 19 in 7-8 item display with teacher assistance in identifying the variables	0.7	0.0	10.9	26.2	12.3	49.8	0.459
10	selects equation that matches the word problem with numbers \leq 9 - subtraction	0.8	0.0	9.3	27.0	15.9	47.0	0.476
11	reads digital time at 1-minute intervals	1.5	0.0	1.5	2.0	1.7	93.2	0.330
12	selects most/least likely outcome given the characteristics of a population - similar proportions (difference is 2x)	1.1	0.0	7.7	19.6	20.1	51.5	0.483
13	counts aloud \leq \$15 using five-dollar bills	0.7	0.0	4.7	16.9	9.8	67.9	0.432
14	subtracts to identify part from whole by counting items \leq 19	1.6	0.0	1.5	3.7	7.5	85.7	0.357
15	selects quantity that is enough \leq 19 - the target and 2 sets are within +/- 5	0.8	0.0	9.7	28.4	15.5	45.6	0.473
16	measures length/width of item using a ruler with 1-inch markings	1.2	0.0	7.4	16.5	12.7	62.1	0.519
17	adds 2 prices named and shown with sums \leq \$19 using a calculator or paper and pencil	1.0	0.0	5.5	16.5	12.1	65.0	0.498
18	orders 4 sets of evenly-spaced items \leq 19 with all numbers within 10	0.9	0.0	5.9	23.4	13.3	56.5	0.598
19	selects number that extends a pattern \leq 19 - odd/even numbers	1.0	0.0	6.4	17.0	11.8	63.9	0.541
20	selects measuring cup filled to the 1-cup or 2-cup line - measuring cups with 5 marked quantities	1.2	0.1	3.6	11.8	12.6	70.7	0.521

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 7/8 Math Level A

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects clock by function - all items are similar in appearance	1.4	1.5	10.1	11.7	9.7	65.6	0.643
2	selects biggest/smallest shape	1.4	1.6	11.1	12.2	13.1	60.6	0.635
3	selects set with most/least - difference between target and closest choice is 6 units - sets are cut to size	1.5	1.9	17.1	20.8	20.0	38.7	0.561
4	matches objects with same volume	2.3	1.7	13.6	15.2	12.4	54.8	0.671
5	selects longest/shortest photograph of item - difference between target and closest choice is 6 inches	1.8	1.7	12.6	15.2	15.9	52.8	0.604
6	matches identical numbers from 1-2 - other choices are pictures	1.9	2.0	10.3	11.0	8.6	66.2	0.718
7	selects biggest/smallest object by volume	2.5	1.9	12.6	17.7	11.4	54.0	0.642
8	selects set with most/least - difference between target and closest choice is 6 units - sets are cut to size	2.3	1.6	15.3	20.7	16.6	43.6	0.560
9	matches photographs of items of same size	2.0	1.4	14.4	12.3	10.0	60.0	0.736
10	matches photographs of items of same length - difference between target and closest choice is 6 inches	1.9	1.6	14.9	13.4	9.6	58.6	0.733
11	matches 2 sets of items with 1-2 items each - difference between target and closest choice is 6 units - sets are cut to size	2.2	1.3	12.7	11.3	9.0	63.5	0.715
12	selects item that will completely fit into a container - 2 choices do not fit into the container	2.0	1.7	13.6	20.1	14.2	48.4	0.690
13	sorts 1 object into 1 of 3 existing groups - all groups are similar in appearance	2.2	1.7	10.5	8.1	7.5	70.1	0.727
14	matches identical digital times from 1:00-2:00 - other choices are pictures	2.4	1.8	10.0	11.0	5.8	69.0	0.747
15	selects biggest/smallest object by area	2.4	1.5	14.5	14.5	10.4	56.6	0.686
16	selects longest/shortest object - difference between target and closest choice is 6 inches	2.6	1.3	14.8	18.7	14.5	48.1	0.607
17	selects set with 1 - difference between target and closest choice is 6 units - sets are cut to size	2.3	1.9	11.8	13.6	11.0	59.3	0.708
18	matches pictures of items of same size	1.9	1.4	12.1	13.0	10.7	61.0	0.746
19	selects object that continues an ABCABC repeating pattern - both distracter choices are not objects in the pattern	2.1	2.0	18.0	20.6	13.5	43.8	0.606
20	selects full/empty item	2.1	1.9	12.2	14.0	12.0	57.9	0.680

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 7/8 Math Level B

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	subtracts 2 numbers ≤ 19 by counting items	0.6	0.1	10.4	28.6	9.6	50.7	0.593
2	reads analog time at 1-hour intervals	0.8	0.1	8.1	9.3	9.2	72.6	0.433
3	matches numeral to quantity ≤ 19 - all sets are within +/- 5	0.7	0.1	4.3	16.2	10.3	68.5	0.584
4	selects largest/smallest area by counting units ≤ 19 - orientation of items in array differs	0.8	0.0	5.4	11.8	19.0	63.1	0.446
5	orders 3 consecutive prices from \$10 to \$19	0.8	0.0	10.7	35.2	12.5	40.7	0.629
6	selects longest/shortest distance - all have different 10s place	0.8	0.0	5.4	12.7	10.3	70.8	0.569
7	selects largest/smallest value from graph of ordered numbers ≤ 19	0.8	0.0	4.9	13.9	18.5	61.8	0.513
8	measures length/width of item affixed to a ruler with 1-inch markings	1.0	0.1	6.0	9.4	4.6	78.9	0.592
9	sorts 8 items into 4 groups - all groups are similar in appearance - no model	2.3	0.0	1.9	15.9	9.3	70.7	0.523
10	selects activity that takes the most/least amount of time from a 7-8 item table of 4 times with hours	1.1	0.0	3.1	8.2	8.1	79.5	0.544
11	adds 2 prices with sums $\leq \$19$ by counting sets of one-dollar bills	0.9	0.1	15.0	34.2	12.1	37.7	0.572
12	counts aloud one-dollar bills or pennies $\leq \$19$ or 19¢ starting at 2 or more with bridge	2.3	0.1	7.8	17.2	7.5	65.1	0.565
13	selects largest/smallest value ≤ 19 in an unordered display	1.2	0.0	7.4	15.7	14.7	61.0	0.620
14	selects container with enough volume to hold measured amount	1.6	0.1	11.2	22.7	23.0	41.5	0.498
15	selects 1, 5, 10, or 25 cents based on value - all choices are coins	2.7	0.0	3.8	10.2	7.7	75.5	0.583
16	orders 3 sets of evenly spaced items ≤ 19	1.2	0.0	10.1	28.3	10.4	50.0	0.679
17	counts out one-dollar bills $\leq \$19$ from a larger set	2.5	0.0	12.5	17.5	13.5	53.9	0.606
18	locates number described ≤ 19 in 7-8 item display with teacher assistance in locating the appropriate row	1.3	0.0	10.0	17.9	9.5	61.5	0.619
19	selects number missing in an odd/even number pattern ≤ 19 - distracters include 2 adjacent numbers	1.4	0.0	12.0	28.4	12.1	46.1	0.468
20	selects item divided evenly and in the number of pieces specified - the target and 1 other item are divided into equal parts	1.7	0.1	6.0	16.7	16.1	59.5	0.484

Appendix J: Item Frequencies with Stopped Cases Excluded

Grades 7/8 Math Level C								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	adds 2 numbers in a word problem with sums ≤ 99 using a calculator or paper and pencil	0.9	0.0	2.7	7.8	7.9	80.7	0.387
2	multiplies numbers by counting with products ≤ 99	0.7	0.0	5.6	19.8	12.0	61.9	0.520
3	matches closest digital times at 30-minute intervals	0.9	0.0	4.6	9.0	16.9	68.6	0.353
4	selects item that can be purchased for the price named $\leq \$99$	1.0	0.0	7.7	18.0	14.3	59.1	0.435
5	selects most/least likely item given the characteristics of a population ≤ 99 - extreme proportions (difference is 5x)	0.8	0.0	4.1	11.8	15.7	67.6	0.437
6	locates number described ≤ 99 in 9-10 item, 3-variable display, with teacher assistance in identifying the variables	0.7	0.1	16.4	33.7	12.4	36.7	0.462
7	measures length/width of item to the 1/2-inch mark	0.7	0.0	19.2	24.8	12.6	42.6	0.547
8	subtracts 2 prices in a word problem with numbers $\leq \$99$ using a calculator or paper and pencil	0.8	0.0	8.1	16.1	13.3	61.7	0.557
9	measures whole number amount using 1/2 cup	1.9	0.0	42.5	29.6	6.3	19.7	0.524
10	determines the value of a missing number in an equation ≤ 99 - subtraction	0.7	0.0	11.8	18.2	10.9	58.3	0.445
11	sorts 9 items into 4 groups - 2 pairs of groups are identical except for 1 feature - no model	1.8	0.0	7.1	30.4	14.8	46.0	0.491
12	selects quantity that is enough ≤ 99 - the target and 3 sets are within +/- 5	1.0	0.0	6.6	17.9	13.6	61.0	0.494
13	divides items by counting ≤ 99	2.1	0.0	5.7	22.2	12.0	58.1	0.530
14	selects sum of 2 moveable figures - all choices ≤ 1	0.8	0.1	6.9	23.1	14.1	55.1	0.499
15	counts aloud $\leq \$99$ using a combination of one- and five- or one- and ten-dollar bills	1.0	0.0	5.0	19.0	8.8	66.3	0.558
16	counts coins aloud $\leq \$1$	2.5	0.0	6.1	18.0	8.8	64.6	0.511
17	determines the end time given a start time and duration	1.4	0.1	8.2	15.2	8.8	66.3	0.594
18	selects equation required to solve a subtraction word problem with numbers ≤ 99	1.1	0.0	7.1	21.7	16.6	53.5	0.483
19	selects number that extends a pattern ≤ 99 - additive pattern (2s or 5s)	0.9	0.0	2.7	7.5	5.8	83.0	0.491
20	selects mode in a table with 10 values ≤ 99 - mode is +/- 10 of all other numbers	1.2	0.0	16.9	39.7	16.5	25.8	0.340

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Math Level A								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects biggest/smallest shape	1.4	0.8	11.6	6.5	8.8	70.8	0.658
2	matches identical numbers from 1-5 - other choices are icons	1.4	0.6	11.9	7.6	5.7	72.8	0.736
3	selects longest/shortest photograph of item - difference between target and closest choice is 3 inches	1.4	1.0	14.3	14.7	10.9	57.6	0.639
4	matches photographs of items of same size	1.4	1.0	11.5	10.1	8.6	67.4	0.713
5	selects set with most/least - difference between target and closest choice is 3 units - sets are on same-sized cards	2.3	0.8	16.9	14.3	19.5	46.2	0.578
6	matches pictures of items of same length - difference between target and closest choice is 3 inches	2.3	1.0	10.8	8.1	6.2	71.7	0.711
7	selects biggest/smallest object by volume	3.7	1.0	10.6	10.3	6.4	68.0	0.679
8	matches 2 sets of items with 1-5 items each - difference between target and closest choice is 3 units - sets are on same-sized cards	2.4	0.6	12.7	9.8	6.5	68.0	0.732
9	matches objects with same volume	3.0	0.8	9.6	7.9	6.5	72.1	0.754
10	selects item that will completely fit into a container - one choice does not fit, one choice fits partially	3.7	1.3	13.3	13.3	6.9	61.5	0.745
11	selects longest/shortest object - difference between target and closest choice is 3 inches	3.0	0.6	14.3	11.0	10.1	61.0	0.663
12	matches digital time 1:00-5:00 - other choices are single-digit whole numbers	2.4	1.1	9.8	5.8	4.4	76.5	0.744
13	selects biggest/smallest object by area	3.7	0.7	12.3	10.1	6.9	66.3	0.693
14	sorts 3 objects into each of 3 existing groups - all groups differ in appearance	4.4	0.8	7.5	21.5	6.8	58.9	0.723
15	matches photographs of items of same length - difference between target and closest choice is 3 inches	2.5	0.7	14.7	9.2	8.2	64.6	0.734
16	matches pictures of items of same size	2.5	1.0	14.6	10.2	10.3	61.3	0.728
17	selects whole/part item	3.0	0.7	13.6	10.8	10.5	61.5	0.651
18	matches 2 sets of items with 1-5 items each - difference between target and closest choice is 3 units - sets are on same-sized cards	2.8	1.6	13.6	9.1	7.8	65.2	0.701
19	selects object that continues an ABCABC repeating pattern - all choices are objects in the pattern	3.0	0.7	22.4	21.5	13.6	38.8	0.586
20	selects half-filled item	4.1	0.8	15.4	15.6	15.2	48.9	0.644

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Math Level B								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	adds 2 numbers named and shown with sums ≤ 99 using a calculator or paper and pencil	0.8	0.1	5.8	9.8	9.9	73.5	0.507
2	counts aloud ≤ 99 items starting at 10 or more without bridge	1.4	0.1	7.8	16.8	8.2	65.7	0.580
3	selects largest/smallest value from graph of unordered numbers ≤ 99	0.7	0.0	4.7	9.7	14.6	70.4	0.529
4	subtracts 2 prices named and shown with numbers $\leq \$99$ using a calculator or paper and pencil	0.8	0.0	12.7	16.2	12.7	57.6	0.650
5	reads analog time at 15-minute intervals	0.8	0.1	21.7	18.9	8.7	49.8	0.467
6	names the value of a coin	3.3	0.0	2.7	2.8	5.4	85.9	0.355
7	counts out one-dollar bills $\leq \$99$ from a larger set	0.5	0.0	7.6	16.0	10.7	65.3	0.473
8	selects quantity that is enough ≤ 19 - the target and 2 sets are within ± 5	0.5	0.0	10.8	19.0	16.9	52.8	0.474
9	selects activity that takes the most/least amount of time	0.5	0.0	13.9	19.8	16.6	49.3	0.415
10	measures composite item area by counting units ≤ 99	0.6	0.0	5.0	7.6	9.4	77.4	0.447
11	sorts 9 items into 4 groups - 2 groups are identical except for 1 feature - no model	1.6	0.0	4.1	24.6	12.0	57.7	0.456
12	multiplies numbers by 2s or 5s with products ≤ 99	0.7	0.0	12.5	20.4	12.8	53.6	0.592
13	selects largest/smallest value ≤ 99 in an unordered display	0.7	0.0	5.6	10.7	10.1	72.8	0.552
14	locates number described ≤ 99 in a 9-10 item display without teacher assistance in locating the appropriate row	0.6	0.1	10.0	13.1	8.0	68.2	0.648
15	orders 3 nonconsecutive numbers ≤ 99	0.9	0.0	5.7	14.3	5.7	73.3	0.662
16	measures length/width of item using a ruler with 1-inch markings	1.9	0.0	9.2	15.0	10.3	63.6	0.551
17	counts aloud ≤ 95 items by 5s in ordered array	0.8	0.0	5.6	12.0	8.9	72.7	0.578
18	selects measuring cup filled with amount named	1.0	0.0	24.7	22.6	15.9	35.8	0.249
19	selects number missing in an odd/even number pattern ≤ 99 - distracters include 2 adjacent numbers	1.2	0.1	15.3	22.3	10.5	50.7	0.443
20	selects item divided evenly and in the number of pieces specified - the target and 2 other items are divided into equal parts	1.3	0.0	6.9	10.7	12.9	68.2	0.494

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Math Level C								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	adds 2 numbers in word problem with sums ≤ 500 using a calculator or paper and pencil	0.8	0.2	2.5	4.8	8.3	83.5	0.370
2	matches fraction shown to picture - all choices are ≤ 1	0.4	0.2	2.5	4.8	4.2	87.9	0.340
3	determines duration given 2 times - times are on the 1/2 hour	0.6	0.2	17.3	16.7	13.1	52.2	0.543
4	divides 2 numbers shown ≤ 500 using a calculator or paper and pencil	1.2	0.0	22.8	31.1	10.4	34.5	0.616
5	counts aloud a combination of coins $\leq \$5$	2.1	0.0	11.7	17.9	9.8	58.5	0.499
6	selects equation required to solve a subtraction word problem with numbers ≤ 500	1.0	0.0	11.1	21.9	10.7	55.3	0.539
7	multiplies numbers in a word problem with products ≤ 500 using a calculator or paper and pencil	1.7	0.0	17.9	24.6	15.2	40.7	0.640
8	selects item divided evenly and in the number of pieces specified - all items are divided into equal parts	1.0	0.0	2.9	2.5	4.6	89.1	0.273
9	measures length/width of item to the 1/4-inch mark	1.9	0.0	35.1	31.3	7.7	24.0	0.535
10	determines the value of a missing number in an equation ≤ 500 - addition	1.2	0.2	15.0	18.8	8.4	56.4	0.645
11	sorts 9 items into 4 groups - all groups are identical except for 2 features - no model	2.3	0.0	5.6	21.3	10.7	60.1	0.361
12	locates number described in 11-12 item, 3-variable display, with no teacher assistance in identifying the variables	1.3	0.0	10.4	19.2	19.0	50.1	0.586
13	selects most/least likely outcome given the characteristics of a population of different items ≤ 500 - close proportions (within +/- 50 of target)	1.2	0.0	11.5	15.4	11.3	60.7	0.561
14	matches closest digital and analog times at 15-minute intervals	1.2	0.0	3.1	2.9	5.8	87.1	0.358
15	measures using a measuring cup with 5 marked quantities	2.3	0.0	14.8	20.7	15.4	46.8	0.503
16	subtracts 2 prices in a word problem with numbers $\leq \$500$ using a calculator or paper and pencil	1.3	0.0	16.3	16.3	10.9	55.1	0.642
17	selects item that can be purchased for the price named $\leq \$500$	1.5	0.0	3.6	3.5	3.6	87.7	0.377
18	selects average value from graph with values ≤ 500 - all numbers are within +/- 25 of target	2.1	0.0	16.5	21.3	16.3	43.8	0.537
19	selects number that extends a pattern ≤ 500 - subtractive pattern (2s or 5s)	1.9	0.2	11.5	13.6	6.9	65.8	0.621
20	selects sum of 2 fixed figures - all choices ≤ 1	1.9	0.0	13.8	20.7	15.4	48.2	0.557

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 4 Science Level A								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects food eaten by animals/people - 2 choices are non-foods	0.3	1.1	7.0	6.0	5.4	80.2	0.684
2	selects object named that is part of a simple man-made system	0.0	1.2	7.8	9.6	8.4	72.9	0.746
3	matches 2 objects based on physical property named - choices differ on up to 2 attributes - target shares one attribute with the other choices	0.3	1.1	10.3	9.8	8.6	69.8	0.677
4	selects weather symbol named on a map	1.6	1.1	12.6	8.3	8.8	67.5	0.777
5	selects tool used to complete a task - 2 choices are conceptually unrelated common objects	2.2	0.6	6.6	9.2	8.2	73.2	0.768
6	selects object that is on/under/in another object	2.1	0.7	16.8	18.3	12.3	49.8	0.726
7	selects plant/animal with structure named - 2 choices are non-living things	2.5	0.4	6.6	11.0	11.5	68.1	0.752
8	selects object that can be recycled after listening to a sentence - 2 choices are non-recyclable	2.7	0.9	11.7	14.4	14.9	55.5	0.750
9	selects picture used to complete a pictograph	2.5	0.8	10.3	11.6	8.8	66.1	0.803
10	selects object that is a solid/liquid after listening to a sentence	2.8	0.4	7.1	10.8	8.9	69.9	0.736
11	selects picture of living/non-living thing	2.6	0.9	14.3	19.5	15.3	47.3	0.715
12	matches weather symbols - 2 choices are conceptually unrelated pictures	3.0	0.5	7.2	7.9	6.0	75.3	0.795
13	selects tool used to complete a task - 2 choices are conceptually unrelated common objects	2.9	0.6	11.1	11.7	9.6	64.1	0.800
14	selects clothing/accessory worn when it is hot/cold	3.0	0.6	14.3	19.8	14.9	47.4	0.714
15	matches 2 objects based on physical property named - choices differ on up to 2 attributes - target shares one attribute with the other choices	3.4	0.4	10.1	12.8	8.2	65.2	0.783
16	selects food eaten by animals/people - 2 choices are non-foods	3.2	0.4	5.6	7.8	7.8	75.0	0.812
17	matches quantity displayed on a pictograph - difference between target and closest choice is 12 units - sets are cut to size	3.2	0.8	14.8	15.6	11.2	54.4	0.752
18	selects picture of weather condition named	3.2	0.5	8.6	8.4	6.6	72.7	0.827
19	selects picture of living/non-living thing	2.9	0.6	12.4	20.6	16.3	47.2	0.685
20	selects object that represents food - 2 choices are non-food items	3.0	0.3	6.0	8.1	7.1	75.4	0.769
21	selects object that is safe/unsafe to eat	6.6	0.7	18.3	25.2	10.9	38.3	0.528

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 4 Science Level B								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture of activity commonly associated with the season named - all choices are season-specific activities	0.5	0.0	1.2	4.0	7.9	86.5	0.429
2	selects picture of a part of a simple man-made system	0.4	0.0	2.0	5.9	8.5	83.3	0.459
3	selects photograph of ingredient in a food item presented in a photograph - ingredient maintains its appearance	0.5	0.0	1.1	2.6	4.8	91.0	0.450
4	selects picture of unprocessed food that comes from a source named	0.6	0.0	1.1	4.4	7.2	86.8	0.455
5	selects 2 objects that are recycled together based on similar composition - all choices are recyclable objects	1.2	0.0	17.7	43.3	13.2	24.6	0.485
6	creates 1 group based on 1 attribute named - initial set of 6 items differ on up to 2 attributes	1.8	0.0	3.9	22.4	14.6	57.4	0.584
7	selects 2 examples of litter in a complex picture	0.7	0.0	0.8	8.4	14.7	75.4	0.601
8	selects picture of an object that is in a state of matter named	0.5	0.0	19.4	36.9	12.5	30.7	0.471
9	selects fastest/slowest moving object/person from an 8-item, 1-variable display - speed shown	0.6	0.0	5.2	14.8	11.3	68.1	0.548
10	selects item that is above/behind/in front of/next to an object in a complex picture	0.6	0.0	9.3	15.9	12.4	61.8	0.520
11	sorts 4 pictures to 4 existing groups to complete a pictograph	0.8	0.0	1.8	16.1	15.7	65.6	0.540
12	selects picture of person wearing clothing/accessory when it is warm/cool	0.8	0.0	6.8	17.4	14.1	60.8	0.654
13	selects picture of item that does not use electricity	0.8	0.0	7.8	17.8	10.8	62.8	0.718
14	selects picture of youngest/oldest plant, animal, or person	0.8	0.0	10.4	24.6	10.5	53.7	0.610
15	selects picture of most/least efficient tool to complete a task - all choices are used to perform the same basic function	0.8	0.0	12.1	30.4	14.4	42.3	0.581
16	selects 1 living/non-living thing from a complex picture	0.8	0.0	1.8	5.7	12.1	79.6	0.638
17	selects picture of person exerting most/least force - required force is related to mass, surface, or slope	0.8	0.0	10.8	16.6	15.8	55.9	0.609
18	names value ≤ 5 shown using the y-axis of a pictograph	0.9	0.0	2.2	9.4	13.9	73.5	0.638
19	selects picture of animal that requires a particular food for survival	0.8	0.0	5.1	10.6	10.5	73.0	0.617
20	names weather condition described	2.2	0.0	9.7	15.3	9.5	63.3	0.598
21	sorts 5 pictures of items that are safe/unsafe to eat	3.9	0.0	2.8	19.7	8.4	65.3	0.432

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 4 Science Level C								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture of an animal that typically lives in an environment named	1.2	0.0	1.2	2.0	1.2	94.4	0.343
2	selects the fastest/slowest moving object or person from a 10-item, 1-variable display - distance shown	0.4	0.0	2.8	4.4	3.2	89.2	0.517
3	selects unprocessed food in a photograph that comes from a source named	0.4	0.0	2.4	4.8	6.0	86.3	0.496
4	names 2 parts required to make a simple man-made system function	1.2	0.0	4.4	40.6	18.1	35.7	0.507
5	names 2 possible sources of pollution	4.0	0.0	31.7	48.6	4.4	11.2	0.466
6	selects picture of mass, surface, or slope on which it will be hardest/easiest to move objects	0.8	0.0	8.0	15.3	15.7	60.2	0.488
7	names the elements associated with a weather condition by supplying a missing word in a sentence	2.4	0.0	24.9	25.3	10.4	36.9	0.478
8	describes 1 difference between the use of 2 tools	2.4	0.0	30.5	29.3	8.0	29.7	0.507
9	sequences 4 stages in the life cycle of a plant, animal, or person - stages are similar in appearance	0.8	0.0	4.8	24.5	11.6	58.2	0.534
10	selects photograph of final product that is made after combining 3 ingredients - ingredients maintain appearance	0.8	0.0	5.2	24.1	14.1	55.8	0.443
11	creates 2 sets of photographs of objects that are recycled together based on similar composition from an initial set of 7 photographs	0.4	0.0	22.9	58.6	3.6	14.5	0.389
12	selects item based on two positions named in a complex picture - below/above/behind/in front of/next to	0.8	0.0	3.2	4.4	13.3	78.3	0.409
13	sorts 6 pictures into groups to complete a pictograph using information from x-axis	1.2	0.0	0.8	6.8	3.6	87.6	0.468
14	sorts 8 objects into 2 groups based on 1 attribute named - items differ on up to 2 attributes	2.0	0.0	6.8	44.2	16.1	30.9	0.483
15	selects 2 living/non-living things from a complex picture - picture includes common misconceptions	0.4	0.0	4.0	35.7	15.3	44.6	0.586
16	selects picture of location that is safest/most dangerous under weather condition named	0.8	0.0	4.4	7.2	8.4	79.1	0.516
17	names 2 examples of objects in a state of matter named	4.4	0.0	8.0	29.3	13.3	45.0	0.467
18	describes 2 ways to conserve resources based on a particular scenario described and shown in a complex picture	0.8	0.0	4.8	18.9	17.3	58.2	0.568
19	selects the category on the x-axis based on data from the y-axis of a pictograph	1.2	0.0	2.4	7.6	8.8	79.9	0.517
20	names 1 activity commonly associated with a season named	2.8	0.0	8.8	11.2	12.4	64.7	0.393
21	names 2 items safe/unsafe to put in one's mouth	15.7	0.0	11.2	44.2	10.8	18.1	0.178

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 8 Science Level A								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture of a member of a kingdom named	0.4	1.1	10.5	8.5	7.6	71.9	0.716
2	selects object used to make a simple man-made system function	0.7	0.7	14.4	9.9	9.9	64.4	0.707
3	selects picture of object that is frozen or has melted	0.4	1.3	11.7	13.9	14.3	58.4	0.687
4	selects category of picture of recyclable object based on similar composition - all choices are recyclable	2.0	1.1	15.7	21.6	13.0	46.5	0.650
5	selects weather symbol named	2.7	1.0	9.6	10.7	10.2	65.8	0.757
6	selects picture of structure based on function - all choices are from the same animal/plant	2.3	0.8	22.3	15.7	13.3	45.5	0.790
7	matches quantity displayed on a pictograph - difference between target and closest choice is 6 units - sets are cut to size	2.1	1.1	18.1	13.2	12.7	52.8	0.768
8	selects picture of living organism that lives on land or in water	2.4	1.3	12.2	12.0	7.4	64.8	0.798
9	matches 2 objects based on physical property named - choices differ on up to 3 attributes - target shares up to 2 attributes with the other choices	3.5	0.8	12.4	12.6	12.9	57.7	0.718
10	selects picture of source of food	2.1	0.8	16.1	12.2	12.3	56.4	0.815
11	selects picture of tool based on advantage - all choices are used to perform the same basic function	2.1	1.0	10.6	16.5	15.0	54.7	0.722
12	selects picture of clothing/accessory worn when it is warm/cool	2.3	1.0	16.1	23.6	18.2	38.8	0.684
13	selects object used to make a simple man-made system function	3.7	1.0	12.0	12.7	7.4	63.2	0.772
14	selects picture of structure based on function - all choices are from the same animal/plant	2.4	1.4	22.2	13.0	8.8	52.2	0.819
15	selects item that is in front of/next to/in/on/under an object in a complex picture	2.5	0.8	25.6	11.7	14.0	45.3	0.809
16	selects weather symbol named on a weather map	2.4	1.1	20.4	13.9	23.9	38.3	0.742
17	selects picture used to complete a pictograph - all choices are related	2.7	1.1	15.4	6.9	10.2	63.6	0.796
18	selects picture of environment in which an organism lives	2.8	1.3	13.7	19.4	12.4	50.4	0.763
19	selects object that can be recycled after listening to a sentence - 2 choices are recyclable	3.7	1.1	13.6	15.0	11.0	55.6	0.761
20	selects picture of object that is frozen or has melted	2.2	1.3	15.1	15.4	12.7	53.3	0.752
21	selects picture of food that requires refrigeration	5.5	1.2	10.2	14.7	13.1	55.3	0.600

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 8 Science Level B								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	completes a graphic organizer of two kingdoms	0.2	0.0	0.5	6.1	4.1	89.1	0.513
2	use map to determine location of area based on direction traveled	0.1	0.0	3.0	7.1	10.3	79.5	0.566
3	selects picture of a part from a simple man-made system based on function named	0.2	0.0	4.3	12.8	13.5	69.3	0.552
4	selects picture of location that is safest/most dangerous under weather condition named	0.1	0.0	3.7	7.8	9.0	79.4	0.582
5	selects picture of next stage of life cycle - stages are substantially different in appearance	0.1	0.0	4.7	16.9	15.6	62.7	0.552
6	selects 2 items that can be recycled from a photograph	0.2	0.0	0.7	20.1	16.1	62.9	0.605
7	describes 1 advantage/disadvantage a new technology has over other tools that perform the same basic function	4.2	0.0	21.7	18.5	8.9	46.7	0.569
8	describes 1 effect of pollution on the environment	0.2	0.0	20.6	22.8	8.8	47.6	0.637
9	selects item from a complex photograph based on the possibility of change in state of matter described	0.3	0.0	12.0	17.7	11.0	59.0	0.615
10	selects picture of person using the most/least amount of a resource	0.2	0.0	5.1	12.4	11.0	71.4	0.527
11	selects data set to complete a pictograph	0.2	0.0	6.1	20.0	15.3	58.4	0.562
12	selects photograph of ingredient in a food item presented in a photograph - ingredient does not maintain its appearance	0.8	0.0	3.8	14.2	18.2	63.0	0.518
13	names 2 structures used to accomplish a task	0.3	0.0	5.8	26.5	14.1	53.3	0.649
14	selects weather symbol by making prediction based on current weather and trend	0.3	0.0	2.8	13.0	9.7	74.2	0.589
15	describes 1 reason for a problem in a scenario involving weight and force - scenario contains successful attempt and failed attempt	2.4	0.0	10.6	14.2	8.8	64.0	0.531
16	matches 4 pictures of processed food/product with each of their sources	0.3	0.0	0.4	7.0	3.0	89.3	0.600
17	selects picture of a natural habitat for an animal named	0.4	0.0	1.5	7.2	5.8	85.0	0.524
18	selects moving object/person that will arrive first/last from a 10-item, 1-variable display - speed shown	0.5	0.0	8.5	19.6	13.9	57.5	0.621
19	selects the category on the x-axis based on data from the y-axis of a pictograph	0.7	0.0	5.4	13.0	13.5	67.5	0.514
20	selects picture of a person wearing clothing/accessory for a temperature named and shown	0.6	0.1	6.5	17.7	13.8	61.2	0.439
21	describes 1 consequence of unsafe food handling practices	13.7	0.1	12.3	16.0	7.1	50.8	0.362

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 8 Science Level C

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	describes 1 effect of pollution on wildlife	1.1	0.0	5.1	7.7	8.6	77.5	0.524
2	names 1 clothing/accessory that should be worn in temperature named and shown	1.1	0.0	4.0	6.8	8.0	80.1	0.440
3	uses map to determine multiple locations of areas based on direction traveled	0.5	0.0	2.2	11.5	12.2	73.5	0.537
4	describes function of a part from a simple man-made system	1.5	0.0	6.8	11.7	9.1	70.9	0.482
5	describes 1 characteristic of a season that permits an activity named	2.4	0.0	6.6	20.8	15.4	54.8	0.542
6	sorts 9 photographs into 4 disposal categories - choices include recyclable and non-recyclable objects	0.2	0.0	0.9	36.9	12.8	49.2	0.444
7	describes 1 reason an item remains in the same state of matter	1.5	0.0	4.8	12.2	9.9	71.7	0.450
8	names 1 advantage/disadvantage of a new technology	1.1	0.0	14.3	20.1	15.9	48.6	0.546
9	names 2 precautions to take under weather condition named	2.0	0.0	3.5	44.6	17.7	32.2	0.500
10	selects moving object or person that traveled the longest/shortest distance from a 15-item, 2-variable display - speed and duration shown	0.4	0.0	3.8	4.9	12.8	78.1	0.502
11	describes 1 effect that habitat destruction has on the acquisition of basic needs	0.4	0.0	7.7	15.4	10.1	66.5	0.577
12	names primary ingredient in processed food	3.3	0.0	14.1	17.6	11.7	53.4	0.472
13	selects data sets to complete graph based on data table	0.7	0.0	1.8	21.0	7.7	68.7	.0575
14	completes a graphic organizer of 5 classes - 2 hierarchical levels with name of class provided	0.5	0.0	1.5	38.9	13.2	45.9	0.396
15	describes 1 way to conserve - example described	2.4	0.0	24.9	30.3	8.0	34.4	0.474
16	describes 1 reason for the difference in the force exerted to move an object - force is related to mass, surface, or slope	1.5	0.0	8.6	16.5	10.8	62.7	0.631
17	calculates the difference in 2 values on a pictograph	1.1	0.0	16.1	38.9	10.6	33.3	0.534
18	selects area on a weather map based on information within the map legend	1.1	0.0	5.9	13.2	21.8	58.1	0.551
19	sequences 4 stages in the life cycle - stages are substantially different in appearance	1.3	0.0	4.0	22.5	8.8	63.4	0.518
20	names item that can be prepared with the ingredients in the photographs	1.5	0.0	4.6	9.7	15.0	69.3	0.587
21	describes 1 unsafe food handling/preparation practice in a scenario described	14.4	0.0	8.7	11.2	8.8	56.9	0.365

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Science Level A								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	selects picture of person dressed for various temperatures	0.4	1.6	16.0	19.7	23.0	39.2	0.565
2	selects picture of item that will/will not melt	0.8	2.0	20.0	17.6	12.5	47.2	0.645
3	identifies how to solve the problem described	0.8	1.9	27.4	17.5	11.7	40.8	0.682
4	selects picture of a structure used for a similar function in another animal or person	2.0	1.3	19.0	11.6	11.7	54.5	0.769
5	selects location that is closest/farthest away based on position shown on a map	2.9	1.1	22.6	16.9	17.0	39.5	0.751
6	selects the outcome associated with a weather event	3.5	0.8	16.4	15.7	20.9	42.8	0.645
7	selects source of energy that pollutes the environment	3.5	0.8	19.5	15.7	15.3	45.2	0.723
8	selects technology needed based on scenario described	3.8	0.9	16.0	10.4	8.7	60.3	0.816
9	selects picture of an animal that lives in a place named	3.5	0.8	15.0	11.4	9.6	59.7	0.809
10	selects article of clothing based on activity named - activity associated with temperature	4.0	0.8	10.7	10.4	7.9	66.2	0.806
11	selects value described on a y-axis of a bar graph	4.0	0.9	21.0	17.0	10.7	46.4	0.796
12	selects the equipment used to get a natural resource	3.8	0.9	14.5	11.4	18.4	51.1	0.759
13	selects picture of a part of a man-made system that will solve a problem described	4.0	0.6	13.6	7.9	8.8	65.0	0.824
14	selects activity associated with temperature predicted	4.3	1.0	17.0	17.1	10.2	50.4	0.787
15	selects most recent innovation in technology - all choices perform the same basic function	4.8	1.0	19.9	16.4	24.3	33.7	0.672
16	selects picture of an animal that lives in a place named	4.4	1.3	12.1	8.6	6.9	66.8	0.855
17	matches line graphs	4.7	1.0	13.8	11.8	11.4	57.2	0.797
18	selects picture of source of product named	4.8	0.9	18.5	20.4	12.5	43.0	0.696
19	selects animal from the same family	4.8	1.0	13.1	12.5	12.6	56.1	0.752
20	selects picture of item that will/will not melt	4.8	1.0	11.8	12.0	12.7	57.6	0.749

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Science Level B

Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	matches weather based on forecast	0.3	0.0	10.8	16.8	11.5	60.6	0.523
2	describes consequence of technology advancement	0.4	0.0	15.7	19.0	12.3	52.6	0.504
3	selects fastest/slowest moving object or person from a 15-item, 2-variable display - duration and distance shown	0.1	0.0	8.3	10.8	8.4	72.4	0.522
4	compares differences in structures of two species	0.1	0.0	7.6	52.0	16.0	24.3	0.491
5	selects the independent variable based on the dependent variable	0.3	0.0	1.8	4.8	5.3	87.9	0.380
6	describes 2 advantages/disadvantages of one environment over another for survival of a specific species	0.1	0.0	3.7	44.6	15.0	36.5	0.546
7	identifies changes in physical properties of matter as a function of change in temperature	0.3	0.0	11.6	44.5	12.0	31.6	0.476
8	names renewable resource used to produce electricity	2.5	0.0	43.7	26.2	7.0	20.6	0.489
9	describes 1 solution to a problem presented in a picture	0.1	0.0	48.0	20.4	6.3	25.2	0.568
10	describes how a plant or an animal is well adapted to live in environment named	0.1	0.0	55.0	16.0	3.9	25.0	0.570
11	selects picture of what is used to convert natural resources to energy	0.1	0.0	7.4	10.3	9.8	72.4	0.550
12	describes 1 solution to a problem in a scenario involving weight and force - scenario contains 1 failed attempt	2.3	0.0	14.2	11.4	8.8	63.4	0.546
13	selects 2 values described on a line graph	0.3	0.0	6.5	47.4	16.1	29.8	0.580
14	describes 1 effect of conservation effort on the environment	1.2	0.0	41.0	19.5	6.3	32.0	0.623
15	describes elements of an extreme weather condition	1.4	0.0	18.7	29.2	14.8	35.9	0.513
16	describes 1 solution to a problem described	1.8	0.0	18.8	16.5	16.5	46.3	0.599
17	selects 1 consequence of a new technology	0.5	0.0	19.2	30.3	18.8	31.1	0.390
18	names clothing associated with month named	3.9	0.0	6.1	13.0	13.0	64.0	0.458
19	selects the graph that shows the effect of humans on an animal's habitat	0.5	0.0	19.4	30.1	13.3	36.8	0.462
20	names and describes the function of a part of a plant/animal that makes it adapted to its environment	0.5	0.0	10.9	32.1	23.4	33.1	0.606

Appendix J: Item Frequencies with Stopped Cases Excluded

Grade 11 Science Level C								
Item	Skill Assessed	0	1	2	3	4	5	Correlation
1	uses forecast to compare weather conditions	0.4	0.0	36.9	21.9	12.4	28.3	0.279
2	compares changes in technology based on scenario given	0.4	0.0	19.4	19.8	11.2	49.2	0.506
3	describes 1 similarity in the function of different structures between 2 species	0.0	0.0	20.0	18.1	14.3	47.5	0.498
4	describes the change in state of matter in a scenario described involving changes in temperature	1.9	0.0	27.4	15.6	5.5	49.6	0.614
5	describes basic need for plant/animal to survive	0.2	0.0	2.7	27.6	8.2	61.2	0.442
6	names 2 pieces of clothing that should be worn under one condition and not another	3.4	0.0	4.2	25.5	17.5	49.4	0.404
7	calculates missing value of the distance traveled based on a 20-item, 3-variable display - speed, duration, and distance shown	0.2	0.0	14.8	22.8	10.3	51.9	0.520
8	recognizes a problem with a system and describes how to correct the problem	0.2	0.0	11.0	9.3	9.5	70.0	0.506
9	describes how natural resources may be conserved	4.4	0.0	30.2	32.3	9.7	23.4	0.446
10	orders 5 pictures based on the manufacturing process	0.4	0.0	9.7	36.3	9.7	43.9	0.515
11	identifies trend on a line graph	0.2	0.0	9.1	18.1	13.9	58.6	0.556
12	describes 1 solution to a problem in a scenario involving weight and force - scenario contains 2 failed attempts	0.8	0.0	7.8	9.5	8.9	73.0	0.496
13	completes a graphic organizer of kingdom, class, and species	0.0	0.0	5.5	30.2	9.3	55.1	0.431
14	describes 1 environmental reason for using one of the 2 pictured options	0.2	0.0	22.8	14.3	6.5	56.1	0.628
15	identifies phase of a state of matter	0.2	0.0	12.9	17.5	23.6	45.8	0.425
16	describes 1 precaution to take during a weather condition pictured	0.2	0.0	6.5	7.8	9.9	75.5	0.452
17	names 2 adaptations of a plant/animal	4.4	0.0	13.5	61.4	6.1	14.6	0.473
18	sorts pictures of animals in 4 habitats	0.0	0.0	2.5	30.2	9.7	57.6	0.358
19	describes 2 effects of human activity on the environment	1.5	0.0	20.5	48.1	9.3	20.7	0.518
20	selects missing value based on interpolation/extrapolation on a line graph	0.4	0.4	11.2	17.5	11.8	58.6	0.361