PENNSYLVANIA
KEYSTONE EXAMS

State Summary Report

Test Date: Spring 2011
Number of Students Tested: 46,998

Content Area:
Biology

This report provides valuable information about performance on the Pennsylvania Keystone Exams. It displays information about how Commonwealth students performed by content area.

The Commonwealth's goal is to enable all students to become lifelong learners and reach their full potential.

About the Keystone Exams

The Keystone Exams are end-of-course assessments designed to assess performance in the content areas of Algebra I, Biology, and Literature. Future content areas to be assessed include Algebra II, Chemistry, English Composition, Geometry, U.S. History, World History, and Civics and Government. The exams are offered in both paper/pencil and online formats.

The Keystone Exams were developed by Pennsylvania educators and are aligned to the Keystone Exams Assessment Anchors and Eligible Content.

The Keystone Exams are one component of Pennsylvania's new system of high school graduation requirements. To receive a diploma, a student must also meet local school district credit and attendance requirements, complete a culminating project, and pass any additional district requirements.

For detailed information about how the Keystone Exams are being integrated into the Pennsylvania graduation requirements, please contact the Pennsylvania Department of Education or visit www.pdesas.org.

KEYSTONE EXAMS ITEMS

Common items within a content area are administered to all eligible students regardless of the exam form they are assigned. Only the common items are used in determining students' scores and their corresponding performance levels. This practice ensures all students are evaluated using the same sets of items.

Field Test items vary between forms. These items are included only as a means for gathering statistical information about an item that might be used in a future assessment. Field Test items are not included in the results of students, schools, or the district.

KEYSTONE EXAMS SCORES

The Keystone Exam score is a scale score computed from the number of points a student receives on the exam (i.e., raw score). For every possible raw score on an exam form, there is a corresponding scale score. Most state testing programs use scale scores for reporting purposes. A given scale score has the same interpretation regardless of the length or difficulty of the exam. For example, a scale score of 1300 always implies the same level of student performance and always falls in the same performance level. The student's Keystone Exam score is used to place the student in the appropriate performance level. The items on the Keystone Exams change with each administration, but they continue to measure the same Assessment Anchors and Eligible Content.

Please note that percentages in the following tables may not add up to 100% due to rounding.

KEYSTONE EXAMS PERFORMANCE LEVELS

Advanced: Superior academic performance indicating an in-depth understanding and exemplary display of the skills included in the Keystone Exams Assessment Anchors and Eligible Content.

Proficient: Satisfactory academic performance indicating a solid understanding and adequate display of the skills included in the Keystone Exams Assessment Anchors and Eligible Content.

Basic: Marginal academic performance indicating work approaching, but not yet reaching, satisfactory performance. Performance indicates a partial understanding and limited display of the skills included in the Keystone Exams Assessment Anchors and Eligible Content. The student may need additional instructional opportunities and/or increased student academic commitment to achieve the Proficient level.

Below Basic: Inadequate academic performance indicating little understanding and minimal display of the skills included in the Keystone Exams Assessment Anchors and Eligible Content. There is a major need for additional instructional opportunities and/or increased student academic commitment to achieve the Proficient level.

KEYSTONE EXAMS ASSESSMENT ANCHORS AND ELIGIBLE CONTENT

The Keystone Exams Assessment Anchors and Eligible Content are designed to clarify the Academic Standards that may be assessed in the Keystone Exams. An Assessment Anchor is reported only if five or more possible points come from items aligned with the Assessment Anchor. Results based on fewer than five items are not considered statistically reliable.

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Performance Level Summary

Biology	Total Tested	Below Basic		Basic		Proficient		Advanced	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
State: All Testers	46,998	14,905	31.7%	15,343	32.6%	12,434	26.5%	4316	9.2%

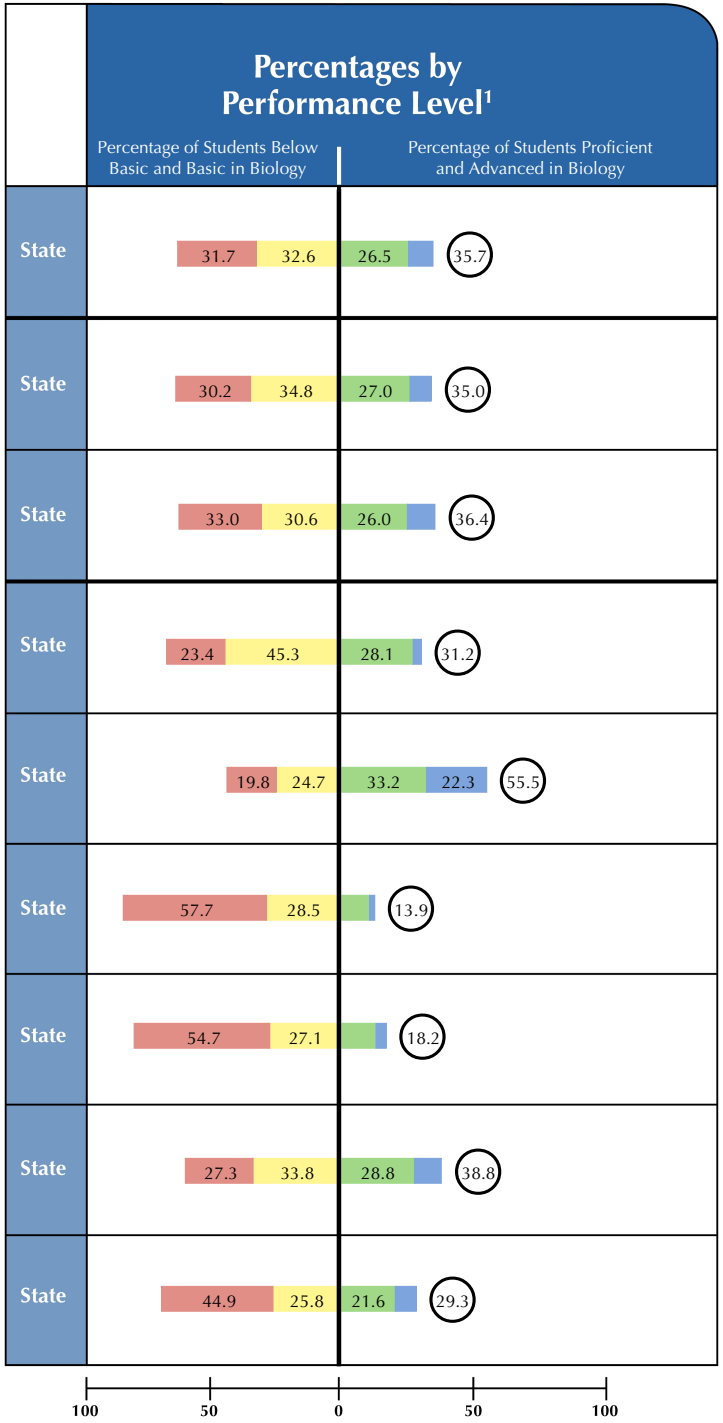
Percentages by Performance Level[1]

[1] If a percentage is not displayed within the graph, consult the table for the actual percentage.

Performance Level Summary by Group: All Testers

	Biology		State			
			Below Basic	Basic	Proficient	Advanced
	All Testers	#	14,905	15,343	12,434	4316
		%	31.7%	32.6%	26.5%	9.2%
GENDER	Female	#	7029	8092	6268	1861
		%	30.2%	34.8%	27.0%	8.0%
GENDER	Male	#	7778	7210	6127	2447
		%	33.0%	30.6%	26.0%	10.4%
RACE/ETHNICITY	American Indian or Alaskan Native	#	15	29	18	2
		%	23.4%	45.3%	28.1%	3.1%
RACE/ETHNICITY	Asian or Pacific Islander	#	232	290	390	261
		%	19.8%	24.7%	33.2%	22.3%
RACE/ETHNICITY	Black/African American non-Hispanic	#	2566	1268	533	83
		%	57.7%	28.5%	12.0%	1.9%
RACE/ETHNICITY	Latino/Hispanic	#	1339	663	349	95
		%	54.7%	27.1%	14.3%	3.9%
RACE/ETHNICITY	White non-Hispanic	#	10,438	12,915	11,007	3833
		%	27.3%	33.8%	28.8%	10.0%
RACE/ETHNICITY	Multi-Racial/Ethnic (two or more races)	#	193	111	93	33
		%	44.9%	25.8%	21.6%	7.7%

[1] If a percentage is not displayed within the graph, consult the table for the actual percentage.

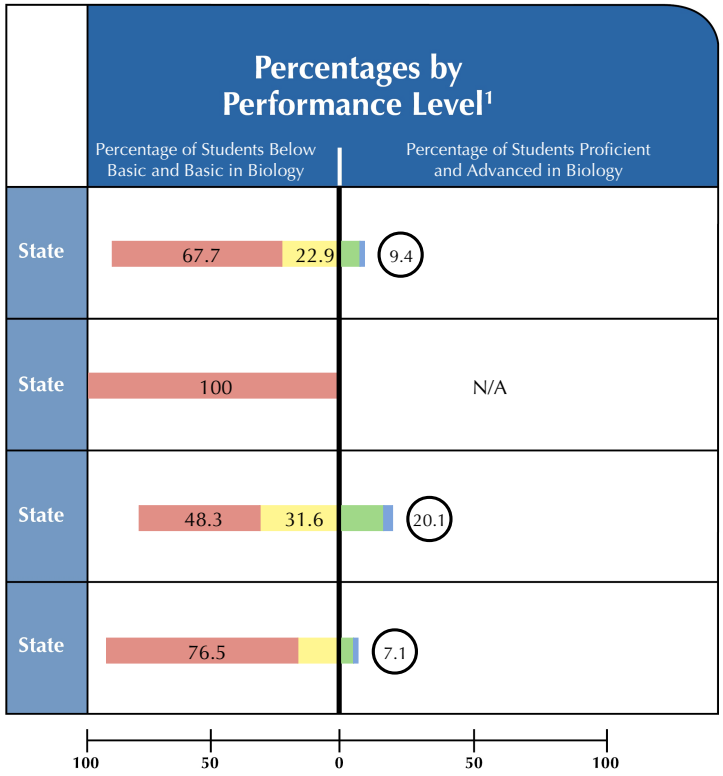


Performance Level Summary by Group: All Testers (Continued)

PROGRAM STATUS

Biology		State			
		Below Basic	Basic	Proficient	Advanced
IEP-Special Education	#	3596	1217	418	82
	%	67.7%	22.9%	7.9%	1.5%
Migrant Education Program	#	19	0	0	0
	%	100%	0.0%	0.0%	0.0%
Economically Disadvantaged	#	6889	4513	2384	489
	%	48.3%	31.6%	16.7%	3.4%
English Language Learner	#	476	102	34	10
	%	76.5%	16.4%	5.5%	1.6%

[1] If a percentage is not displayed within the graph, consult the table for the actual percentage.



Performance Summary by Assessment Anchor

Based on Current Test Administration

All Testers Performance Summary by Assessment Anchor

Biology	Points Possible	Minimum Estimated Points Needed to Pass	State Median[1] Points Earned	State Percent of Students Earning More Than Minimum Points
Module 1 – Cells and Cell Processes	**33**	**16**	**13**	**31.4%**
BIO.A.1 Basic Biological Principles	8	4	3	24.0%
BIO.A.2 The Chemical Basis for Life	9	4	4	37.2%
BIO.A.3 Bioenergetics	8	4	3	28.7%
BIO.A.4 Homeostasis and Transport	8	4	3	25.0%
Module 2 – Continuity and Unity of Life	**33**	**19**	**16**	**33.4%**
BIO.B.1 Cell Growth and Reproduction	8	4	4	38.6%
BIO.B.2 Genetics	8	5	4	24.8%
BIO.B.3 Theory of Evolution	8	4	3	26.0%
BIO.B.4 Ecology	9	6	5	28.4%

[1] **Median:** The median is the score where approximately half of the students score above and half score below. All medians in this report are calculated based on students' scores. The median is reported instead of the mean because extreme outlier scores can impact the mean for a small group (e.g., 15 or fewer students).