

Agriculture Mechanization, General, Classification of Instructional Program (CIP) 01.0201

Units of Instruction and Task Grid Linked to Pennsylvania Core Standards

100 Supervised Agricultural Experience

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>101 Develop short, mid, and long term project plans.</p> <p>102 Develop a Supervised Agricultural Experience (SAE) based upon individual interests/career goals.</p> <p>103 Maintain complete and accurate records.</p> <p>104 Analyze records to determine strengths and areas for improvement.</p> <p>105 Conduct a research project using the scientific method.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3-4</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 Standard CC.3.6.9-10.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE GRADES 11-12 Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10 Standard CC.3.6.9-10.C Produce clear and coherent writing ...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D</p>	

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200 Management, Economics, and Marketing

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<p>201 Discuss the historical significance of agriculture to United States and global economic strength.</p> <p>202 Maintain accurate business and financial records.</p> <p>203 Identify possible types and sources of credit.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & C Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10</p> <p>Standard CC.3.6.9-10.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE GRADES 11-12</p> <p>Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10</p> <p>Standard CC.3.6.9-10.C Produce clear and coherent writing ...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p> <p>Standard CC.3.6.9-10.E Use technology, including the internet, to produce, publish, and update individual or shared writing products.</p> <p>PRODUCTION &</p>	

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300 Demonstrate Core Sales Skills

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<p>301 Use computers to enter, access, or retrieve data.</p> <p>302 Prepare a technical report.</p> <p>303 Use telephone communication techniques.</p> <p>304 Fill out business or government forms.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10</p> <p>Standard CC.3.6.9-10.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE GRADES 11-12</p> <p>Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10</p> <p>Standard CC.3.6.9-10.C Produce clear and coherent writing ...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p> <p>Standard CC.3.6.9-10.E Use technology, including the internet, to produce, publish, and update individual or shared writing products.</p> <p>PRODUCTION &</p>	<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p> <p>Standard 2.2.HS.D.7 Create and graph equations or inequalities to describe numbers or relationships.</p> <p>Standard 2.4.HS.B.2 Summarize, represent, and interpret data on two categorical and quantitative variables.</p> <p>Standard 2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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400 Solicit Customers and Orders

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<p>401 Analyze sales activities or trends.</p> <p>402 Prepare a list of prospective customers.</p> <p>403 Use product knowledge and customer's needs to solicit an order from established or new customers.</p> <p>404 Access media advertising services.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Standard CC.3.5.9-10.C Determine the central ideas or conclusions of a text; etc... Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Standard CC.3.5.11-12.C. Determine the central ideas or conclusions of a text; etc... Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10</p> <p>Standard CC.3.6.9-10.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE GRADES 11-12</p> <p>Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10</p> <p>Standard CC.3.6.9-10.C Produce clear and coherent writing ...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p> <p>Standard CC.3.6.9-10.E Use technology, including the internet, to produce, publish, and update individual or shared writing products.</p> <p>PRODUCTION &</p>	<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p> <p>Standard 2.2.HS.D.7 Create and graph equations or inequalities to describe numbers or relationships.</p> <p>Standards 2.4.HS.B.2 Summarize, represent, and interpret data on two categorical and quantitative variables.</p>

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500 Provide Customer Information

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<p>501 Conduct a sales presentation. 502 Demonstrate goods or services.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc... KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc.... Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc... CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words... Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure... CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p> <p>Standard 2.2.HS.D.7 Create and graph equations or inequalities to describe numbers or relationships.</p> <p>Standard 2.4.HS.B.2 Summarize, represent, and interpret data on two categorical and quantitative variables.</p>

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
		<p>and other domain specific words...</p> <p>Standard CC.3.5.11-12.E. Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>INTEGRATE KNOWLEDGE/ IDEAS (GRADES 9-10)</p> <p>Standard CC.3.5.9-10.G. Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart)</p> <p>Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author's claim for solving a technical problem.</p> <p>Standard CC.3.5.9-10.I. Compare and contrast findings presented in a text to those from other sources, etc...</p> <p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 11-12</p> <p>Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats... to solve a problem.</p> <p>Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.</p> <p>Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10 and 11-12</p> <p>Standard CC.3.5.9-10.J AND</p>		

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		<p>Standard CC.3.5.11-12.J. By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently.</p>		

600 Complete a Sale

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>601 Use sales techniques based on the customer.</p> <p>602 Compute financial data.</p> <p>603 Identify steps to arrange for trial installations of equipment.</p> <p>604 Negotiate term of sale or services with customer.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10</p> <p>Standard CC.3.6.9-10.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE GRADES 11-12</p> <p>Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10</p> <p>Standard CC.3.6.9-10.C Produce clear and coherent writing ...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p> <p>Standard CC.3.6.9-10.E Use technology, including the internet, to produce, publish, and update individual or shared writing products.</p> <p>PRODUCTION &</p>	<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p>

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		<p>Standard CC.3.5.11-12.J. By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently.</p>	<p>Standard CC.3.6.11-12.G. Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.</p> <p>Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.</p> <p>RANGE OF WRITING GRADES 9-12 Standard CC.3.5.9-10.I AND Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	

700 Sale Follow Through

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>701 Identify steps to arrange a delivery schedule.</p> <p>702 Conduct training in product use.</p> <p>703 Provide customer service needs.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		

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800 Manage Natural Resources

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>801 Identify renewable and nonrenewable natural resources.</p> <p>802 Define soil erosion and what causes soil erosion.</p> <p>803 Explain the hydrologic cycle.</p> <p>804 Identify the various types of land uses.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>	<p>TEXT TYPES AND PURPOSE</p> <p>GRADES 9-10</p> <p>Standard CC.3.6.9-10.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE</p> <p>GRADES 11-12</p> <p>Standard CC.3.6.11-12.A Write arguments focused on discipline specific content.</p> <p>Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING</p> <p>GRADES 9-10</p> <p>Standard CC.3.6.9-10.C Produce clear and coherent writing ...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p> <p>Standard CC.3.6.9-10.E Use technology, including the internet, to produce, publish, and update individual or shared writing products.</p> <p>PRODUCTION &</p>	

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900 Historical Applications and Future Implications of Agricultural Power and Systems Technologies

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>901 Describe and discuss the historical development of agricultural power and systems technologies.</p> <p>902 Identify global applications of agricultural power and systems technologies.</p> <p>903 Identify emerging technologies and their potential impact.</p> <p>904 Identify methods of changing appropriate technology for various applications (size, social, and cultural).</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc.... Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words... Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 Standard CC.3.6.9-10.A Write arguments focused on discipline specific content. Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc. TEXT TYPES AND PURPOSE GRADES 11-12 Standard CC.3.6.11-12.A Write arguments focused on discipline specific content. Standard CC.3.6.11-12.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10 Standard CC.3.6.9-10.C Produce clear and coherent writing ...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. Standard CC.3.6.9-10.E Use technology, including the internet, to produce, publish, and update individual or shared writing products. PRODUCTION &</p>	

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		<p>Standard CC.3.5.11-12.J. By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently.</p>	<p>Standard CC.3.6.11-12.G. Gather relevant information from multiple authoritative print and digital sources, following a standard format for citation.</p> <p>Standard CC.3.6.11-12.H. Draw evidence from informational texts to support analysis, reflection, and research.</p> <p>RANGE OF WRITING GRADES 9-12</p> <p>Standard CC.3.5.9-10.I AND Standard CC.3.5.11-12.I. Write routinely over extended time frames and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	

1000 Demonstrate Safety

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1001 Define the dangers in an agricultural mechanics shop and work place.</p> <p>1002 List safety procedures that promote avoidance of shop hazards and accident reduction.</p> <p>1003 Identify safety colors used on signs and icons in the agriculture industry.</p> <p>1004 Identify and demonstrate wearing of personal protective equipment.</p> <p>1005 Identify and use proper firefighting equipment.</p> <p>1006 Demonstrate positive safety attitudes and responsibilities.</p> <p>1007 Demonstrate safety rules and regulations.</p> <p>1008 Describe regulations, safety and consumer protection.</p> <p>1009 Demonstrate first aid methods and procedures using supplies in a first aid kit.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3-4</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc.... Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words... Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
		<p>and other domain specific words...</p> <p>Standard CC.3.5.11-12.E. Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.11-12.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>INTEGRATE KNOWLEDGE/ IDEAS (GRADES 9-10)</p> <p>Standard CC.3.5.9-10.G. Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart)</p> <p>Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author's claim for solving a technical problem.</p> <p>Standard CC.3.5.9-10.I. Compare and contrast findings presented in a text to those from other sources, etc...</p> <p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 11-12</p> <p>Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats... to solve a problem.</p> <p>Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible.</p> <p>Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10 and 11-12</p> <p>Standard CC.3.5.9-10.J AND</p>		

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
		<p>Standard CC.3.5.11-12.J. By the end of grades 9- 10, AND 11-12, read and comprehend technical texts independently and proficiently.</p>		

1100 Tools, Equipment, and Hardware

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1101 Identify, select, adjust, maintain, and safely use common hand tools and power tools.</p> <p>1102 Identify various gauges and testers used in agricultural power equipment.</p> <p>1103 Demonstrate proper and safe use of air operated equipment.</p> <p>1104 Adjust, maintain and safely use electrical powered shop equipment.</p> <p>1105 Demonstrate the proper installation and application of common hardware items like nails, screws, bolts and rivets.</p> <p>1106 Demonstrate accurate use of measurement devices and techniques for calculating measurement, including the metric system.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc.... Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words... Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		

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1200 Material Fabrication and Welding

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1201 Identify and select various types of metals.</p> <p>1202 Identify and select various types of welding and cutting equipment including oxyacetylene and plasma arc.</p> <p>1203 Select, adjust, operate and maintain oxy fuel equipment with and without filler rods.</p> <p>1204 Identify and weld various joints to include fillet butt joint, vertical tee joint, double bevel joint and fillet tee joint.</p> <p>1205 Use soldering equipment.</p> <p>1206 Operate woodworking equipment/machinery.</p> <p>1207 Design a building for an application in agriculture using new technologies.</p> <p>1208 Repair sheet metal products.</p> <p>1209 Fabricate a product by hand.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		

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1300 Perform Core Mechanics Skills

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1301 Read blueprints and schematics.</p> <p>1302 Read work order, instructions, formulas or processing charts.</p> <p>1303 Maintain repair records.</p> <p>1304 Record details of repairs made and parts used.</p> <p>1305 Calculate bills according to record of repairs made, labor time, and parts used.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p>

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
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1400 Engine Systems

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1401 Define mechanical power, work, torque, and horsepower.</p> <p>1402 Describe the purpose of drawbar power, power take off (PTO) power and brake power.</p> <p>1403 Define the purpose of a clutch and demonstrate how to remove and reinstall a clutch in a drive train.</p> <p>1404 Define the purpose of gears, bearings and seals.</p> <p>1405 List and describe the operation of two and four stroke engines.</p> <p>1406 Demonstrate the use of specialized tools for small engines such as wheel pullers, cylinder honing tools and micrometers.</p> <p>1407 List and repair a manual transmission used in a tractor.</p> <p>1408 List the principles of operation for spark and compression ignition engines.</p> <p>1409 Demonstrate the use of measuring and calibration devices.</p> <p>1410 List and identify the components and function of engine parts.</p> <p>1411 Disassemble and reassemble an engine using all diagnostic tools.</p> <p>1412 Troubleshoot an engine and return it to working order.</p> <p>1413 Select engine coolants, lubricants, fuels, engine additives, electrical components and drive systems needed for various applications.</p> <p>1414 Identify the various types of diesel engines used in agricultural power.</p> <p>1415 Identify the components of a diesel engine.</p> <p>1416 Identify the components and describe their function.</p> <p>1417 List the engine diesel systems and their components.</p> <p>1418 Disassemble and reassemble a diesel engine.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p>

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
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1500 Vehicle and Farm Equipment Systems

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1501 Identify and describe agricultural equipment and their operations.</p> <p>1502 Locate and use a repair manual to diagnose malfunctions of various pieces of agricultural equipment.</p> <p>1503 Test a vehicle to determine installation, service or repair needed.</p> <p>1504 Service vehicle with water, fuel, or oil.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		

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Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
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1600 Machinery and Equipment Systems

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1601 Review operating and service manuals, and schedules, and conduct procedures as needed.</p> <p>1602 Perform safety inspections in industrial, manufacturing or repair setting.</p> <p>1603 Adjust or set mechanical controls or components.</p> <p>1604 Select, measure, use and calibrate testing devices and the machines.</p> <p>1605 Move or fit heavy objects.</p> <p>1606 Perform disassembly and assembly procedures.</p> <p>1607 Select, connect, engage and operate machinery and power units.</p> <p>1608 Lubricate machinery, equipment or parts.</p> <p>1609 Demonstrate the correct selection and use of agricultural machinery and equipment systems.</p> <p>1610 Demonstrate the use of auxiliary systems including hydraulics, pneumatics and electronics.</p> <p>1611 Conduct troubleshooting procedures.</p> <p>1612 Test electrical/electronic wiring, equipment, systems or fixtures.</p> <p>1613 Repair or replace electrical wiring, circuits, fixtures, or equipment.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources</p> <p>Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems</p> <p>Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems</p> <p>Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 9-10</p> <p>Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE</p> <p>GRADES 11-12</p> <p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p>

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1700 Energy Systems

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1701 Identify the parts and functions of specific energy systems to include electrical power, solar power, wind power, mechanical power, and chemical/carbon based power systems.</p> <p>1702 Perform energy system maintenance, testing and evaluation.</p> <p>1703 Discuss and explain the operating principles for energy systems.</p> <p>1704 Explain and describe the principles of power transmission, heat transfer, evaporation, fluid movement, conductivity, satellite transmission, conservation and regulations.</p> <p>1705 Identify computer applications, remote sensing and automatic controls to manage systems.</p> <p>1706 Identify and investigate emerging technologies and their economic impact on energy systems.</p> <p>1707 Identify appropriate industry standards for energy systems.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p>

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1800 Structural Systems

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<p>1801 Explain a site evaluation and determine elevation, slope, and cut and fill requirements.</p> <p>1802 Interpret plans and drawings for structures with consideration to building codes, regulations and inspection requirements.</p> <p>1803 Develop an itemized bill of materials, determine costs, delivery and storage requirements, and construction time.</p> <p>1804 Layout a structure foundation, erect batter boards and frames and/or forms.</p> <p>1805 Identify and evaluate building construction materials, methods and styles.</p> <p>1806 Calculate ventilation, insulation, heating, cooling, lighting, electrical, water, and waste handling needs.</p> <p>1807 Calculate, mix and finish concrete and masonry units.</p> <p>1808 Design and construct wall and roofing systems.</p> <p>1809 Design, form, and pour stepping stones for a garden.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc.... Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words... Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc. Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p>

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1900 Demonstrate Wood Frame Construction

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>1901 Select lumber for a specific application for an agricultural structure.</p> <p>1902 Identify and select proper roofing materials.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>			

2000 Plumbing, Irrigation, and Water Systems

Secondary Competency Task Grid with Unit and Task Numbers	Common Career Technical Core Standards	Pennsylvania Core Standards for Reading for Technical Subjects Standard 3.5	Pennsylvania Core Standards for Writing for Technical Subjects Standard 3.6	Pennsylvania Core Standards for Mathematics Standard 2.1
<p>2001 Identify the various plastic and metal components and their functions within water supply, waste, and vent systems.</p> <p>2002 Cut, assemble and pressure test components within various types of water supply systems.</p> <p>2003 Determine pump and pipe size based on water requirements, head and friction losses for water and irrigation systems.</p> <p>2004 Construct and identify the components in agricultural irrigation systems based on crop, greenhouse or landscaping needs.</p> <p>2005 Identify the requirements of a safe water supply and treatment procedures that may be needed.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		<p>Standard 2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.</p> <p>Standard 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.</p> <p>Standard 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems.</p> <p>Standard 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p> <p>Standard 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p>

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2100 Environmental and Natural Resource Systems

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<p>2101 Identify environmental problems and use equipment and tools needed to measure the problems in livestock, crop handling, processing, nursery and landscaping, aquaculture, forestry, and agribusiness industries.</p> <p>2102 Use various map types and aerial photos for land use, soil, watershed, wildlife and natural resource management and conservation.</p> <p>2103 Use global positioning systems, remote sensing and collection equipment for various applications.</p> <p>2104 Read legal land descriptions and determine land areas using maps and on site measuring techniques.</p> <p>2105 Identify, construct and evaluate storage and waste disposal systems and procedures.</p> <p>2106 Assemble environmental and natural resource systems equipment and structures.</p>	<p>CLUSTER: Agriculture, Food and Natural Resources Choose Standards 1-2-3-4-5-6</p> <p>PATHWAYS INCLUDE</p> <p>A. Power, Structural and Technical Systems Choose Standards 1-2-3-4-5</p> <p>B. Natural Resources Systems Choose Standards 1-2-3</p>	<p>KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.9-10B & Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex multistep procedure, etc...</p> <p>KEY IDEAS/DETAILS GRADES 11-12 Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p> <p>Standard CC.3.5.11-12.B. Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.11-12.C. Follow precisely a complex multistep procedure, etc...</p> <p>CRAFT & STRUCTURE GRADES 9-10 Standard CC.3.5.9-10.D. Determine the meaning of symbols, key terms, and other domain specific words...</p> <p>Standard CC.3.5.9-10.E Analyze the structure of the relationships among concepts in a text, etc.</p> <p>Standard CC.3.5.9-10.F Analyze the author's purpose in providing an explanation, describing a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms,</p>		

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