

Vehicle Maintenance Technology, Other, Classification of Instructional Program (CIP) 47.0699
Units of Instruction and Task Grid Linked to Pennsylvania Core Standards

Secondary Competency Task List 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 2.0
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100. FOLLOW SAFETY RULES AND REGULATIONS.				
<p>101 Interpret workplace safety and MSDS sheets. 102 Demonstrate how to lift and move heavy objects. 103 Demonstrate how to handle and store flammable materials and toxic substances. 104 Explain the purpose of OSHA and how it promotes safety on the job. 105 Demonstrate and explain appropriate safety precautions to take around job site hazards. 106 Demonstrate and properly wear personal protective equipment (safety goggles, hearing protection and respiratory protection). 107 Describe fire prevention techniques. 108 Follow safety rules for ECP (Exposure Control Procedures) for blood borne pathogens.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2</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</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.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. Standard CC.3.6.9-10 D Develop and strengthen writing as needed. Standard CC.3.6.9-10.E Use technology, including</p>	<p>ALGEBRA Standard. 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard. 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard. 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard. 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. Standard CC.2.4.HS.B.5 Make inferences and justify conclusions based on sample surveys, experiments, and observational studies. Standard CC.2.2.HS.D.3 Extend the knowledge of arithmetic operations and apply to polynomials. Standard CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.</p>

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		<p>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, 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.</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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. Standard CC.3.5.9-10.I. Compare and contrast findings presented in a text to those from other sources, etc...</p>	<p>the internet, to produce, writing products.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research.</p>	<p>Standard CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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		<p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 11-12 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research. RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames.</p>	
<p>200. DEMONSTRATE KNOWLEDGE OF THE PRINCIPLES AND DESIGN OF 2 CYCLE AND 4 CYCLE ENGINES.</p>				
<p>201 Explain a manufacturer's model number, serial number and engine type number for 2 cycle and 4 cycle engines. 202 Identify the component parts in a short block of a 2 cycle engine and explain their purposes. 203 Compare and contrast 2 and 4 cycle operations and applications. 204 Explain 2 cycle engine operating theory. 205 Explain 4 cycle engine operating theory. 206 Explain the differences between piston port and reed valves for 2 and 4 cycle stroke engines.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile</i></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 & 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>TEXT TYPES AND PURPOSE GRADES 9-10 Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND</p>	

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	<p><i>Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</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, and other domain specific words... Standard CC.3.5.11-12.E. Analyze the structure of the relationships among concepts in a text.</p>	<p>PURPOSE GRADES 11-12 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. Standard CC.3.6.9-10 D Develop and strengthen writing as needed. 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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen</p>	

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300. DEMONSTRATE KNOWLEDGE OF LUBRICATION SYSTEMS.	CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6- PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2	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.	TEXT TYPES AND PURPOSE GRADES 9-10 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.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.	
301 Describe lubrication systems and their functions. 302 Describe API oil ratings and the meaning of SAE viscosity ratings. 303 Describe the standard classification of 2 cycle oils. 304 List common oil contaminants. 305 Interpret engine oil application charts used in owners/operators manuals. 306 Prepare premixed fuel for a 2 cycle engine. 307 Describe differences between splash lubrication systems and a pressure lubrication system. 308 Describe the operation of an oil filtration system. 309 Describe methods of checking the oil level in an engine. 310 Explain the need for positive crank case ventilation. 311 Identify the components and function of a crankcase ventilation breather assembly.				

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		<p>solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
400. DEMONSTRATE KNOWLEDGE OF BASIC ELECTRICITY.				
<p>401 Demonstrate safe work habits when working with electrical systems.</p> <p>402 Demonstrate how to interpret electrical circuit and wiring diagrams while making correct electrical connections.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster</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 &</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 Standard CC.3.6.9-10.B Write informative or</p>	<p>ALGEBRA Standard. 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical</p>

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<p>403 Use a meter to measure resistance, continuity, amperage and voltage.</p> <p>404 Solve problems using Ohm's Law.</p> <p>405 Explain the proper procedure for battery disposal based on EPA and local ordinances and resistance.</p> <p>406 Describe series and parallel circuits and explain the different types of circuit failures.</p> <p>407 Identify terminals and connectors used in electrical systems.</p> <p>408 Describe and perform the diode test.</p> <p>409 Identify electrical wire sizes and selection based on an anticipated current load.</p> <p>410 Demonstrate applicable test procedures for testing series and parallel circuits.</p> <p>412 Check current flow in electrical systems and components.</p> <p>413 Inspect, test and replace fusible links, fuses and circuit breakers.</p> <p>414 Demonstrate knowledge of American Wire Gauge (AWG) wiring codes.</p> <p>415 Inspect a low oil alert system.</p> <p>416 Solder a current carrying wire.</p>	<p>Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</p>	<p>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, and other domain specific</p>	<p>explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE GRADES 11-12 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 Develop and strengthen writing as needed.</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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6..11-12 C Produce clear and coherent</p>	<p>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 CC.2.4.HS.B.5 Make inferences and justify conclusions based on sample surveys, experiments, and observational studies.</p> <p>Standard CC.2.2.HS.D.3 Extend the knowledge of arithmetic operations and apply to polynomials.</p> <p>Standard CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.</p> <p>Standard CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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500. DEMONSTRATE KNOWLEDGE AND SERVICE OF COOLING SYSTEMS.				
501 Demonstrate knowledge of the concept of heat transfer and the purpose of a cooling system. 502 Perform a cooling system flush and cleaning on a liquid cooled engine. 503 Remove, service and replace a water pump hose and replace thermostat. 504 Identify the components and function of a liquid cooled engine. 505 Properly pressure test a liquid cooled cooling system. 506 Describe major causes of liquid cooled engine overheating.	CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6- PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2	KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... Standard CC.3.5.9-10B & Standard CC.3.5.9-10.C Determine the central ideas or conclusions of a text; etc... Standard CC.3.5.11-12A 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...	TEXT TYPES AND PURPOSE GRADES 9-10 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.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10	

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		<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, 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.</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 Standard CC.3.5.9-10.G. Translate quantitative or technical information expressed in a text into</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.</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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G.</p>	

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		<p>visual form (e.g. a table or chart). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
600. DEMONSTRATE KNOWLEDGE OF FUEL SYSTEMS.				
601 Identify the basic types of fuel systems used in power	CLUSTER: <i>Transportation,</i>	KEY IDEAS/DETAILS GRADES 9-10	TEXT TYPES AND PURPOSE	

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<p>equipment.</p> <p>602 Identify the function of each component in the fuel system including carburetor, fuel filter, fuel pump, and electronic fuel injector.</p> <p>603 Identify types of carburetor designs and their functions, using proper terms.</p> <p>604 Use proper terms to describe the function of vacuum feed, diaphragm, float, rotary, and slide valve carburetors.</p> <p>605 Identify and describe the idle fuel circuit and the main fuel circuit.</p> <p>606 Use proper terms to describe the venturi principle, and variable venturi carburetors.</p> <p>607 Describe fuel enrichment devices including choke types, purging systems, and primers.</p> <p>608 Describe the function of a fixed orifice jet, high speed nozzle, emulsion tube, and purging system.</p> <p>609 Identify the common types of fuel filters and describe the difference between micron and mesh.</p> <p>610 Explain the theory, function, and components of electronic fuel injection (EFI).</p> <p>611 Explain the theory, function, and components of gaseous fuels.</p> <p>612 Identify types and grades of gasoline used in power equipment.</p> <p>613 Describe how fuel additives protect power equipment placed in seasonal storage.</p>	<p><i>Distribution and Logistics</i></p> <p>Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</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>GRADES 9-10</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.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.</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 & DISTRIBUTION OF WRITING</p>	

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		<p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms, 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.</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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H.</p>	<p>GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p>	

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		<p>Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
700. SERVICE FUEL SYSTEMS ON ALL ENGINES.				
<p>701 Inspect, disassemble, clean, and reassemble internal carburetor parts for wear. 702 Remove, service and replace a carburetor on a small gasoline engine. 703 Remove, service, and replace a fuel system's air filter. 704 Remove, service and replace a fuel pump. 705 Adjust carburetor choke linkage. 706 Adjust carburetor mixture screws per OEM specifications. 707 Adjust carburetor float level, adjust carburetor metering levers, remove, replace and repair fuel lines. 708 Remove and replace a fuel tank, filters, caps and lines. 709 Adjust an engine's idle speed after servicing a carburetor.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2</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 & 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 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</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION & DISTRIBUTION OF</p>	

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		<p>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, 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.</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 Standard CC.3.5.9-10.G. Translate quantitative or technical</p>	<p>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 Develop and strengthen writing as needed.</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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more</p>	

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		<p>information expressed in a text into visual form (e.g. a table or chart). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
800. DEMONSTRATE THE KNOWLEDGE AND THE SERVICE PROCEDURES OF EXHAUST SYSTEMS.				

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<p>801 Describe equipment problems that can occur from operating equipment with a removed or damaged exhaust system.</p> <p>802 State the danger of operating a power product in a closed area.</p> <p>803 Describe the purpose of an exhaust deflector and describe the purpose of a spark arrestor screen.</p> <p>804 Describe exhaust system nomenclature and function as well as types and terms associated with exhaust systems.</p> <p>805 Describe the theory and function of a single stage catalyst (catalytic converters).</p> <p>806 Describe the proper service cleaning procedures for exhaust ports and spark arrestor screens.</p> <p>807 Inspect, remove, service and replace an exhaust system.</p> <p>808 Diagnose, service, and replace an oxygen sensor.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i></p> <p>Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</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 & Standard CC.3.5.9-10.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 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>TEXT TYPES AND PURPOSE GRADES 9-10 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.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 Develop and strengthen writing as needed.</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>ALGEBRA 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 CC.2.4.HS.B.5 Make inferences and justify conclusions based on sample surveys, experiments, and observational studies.</p> <p>Standard CC.2.2.HS.D.3 Extend the knowledge of arithmetic operations and apply to polynomials.</p> <p>Standard CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.</p> <p>Standard CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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		<p>diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
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900. DEMONSTRATE SKILL WITH MEASURING SYSTEMS AND TOOLS.				
<p>901 Read a standard and a metric ruler. 902 Read and use a standard and metric micrometer. 903 Read and use a standard and metric dial indicator. 904 Use a standard and metric torque wrench. 905 Use a standard metric dial caliper. 906 Calculate displacement and horse power. 907 Calculate work, power, torque, area and volume.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2</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 & 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 Standard CC.3.5.11-12A Cite specific textual evidence, etc....</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.B Write informative or explanatory texts, including the narration of technical</p>	<p>ALGEBRA Standard. 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard. 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard. 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.</p>

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		<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, 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.</p> <p>Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing a procedure...</p>	<p>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.</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 & DISTRIBUTION OF WRITING GRADES 11-12</p> <p>Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p>	<p>Standard. 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers.</p> <p>Standard CC.2.4.HS.B.5 Make inferences and justify conclusions based on sample surveys, experiments, and observational studies.</p> <p>Standard CC.2.2.HS.D.3 Extend the knowledge of arithmetic operations and apply to polynomials.</p> <p>Standard CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.</p> <p>Standard CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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		<p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 9-10 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND Standard CC.3.5.11-12.J.</p>	<p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	

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		By the end of grades 9-10, AND 11-12, read and comprehend technical texts independently and proficiently.		
1000. IDENTIFY AND USE HAND TOOLS.				
<p>1001 Identify common hand tools used in the repair of outdoor power equipment.</p> <p>1002 Identify specialty tools used in overhaul.</p> <p>1003 Follow rules for hand tool safety.</p> <p>1004 Follow specific rules for portable electric hand tool safety.</p> <p>1005 Follow safety use of air, hydraulic, and machine tools.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i></p> <p>Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</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 & 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 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>TEXT TYPES AND PURPOSE GRADES 9-10 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.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 Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.9-10.E Use technology, including the Internet, to produce, publish, and update</p>	

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		<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, 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.</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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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/</p>	<p>individual or shared writing products.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G.</p>	

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		<p>IDEAS GRADES 11-12 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
<p>1100. IDENTIFY AND USE FASTENERS.</p>				
<p>1101 Identify, select and install various fasteners according to specifications. 1102 Install selected fasteners according to specifications. 1103 Replace damaged internal threads using a thread repair system. 1104 Repair damaged internal and external threads, using a tap and die. 1105 Demonstrate use of an easy out type tool to remove broken fasteners.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></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</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.B</p>	

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	Choose Standards from: 1 and/or 2	<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, 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.</p> <p>Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing</p>	<p>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.</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 & DISTRIBUTION OF WRITING GRADES 11-12</p> <p>Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D</p> <p>Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share</p>	

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		<p>a procedure...</p> <p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 9-10 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12</p>	<p>writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	

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		Standard CC.3.5.9-10.J AND 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.		
1200. DEMONSTRATE WELDING AND CUTTING. 1201 State and follow safety rules for using an electric welder. 1202 Wear personal protective equipment. 1203 Adjust welding amperage for a specific welding repair. 1204 Weld a broken metal part on a piece of outdoor power equipment. 1205 Light and adjust the flame on a cutting torch. 1206 Heat and cut with an oxyacetylene torch.	CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6- PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2	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	TEXT TYPES AND PURPOSE GRADES 9-10 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.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. Standard CC.3.6.9-10.E	

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		<p>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, and other domain specific words... Standard CC.3.5.11-12.E. Analyze the structure of the relationships among concepts in a text. 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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. Standard CC.3.5.9-10.I. Compare and contrast findings presented in a text to those from</p>	<p>Use technology, including the Internet, to produce, publish, and update individual or shared writing products.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more</p>	

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		<p>other sources, etc...</p> <p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 11-12 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
<p>1300. DIAGNOSE PERFORMANCE PROBLEMS ON A 2 CYCLE GASOLINE ENGINE.</p>				
<p>1301 Diagnose performance problems in a 2 cycle gasoline engine. 1302 Check engine for top end compression. 1303 Check engine for base/primary compression (bottom end). 1304 Inspect the fuel system for proper operation. 1305 Perform a carburetor pressure test. 1306 Inspect the ignition system for proper operation using a spark tester. 1307 Inspect the exhaust port for carbon obstructions.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY:</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 & Standard CC.3.5.9-10.C Determine the central ideas or conclusions of a text; etc... Follow precisely a complex</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p>	

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1308 Operate the engine to check for proper starting and power output under load.	<p><i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</p>	<p>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, and other domain specific words... Standard CC.3.5.11-12.E. Analyze the structure of the relationships among concepts in a</p>	<p>TEXT TYPES AND PURPOSE GRADES 11-12 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. Standard CC.3.6.9-10 D Develop and strengthen writing as needed. 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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D.</p>	

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		<p>text. 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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent</p>	<p>Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	

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		<p>understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>1400. DIAGNOSE PERFORMANCE PROBLEMS ON A 4 CYCLE GASOLINE ENGINE.</p>				
<p>1401 Check the fuel pump pressure. 1402 Pressure test the carburetor. 1403 Operate the engine to check for proper starting and acceleration. 1404 Differentiate hunting/surging symptom between the fuel system and governor system. 1405 Perform a cylinder balance test and demonstrate understanding of findings. 1406 Perform a cylinder compression test. 1407 Perform a cylinder leak down test. 1408 Perform an oil pressure test. 1409 Test an ignition system using a spark tester. 1410 Inspect the engine for a partially sheared flywheel key. 1411 Remove, inspect and replace points and condenser. 1412 Remove, replace, and test an ignition armature assembly (ignition coil, ignition). 1413 Test and replace high tension lead(s). 1414 Test the solid state transistor controlled discharge system. 1415 Test a capacitive ignition system. 1416 Demonstrate timing procedure for an engine with ignition points. 1417 Demonstrate timing procedures on an engine with a solid state/electronic ignition system. 1418 Measure primary and secondary resistance. 1419 Check/replace an engine ignition kill switch. 1420 Inspect the cooling system.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2</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.</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.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>ALGEBRA Standard. 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard. 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard. 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard. 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. Standard CC.2.4.HS.B.5 Make inferences and justify conclusions based on sample surveys, experiments, and observational studies. Standard CC.2.2.HS.D.3</p>

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<p>1421 Check for damage to the cooling fins or fan. 1422 Identify debris clogging cooling air fins. 1423 Identify the proper order of assembling an air intake system. 1424 Remove and replace an intake manifold.</p>		<p>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, and other domain specific words... Standard CC.3.5.11-12.E. Analyze the structure of the relationships among concepts in a text. 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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for</p>	<p>Standard CC.3.6.9-10 D Develop and strengthen writing as needed. 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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p>	<p>Extend the knowledge of arithmetic operations and apply to polynomials. Standard CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable. Standard CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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		<p>solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
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1500. OVERHAUL A 4 CYCLE GASOLINE ENGINE.				
1501 Disassemble the block. 1502 Remove, inspect and replace an oil seal. 1503 Inspect balance system; inspect shaft(s) and bearings for damage and wear valve guides for wear.	CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster	KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc....	TEXT TYPES AND PURPOSE GRADES 9-10 Standard CC.3.6.9-10.B Write informative or	ALGEBRA Standard. 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical

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<p>1504 Inspect and measure camshaft bearings for wear and damage.</p> <p>1505 Measure crankshaft end play and run out, and repair crankshaft if damaged.</p> <p>1506 Inspect rings and valve train parts; valves, rocker arms, lifters, studs, and push rods.</p> <p>1507 Inspect valve guides for wear.</p> <p>1508 Inspect valves and valve seals; resurface or replace.</p> <p>1509 Replace valve stem seals.</p> <p>1510 Use a valve spring compressor to install valve springs.</p> <p>1511 Adjust valves (mechanical), and hydraulic lifters.</p> <p>1512 Measure cylinder bore and compare against OEM specifications</p> <p>1513 Ream a cylinder ridge and deglaze.</p> <p>1514 Install a new crankshaft, with bearings, if needed.</p> <p>1515 Install a piston using a ring compressor.</p> <p>1516 Install new rings; check end and side clearance.</p> <p>1517 Verify camshaft timing according to manufacturer's specifications.</p> <p>1518 Install all gaskets where needed, according to specifications.</p> <p>1519 Torque fasteners according to manufacturer's specifications.</p> <p>1520 Install and adjust linkages and controls.</p> <p>1521 Initiate start up procedures for test run.</p> <p>1522 Check top no load speed object governor as needed.</p>	<p>Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</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,</p>	<p>explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND PURPOSE GRADES 11-12 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 Develop and strengthen writing as needed.</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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent</p>	<p>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 CC.2.4.HS.B.5 Make inferences and justify conclusions based on sample surveys, experiments, and observational studies.</p> <p>Standard CC.2.2.HS.D.3 Extend the knowledge of arithmetic operations and apply to polynomials.</p> <p>Standard CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.</p> <p>Standard CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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		<p>key terms, 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.</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 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 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</p>	<p>writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research.</p> <p>Standard CC.3.6.9-10.G. Gather relevant information.</p> <p>Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research.</p> <p>Standard CC.3.6.11-12.G. Gather relevant information.</p> <p>Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and</p>	

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1600. CONDUCT A FAILURE ANALYSIS ON GASOLINE ENGINES.				
1601 Classify failures into 5 major categories; electrical, fuel, ignition, lubrication, and compression. 1602 Identify the effects of insufficient lubrication on engine components; piston cylinders, etc. 1603 Identify and describe engine failures caused by the breakdown of fuel. 1604 Identify the effects of overheating on engine component parts. 1605 Define detonation, pre-ignition and effects on engine components. 1606 Identify engine failure caused by lean mixture of fuel. 1607 Identify the effects of over speeding on engine component parts. 1608 Identify the signature breakage of a connecting rod on a failed engine. 1609 Identify exhaust port piston scoring and large end bearings due to over speeding. 1610 Identify the effects of excessive vibration on engine block and mounting base. 1611 Inspect a damaged engine and identify the symptoms, types and causes of failures.	CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6- PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2	KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... 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... 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...	TEXT TYPES AND PURPOSE GRADES 9-10 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.B Write informative or explanatory texts, including the narration of technical processes, etc. PRODUCTION & DISTRIBUTION OF WRITING	ALGEBRA Standard. 2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems. Standard. 2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multistep problems. Standard. 2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. Standard. 2.1.HS.F.6 Extend the knowledge of arithmetic operations and apply to complex numbers. Standard CC.2.4.HS.B.5

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		<p>visual form (e.g. a table or chart). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
1700. SERVICE MANUAL STARTING SYSTEMS.				
1701 Identify and describe the parts of a recoil starting system.	CLUSTER: <i>Transportation,</i>	KEY IDEAS/DETAILS GRADES 9-10	TEXT TYPES AND PURPOSE	ALGEBRA Standard. 2.1.HS.F.2

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1702 Disassemble starter housing. 1703 Replace a starter spring. 1704 Replace a manual starter rope. 1705 Troubleshoot a starting/safety interlock circuit.	<p><i>Distribution and Logistics</i></p> <p>Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</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>GRADES 9-10</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.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.</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 & DISTRIBUTION OF WRITING</p>	<p>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 CC.2.4.HS.B.5 Make inferences and justify conclusions based on sample surveys, experiments, and observational studies.</p> <p>Standard CC.2.2.HS.D.3 Extend the knowledge of arithmetic operations and apply to polynomials.</p> <p>Standard CC.2.2.HS.D.8 Apply inverse operations to solve equations or formulas for a given variable.</p> <p>Standard CC.2.2.HS.D.9 Use reasoning to solve equations and justify the solution method.</p>

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		<p>Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms, 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.</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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H.</p>	<p>GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p>	

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		<p>Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
1800. SERVICE ELECTRICAL STARTING SYSTEMS.				
<p>1801 Remove, service and replace a direct current starter. 1802 Remove, service and replace an alternating current starter. 1803 Identify and describe the components of a DC starting system. 1804 Perform a 12 volt DC starter motor current draw test. 1805 Remove, test and replace a starter relay or solenoid.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2</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 & 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 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...</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>PRODUCTION &</p>	

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		<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, 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.</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>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 Develop and strengthen writing as needed.</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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F.</p>	

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1900. SERVICE IGNITION SYSTEMS.				
<p>1901 Identify, remove, service and replace battery ignition system components.</p> <p>1902 Identify, remove, service and replace electronic ignition system components.</p> <p>1903 Remove, test and replace a coil or electronic ignition.</p> <p>1904 Check and set ignition timing.</p> <p>1905 Check engine RPM.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</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 & 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 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... 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</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.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 Develop and strengthen writing as needed.</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>	

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		<p>a procedure...</p> <p>CRAFT & STRUCTURE GRADES 11-12 Standard CC.3.5.11-12.D. Determine the meaning of symbols, key terms, 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.</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 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 RADES 11-12 Standard CC.3.5.11-12.G.</p>	<p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research.</p> <p>Standard CC.3.6.9-10.G. Gather relevant information.</p> <p>Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research.</p> <p>Standard CC.3.6.11-12.G. Gather relevant information.</p> <p>Standard CC.3.6.11-12.H. Draw evidence from informational texts for</p>	

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2000. SERVICE AND TEST CHARGING SYSTEMS.				
2001 Explain storage battery theory and perform maintenance. 2002 Identify types of charging systems including an under flywheel alternator and a belt drive alternator. 2003 Perform a current drain test using a DC shunt or its equivalent. 2004 Troubleshoot a charging circuit. 2005 Test a charging system. 2006 Test a voltage regulator. 2007 Test an alternator's output. 2008 Remove and replace an alternator, a voltage rectifier, and a diode.	CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6- PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2	KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... Standard CC.3.5.9-10B & Standard CC.3.5.9-10.C 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.	TEXT TYPES AND PURPOSE GRADES 9-10 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.B Write informative or explanatory texts, including the narration of technical	

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		12, read and comprehend technical texts independently and proficiently.		
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2100. SERVICE LUBRICATION SYSTEMS.				
<p>2101 Identify types of filters used on power equipment. 2102 Interpret charts that outline oil applications. 2103 Change engine oil and filter on a variety of outdoor power equipment. 2104 Select proper oil and grade. 2105 Prepare a fuel/oil mixture for a 2 cycle engine. 2106 Service a crankcase breather assembly.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2</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 & Standard CC.3.5.9-10C 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.</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.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. Standard CC.3.6.9-10 D Develop and strengthen writing as needed. Standard CC.3.6.9-10.E Use technology, including the Internet, to produce, publish, and update</p>	

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<p>2200. IDENTIFY AND SERVICE GOVERNORS.</p>				
<p>2201 Perform static and dynamic governor adjustments. 2202 Remove, service, and replace pneumatic and mechanical governor.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i></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</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.B</p>	

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	Choose Standards from: 1 and/or 2	<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, 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.</p> <p>Standard CC.3.5.11-12.F Analyze the author’s purpose in providing an explanation, describing</p>	<p>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.</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 & DISTRIBUTION OF WRITING GRADES 11-12</p> <p>Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share</p>	

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		<p>a procedure...</p> <p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 9-10 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12</p>	<p>writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	

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		Standard CC.3.5.9-10.J AND 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.		
2300. SERVICE BRAKING SYSTEMS.				
2301 Inspect, remove, service and repair mechanical brake systems. 2302 Inspect, remove, service and repair hydraulic brake systems. 2303 Inspect, remove, service and repair drum and disc brakes. 2304 Demonstrate knowledge of the hydraulic theory. 2305 Change hydraulic fluid.	CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6- PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2	KEY IDEAS/DETAILS GRADES 9-10 Standard CC.3.5.9-10.A. Cite specific textual evidence, etc.... 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... 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	TEXT TYPES AND PURPOSE GRADES 9-10 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.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. Standard CC.3.6.9-10.E Use technology, including	

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Secondary Competency Task List 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 2.0
		<p>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, 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. 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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. Standard CC.3.5.9-10.I. Compare and contrast findings presented in a text to those from other sources, etc...</p>	<p>the Internet, to produce, publish, and update individual or shared writing products.</p> <p>PRODUCTION & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more</p>	

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		<p>INTEGRATE KNOWLEDGE/ IDEAS GRADES 11-12 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 9-10-11-12 Standard CC.3.5.9-10.J AND 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>sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	
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<p>2400. SERVICE CLUTCHES AND EQUIPMENT DRIVES.</p> <p>2401 Inspect, service or replace belts and tensioning devices. 2402 Inspect, service or replace centrifugal clutches. 2403 Inspect, service or replace clutch discs. 2404 Inspect, service or replace sprockets and chains. 2405 Inspect, service or replace an electric power take off. 2406 Inspect, service or replace universal joints.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY:</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 & Standard CC.3.5.9-10.C Determine the central ideas or conclusions of a text; etc...</p> <p>Standard CC.3.5.9-10.C Follow precisely a complex</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 Standard CC.3.6.9-10.B Write informative or explanatory texts, including the narration of technical processes, etc.</p> <p>TEXT TYPES AND</p>	
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	<p><i>Facility and Mobile Equipment Maintenance Careers</i></p> <p>Choose Standards from: 1 and/or 2</p>	<p>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, and other domain specific words... Standard CC.3.5.11-12.E. Analyze the structure of the relationships among concepts in a</p>	<p>PURPOSE GRADES 11-12 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. Standard CC.3.6.9-10 D Develop and strengthen writing as needed. 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 & DISTRIBUTION OF WRITING GRADES 11-12 Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience. Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen</p>	

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		<p>text. 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 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). Standard CC.3.5.9-10.H. Assess the reasoning in a text to support the author’s claim for solving a technical problem. 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 Standard CC.3.5.11-12.G. Integrate and evaluate multiple sources of information presented in diverse formats...to solve a problem. Standard CC.3.5.11-12.H. Evaluate the hypotheses, data, analysis, and conclusions in a technical text, verifying the data when possible. Standard CC.3.5.11-12.I. Synthesize information from a range of sources into a coherent</p>	<p>writing as needed. Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10 Standard CC.3.6.9-10.F. Conduct short and more sustained research. Standard CC.3.6.9-10.G. Gather relevant information. Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p> <p>RESEARCH GRADES 11-12 Standard CC.3.6.11-12.F. Conduct short and more sustained research. Standard CC.3.6.11-12.G. Gather relevant information. Standard CC.3.6.11-12.H. Draw evidence from informational texts for research.</p> <p>RANGE OF WRITING GRADES 9-10-11-12 Standard CC.3.5.9-10.I and Standard CC.3.5.11-12.I. Write over extended and shorter time frames for a range of tasks, purposes and audiences...etc.</p>	

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		<p>understanding.</p> <p>RANGE OF READING GRADES 9-10-11-12 Standard CC.3.5.9-10.J AND 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>		
2500. ORDER REPAIR PARTS AND KEEP RECORDS.				
<p>2501 Interpret illustrations, graphs, diagrams, and tables in repair manuals.</p> <p>2502 Use reference materials, service manuals, and parts tables to find parts.</p> <p>2503 Take inventory of parts in stock.</p> <p>2504 Determine parts and specifications using a computerized or microfiche parts reference database.</p> <p>2505 Complete a service order form.</p> <p>2506 Interpret time and flat rate information.</p> <p>2507 Order materials and supplies from a catalog.</p>	<p>CLUSTER: <i>Transportation, Distribution and Logistics</i> Choose Cluster Standards from: 1-2-3-4-5-6-</p> <p>PATHWAY: <i>Facility and Mobile Equipment Maintenance Careers</i> Choose Standards from: 1 and/or 2</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 & Standard CC.3.5.9-10.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 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,</p>	<p>TEXT TYPES AND PURPOSE GRADES 9-10 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.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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		<p>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, 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.</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>Develop and strengthen writing as needed.</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 & DISTRIBUTION OF WRITING GRADES 11-12</p> <p>Standard CC.3.6...11-12 C Produce clear and coherent writing...appropriate to task, purpose, and audience.</p> <p>Standard CC.3.6.9-10 D Standard CC.3.6.11-12.D. Develop and strengthen writing as needed.</p> <p>Standard CC.3.6.11-12.E. Use technology, including the internet, to...share writing products.</p> <p>RESEARCH GRADES 9-10</p> <p>Standard CC.3.6.9-10.F. Conduct short and more sustained research.</p> <p>Standard CC.3.6.9-10.G. Gather relevant information.</p> <p>Standard CC.3.6.9-10.H. Draw evidence from informational texts.</p>	

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