

Standards Correlations

Small Engine Technology II (8726)

Task	SOL Correlations	EETC Correlations
Demonstrating Personal Qualities and Abilities		
Demonstrate creativity and innovation.	<p>English: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1</p> <p>Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 8.2, 8.4, 8.6, 8.7, 8.11, 8.12, 8.17, 8.18, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, AII.9, COM.1, COM.3, COM.4, COM.5, COM.8, DM.7, DM.1*, DM.10, DM.2*, DM.3*, PS.3*, PS.4*, PS.7*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1</p>	
Demonstrate critical thinking and problem solving.	<p>English: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8</p>	

Task	SOL Correlations	EETC Correlations
	History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.10, 6.11, 7.2, 7.3, 7.8, 7.12, 7.13, 8.2, 8.4, 8.8, 8.9, 8.10, 8.11, A.8, A.9, G.1, G.13, G.14, AFDA.3, AFDA.5, AFDA.8, AII.9, AII.10, AII.11, COM.1, COM.3, COM.4, COM.5, COM.8, DM.4, DM.7, DM.1*, DM.2*, DM.3*, DM.9*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1	
Demonstrate initiative and self-direction.	English: 6.1, 6.4, 6.6, 6.7, 6.9, 7.1, 7.4, 7.6, 7.7, 7.9, 8.1, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate integrity.	English: 6.1, 7.1, 8.1, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate work ethic.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
Demonstrating Interpersonal Skills		

Task	SOL Correlations	EETC Correlations
Demonstrate conflict-resolution skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.4, 8.6, 8.7, 8.9, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, VUS.1	
Demonstrate listening and speaking skills.	English: 6.1, 6.2, 6.4, 6.6, 7.1, 7.2, 7.4, 7.6, 8.1, 8.2, 8.4, 8.6, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate respect for diversity.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, USII.9, VUS.1, VUS.13, WG.1, WHI.1, WHII.1	
Demonstrate customer service skills.	English: 6.1, 6.4, 6.7, 7.1, 7.4, 7.7, 8.1, 8.4, 8.7, 9.1, 9.5, 9.6, 10.1, 10.5, 10.6, 11.1, 11.5, 11.6, 12.1, 12.5, 12.6 History and Social Science: CE.1, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Collaborate with team members	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrating Professional Competencies		
Demonstrate big-picture thinking.	English: 6.1, 6.4, 7.1, 7.4, 8.1, 8.4, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5	

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	History and Social Science: CE.1, CE.4, CE.12, GOVT.1, GOVT.15, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate career- and life-management skills.	English: 6.1, 6.7, 7.1, 7.7, 8.1, 8.7, 9.1, 9.6, 10.1, 10.6, 11.1, 11.6, 12.1, 12.6 History and Social Science: CE.1, CE.4, CE.12, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 8.4	
Demonstrate continuous learning and adaptability.	English: 6.1, 6.4, 6.7, 6.9, 7.1, 7.4, 7.7, 7.9, 8.1, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.3, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: BIO.1, CH.1, LS.1, PH.1, PH.4, PS.1	
Manage time and resources.	English: 6.1, 6.2, 6.4, 6.7, 6.9, 7.1, 7.2, 7.4, 7.7, 7.9, 8.1, 8.2, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 8.4, 8.11, 8.12, 8.13, 8.14, 8.17, 8.18, A.4, A.5, A.8, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, COM.1, COM.3, COM.5, COM.8	

Task	SOL Correlations	EETC Correlations
Demonstrate information-literacy skills.	<p>English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.9, 9.2, 9.5, 9.6, 9.8, 10.2, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: 6.10, 6.11, 7.8, 7.9, 8.11, 8.12, A.8, A.9, AFDA.3, AFDA.4, AFDA.6, AFDA.7, AFDA.8, DM.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.9*, PS.10*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1</p>	
Demonstrate an understanding of information security.	<p>English: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.8, 8.9, 9.1, 9.2, 9.5, 9.6, 9.8, 10.1, 10.2, 10.5, 10.6, 10.8, 11.1, 11.2, 11.5, 11.6, 11.8, 12.1, 12.2, 12.5, 12.6, 12.8</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: COM.10</p>	
Maintain working knowledge of current information-technology (IT) systems.	<p>English: 6.1, 6.3, 6.4, 6.6, 6.9, 7.1, 7.3, 7.4, 7.6, 7.9, 8.1, 8.3, 8.4, 8.6, 8.9</p> <p>History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1</p> <p>Mathematics: 7.8, COM.1, COM.2, COM.7, COM.9, COM.10, COM.11, COM.16, COM.18, PS.17</p>	

Task	SOL Correlations	EETC Correlations
	Science: BIO.1, CH.1, ES.1, PH.1	
Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.	History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.9, 8.4, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AII.4, AII.7, AII.9, COM.1, COM.7, COM.10, COM.11, COM.12, COM.16 Science: CH.1, ES.1, LS.1, PH.1, PS.1	
Apply mathematical skills to job-specific tasks.	English: 6.4, 6.6, 6.7, 7.4, 7.6, 7.7, 8.4, 8.6, 8.7, 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.5, 6.6, 6.12, 6.13, 6.14, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12, 7.13, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.17, 8.18, A.1, A.3, A.4, A.5, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AFDA.8, AII.3, AII.7, AII.9, AII.10, COM.1, COM.7 Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1	
Demonstrate professionalism.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	

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Demonstrate reading and writing skills.	English: 6.1, 6.6, 6.7, 7.1, 7.6, 7.7, 8.1, 8.6, 8.7, 9.1, 9.5, 9.6, 9.7, 10.1, 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1, 12.5, 12.6, 12.7 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: 6.1, PH.1, PS.1	
Demonstrate workplace safety.	English: 6.4, 7.4, 8.4, 9.5, 10.5, 11.5, 12.5 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
Examining All Aspects of an Industry		
Examine aspects of planning within an industry/organization.	History and Social Science: GOVT.16	
Examine aspects of management within an industry/organization.		
Examine aspects of financial responsibility within an industry/organization.		
Examine technical and production skills required of workers within an industry/organization.		
Examine principles of technology that underlie an industry/organization.		
Examine labor issues related to an industry/organization.	History and Social Science: GOVT.16	

Task	SOL Correlations	EETC Correlations
Examine community issues related to an industry/organization.	History and Social Science: GOVT.16	
Examine health, safety, and environmental issues related to an industry/organization.	History and Social Science: GOVT.16	
Addressing Elements of Student Life		
Identify the purposes and goals of the student organization.		
Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.		
Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.		
Identify Internet safety issues and procedures for complying with acceptable use standards.		
Exploring Work-Based Learning		
Identify the types of work-based learning (WBL) opportunities.		
Reflect on lessons learned during the WBL experience.		
Explore career opportunities related to the WBL experience.		

Task	SOL Correlations	EETC Correlations
Participate in a WBL experience, when appropriate.		
Applying Safety Practices on the Job		
Identify marked safety areas.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	105 Regulations–1, 2
Identify the location and use of industry-accepted safety devices.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	103 Personal Safety–4
Identify the location of the posted evacuation routes.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	104 Emergency Awareness–2
Demonstrate knowledge of safety data sheets (SDS).	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	105 Regulations–3

Task	SOL Correlations	EETC Correlations
	Science: CH.1	
Demonstrate the safe use of chemicals.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9 Science: CH.1	105 Regulations–4
Demonstrate the safe use of standard and metric hand tools.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	401 Service Tools and Equipment–1,2 402 Hand Tools– 1,2, 3
Demonstrate the safe use of power tools.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	400 Tools and Equipment 401 Service Tools and Equipment–1, 2
Demonstrate the safe use of lab equipment, lifting equipment, and blocking equipment.	English: 11.5, 12.5 History: WHII 8 VUS 8	101 Work Habits –1, 2 404 Hand Tools– 1, 2, 3, 4

Task	SOL Correlations	EETC Correlations
	Govt 7, 8, 9	
Demonstrate the safe use of diagnostic and testing equipment.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	401 Service Tools and Equipment– 1, 2
Demonstrate the safe use of standard and metric precision measuring tools.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	403 Precision Measuring Tools–1, 2, 3, 4, 5, 6, 7
Demonstrate the safe use of protective clothing and equipment.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9	103 Personal Safety–1, 2, 3
Demonstrate the safe use of fire protection equipment.	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9 Science: CH.1	104 Emergency Awareness–1

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Demonstrate the safe use of outdoor power equipment.	History: WHII 8 VUS 8 Govt 7, 8, 9	
Follow safety standards and regulations of the U.S. Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), the Equipment and Engine Training Council (EETC), and Safety Data Sheets (SDS).	English: 11.5, 12.5 History: WHII 8 VUS 8 Govt 7, 8, 9 Science: CH.1	105 Regulations–5
Performing Lab Operations		
Maintain a daily and weekly work schedule.	English: 11.1, 11.5, 12.1, 12.5	
Maintain a time record for each lab job.	English: 11.5, 12.5	
Determine economic feasibility of repair.	English: 11.5, 12.5	
Write a service order.	English: 11.1, 11.5, 12.1, 12.5	200 Shop Practices–1 600 Four Stroke Engine Service–21
Calculate labor cost using a flat rate manual.	English: 11.5, 12.5	300 Technical Publications–3
Identify the importance of a work order.	English: 11.5, 12.5	200 Shop Practices–1
Interpret manufacturer’s illustrated parts lists (IPL) and schematics.	English: 11.5, 12.5	300 Technical Publications–4
Prepare warranty reports.	English: 11.5, 12.5	200 Shop Practices–3

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Adhere to inventory controls.	English: 11.5, 11.8, 12.5, 12.8	
Maintain a clean and orderly lab and work area according to OSHA standards.	History: WHII 8 VUS 8 Govt 7, 8, 9	100 Shop Safety 102 Work Environment–1
Demonstrate understanding of cutting attachment operation, replacement, and sharpening.		300 Two Stroke Engine 301 Test Engine–10
Prepare equipment for delivery.	English: 11.5, 11.6, 12.5, 12.6	
Diagnosing and Troubleshooting a Four-Stroke Engine		
Determine wear on internal engine parts using precision standard and metric measuring tools.	English: 11.5, 12.5	400 Tools and Equipment 403 Precision Measuring Tools –1, 2, 3
Service engine cylinder.	English: 11.5, 12.5	600 Four Stroke Engine Service–4, 5
Diagnose compression problems.	English: 11.5, 12.5	600 Four Stroke Engine Service–2, 3, 6, 7, 11
Reassemble a long block.	English: 11.5, 12.5	600 Four Stroke Engine Service–11
Diagnose needed repair on four-stroke engine components.	English: 11.5, 12.5	500 Four Stroke Engine Diagnosis –4, 5, 6, 7, 22
Diagnosing and Troubleshooting the Fuel System		
Service the fuel pump.	English: 11.5, 12.5	

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Service the fuel system.	English: 11.5, 12.5	200 Maintenance 204 Fuel System Engine Maintenance–10, 11
Describe the components and operation of an electronic fuel injection system.	English: 11.5, 12.5	100 Small Engine Fundamentals 104 Engine Components–36
Diagnosing and Troubleshooting the General Electrical System		
Service a direct current (DC) electric starter/generator.	English: 11.5, 12.5	
Troubleshoot the charging circuit, using a manufacturer's guide.	English: 11.5, 12.5	100 Electrical Systems 101 Electrical Theory–30
Service the starter/generator pulley and belt.	English: 11.5, 12.5	
Service the alternator.	English: 11.5, 12.5	100 Electrical Systems 101 Electrical Theory–41
Explain how alternating current (AC) is converted to DC voltage.	English: 11.5, 12.5 Science: PH.11	100 Electrical Systems 101 Electrical Theory–28, 29, 31, 32
Service alternator components.	English: 11.5, 12.5	100 Electrical Systems

Task	SOL Correlations	EETC Correlations
		101 Electrical Theory–41
Service the starting circuit.	English: 11.5, 12.5	100 Small Engine Fundamentals, 100 Electrical Systems 101 Electrical Theory–13, 20, 23, 39, 42, 43, 104 Engine Components–49, 50 500 Four Stroke Engine Diagnosis–21
Repair signs of corrosion or damage in an electrical system.		100 Electrical Systems 101 Electrical Theory–21, 34
Diagnosing and Troubleshooting the Ignition System		
Service a coil/magneto.	English: 11.5, 12.5	500 Four Stroke Engine Diagnosis –9, 13, 14, 15, 20
Explain the operation of an electronic ignition system.	English: 11.5, 12.5	500 Four Stroke Engine Diagnosis –9, 12, 14, 16, 19
Diagnosing and Troubleshooting Two-Stroke Engines		
Diagnose two-stroke engine components.	English: 11.5, 12.5	300 Two Stroke Engine 301 Two Stroke Engine–1, 3, 6, 7, 12
Determine wear on internal engine parts using precision standard and metric measuring tools.	English: 11.5, 12.5	400 Two Stroke Engine Overhaul 401 Disassembly, Inspection, and Repair–1, 4

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Diagnosing and Troubleshooting Small-Engine Equipment		
Adjust controls (i.e., cables, rods, and springs).	English: 11.5, 12.5	
Service drive trains and power take-off (PTO) systems.	English: 11.5, 12.5	100 Small Engine Fundamentals 104 Engine Components–48
Identify the five major categories of failure analysis for two- and four-stroke engines.	English: 11.5, 12.5	700 Failure Analysis–1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17
Performing Thermal Cutting Processes and Welding Operations		
Use an oxy-acetylene torch.	English: 11.5, 12.5	
Operate gas metal arc welding equipment.		
Operate manual plasma arc cutting equipment.		
Maintaining Wheels and Tires		
Inspect tire condition.		
Service a wheel.	English: 11.5, 12.5	
Repair an off-road tire, using an internal patch or plug.	English: 11.5, 12.5	
Repair an on-road tire.		
Repairing Fasteners		
Repair damaged thread using a tap and die set.	English: 11.5, 12.5	400 Two Stroke Engine Overhaul 401 Disassembly Inspection and Repair–8

Task	SOL Correlations	EETC Correlations
Repair damaged thread using thread inserts (i.e., helicoil thread insert).	English: 11.5, 12.5	400 Two Stroke Engine Overhaul 401 Disassembly Inspection and Repair-8