Small Engine Repair/Power Sports Evaluation Tool

2020 Curricular Materials Review

Idaho CTE Agriculture, Food, and Natural Resources (AFNR) Small Engine Repair/Power Sports Program Standards[[1]](#footnote-1)

**Publisher information**

* Publisher Name:
* Title:
* Grade Level:
* ISBN #:
* Author:
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# Instructions:

Complete the Publisher Standards Alignment Report below. Please provide written justification as to how the material meets the standard along with location references. If a justification requires additional space, please submit response on an additional document.

# Publisher STANDARDS ALIGNMENT Report:

## Standard SEPS.1.0: Basic Safety

### Performance Standard SEPS.1.1 Workplace Safety

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.1.1.1 Describe general shop safety rules and procedures. |  |
| CTE SEPS.1.1.2 Utilize safe procedures for handling of tools and equipment. |  |
| CTE SEPS.1.1.3 Utilize proper ventilation procedures for working within the lab/shop area. |  |
| CTE SEPS.1.1.4 Identify marked safety areas. |  |
| CTE SEPS.1.1.5 Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other safety equipment. |  |
| CTE SEPS.1.1.6 Identify the location and use of eye wash stations. |  |
| CTE SEPS.1.1.7 Identify the location of the posted evacuation routes. |  |
| CTE SEPS.1.1.8 Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities. |  |
| CTE SEPS.1.1.9 Identify and wear appropriate clothing for lab/shop activities. |  |
| CTE SEPS.1.1.10 Secure hair and jewelry for lab/shop activities. |  |
| CTE SEPS.1.1.11 Locate and interpret safety data sheets (SDS). |  |
| CTE SEPS.1.1.12 Handle, store, and dispose of hazardous and flammable waste and materials. |  |

Standard SEPS.2.0: Tools

### Performance Standard SEPS.2.1 Basic Tools

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.2.1.1 Identify basic tools. |  |
| CTE SEPS.2.1.2 Identify basic tool usage. |  |
| CTE SEPS.2.1.3 Demonstrate common tools knowledge. |  |
| CTE SEPS.2.1.4 Determine maintenance procedures. |  |

### **Standard SEPS.3.0: Fasteners**

### Performance Standard SEPS.3.1 Proper Use of Fasteners

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.3.1.1 Define fastener terms. |  |
| CTE SEPS.3.1.2 Identify fasteners. |  |
| CTE SEPS.3.1.3 Select correct fasteners. |  |
| CTE SEPS.3.1.4 Rethread tapped holes. |  |
| CTE SEPS.3.1.5 Rethread damaged fasteners. |  |
| CTE SEPS.3.1.6 Remove seized fasteners. |  |
| CTE SEPS.3.1.7 Demonstrate proper torque methods. |  |
| CTE SEPS.3.1.8 Demonstrate common fastener knowledge. |  |
| CTE SEPS.3.1.9 Select specific application of threaded and non-threaded fasteners. |  |
| CTE SEPS.3.1.10 Select seized nut and bolt removal methods. |  |
| CTE SEPS.3.1.11 Demonstrate common fastener knowledge command. |  |

### **Standard SEPS.4.0: Measurement**

### Performance Standard SEPS.4.1 Precision Measuring Instruments

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.4.1.1 Define measuring terms. |  |
| CTE SEPS.4.1.2 Identify measuring instruments. |  |
| CTE SEPS.4.1.3 Determine measuring steps. |  |
| CTE SEPS.4.1.4 Demonstrate the use of measuring instruments. |  |
| CTE SEPS.4.1.5 Demonstrate precision measuring. |  |

### **Standard SEPS.5.0: Basic Electrical**

### Performance Standard SEPS.5.1 Basic Electrical Theory and System

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.5.1.1 Identify basic electrical schematic symbols. |  |
| CTE SEPS.5.1.2 Identify parts of a basic electrical system. |  |
| CTE SEPS.5.1.3 Understand basic electrical theory. |  |
| CTE SEPS.5.1.4 Understand basic electrical circuits. |  |
| CTE SEPS.5.1.5 Demonstrate proper use of a multimeter. |  |

### **Standard SEPS.6.0: Engine Design and Theory**

### Performance Standard SEPS.6.1 Basic Engine Principles and Design

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.1.1 Identify engine type and application. |  |
| CTE SEPS.6.1.2 Identify type of operation. |  |
| CTE SEPS.6.1.3 Explain theory of operation. |  |
| CTE SEPS.6.1.4 Identify engine components and their function. |  |
| CTE SEPS.6.1.5 Interpret various engine model codes. |  |
| CTE SEPS.6.1.6 Understand the terms of work, horsepower, torque, displacement and compression. |  |

### Performance Standard SEPS.6.2 Operation of a 2-Stroke Engine

|  |  |
| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.2.1 Define 2‐stroke engine terms. |  |
| CTE SEPS.6.2.2 Define 2‐stroke engine operations. |  |
| CTE SEPS.6.2.3 Identify 2‐stroke engine components. |  |
| CTE SEPS.6.2.4 Demonstrate knowledge of 2‐stroke engine operation. |  |
| CTE SEPS.6.2.5 Diagnose, troubleshoot, and repair a 2‐stroke engine. |  |

### Performance Standard SEPS.6.3 Operation of a 4-Stroke engine

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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.3.1 Define 4‐stroke engine terms. |  |
| CTE SEPS.6.3.2 Define 4‐stroke engine operations. |  |
| CTE SEPS.6.3.3 Identify 4‐stroke engine components. |  |
| CTE SEPS.6.3.4 Demonstrate knowledge of 4‐stroke engine operation. |  |
| CTE SEPS.6.3.5 Diagnose, troubleshoot, and repair a 4‐stroke engine. |  |

### Performance Standard SEPS.6.4 Overhaul a 4-Stroke Engine

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.4.1 Diagnose various engine problems. |  |
| CTE SEPS.6.4.2 Demonstrate engine overhaul knowledge and competence. |  |
| CTE SEPS.6.4.3 Perform and evaluate failure analysis. |  |
| CTE SEPS.6.4.4 Disassemble and evaluate a 4‐stroke engine. |  |
| CTE SEPS.6.4.5 Inspect internal components. |  |
| CTE SEPS.6.4.6 Service, replace or repair damaged internal components. |  |
| CTE SEPS.6.4.7 Reassemble a 4‐stroke engine. |  |

### Performance Standard SEPS.6.5 Overhaul a 2-Stroke Engine

|  |  |
| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.5.1 Diagnose various engine problems. |  |
| CTE SEPS.6.5.2 Demonstrate engine overhaul knowledge and competence. |  |
| CTE SEPS.6.5.3 Perform and evaluate failure analysis. |  |
| CTE SEPS.6.5.4 Disassemble and evaluate a 2‐stroke engine. |  |
| CTE SEPS.6.5.5 Inspect internal components. |  |
| CTE SEPS.6.5.6 Service, replace or repair damaged internal components. |  |
| CTE SEPS.6.5.7 Reassemble a 2‐stroke engine. |  |

### Performance Standard SEPS.6.6 Cooling and Lubrication Systems

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.6.1 Identify type of cooling and lubrication systems. |  |
| CTE SEPS.6.6.2 Identify the components and function of a cooling system. |  |
| CTE SEPS.6.6.3 Identify the components and function of a lubrication system. |  |
| CTE SEPS.6.6.4 Identify proper types of oils and their applications. |  |

### Performance Standard SEPS.6.7 Fuel Systems

|  |  |
| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.7.1 Define types of fuel systems. |  |
| CTE SEPS.6.7.2 Define fuel system theory. |  |
| CTE SEPS.6.7.3 Identify fuel system components and their functions. |  |
| CTE SEPS.6.7.4 Identify fuel system supply functions. |  |
| CTE SEPS.6.7.5 Service fuel systems components. |  |
| CTE SEPS.6.7.6 Diagnose, troubleshoot and repair fuel system malfunctions. |  |

### Performance Standard SEPS.6.8 Governor Systems

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.8.1 Identify different types of governor systems and their components. |  |
| CTE SEPS.6.8.2 Identify governor theory, operation, and adjustments. |  |
| CTE SEPS.6.8.3 Diagnose, troubleshoot and repair governor malfunctions. |  |

### Performance Standard SEPS.6.9 Ignition Systems

|  |  |
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| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.9.1 Identify basic types of ignition systems and theory of operation. |  |
| CTE SEPS.6.9.2 Identify components and functions of a basic ignition system. |  |
| CTE SEPS.6.9.3 Diagnose, troubleshoot, and repair ignition system malfunctions. |  |

### Performance Standard SEPS.6.10 Charging Systems

|  |  |
| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.10.1 Identify basic types of charging systems and theory of operation. |  |
| CTE SEPS.6.10.2 Identify components and functions of a basic charging system. |  |
| CTE SEPS.6.10.3 Diagnose, troubleshoot, and repair charging system malfunctions. |  |

### Performance Standard SEPS.6.11 Starting Systems

|  |  |
| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.6.11.1 Identify basic types of starting systems and theory of operation. |  |
| CTE SEPS.6.11.2 Identify components and functions of a basic starting system. |  |
| CTE SEPS.6.11.3 Diagnose, troubleshoot, and repair starting system malfunctions. |  |

### **Standard SEPS.7.0: Maintenance**

### Performance Standard SEPS.7.1 Basic Maintenance

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.7.1.1 Describe a periodic maintenance program. |  |
| CTE SEPS.7.1.2 Research owner’s manuals, service schedules, and manufacturer’s data to perform proper periodic maintenance. |  |

### **Standard SEPS.8.0: Parts and Service Management**

### Performance Standard SEPS.8.1 Parts and Service Operation

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| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.8.1.1 Understand the concept of inventory control. |  |
| CTE SEPS.8.1.2 Identify how to look up parts. |  |
| CTE SEPS.8.1.3 Ability to look up flat rate. |  |
| CTE SEPS.8.1.4 Complete a customer service order. |  |
| CTE SEPS.8.1.5 Explain why parts management and inventory control is needed. |  |

### **Standard SEPS.9.0: Career Exploration**

### Performance Standard SEPS.9.1 Career Opportunities

|  |  |
| --- | --- |
| Student Competencies by Performance Standard | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| CTE SEPS.9.1.1 List and describe the types of employment opportunities in power sports/small engine repair. |  |

# Indicators of quality Rubric:

Standards aligned and Integrated Curriculum:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The curriculum is based on industry-validated technical standards and competencies.
 |  |
| 1. The curriculum is aligned with relevant content and standards for core subjects, such as reading, math and science, including federal, state and/or local standards, as appropriate.
 |  |
| 1. The curriculum incorporates employability skill standards that help students succeed in the workplace, such as problem solving, critical thinking, teamwork, communications and workplace etiquette.
 |  |
| 1. The curriculum allows for student application of integrated knowledge and skills in authentic scenarios.
 |  |
| 1. Materials used reflect current workplace, industry and/or occupational practices and requirements.
 |  |

Access and Equity:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Materials are provided in a way that ensures all students have the opportunity to achieve success in the program of study, including by meeting Title IX, Americans with Disabilities Act and other accessibility requirements.
 |  |
| 1. Materials and assessments are free from bias, inclusive and non-discriminatory, and offered in a way that ensures all students have the opportunity to achieve success in the program of study.
 |  |
| 1. Contains guidance to support differentiated and culturally responsive (i.e., purposefully represents diverse cultures, linguistic backgrounds, learning styles and interests) instruction in the classroom so that every student’s need are addressed by including:
	1. Suggestions for how to promote equitable instruction by making connections to culture, home, neighborhood, and community as appropriate.
	2. Appropriate scaffolding, interventions, and supports, including integrated and appropriate reading, writing, listening, and speaking alternatives (e.g., translations, picture support, graphic organizers) that neither sacrifice content nor avoid language development for English language learners, special needs, or below grade level readers.
	3. Digital and print resources that provide various levels of readability.
	4. Modifications and extensions for all students, including those performing above their grade level, to deepen understanding of the content.
	5. Materials in multiple language formats.
 |  |

Student Focus:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The material supports the sequential and cumulative development of foundational skills and progresses in specificity to build students’ depth of knowledge and skills. Those skills are necessary for a student’s independent comprehension of grade-level complex texts and mastery of tasks called for by the standards.
 |  |
| 1. Content and standards within the program of study are non-duplicative and vertically aligned to prepare students to transition seamlessly to the next level of education.
 |  |
| 1. The material provides many and varied opportunities for students to work with each standard within the grade level.
 |  |
| 1. The material cross-refers and integrates other content areas.
 |  |
| 1. The material has a balance of text types and lengths that encourage close, in-depth reading and rereading, analysis, comparison, and synthesis of texts.
 |  |
| 1. The material includes sufficient supplementary activities or assignments that are appropriately integrated into the text.
 |  |
| 1. The material has activities and assignments that develop problem-solving skills and foster synthesis and inquiry at both an individual and group level.
 |  |
| 1. The material has activities and assignments that reflect varied learning styles of students.
 |  |
| 1. The material includes appropriate instructional strategies.
 |  |
| 1. Project-based learning and related instructional approaches, such as problem-based, inquiry-based and challenge-based learning, are fully integrated into the material.
 |  |

Pedagogical Approach:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Provides guidance for teachers throughout for how learning experiences build on each other to support students in developing a deep understanding of the content.
 |  |
| 1. Provides scaffolded supports for teachers to facilitate learning of the content so that students are increasingly responsible for making sense of the content.
 |  |
| 1. The material provides opportunities for supporting English language learners to regularly and actively participate with grade-level text.
 |  |
| 1. The material gives clear and concise instruction to teachers and students. It is easy to navigate and understand.
 |  |
| 1. Includes appropriate academic and content-specific vocabulary in the context of the learning experience that is accessible, introduced, reinforced, reviewed, and augmented with visual representations when appropriate.
 |  |
| 1. Allows teachers to access, revise, and print form digital resources (e.g., readings, labs, assessments, rubrics).
 |  |
| 1. Uses varied modes (selected, constructed, project-based, extended response, and performance tasks) of instruction-embedded pre-, formative, summative, peer, and, self-assessment measures of learning.
 |  |
| 1. Includes editable and aligned rubrics, scoring guidelines, and exemplars that provide guidance for assessing student performance and to support teachers in planning instruction and providing ongoing feedback to students.
 |  |
| 1. Provides multiple opportunities for students to demonstrate and receive feedback on performance of practices connected with their understanding of concepts.
 |  |

Presentation and Design:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. The material has an aesthetically appealing appearance.
 |  |
| 1. Digital and print materials are consistently formatted, visually focused, and uncluttered for efficient use.
 |  |
| 1. The material has a reasonable and appropriate balance between text and illustration. The material has grade-appropriate font size.
 |  |
| 1. The illustrations clearly cross-reference the text, are directly relevant to the content (not simply decorative), and promote thinking, discussion, and problem solving.
 |  |
| 1. Non-text content (performance clips, images, maps, globes, graphs, pictures, charts, databases, and models) are accurate and well integrated into the text.
 |  |

Technology:

| Standards | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions, not just page numbers. |
| --- | --- |
| 1. Technology and digital media support, extend, and enhance learning experiences.
 |  |
| 1. The material has “platform neutral” technology (i.e., cloud based) and availability for networking.
 |  |
| 1. The material has a user-friendly and interactive interface allowing the user to control (shift among activities).
 |  |

For Questions Contact

Content & Curriculum

Idaho State Department of Education

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1. [Idaho AFNR Small Engine Repair/Power Sports Program Standards](https://cte.idaho.gov/wp-content/uploads/2016/01/Small_Engine_Repair_Power_Sports_Standards.pdf) [↑](#footnote-ref-1)