Forestry Equipment

Forestry Equipment is a one-credit course designed to enable students to become knowledgeable in the maintenance and safe operation of all equipment used in the forestry industry, including types of gasoline and diesel engines. Topics include career opportunities, safety, large equipment, small equipment, engine maintenance, and hydraulics.

Content standards for this course are not intended to serve as the entire curriculum. Teachers are encouraged to expand the curriculum beyond the limits of these content standards to accommodate specific community interests and utilize local resources. This course encourages critical thinking, use of the scientific method, integration of technology, development of student leadership skills, and application of knowledge and skills related to practical questions and problems. Safety concepts are integrated into instruction to the maximum extent possible.

Career and technical student organizations are integral, cocurricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

### Career Opportunities

Students will:

1. Examine careers in sales and service of forestry equipment.

### Safety

2. Recognize the need for safety clothing and gear used in the forestry industry.
   - Identifying safe practices in the forestry mechanics industry
   - Describing the safe operation and maintenance of forestry equipment

### Large Equipment

3. Compare uses of tree-harvesting equipment.
   - Examples: skidder, loader, cutting machine, delimber

4. Identify road and fire lane maintenance equipment.
   - Examples: bulldozer, road grader

### Small Equipment

5. Demonstrate the use of forestry hand tools, including pruning saws, bow saws, loppers, and brush cutters.

6. Identify sharpening techniques for chain saws, axes, pruners, and pole saws.
7. Identify types of urban forestry equipment, including tree-climbing equipment and tree-moving equipment.

8. Explain common techniques of chain saw maintenance.
   - Identifying major components of a chain saw
   - Differentiating types of chains used on a chain saw

**Engine Maintenance**

9. Identify systems that require inspection before engine operation.

10. Describe preparation of forestry equipment for storage.
    Examples: draining fluids, lubricating

**Hydraulics**

11. Describe uses of hydraulic systems in the forestry industry.
    - Identifying basic components of a simple hydraulic system
    - Comparing advantages and disadvantages of using a hydraulic system