



## MODULE DESCRIPTION

This module introduces students to the ways in which power, mechanical, and technical systems are utilized in the agriculture industry. Students investigate ways the agriculture industry uses physical science principles and engineering applications to solve problems and improve performance in p

- d) Demonstrate appropriate use and care of Personal Protective Equipment (PPE) and safety apparel in agriculture

### 3. TOOLS, EQUIPMENT, AND MACHINERY

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#### STUDENTS WILL:

- a) Identify and select the appropriate tools, equipment, and machinery for use in specific agricultural tasks
- b) Investigate the role and importance of regularly scheduled inspection and maintenance of agricultural tools, equipment, and machines
- c) Demonstrate development of hand and power tool skills through practice of these skills in a variety of classroom applications

### 4. PROJECT DESIGN AND CONSTRUCTION

## 6. CAREERS IN AGRICULTURE POWER, MECHANICS, AND TECHNICAL FIELDS

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STUDENTS WILL

a)

their construction project design. Groups present their plans, and the class decides which project to construct.

## HEALTH, SAFETY, AND WELLNESS

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### PERSONAL PROTECTIVE EQUIPMENT

Students research common safety hazards associated with agricultural tools, equipment, and machinery. Students investigate the Personal Protective Equipment (PPE) and safety apparel available to protect agricultural workers from common hazards. Students prepare safety posters reminding classmates to utilize PPE and safety apparel each time they are using agricultural tools, equipment, or machines. Hang safety posters in strategic locations throughout the classroom.

## PROBLEM SOLVING AND INNOVATION

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### THE PERFECT TOOL

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STANDARD 2: INTEGRATED LEARNING

Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings

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STANDARD 3A: UNIVERSAL FOUNDATION SKILLS

Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace

## UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) FOREST SERVICE

<https://www.fs.usda.gov/main/conservationeducation/educator-toolbox/middle-school>

This website contains a variety of Forest Service and partner conservation education programs and materials for middle school teachers and students.

## NEW YORK AGRICULTURE IN THE CLASSROOM (NYAITC)

<https://newyork.agclassroom.org/>

This website is a partnership of Cornell University, the NYS Department of Agriculture and Markets, the NYS Education Department, Cornell Cooperative Extension, and the New York Farm Bureau. Resources include the Agricultural Literacy Curriculum Matrix, lesson plans, and websites for classroom use.

