

## Agricultural Power and Technology Course Description

The focus of *Agricultural Power and Technology* (APT) is to expose students to mechanics, power, technology, and career options in the world of agriculture. Students participating in the APT course will have experiences in various mechanical and engineering concepts with exciting hands-on activities, projects, and problems. Student's experiences will involve the study of energy, tool operation and safety, material properties, machine operation, and structural components. Students will acquire the basic skills to operate, repair, engineer, and design agricultural tools and equipment. Throughout the course, students will apply engineering principles to the construction of machines and structures.

Students will explore projects and problems similar to those that a tradesperson, technician, or engineer may face in their respective careers. In addition, students will understand specific connections between science, math, and technical skills applied to Supervised Agricultural Experiences and FFA components that play an important role in developing an informed agricultural education student. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community.

The *Agricultural Power and Technology* course includes:

- Shop Safety
- Tool Operation
- Material Selection and Uses
- Fabrication
- Energy and Power Production
- Machine Components and Design
- Agricultural Structures
- Engineering Design Process
- Technical Applications of Math and Science

### ***Student-Friendly Course Description***

*Agricultural Power and Technology* (APT) exposes students to mechanics, power, technology, and career options in the world of agriculture. Students participating in the APT will experience mechanical and engineering concepts with exciting hands-on activities, with two to three labs per week. Students will acquire the basic skills to operate, repair, engineer, and design agricultural tools and equipment.

The *Agricultural Power and Technology* course includes:

- Shop Safety
- Tool Operation
- Material Selection and Uses
- Fabrication
- Energy and Power Production
- Machine Components and Design
- Agricultural Structures
- Engineering Design Process