

Agriscience Power Standards**Introduction to Agriculture, Food, and Natural Resources:**

1. Students will identify the impact of agriculture, food, and natural resources on the economy, both local and global.
2. Students will recognize the steps food takes to get from the farm to them.
3. Students will create a small woods project in the ag shop.
4. Students will utilize practical applications of agriculture content to better understand agriculture topics.
5. Students will explore career opportunities in the agriculture, food, and natural resources industries.
6. Students will explore opportunities in FFA.
7. Students will participate in leadership development opportunities during class.

Home Repairs:

1. Students will identify careers in the construction industry.
2. Students will demonstrate safe practices in the ag shop.
3. Students will calculate a bill of materials for a given project to be built.
4. Students will be able to complete accurate measurements to 1-16th of an inch.
5. Students will construct projects out of wood.
6. Students will determine the difference between cement and concrete
7. Students will mix concrete.
8. Students will construct a concrete block wall.
9. Students will use trouble shooting skills to solve problems that arise in construction.
10. Group work will be emphasized along with individual competence.

Ag Occupations:

1. Students will assess their personal values, interests, and strengths.
2. Students will compare and contrast different post-secondary options.
3. Students will identify the career clusters and research different career areas.
4. Students will write a research paper on a chosen career.
5. Students will prepare for the job-search process by completing a job application, resume, cover letter, and reference list.
6. Students will participate in a mock interview.
7. Students will communicate with potential employers.
8. Students will learn the expectations for On-the-Job-Training and complete a safety test.
9. Students will complete an Agricultural Experience project, which is a hands-on work experience project or job shadow.

Companion Animals:

1. Students will evaluate important criteria for selecting a pet and determine their costs.
2. Students will identify the necessary requirements of caring for a pet.
3. Students will diagram companion animal anatomy.
4. Students will understand animal body systems of companion animals including the following systems: digestive, reproductive, and skeletal.
5. Students will identify feedstuffs, analyze commercial foods, and determine proper feed and water requirements for companion animals.
6. Students will identify signs of a healthy animal, apply first aid care to animals, and recognize when to seek professional health care for companion animals.
7. Students will describe normal animal behavior of companion animals.
8. Students will identify professional societies and the role of humane societies.
9. Students will recognize the importance of proper animal hygiene.
10. Students will determine safe methods for handling animals.
11. Students will complete an Agricultural Experience project, which is a hands-on work experience project or job shadow.

Fish and Wildlife:

1. Students will identify and explain the parts of a habitat.
3. Students will understand the role of competition and predation within an ecosystem.
4. Students will explain the difference between conservation and preservation.
5. Students will explain the difference between endangered and threatened species.
6. Students will analyze the impact of harvesting regulations and practices on the management of large wildlife mammal populations.
7. Students will identify species of fish.
8. Students will identify fur wildlife species.
9. Students will profile the various life cycles of the different species discussed.
10. Students will identify major species of game birds.
11. Students will create a fishing pole.
12. Students will explain the importance of hunting and hunting regulations.
13. Students will determine the economic and aesthetic benefits that wildlife management practices provide for local, regional, or state economies.
14. Students will complete an Agricultural Experience project, which is a hands-on work experience project or job shadow.

Revised 2021

Food Chemistry:

1. Students will utilize the scientific method.
2. Students will describe their scientific findings using claim, evidence, and reasoning.
3. Students will analyze their scientific findings by writing a lab report.
4. Students will explore the food science industry.
5. Students will be introduced to chemistry concepts.
6. Students will apply chemistry concepts to the science of food.
7. Students will create their own food products.
8. Students will complete an Agricultural Experience project, which is a hands-on work experience project or job shadow.

On-the-Job Training (Vo-Ag Placement):

1. Students will have a training agreement signed by the student, employer, parent, and work coordinator. This will be completed at the beginning of the semester.
2. Students will complete an individual training plan at the beginning of the semester.
3. Students will document hours worked and duties performed each week.
4. Students will be passing all classes if leaving during the school day.
5. Students will manage their time while attending school, job responsibilities, and extracurricular activities.
6. Students will gain experience in a chosen career field as well as building on their resume.
7. Students will apply skills and knowledge gained in ag occupations to a real-life work experience.

Animal Science

1. Students will identify the steps it takes food to get from the farm to them.
2. Students will explore careers in the animal science industry.
3. Students will understand the practices the animal science industry utilizes to ensure a safe, plentiful food supply.
4. Students will research animal welfare topics and understand that farmers care about the humane treatment of their animals.
5. Students will calculate feed rations by utilizing the Pearson Square method.
6. Students will understand animal body systems of production animals including the following systems: digestive, reproductive, and skeletal.
7. Students will examine feeding and production management of beef, dairy, swine, poultry, sheep, and goats.
8. Students will complete an Agricultural Experience project, which is a hands-on work experience project or job shadow.

Revised 2021

Home Repairs

1. Students will identify safety hazards in home repairs and complete a safety exam before working in the shop.
2. Students will identify different types of electrical circuits, switches, and tools.
3. Students will perform basic electrical wiring schematics.
4. Students will demonstrate understanding of basic tool use by creating a small woods project in the shop.
5. Students will identify and use basic plumbing tools.
6. Students will understand how renewable energy affects them.
7. Students will complete an Agricultural Experience project, which is a hands-on work experience project or job shadow.

Revised 2021

Crops and Soils:

1. Understand the importance of crops and soils, and how it impacts the environment, our food system, and our everyday lives.
2. Explore careers in agronomy.
3. Explain the function of plants and the different parts of plants.
4. Understand plant growth requirements.
5. Identify different soil textures and their uses.
6. Compare and contrast genetically modified organisms and organic products.
7. Identify crops, weeds, insects, and pests.
8. Apply commodity marketing concepts to agronomy.