

## Introduction to Agriculture, Food, and Natural Resources

Topic	Skills
<b>Unit 1: Introduction</b>	
What is agriculture?	<ul style="list-style-type: none"> <li>○ Articulate opinions and understandings with clarity and logic</li> <li>○ Analyze evidence to form personal opinions on agricultural topics</li> <li>○ Create and implement a problem-solving strategy to team challenge situations</li> </ul>
<b>Unit 2: Animal Science</b>	
Animal Identification	<ul style="list-style-type: none"> <li>○ Students will be able to identify at least 7 species of animals</li> </ul>
Livestock Principles	<ul style="list-style-type: none"> <li>○ Use proper terminology for each animal species</li> <li>○ Use proper anatomy terms to describe livestock animals</li> <li>○ Create sales ad for a livestock lot at auction</li> </ul>
<b>Unit 3: Plant Science</b>	
Plant Anatomy	<ul style="list-style-type: none"> <li>○ Describe and identify plant anatomy on at least 4 species of plants</li> </ul>
Plant Essentials	<ul style="list-style-type: none"> <li>○ Utilize terminology to describe a growth problem</li> </ul>
Soil Analysis	<ul style="list-style-type: none"> <li>○ Draw a diagram of nutrient flow in plants</li> <li>○ Explain the importance of all food requirements for plants</li> </ul>
Water & Fertilizer	<ul style="list-style-type: none"> <li>○ Utilize a soil texture triangle</li> <li>○ Conduct a soil sampling to send off to a lab (using a corer)</li> <li>○ Conduct a soil texture test</li> </ul>
Propagation	<ul style="list-style-type: none"> <li>○ Analyze the watering threshold of a plant</li> <li>○ Calculate needed fertilizer for specific plant applications</li> <li>○ Develop a list of natural and synthetic fertilizers used in vegetable production</li> </ul>
Floral Design	<ul style="list-style-type: none"> <li>○ Propagate plants from seeds</li> <li>○ Propagate plants from cuttings</li> <li>○ Propagate plants from bulbs</li> <li>○ Create bud vases for floral design</li> <li>○ Create round centerpieces</li> </ul>
<b>Unit 4: Biotechnology</b>	
What is biotechnology?	<ul style="list-style-type: none"> <li>○ Utilize biotechnology terminology appropriately to describe agricultural products</li> </ul>
Genetic Engineering	<ul style="list-style-type: none"> <li>○ Discuss technologies in a civilized way to solve a current world problem</li> </ul>
<b>Unit 5: Environmental Science</b>	
Weather Patterns	<ul style="list-style-type: none"> <li>○ Read weather charts and other meteorological tools</li> <li>○ Utilize tools to track weather patterns</li> </ul>
Wildlife	<ul style="list-style-type: none"> <li>○ Explain impacts of weather patterns on wildlife</li> <li>○ Identify native and non-native species</li> <li>○ Utilize animal tracks to identify wildlife species</li> </ul>
Ecosystem	<ul style="list-style-type: none"> <li>○ Make a plan for managing populations of wildlife</li> <li>○ Identify at least 3 types of ecosystems</li> <li>○ Illustrate a complete ecosystem</li> </ul>
Technology	<ul style="list-style-type: none"> <li>○ Construct a self-contained ecosystem</li> <li>○ Utilize GPS technology to determine animal rangeland</li> <li>○ Draw map with coordinates of animal rangeland</li> </ul>

<b>Unit 6: Ag. Mechanics</b>	
Power Development	<ul style="list-style-type: none"> <li>○ Explain the term “Horsepower”</li> <li>○ Create and implement an experiment to determine the horsepower of 1 person</li> </ul>
Small Engines	<ul style="list-style-type: none"> <li>○ Model the 4-stroke cycle of an engine</li> <li>○ Service the oil and air filters of an engine</li> </ul>
<b>Unit 7: Food Science</b>	
Food System	<ul style="list-style-type: none"> <li>○ Illustrate the food production and distribution system in the U.S</li> <li>○ Demonstrate knowledge of food safety and storage practices</li> <li>○ Model current food storage techniques</li> </ul>
Product Development	<ul style="list-style-type: none"> <li>○ Create a new food product that meets given requirements</li> <li>○ Develop packaging material for the new food product</li> <li>○ Calculate nutritional information for recipes</li> </ul>
<b>Unit 8: Agri-business</b>	
Basic Accounting	<ul style="list-style-type: none"> <li>○ Develop a record keeping system for the Food Science project</li> <li>○ Utilize debits, credits, receipts, and disbursements to accurately reflect cash flow</li> </ul>
Record-Keeping	<ul style="list-style-type: none"> <li>○ Create a system of tracking hours invested in a project</li> <li>○ Prepare and interpret financial reports of AFNR businesses</li> <li>○ Create recommendations to improve management of inventory in AFNR businesses</li> </ul>