

## Gee Whiz in Agriculture Content Standards

### “Wood You Take Care of Me?”

**\*Project Area Skill (PAS) refers to the subject matter based skill which youth demonstrate in relation to the correlating content standard.\***

#### **Objectives:**

##### **Career Readiness-**

- 1. Students will identify their career interests and aptitudes to develop an educational plan which supports personal career goals.**

**Benchmarks: K-4: 1 A, B, C; 5-8: 1 A, B, C, D**

**Project Area Skill: The youth understand the importance of learning about the forestry industry. This thematic unit covers information related to producing wood products, and identifies possible career opportunities.**

- 2. Students will utilize and manage resources effectively to produce quality services and products.**

**Benchmarks: K-4: 2 A, B, C; 5-8: 2 A, B**

**Project Area Skill: The youth manage time effectively to complete assignments related to the topic. They learn the importance of utilizing resources effectively in daily activities, just as the members of the forestry industry do. Learning how to manage resources effectively is a strategy followed by anyone involved in the processing of this natural resource.**

- 3. Students will demonstrate the technological knowledge and skills required for future careers.**

**Benchmarks: K-4: 3 A, B, C, D; 5-8: 3 A, B, C, D**

**Project Area Skill: The youth use computers and other tools to complete assignments related to this topic. They learn about the different tools involved in the harvesting and processing of wood. Furthermore, the youth use common items to represent tools used to produce paper and other products.**

- 4. Students will develop and demonstrate responsible and ethical workplace behaviors.**

**Benchmarks: K-4: 4 A, B, C, D, E; 5-8: 4 A, B, C, D**

**Project Area Skill: The youth learn the importance of working cooperatively with others to achieve common goals. The youth understand that responsible behaviors learned at school and home lead to making better decisions in the workplace.**

5. Students will develop effective leadership, interpersonal, and team skills.

**Benchmarks: K-4: 5 A, B, C, D; 5-8: 5 A, B, C, D**

**Project Area Skill: The youth understand the importance of assuming roles and developing leadership skills as they interact with others. As the youth complete assignments in the topic, leadership roles are assumed, and positive interaction is encouraged to achieve goals.**

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#### Language Arts-

- 1. Reading and listening for comprehension: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.**

**Benchmarks: K-4: 1 A, B, C, D; 5-8: 1 A, B, C, D**

**Project Area Skill: The youth learn about the forestry industry through reading the student materials and completing assigned activities. Open communication among the students is encouraged, so others may listen and learn the material.**

- 2. Writing and speaking for expression: Students will communicate effectively through speaking and writing.**

**Benchmarks: K-4: 2 A, B, C; 5-8: 2 A, B, C**

**Project Area Skill: The youth learn the importance of describing information which they have learned. They complete assignments related to the forestry industry by using different writing techniques. Students, who may encounter difficulties learning the material visually or audibly, can use writing to complete the activities.**

- 3. Literature and media: Students will use literature and media to develop an understanding of people, societies, and the self.**

**Benchmarks: K-4: 3 A; 5-8: 3 A**

**Project Area Skill: The youth are able to view a short video which covers important aspects of the forestry industry. The video, which can be used as an introduction to the lesson, is formatted to be a fun, interesting learning experience.**

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##### Math-

- 1. Number and operations: Students will understand numerical concepts and mathematical operations.**

**Benchmarks: K-4: 4 A, B, C; 5-8: 4 A, B, C**

**Project Area Skill: The youth use basic addition, subtraction, multiplication, and division to perform mathematical operations. These operations allow the youth to figure out problems seeking to calculate number of trees, and cords of wood.**

- 2. Measurement: Students will understand measurement systems and applications.**

**Benchmarks: K-4: 1 A, B, C, D; 5-8: 1 A, B, C, D**

**Project Area Skill: The youth learn to calculate board feet by utilizing units of measurement. The youth learn to calculate the amount wood in a cord based on length and width. Furthermore, they learn dimensions of boards in relation as to how they are marketed in retail and wholesale lumber yards.**

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#### **Objectives:**

##### **Science Strand I- Standard I- Scientific Thinking and Practice-**

- 1. Students will understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.**
  - A. K-4: Benchmark II: Use scientific thinking and knowledge and communicate findings.  
5-8: Benchmark II: Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.**

**Project Area Skill: Youth use the scientific method to understand such ideas as the transformation of raw wood into lumber. They learn the importance of making predictions based on observations of the live tree.**

##### **Science Strand II- Standard I- Physical Science-**

- 1. Students will understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.**
  - A. K-4: Benchmark I: Recognize that matter has different forms and properties.  
5-8: Benchmark I: Know the forms and properties of matter and how matter interacts.**

**Project Area Skill: The youth understand that trees and wood are made up of many different forms of matter. This allows the wood to react to elements in different ways.**

##### **Science Strand II- Standard II- Life Science-**

- 1. Understand the properties, structures, and processes of living things, and the interdependence of living things and their environments.**
  - A. K-4: Benchmark I: Know that living things have diverse forms, structures, functions, and habitats.**

**5-8: Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.**

**Project Area Skill: The youth understand that trees perform certain duties in the food chain and in the transformation of pollutants in the air. This proves the many scientific theories that exist due to the trees' role in nature. Youth recognize that, while it is necessary for trees to be processed, it is also important to conserve and replenish this natural resource for future use.**

**B. K-4: Benchmark II: Know that living things have similarities and differences, and that living things change over time.**

**5-8: Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.**

**Project Area Skill: The youth understand that there are many different species of trees, and within those species, each individual tree changes during different life stages. Knowledge of this fact helps members of the forestry industry decide when to harvest the trees and how long until the new trees grow back to a harvestable age. Youth understand that trees pass on traits to the next generation depending on the species and environment. The evolution of species has been impacted by changes over time to the natural environment.**

**Science Strand III- Standard I- Science and Society-**

**1. Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.**

**A. K-4: Benchmark I: Describe how science influences decisions made by individuals and societies.**

**5-8: Benchmark I: Explain how scientific discoveries and inventions have changed individuals and societies.**

**Project Area Skill: The youth understand that wood is a common and popular building material. Early societies relied heavily on natural resources to construct dwellings, and wood was readily available in most parts of the world. As the forestry industry has grown to**

accommodate growth rates of trees, and the percentage of harvestable trees, it has remained a staple in the lumber market.

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##### **Social Studies: Strand: Geography: Content Standard II-**

- 1. Students understand how physical, natural, and cultural processes influence where people live, the ways in which people live, and how societies interact with one another and their environments.**

**F. K-4: Benchmark II: Describe how natural and manmade changes affect the meaning, use, distribution, value of resources.**

**5-8: Benchmark II: Understand the effects of interactions between human and natural systems in terms of changes in meaning, use, distribution, and relative importance of resources.**

**Project Area Skill: The youth understand the importance that the forestry industry has upon the environment and its societies. Furthermore, the youth recognize how human utilization of wood and wood products affects the natural habitat of the trees, and of all living things which surround them.**

##### **Social Studies: Strand: Economics: Content Standard IV-**

- 2. Students understand basic economic principles and use economic reasoning skills to analyze the impact of economic systems (including the market economy) on individuals, families, businesses, communities, and governments.**

**A. K-4: Benchmark IV: Understand that individuals, households, businesses, governments, and societies make decisions that affect the distribution of resources and that these decisions are influenced by incentives (both economic and intrinsic).**

**5-8: Benchmark IV: Explain and describe how individuals, households, businesses, governments, and societies make decisions, are influenced by incentives (economic as well as intrinsic) and the availability and**

use of scarce resources, and that their choices involve costs and varying ways of allocating.

**Project Area Skill:** The youth recognize that community support and a positive relationship with the forestry industry is vital to each other's success. Economic growth in the community is strengthened through business opportunities that the forestry industry creates. The availability of resources such as labor and industry, ease the transition to attract or retain local forestry related industry in the local area.

**B. K-4: Benchmark IV:** Understand that economic systems impact the way individuals, households, businesses, governments, and societies make decisions about goods and services.

**5-8: Benchmark IV:** Explain how economic systems impact the way individuals, households, businesses, governments, and societies make decisions about resources and the production and distribution of goods and services.

**Project Area Skill:** The youth understand how and why decisions are made by community members and businesses involving goods and services, in relation to supporting the forestry industry. Furthermore, they realize the impact which the forestry industry has on the local economy.

**C. K-4: Benchmark IV:** Understand the patterns and results of trade and exchange among individuals, households, businesses, governments, and societies, and their interdependent qualities.

**5-8: Benchmark IV:** Describe the patterns of trade and exchange in early societies and civilizations and explore the extent of their continuation in today's world.

**Project Area Skill:** The youth are able to determine ways in which wood and wood products are marketed within the economy. Youth understand the important relationship which exists between producers and consumers. Lastly, the youth are able to understand how wood is priced based on trade, surplus, demand, and market value.