

Linking Students with Agriculture
List of New Jersey Department of Education Core Curriculum Content Standards
Which are Reinforced by an Agricultural Education Session at Terhune Orchards
Princeton, New Jersey

Please note-- the first number is the instructional area, the second number is the New Jersey Department of Education Core Curriculum Standard and the third number after the colon (:) is the Cumulative Progress Indicator that is also written out. The activity during the Agricultural Educational Session is written in italic.

Agricultural Production Session Grades K-4

1. Visual and Performing Arts
(Grades K-4)

- 1.5:2 Investigate, experience and participate in dance, music, theater and visual arts activities representing various historical periods and world cultures. *Students will view and touch historical agricultural tools, tractors and specialized equipment.*

2. Health and Physical Education
(Grades K-4)

- 2.1:3 Identify and demonstrate responsible health behaviors for children. *Students will wash hands after petting and feeding animals.*
- 2.2:3 Discuss how family and friends are important throughout life and that relationships require respect for others. *Students will visit a family agricultural enterprise and see the market business in operation with members of the family providing labor.*
- 2.5:3 Adapt movement skills in relation to objects, other participants and boundaries. *Students will walk through the orchard and along the nature trail.*

3. Language Arts Literacy
(Grades K-4)

- 3.2:3 Listen for a variety of purposes, such as enjoyment and obtaining information. *During their visit, students will receive agricultural information about growing plants.*
- 3.2:6 Develop listening strategies such as asking relevant questions, taking notes, and making predictions, to understand what is heard. *During the session, students will find answers to questions about agriculture.*
- 3.3:3 Use writing to extend the experience. *Students are encouraged to write follow up letters to the farm operator.*
- 3.5:2 Demonstrate the ability to gain information from a variety of media. *Signs and charts on display will provide information during the session.*

4. Mathematics
(Grades K-4)

- 4.2:1 Discuss, listen, represent, read, and write as vital activities in their learning and use of mathematics. *Problem solving activities during the session will require reading and listening.*

- 4.3:6 Recognize the connections between mathematics and other disciplines, and apply mathematical thinking and problem solving in those areas. *Mathematical problems using agricultural examples are included in the session.*
- 4.3:7 Recognize the role of mathematics in their daily lives and in society. *The retail market exemplifies how mathematics is important to the agricultural business.*
- 4.5:4 Use a variety of tools to measure mathematical and physical object in the world around them. *Students will see and use different measures that are used in the retail market.*
- 4.9:3 Recognize the need for uniform unit of measure. *Students will see different size baskets and other measures in the retail market.*
- 4.9:6 Understand and incorporate estimation and repeated measures in measurement activities. *Students will see different size baskets and other measures used in the market.*
- 4.10:2 Use personal referents, such as the width of a finger as one centimeter, for estimations with measurement. *Students will see different size baskets and other measures used in the market.*

5. Science (Grades K-4)

- 5.1:2 Recognize that since the components of a system usually influence one another, a system may not work if a component is missing. *Students will see growing crops during the session and the process of producing these crops will be explained and shown to them.*
- 5.2:1 State a problem about the natural world in the form of a question. *Experience with growing crops/animals will stimulate the development of problems that can then be researched.*
- 5.3:2 Recognize that scientific ideas and knowledge have come from men and women of all cultures. *Students will see that agriculture is concentrated on food production and that the crops originated in different countries.*
- 5.4:2 Demonstrate how tools are used to do things better and more easily or to do tasks that could not otherwise be done. *Students will see how agriculture equipment saves hand labor.*
- 5.4:4 Find and report on examples of how technology helps people. *Students will see how agriculture equipment saves labor.*
- 5.5:1 Judge whether estimates, measurements, and computations of quantities are reasonable. *Students will estimate the amounts in a variety of containers.*
- 5.5:2 Use a variety of measuring instruments, emphasizing appropriate units. *Students will see a variety of ways in which agricultural products are sold.*
- 5.6:1 Compare and contrast living and nonliving things. *Students will have the opportunity to see and experience living plants and animals.*
- 5.6:2 Determine the basic needs of organisms. *Students will have the opportunity to see and experience living plants and animals.*
- 5.6:4 Show that plants and animals are composed of different parts serving different purposes and working together for the well being of the organisms. *Students will have the opportunity to see and experience living plants and animals.*

- 5.6:6 Group organisms according to the functions they serve in a food chain. *Students will have the opportunity to see and experience both plants and animals.*
- 5.7:1 Recognize the diversity of plants and animals on earth. *Students will have the opportunity to see and experience many different living plants and animals.*
- 5.7:3 Recognize that individuals vary within every species. *Students will have the opportunity to see and experience many different species of living plants and animals.*
- 5.7:4 Identify and describe external features of plants and animals that help them survive in varied habitats. *Students will have the opportunity to see and experience living plants and animals and provide descriptions.*
- 5.12:1 Investigate the interdependence of living things and their environment. *Students will see how the environment is controlled to benefit plants and animals.*
- 5.12:2 Explain how meeting human requirements affects the environment. *Students will experience how agriculture uses the environment to raise plants for food.*

6. Social Studies (Grades K-4)

- 6.1:4 Give examples of the impact of government policy on their lives. *Students will see the importance of the farm's location to homes, roads and other businesses.*
- 6.4:2 Identify social institutions, such as family, religion, and government, that function to meet individual and group needs. *Students will see how a family business is operated.*
- 6.6:2 Describe the relationship of price to supply and demand. *Students will have the pricing of agriculture products explained to them.*
- 6.6:5 Illustrate the balance between economic growth and environmental preservation. *Students will see where this orchard and market is located and its relationship to population.*
- 6.8:2 Discuss the similarities, differences, and interdependencies among rural, suburban, and urban communities. *While traveling to the market and farm, students will see a variety of communities.*
- 6.9:1 Explain the characteristics of renewable and nonrenewable resources and their distribution, and the role of resources in daily life. *Students will see how growing a crop is a renewable resource.*
- 6.9:2 Explain how people depend on the physical environment and how they modify the environment. *Students will see how the environment has been modified to maximize the growth of plants and animals.*

7. World Languages (Grades K-4)

- 7.2:1 Demonstrate an awareness of culture. *Students will see how food is important to different cultures in the celebration of holidays and special occasions.*

8. Cross Content Workplace Readiness (Grades K-4)

- 8.1:5 Identify skills that are transferable from one occupation to another. *Students will see the many tasks performed at the farm and retail market.*
- 8.2:1 Understand how technological systems function. *Students will see how technology is used in agriculture equipment.*

- 8.2:2 Select appropriate tools and technology for specific activities. *Students will see how agriculture equipment is designed to perform specialized functions.*
- 8.5:3 Demonstrate principles of safe physical movement. *Students will be required to practice safety and follow safety rules while visiting this agricultural enterprise.*
- 8.5:7 Identify and follow safety procedures for laboratory and other hands-on experiences. *Students will be required to practice safety and follow safety rules while visiting this agricultural enterprise.*

Integrated Pest Management Session Grades 5-8

3. Language Arts Literacy (Grades 5-8)

- 3.1:17 Conduct an informational interview *Students will have the opportunity to interview the orchard owner on his pest control processes.*
- 3.2:8 Demonstrate comprehension of, and appropriate listener response (e.g., listening attentively) to, an oral report, discussion, and interview. *Students will ask questions during the presentation and be questioned.*
- 3.4:11 Distinguish personal opinions and points of view from those of the author, and distinguish fact from opinion. *Students will receive factual information presented by the orchard owner.*

4. Mathematics (Grades 5-8)

- 4.2:8 Analyze, evaluate, and explain mathematical arguments and conclusions presented by others. *Students will use data to determine weather conditions.*
- 4.3:10 Apply mathematics in their daily lives and in career-based contexts. *Students will use current data collected to make pest control decisions.*
- 4.4:8 Follow and construct logical arguments, and judge their validity. *Students will see how nature can be used to control pests.*
- 4.8:11 Develop, apply, and explain methods for solving problems involving proportions and percents. *Students will learn about pest scouting (Integrated Pest Management) and determining the seriousness of the infestation.*
- 4.10:10 Determine whether a given estimate is an overestimate or an underestimate. *Students will determine if a pesticide is needed or not based upon data collected.*

5. Science (Grades 5-8)

- 5.1:4 Describe components of a system and how they influence one another. *Students will learn about the life cycles of fruit trees and insects.*
- 5.2:10 Evaluate the strengths and weaknesses of claims, arguments, and data. *Students will be shown how integrated pest management reduces the use of pesticides.*
- 5.2:11 Assess risks and benefits associated with alternative actions. *Students will determine alternative courses of action.*
- 5.6:10 Identify and describe the structure and function of cell parts. *Students will be shown the parts of a tree and how each part contributes to the life function.*

- 5.10:9 Monitor local weather conditions and changes in the atmosphere that lead to weather systems. *Students will see satellite monitoring of weather conditions for agricultural applications.*
- 5.12:5 Compare and contrast practices that affect the use and management of natural resources. *Students will experience modern agricultural management processes.*
- 5.12:6 Recognize that individuals and groups may have differing point of view on environmental issues. *Students will be given a factual presentation and opinions will be stated as such.*

8. Cross Content Workplace Readiness (Grades 5-8)

- 8.1:5 Identify skills that are transferable from one occupation to another. *Students will see the many tasks performed within the orchard.*
- 8.2:1 Understand how technological systems function. *Students will see how technology is used in agricultural production.*
- 8.2:2 Select appropriate tools and technology for specific activities. *Students will see how equipment is designed to perform specialized functions.*
- 8.5:3 Demonstrate principles of safe physical movement. *Students will be shown how pesticides are safely stored and used on the farm operation.*
- 8.5:7 Identify and follow safety procedures for laboratory and other hands-on experiences. *Students will be required to follow safety rules while visiting this agricultural enterprise.*

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