



Constructing a Strawberry Plant Container NC Strawberry Ag Mag Companion Activity

K-8 Subject Areas: English Language Arts, Science, and Visual Art

Purpose:

Students will gain an understanding of the strawberry life cycle while using informational text found within the North Carolina Strawberry Ag Mag and using a video of a North Carolina strawberry farmer. Working in groups, students will create a small-scale strawberry plant container for growing strawberries at school.

Essential Questions:

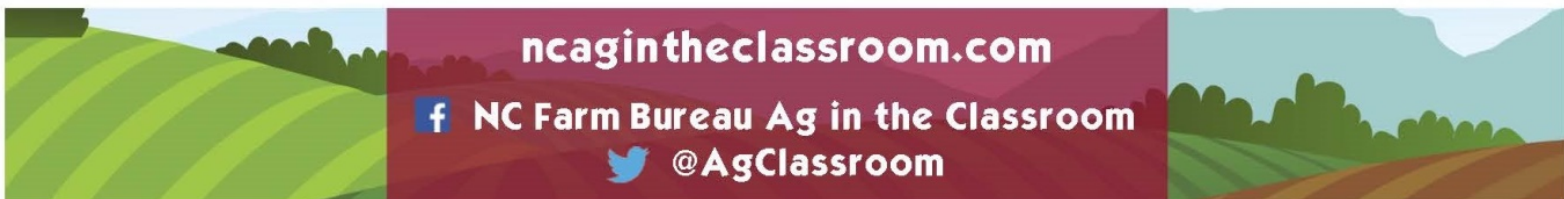
1. What is the life cycle of a strawberry?
2. What do strawberry plants need to produce red, ripe, delicious strawberries to eat?
3. What types of technology is used in growing strawberries?
4. How can I use what I learned in the Ag Mag and video to build a strawberry plant container?

Materials:

- [North Carolina Strawberry Ag Mag](#) (1 per student)
- White, plain paper or construction paper
- [Plant Container Images](#)
- Pens, markers, paint, pencils, glue, and/or any other art supplies available
- Small building materials: popsicle sticks, Styrofoam, potting soil, plastic wrap, empty soda bottles, empty cool whip containers, and any other small building supplies available

Procedures:

1. After reading and discussing the North Carolina Strawberry Ag Mag, have each student individually go through their Ag Mag and record five of their favorite facts from reading.
2. Lead a discussion with the students about their five favorite facts. When facts are stated regarding the life cycle of the strawberry, make a list on chart paper or on the SMART Board. Tell students they can refer to these notes when they begin building their strawberry container.
3. Inform the students that they will become strawberry farmers and will design a container for growing a strawberry plant at school.
4. Show the video [AITC: Strawberries](#) of a strawberry farmer in Guildford County, NC. Tell students to take notes specifically for understanding the needs of a strawberry plant from natural resources such as sunlight, water, and soil.



5. Discuss any technology the students noticed in the video that helps the strawberry farmer grow the best product for the consumer such as the black plastic.
6. Next, place students in groups of 4-5.
7. First, instruct students to discuss the different parts of the strawberry life cycle paying attention to each season in which the strawberry plant is growing and the needs of the plant such as soil, water, sunlight, and drainage.
8. Next, have students use facts and images from the Ag Mag to help them design a strawberry plant container. Let them select from the building supplies you provided to construct their container.
9. Allow them time to research plant containers or show them pictures found in the *Plant Container Images* (see **Materials**).
10. Walk around the room and observe their work. Listen to their conversations to help guide them in the direction for making a good product and keeping them on task.
11. Once students have finished building their plant containers, ask students to present their construction and include each member of the group to explain one portion of the project. Information that must be included in the presentation:
 - How many strawberry plants will your container hold?
 - What are your reasons for constructing your container?
 - When will you be planting your **plugs**?
 - Where is the best place on the school grounds for your container to live? Tell why.
 - How will you keep your strawberry plant from dying during the winter months?
 - When do you expect to harvest your strawberries?
 - How many strawberries do you expect to harvest from your plant(s)?

Extension Activities:

- **English Language Arts:** Use this lesson to discuss how specific plant containers have an effect on consumers' selection (color, size, proper drainage, type of materials, etc.). Then, encourage students to use persuasive writing techniques to write an advertisement for their plant container.

K-8 Content Standards (NC DPI Standard Course of Study)

Kindergarten

Language Arts:

- W.K.2** Use a combination of drawing dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
- a. With guidance and support from adults, respond to questions and suggestions from adults and/or peers and add details to strengthen writing as needed.
- L.K.6** Use words and phrases learned through conversations, reading and being read to, and responding to texts.

Visual Art:

- K.CX.1.2** Recognize that art can depict something from the past (long ago) or present (today).

K.CX.2.2 Identify relationships between art and concepts from other disciplines, such as math, science, language arts, social studies, and other arts.

1st Grade

Language Arts:

RL.1.5 Know and use various text features to locate key facts or information in a text.

Visual Art:

1.V.2.3 Create art from imaginary sources of inspiration.

1.CX.1.2 Identify images in art as depicting something old (historic) or new (contemporary).

1.CX.1.5 Understand that art is a reflection of the artist's ideas, environment, and/or resources.

1.CX.2.2 Identify connections between art and concepts from other disciplines, such as math, science, language arts, social studies, and other arts.

Science:

1.E.2 Understand the physical properties of Earth materials that make them useful in different ways.

1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.

1.L.2 Summarize the needs of living organisms for energy and growth.

2nd Grade:

Language Arts:

RI.2.2 Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text.

RI.2.5 Know and use various text features to locate key facts or information in a text efficiently.

RI.2.7 Explain how specific images contribute to and clarify a text.

W.2.2 Write informative /explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

Visual Arts:

2.V.2.3 Create art from real and imaginary sources of inspiration.

2.CX.2.2 Understand relationships between art and concepts from other disciplines, such as math, science, language arts, social studies, and other arts.

3rd Grade

Language Arts:

RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis the answers.

RI.3.5 Use text features and search tools to locate information relevant to a given topic efficiently.

RI.3.7 Use information gained from illustrations and the words in a text to demonstrate understanding of the text.

W.3.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Visual Art:

3.V.2.1 Create art through a process that includes generating ideas, planning solutions, and producing original art.

3.V.2.2 Use personal point of view and experiences as sources for creating art.

3.V.2.3 Create art from realistic sources of inspiration.

3.CX.2.2 Understand how to use information learned in other disciplines, such as math, science, language arts, social studies, and other arts in visual arts.

4.CX.2.3 Use appropriate collaborative skills to create a work of art.

Science:

3.L.2 Understand how plants survive in their environments.

4th Grade

Language Arts:

- RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- RI.4.2** Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- RI.4.4** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
- RI.4.5** Describe the overall structure of events, ideas, concepts, or information in a text or part of a text.
- RI.4.7** Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.
- W.4.2** Write informative /explanatory texts to examine a topic and convey ideas and information clearly.
- W.4.5** Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- W.4.6** Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

Visual Art:

- 4.V.1.2** Apply personal choices while creating art.
- 4.V.2.2** Use ideas and imagery from North Carolina as sources for creating art.
- 4.CX.1.1** Understanding how the visual arts have affected, and are reflected in the culture, traditions, and history of North Carolina.
- 4.CX.2.2** Apply skills and concepts learned in other disciplines, such as math, science, language arts, social studies, and other arts, in the visual arts.
- 4.CR.1.1** Use visual clues to interpret the content of art.

5th Grade

Language Arts:

- RI.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- RI.5.2** Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
- RI.5.4** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic of subject area.
- W.5.2** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- W.5.5** Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
- W.5.6** Recall relevant information from experience or gather relevant information from print and digital resources; summarize or paraphrase information in notes and finished work and provide a list of sources.

Visual Art:

- 5.V.1.2** Create art that reflects personal voice and choice.
- 5.V.2.2** Use ideas and imagery from the global environment as sources for creating art.
- 5.CX.2.1** Analyze the relationship between arts and daily life in product design, print, and digital media.
- 5.CX.2.2** Exemplify how information and skills learned in art can be applied in other disciplines.
- 5.CX.2.4** Interpret visual images from media sources and the immediate environment.

Science:

- 5.L.2** Understand the interdependence of plants and animals with their ecosystem.

6th Grade

Language Arts:

- RI.6.1** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- RI.6.7** Integrate information presented in different media or formats, including visually and quantitatively, as well as in words to develop a coherent understanding of a topic or issue.

Visual Art:

6.CX.2.2 Understand the connection between art and other disciplines.

Science:

6.L.1 Understand the structures, processes and behaviors of plants that enable them to survive and reproduce.

6.L.2 Understand the flow of energy through ecosystems and the responses of populations to the biotic and abiotic factors in their environment.

7th Grade

Language Arts:

RI.7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

W.7.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

Visual Art:

7.V.2.2 Use observation skills of the environmental and personal experiences to create original imagery.

8th Grade

Language Arts:

RI.8.1 Cite textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

W.8.2 Write information/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

Visual Art:

8.V.2.3 Create original art that conveys one or more ideas or feelings.

Science:

8.L.3 Understand how organisms interact with and respond to the biotic and abiotic components of their environment.

National Agricultural Literacy Outcomes

Agriculture and the Environment Outcomes

K-2

- Describe how farmers/ranchers use land to grow crops and support livestock
- Describe the importance of soil and water in raising crops and livestock
- Identify natural resources

3-5

- Explain how the interaction of the sun, soil, water, and weather in plant and animal growth impacts agricultural production
- Recognize the natural resources used in agricultural practices to produce food, fiber, clothing, landscaping plants, and fuel (e.g., soil, water, air, plants, animals, and minerals)

6-8

- Recognize how climate and natural resources determine the types of crops and livestock that can be grown and raised for consumption
- Recognize the factors of an agricultural system which determine its sustainability

Plants and Animals for Food, Fiber & Energy Outcomes

K-2

- Explain how farmers/ranchers work with the lifecycle of plants and animals (planting/breeding) to harvest a crop
- Identify examples of feed/food products eaten by animals and people
- Identify the importance of natural resources (e.g., sun, soil, water, minerals) in farming

3-5

- Distinguish between renewable and non-renewable resources used in the production of food, feed, fuel, fiber (fabric or clothing) and shelter
 - Explain how the availability of soil nutrients affects plant growth and development
- 6-8**
- Identify farm practices for plant protection (e.g., using a pesticide, integrated pest management, cultural practices) and the harvest of safe products for consumers

Food, Health, and Lifestyle Outcomes

K-2

- Recognize that agriculture provides our most basic necessities: food, fiber (fabric or clothing), energy, and shelter

3-5

- Identify food sources of required food nutrients

6-8

- Identify agricultural products (foods) that provide valuable nutrients for a balanced diet

Science, Technology, Engineering & Mathematics Outcomes

K-2

- Explain what tools and materials farmers/ranchers use to reduce heating and cooling in plant and livestock structures

3-5

- Describe how technology helps farmers/ranchers increase their outputs (crop and livestock yields) with fewer inputs (less water, fertilizer, and land) while using the same amount of space
- Identify examples of how the knowledge of inherited traits is applied to farmed plants and animals in order to meet specific objectives (i.e., increased yields, better nutrition, etc.)
- Provide examples of science being applied in farming for food, clothing, and shelter products

6-8

- Discuss how technology has changed over time to help farmers/ranchers provide more food to more people
- Explain how and why agricultural innovation influenced modern economic systems
- Identify specific technologies that have reduced labor in agriculture
- Provide examples of science and technology used in agricultural systems (e.g., GPS, artificial insemination, biotechnology, soil testing, ethanol production, etc.); explain how they meet our basic needs; and detail their social, economic, and environmental impacts

Culture, Society, Economy & Geography Outcomes

K-2

- Identify places and methods of exchange for agricultural products in the local area
- Identify plants and animals grown or raised locally that are used for food, clothing, shelter, and landscapes
- Trace the sources of agricultural products (plant or animal) used daily

3-5

- Explain the value of agriculture and how it is important in daily life