



# STEMsational Ag: The Virtual Farm

MIDDLE TENNESSEE STATE UNIVERSITY



## Module 11: My Own Garden UNIT 4: FROM SEED TO SPROUT Kindergarten – Grade 2



National Institute of Food and Agriculture  
U.S. DEPARTMENT OF AGRICULTURE



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## Module 11: My Own Garden UNIT 4: FROM SEED TO SPROUT Kindergarten – Grade 2



### Kindergarten – 2nd Grade:

#### Introduction to the Unit:

Read "National Geographic Kids': Seed to Plant" by Kristin Baird Rattini.  
(Or watch at <https://youtu.be/rr1jjsNq9S0>)

#### Pre-assessment:

 Time to think about plants!

- ▶ Draw or write down everything you can think of about the plants we eat.
- ▶ What does a plant need to grow?

#### Purpose:

- ▶ The purpose of this lesson is to help students understand the parts of a plant, the plant life cycle, and the parts of the plant that are edible.

#### Next Generation Science Standards:

- ▶ Recognize the structure of plants (roots, seeds, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, making new plants).
- ▶ Identify plants that are edible and the parts of the plant that we eat.



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### National Agricultural Literacy Outcomes:

Plants and Animals for Food, Fiber, and Energy Outcomes

- ▶ T2.K-2 A. Explain how farmers/ranchers work with the lifecycle of plants and animals (planting/breeding) to harvest a crop.

### Vocabulary Words:

- ▶ **Parts of a Plant:** roots, seed, flower, stem, leaves
- ▶ **What a plant needs:** soil, water, food, sunlight, air space
- ▶ **Stages of plant life cycle:** seed, spout, seedling, plant

### Materials Needed:

- ▶ Scissors
- ▶ Variety of fresh produce or images of plants that are in the lesson plan
- ▶ Whiteboard or paper and pencil
- ▶ Glue

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## Activity 1:

Complete this activity using the books “National Geographic Kids: Seed to Plant” and “The Life Cycle of a Plant Activity”.

Look at these pages in “National Geographic Kids: Seed to Plant”:

- ▶ On page 9 of the book, pay attention to the parts of the plant. The flower is also a plant part. Some plants have fruit.
- ▶ On page 15 of the book, view the illustration of what plants need to grow.
- ▶ On page 10 of the book, view the plant life cycle. The word to “sprout” also means to “germinate”.

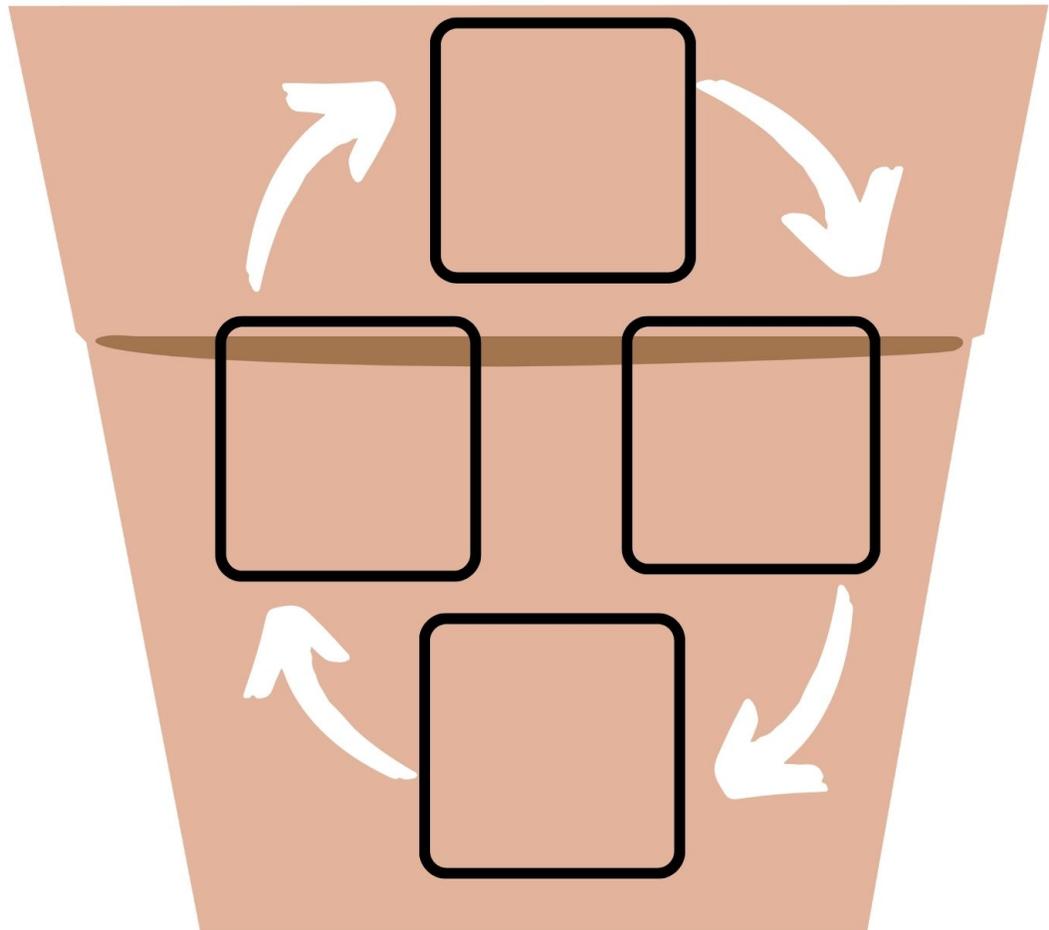
Get “The Life Cycle of a Plant Activity” You will also need scissors and glue.

- ▶ Cut out the stages of the plant life cycle and the stems and flowers on page 5.
- ▶ Glue the stages of the plant life cycle in the flowerpot on page 4 in the correct order, with the first stage beginning at the bottom.
- ▶ Glue the leaves and stem at the top of the flowerpot to complete the picture.



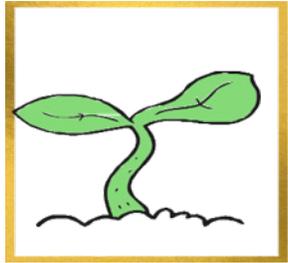
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**For Use with Activity 1:**  
**The Life Cycle of a Plant (1/2)**





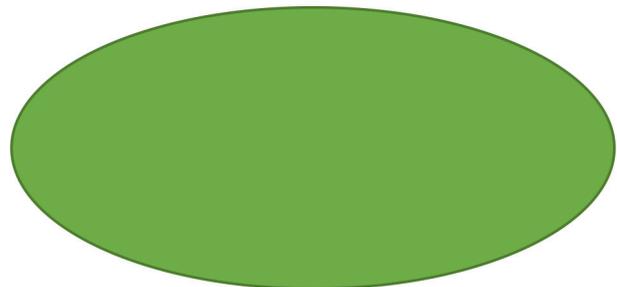
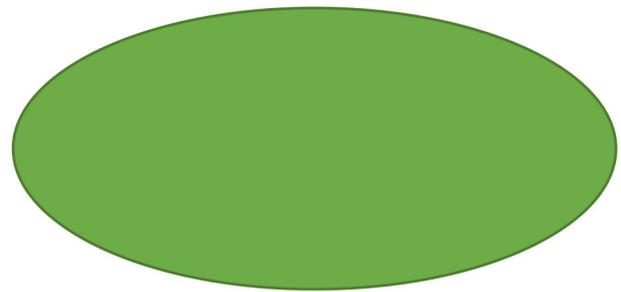
**For Use with Activity 1:  
The Life Cycle of a Plant (2/2)**



Stem



Leaves





## Activity 2: Complete Option 1 or 2

**Option 1:** Gather students in a circle and pass around a variety of produce representing different plant parts.

- ▶ *Important Note:* Be aware of food allergies of students in your class when selecting produce for the class.
- ▶ Examples of what to pass around:
  - **Roots:** beets, onions, potatoes
  - **Leaves:** different kinds of cabbage, spinach
  - **Seeds:** peas in the pod, green beans, corn on cob
  - **Flowers:** broccoli, cauliflower, artichoke
  - **Fruit:** orange, cucumber, pear, eggplant
  - **Stems:** asparagus, celery

**Option 2:** Show pictures of fruits and vegetables to the class.

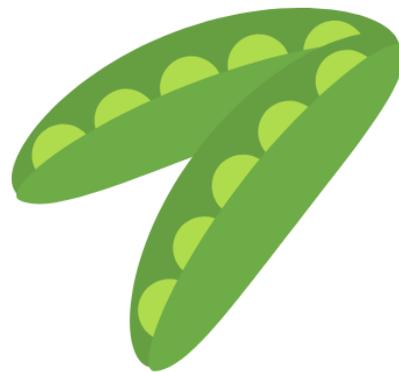
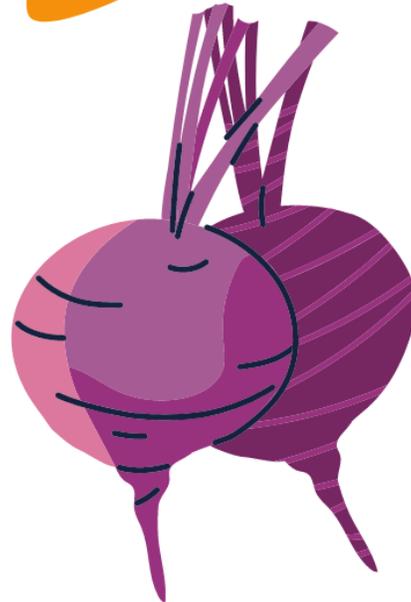
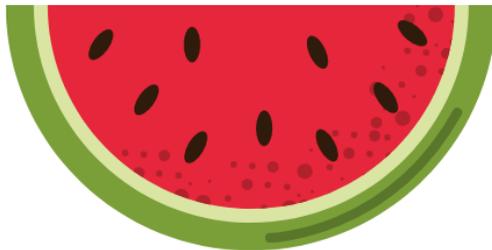
- ▶ Optional: use the images in the “Foods We Eat Activity” page.

### Talking Points for Options 1 and 2:

- ▶ Show students an example of a root that humans eat without naming the plant itself. For example, show a potato and say, “This is a plant we eat often. What part of the plant might this be? Is it leafy and green? Is it rigid and tall like a stem? Is it colorful and soft like a flower?”
- ▶ Describe the characteristics of each of the other food categories:
  - Roots lie below the surface of the soil and anchors the plant.
  - Leaves are attached to the stem and are leafy and green.
  - Stems are above the ground and are usually narrow and straight.
  - Flowers usually have color and are soft.
  - Fruit are often colorful and contain seeds.
  - Seeds are the parts of the plant that we put in the ground from which a new plant grows.
- ▶ Allow students to share their feedback.
- ▶ Have the students cut out the images on the “Foods We Eat” (pages 7-8).
- ▶ Ask them to glue or tape each food onto the page of the category it fits in (categories are Roots, Leaves, Seeds, Flowers, Fruit, and Stems).
- ▶ Then, review the answers to the activity with the class and see how many they got right!



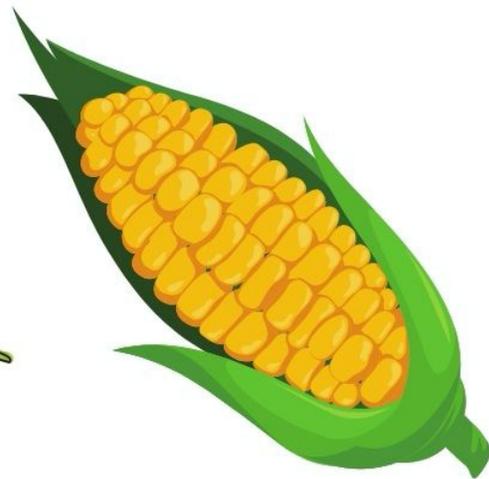
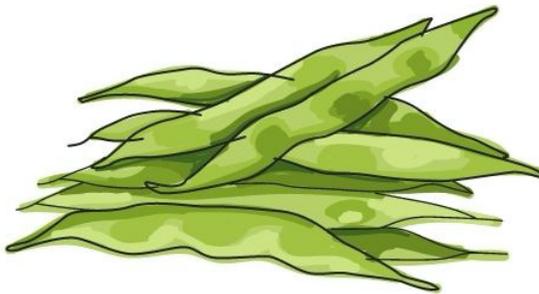
**For Use with Activity 2:**  
**Foods We Eat (1/2)**





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**For Use with Activity 2:  
Foods We Eat (2/2)**





## Post Assessment

Look back at your Pre-assessment. Do you agree with what you wrote?

Draw or write down your answers.

- ▶ What did you learn about plants?