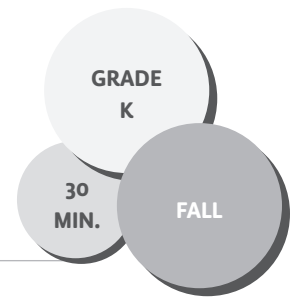


Up, Up, Up We Grow!

THEME: EXPLORING THE ECOLOGY OF FOOD



ESSENTIAL QUESTION

How can we imagine what it feels like to be a plant?

LEARNING OBJECTIVE

✓ Students will be able to explain that a plant needs sun, soil, water, and air to grow.

LESSON DESCRIPTION

In this lesson, students play a guessing game, pretend to be a growing plant, and sing a song to consider what a plant needs to grow.

MATERIALS

- Fruit and Vegetable Picture Cards (pp. 195–199)
- Props to represent each plant need (optional)
- Flashlight or cardboard cutout to represent sun
- Brown or beige sheet to represent soil
- Watering can or cardboard cutout of a raindrop to represent water
- Blue yarn or scarf to represent wind

PREPARATION

- › Assemble or create your props.
- › Learn the “Sun, Soil, Water, Air” song by the Banana Slug String Band.

ACTION STEPS

1. Playing Who Am I Game: Gather students in a circle. Tell them that you’re a mystery object (a plant), and have them guess what you are.

Give students clues such as, *I really like the rain. I have lots of neighbors, but I don’t like to be too close to them. I cooperate with the bees! I get my food from the sun and air. My feet live in the ground.* Once they guess that you’re a plant, tell them that today you’ll be talking about what plants need to grow healthy and strong. Ask, *Have you or anyone you know ever had a plant? How did you care for it? (5 min.)*

2. Singing: Teach students the song, “Sun, Soil, Water, Air” by the Banana Slug String Band. Incorporate hand gestures or movements for sun, soil, water and air. If you have time, do a freeze dance to the song, stopping on different words each time. *(5 min.)*

3. Explain the Activity: First, ask students to name their favorite fruit or vegetable. Have the Fruit and Vegetable Picture Cards displayed to help generate ideas. Say, *We’re going to play a game where you each pretend that you’re a favorite fruit or vegetable seed, and you’ll use your bodies to show how you grow. Pretend I’m the gardener.* Before starting, have students check that they have space around themselves, and remind them to be careful of how they move so it doesn’t hurt others. Explain that seeds don’t like to be planted too close together either. *(5 min.)*

4. Role Play: Have students start as seeds, curled up on the ground. If using props, cover students' legs with the sheet, and tell them that you're planting them in the soil where they'll need to be nice and warm to sprout. Ask, *Seeds, what else do you need before you can sprout?* (Water!) Walk around and "water" each student's head with the watering can, and encourage them to sprout just a bit. Ask students again what they need. (Sun.) Say, *Yes, I hear that you make your very own food with energy from the sun, and carbon dioxide in the air helps, too!* Walk around, shining a flashlight on the students' arms (careful not to point it in their eyes) and waving your wind scarf or cutout. Encourage students to continue growing as you give them more water, sunshine, and air. Remind them that their feet are rooted in the soil, getting nutrients they need to grow strong. Once the students are starting to stand tall with their arms up high, ask them individually what type of plant they are, and if they have a fruit, root, or leaf you can harvest. If you have extra time, you can repeat this whole cycle at different speeds, such as a speed round, a slow-motion round, or the like. **(10 min.)**

REFLECTION

Have students discuss the following questions in small groups, then share with the class: **(5 min.)**

- *How are plants like us? How are they different from us?*
- *How can we take care of plants that we're growing?*
- *How did it feel to use our bodies to pretend we were plants? How did we make sure we were safe with our bodies?*

ADAPTATIONS

Age (Grades 3–5): If you have access to a field, try a game of Farmer Tag where there are a couple farmers who are it, trying to tag students to become seeds. Once a student is tagged by a Farmer, they crouch into a seed position. Then the student waves over the Water person (wearing a blue armband) and, after getting watered, sprouts one arm into the air. Then the student waves over the Sun person (wearing a yellow armband). Once the student has been tapped by both Sun and Water, the student stands with both arms up high, to show they're a fully grown plant, and the Farmer will come harvest them and bring them to the designated "farmer's market" (e.g., a soccer goalpost). Keep playing until the farmers and their sun and water helpers have all the students in the farmer's market or have a farmer's market jailbreak and switch roles.

ACADEMIC CONNECTIONS

Next Generation Science Standards, Life Science Disciplinary Core Idea

NGSS K-LS1-1

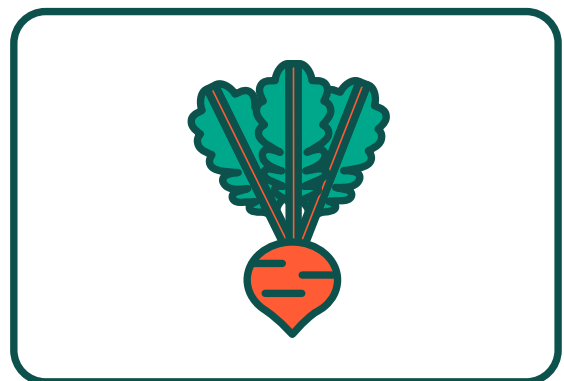
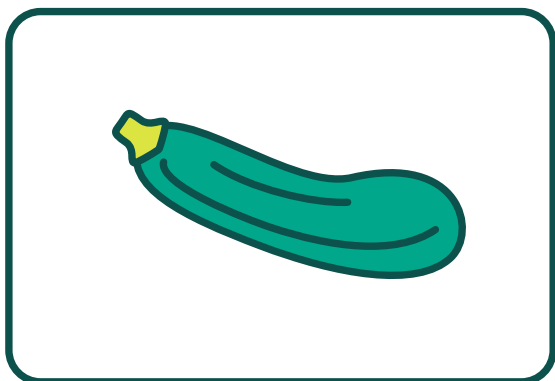
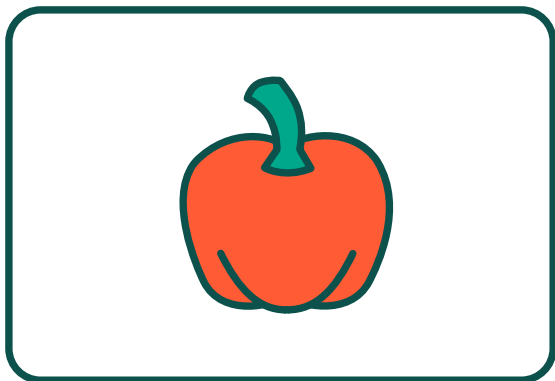
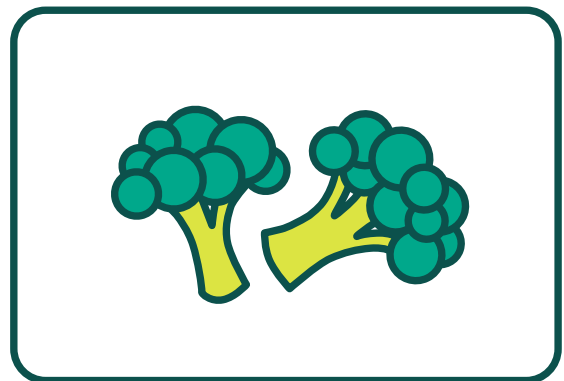
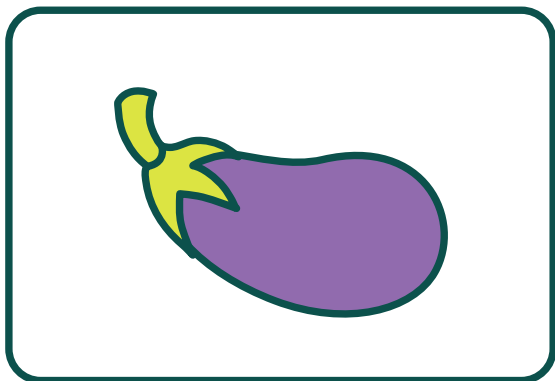
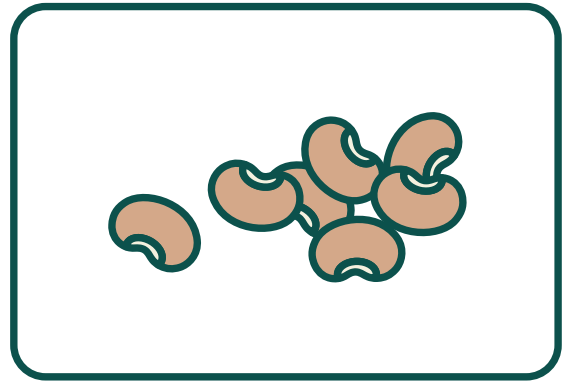
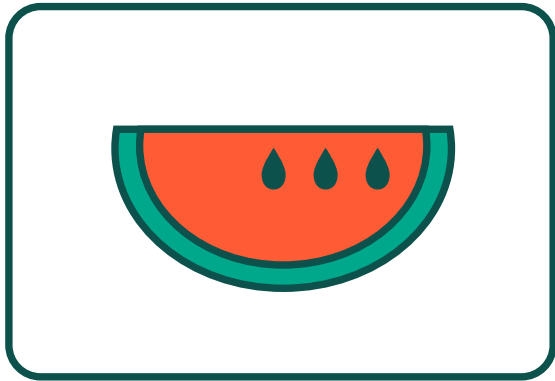
Use observations to describe patterns of what plants and animals (including humans) need to survive.

English Language Arts Common Core State Standards

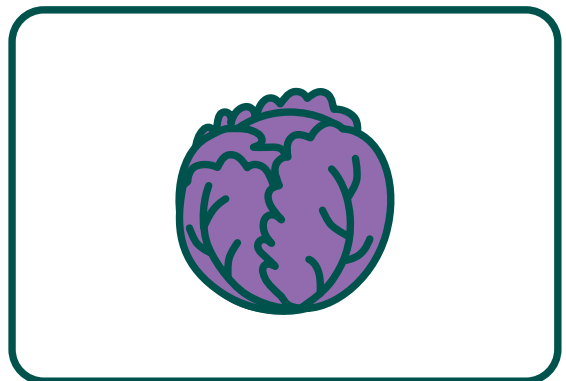
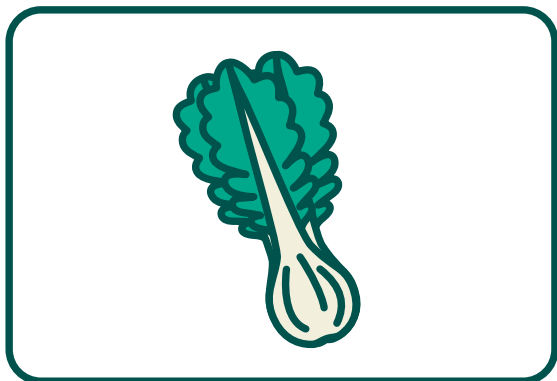
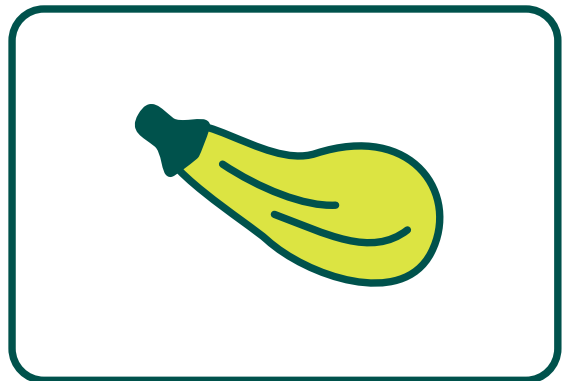
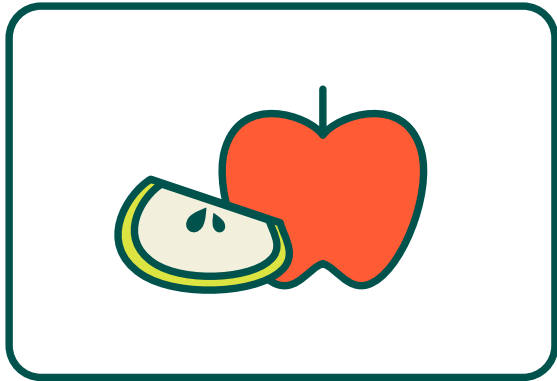
CCSS.ELA-LITERACY.SL.K.1

Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups

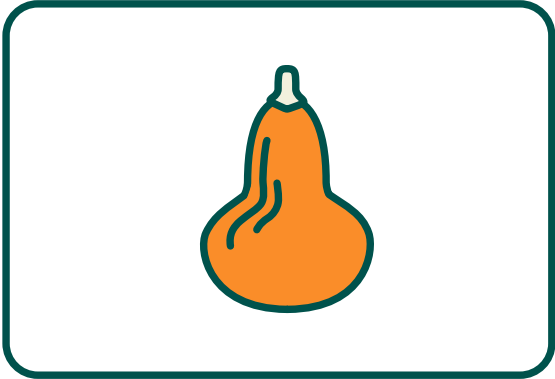
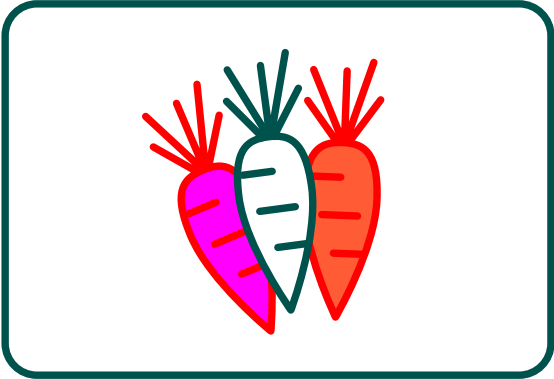
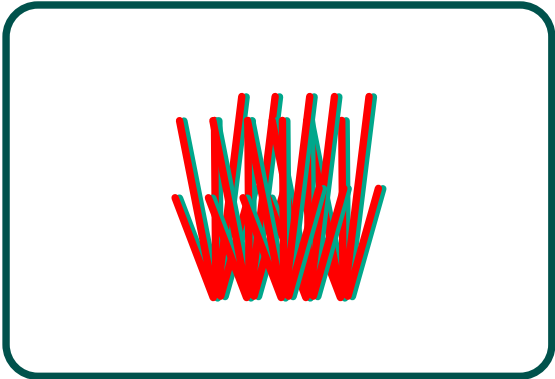
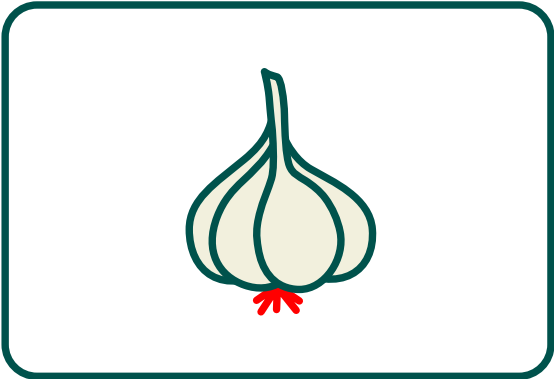
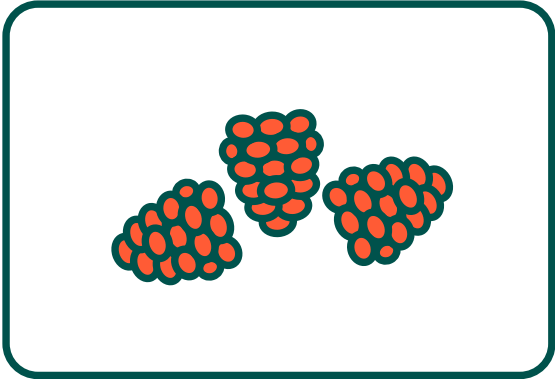
Fruit and Vegetable Picture Cards



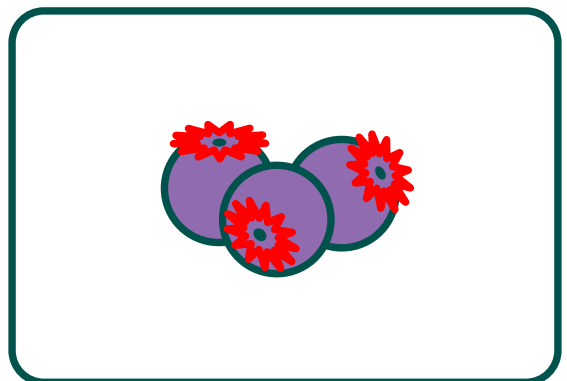
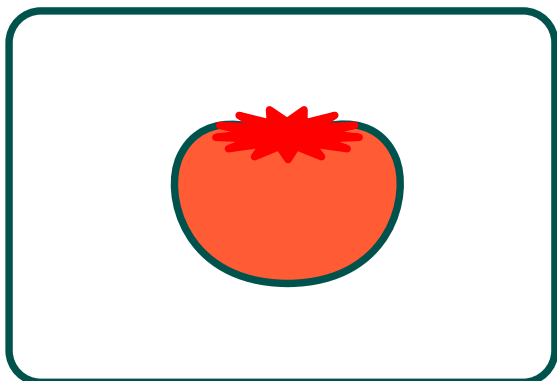
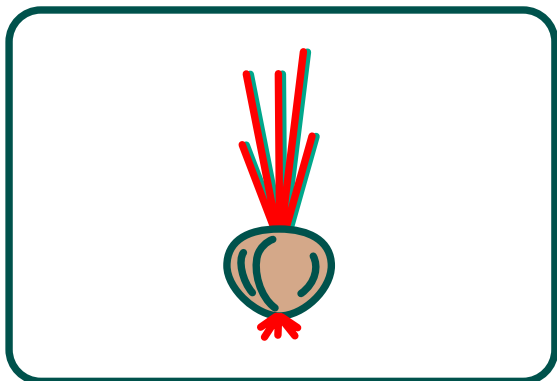
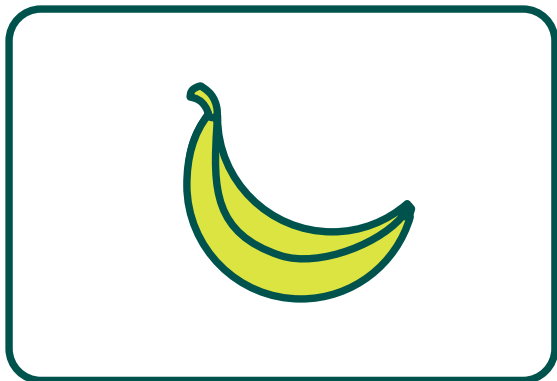
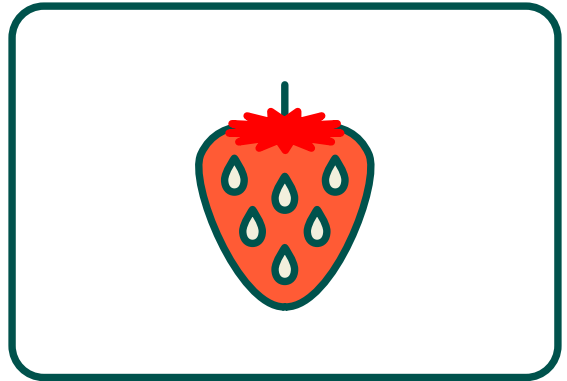
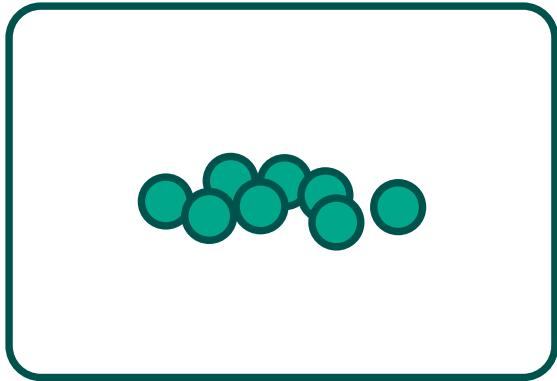
Fruit and Vegetable Picture Cards



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