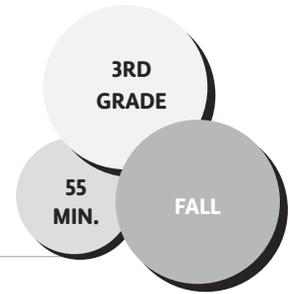


That's Life!

THEME: EXPLORING THE ECOLOGY OF FOOD



ESSENTIAL QUESTION

How do all living things grow and change over time?

LEARNING OBJECTIVES

- ✓ Students will be able to identify different stages of a plant's life cycle.
- ✓ Students will be able to draw the life cycle of a plant.

CONCEPTS

life cycle mature pollination sprout

Engaging the Classroom Teacher

- Prior to the lesson, discuss with the teacher whether their class would benefit from starting and ending in the classroom or meeting outside.
- Ask the teacher what prior knowledge students might have about pollination and the plant life cycle.
- During Action Step 5, suggest that the teacher encourage students to add detail to their drawings on the worksheet.

LESSON DESCRIPTION

In this lesson, students go on a life cycle scavenger hunt in the garden after exploring the different stages of a pumpkin's life and reading a book depicting this life cycle. In groups, they find samples of each stage of a plant's life cycle and draw the sequence.

MATERIALS

- One of the following: *Pumpkin Circle* by George Levenson or *The Tiny Seed* by Eric Carle

For each student:

- Life Cycle Scavenger Hunt Worksheet (p. 333)
- Clipboard
- Pencils

For each group of 3–4 students:

- Pumpkin Life Cycle Cards (p. 332)
- Tray, basket, or large yogurt container for collecting samples

PREPARATION

- › Scout around the garden, and identify plants that currently display several different life cycle stages.
- › Photocopy and cut out Pumpkin Life Cycle Cards.
- › Photocopy Life Cycle Scavenger Hunt Worksheet for each student.

ACTION STEPS

- 1. Engage:** In the garden, gather students in a circle, and ask them to turn and talk to a

neighbor about what they remember doing when they were a baby. Then ask, *What can you do now that you couldn't do when you were a baby? What things will you be able to do when you get even older?* Explain that just like humans, plants grow and change over time and are able to do different things at different stages of their lives. **(5 min.)**

2. Sorting Pumpkin Life Cycle: Pass out the Pumpkin Life Cycle Cards to groups of students, and ask them to put the cards in order. Circulate through the space, observing the order and asking questions to check for understanding. **(5 min.)**

3. Reading: Say, *We're going to read a book about the life cycle of a plant to see if we put the pictures in the right order.* Read *Pumpkin Circle*, pausing throughout and encouraging students to rearrange the cards based on the information they learn from the book. **(10 min.)**

4. Scavenger Hunt: Say, *You'll now go on a scavenger hunt throughout the garden and find an example of a plant species at each stage of its life.* Explain that they may not find all their examples from the same plant species, and that's OK. Remind them that they shouldn't pick something if there aren't more than ten still growing in the garden. Tell students the signal you'll use to gather them back to you and then pass out the Life Cycle Scavenger Hunt worksheet on clipboards, and pass out the containers for collecting samples. **(10–15 min.)**

5. Drawing: Gather students back together, and have them lay out the samples they collected in the order of the plant's life cycle, just

like they did with the pumpkin cards. Have them draw the different samples on their Life Cycle Scavenger Hunt Worksheet. If it's cold outside, or students need to regroup after the scavenger hunt, consider bringing the samples back into the classroom, so students can focus on creating quality drawings sitting at their desks. **(15 min.)**

REFLECTION

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

Social and emotional learning

- Ask yourself: Was I safe and respectful in the garden today?
- Ask yourself: Did I take turns and support my group members?

Check for understanding

- What plant did you find?
- Was it challenging to find your samples at each life cycle stage? What clues did you look for?
- Why does the life cycle begin and end with seeds?
- How are plants' and animals' life cycles similar?

ADAPTATIONS

Decomposition Extension: If you have a fruiting plant from the summer, such as a pumpkin or tomato, allow it to stay in the garden throughout the fall and winter, and have your class periodically check on it, keeping a log of their observations.

Seed-Saving Extension: Grow some plants out to seed, such as by letting a carrot, kale, or broccoli plant flower. Then have students collect all the seeds from the fall garden, putting

them in separate envelopes and labeling them to take them home to plant next season.

Health Connection: Have students draw pictures of themselves at different stages in their own life cycles (i.e., as a baby, as a kindergartner, etc.). Discuss how eating well has helped them grow and can continue to help them grow over time.

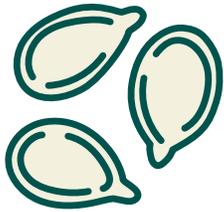
ACADEMIC CONNECTIONS

Next Generation Science Standards, Life Science Disciplinary Core Idea

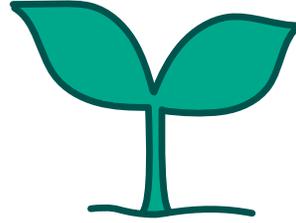
NGSS.LS1.B Growth and Development of Organisms

Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.

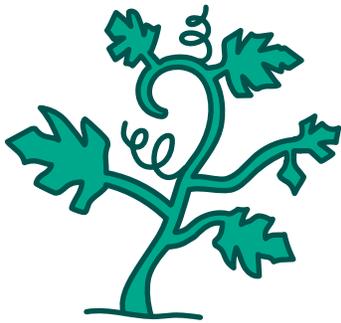
Pumpkin Life Cycle Cards



seeds



sprout



vines



flower



green baby
pumpkin



adult
pumpkin

Name: _____ Date: _____

Life Cycle Scavenger Hunt Worksheet

Directions: In the circles below, draw a picture of your plant at each stage of its life cycle.

dead
plant

seed

baby
sprout

plant that
has new seeds
or fruit

LIFE CYCLE

grown plant
with leaves
and vines

plant with a
dead flower
(because it has
been pollinated)

