

Life Cycle of a Pumpkin

Topic: Life Cycle of a Pumpkin

Grade Level: K - 2nd grade

Teacher: Kylie Shope

Arizona Science and Content & Inquiry Standards

K.L1U1.6 - Obtain, evaluate, and communicate information about how organisms use different body parts for survival.

K.L1U1.7 - Observe, ask questions, and explain how specialized structures found on a variety of plants and animals (including humans) help them sense and respond to their environment.

1.L1U1.6 Observe, describe, and predict life cycles of animals and plants.

1.L2U2.7 Develop and use models about how living things use resources to grow and survive; design and evaluate habitats for organisms using earth materials.

1.L2U1.8 Construct an explanation describing how organisms obtain resources from the environment including materials that are used again by other organisms.

2.L2U1.9 - Obtain, analyze, and communicate evidence that organisms need a source of energy, air, water, and certain temperature conditions to survive.

2.L2U1.10 - Develop a model representing how life on Earth depends on energy from the Sun and energy from other organisms.

Objectives:

- Students will explain how pumpkins use different parts of the plant to grow and survive.
- Students will observe, describe the parts of a pumpkin.
- Students will observe, describe and predict the life cycle of a pumpkin
- Students will learn how pumpkins use resources to grow and survive.
- Students will describe how pumpkins use resources from their environment to grow and survive.
- Students will explain that pumpkins need air, water, sun and certain conditions to grow and survive.

Evidence of Mastery: Did the students do their cut and paste worksheet correctly, in the correct order?

Formative Assessment: Teacher comprehension questions, teacher observations during pumpkin investigation and worksheet.

Summative Assessment: Life Cycle of a Pumpkin Worksheet, Life cycle notecard.

Background Knowledge:

Students need to know what a pumpkin is.

Students need to know what season a pumpkin grows in.

Safety Rules and Procedures:

Do not put pumpkin seed in your mouth.

Do not put soil in your mouth.

Do not touch our friends seeds or pot.

**While also following classroom rules and procedures.*

Essential Question: How do pumpkins grow?

Key Vocabulary:

Seed - small parts produced by plants from which new plants grow

Sprout - a small growth on a plant — a little new bud

Vine - a plant that has very long stems and that grows along the ground or up and around something, such as a wall or tree.

Flower- the part of the plant that has petals and makes fruit or seeds.

Soil - the loose upper layer of the Earth's surface where plants grow

Roots - is a part of a plant that is usually hidden underground. They hold the plant in the ground and keep it upright. They take water and food from the soil. They also store food for the plant.

Crop - a plant or plant product that is grown and harvested.

Harvest - to collect what has been planted and grown in the ground.

Produce - is the product of gardening: fruits and vegetable

Fruit - is the part of a flowering plant that contains the seeds

Vegetable - are the leaves, stems, roots, or other parts of certain plants that people eat.

Materials

- The book, *From Seed to Pumpkin* By Wendy Pfeffer
- Pumpkin Investigation on Chart Paper
- Counting Cubes
- Knife
- Life Cycle of a Pumpkin Worksheet
- Life Cycle of a Pumpkin Stages cut out
- Glue
- Student Scissors
- Pumpkin
- Pumpkin Seeds
- Knife (Teacher use only)
- Soil
- Peat Pot (starter pot) 1 per student
- Water (This can be sink water)
- Notecard
- Pumpkin spinner worksheet

ENGAGE

Teacher Will:

Prep materials beforehand. Have From Seed To Pumpkin by Wendy Pfeffer ready. Place pumpkin and knife somewhere close to the carpet. On chart paper make a Pumpkin Investigation paper. (Example provided).

1. Bring the students to the carpet. Read From Seed to Pumpkin by Wendy Pfeffer.
2. During the read aloud ask comprehension questions.
3. After reading the book, discuss the different stages of growing a pumpkin with the class.

Students Will:

1. Come to the front carpet. Sit in their spots to get ready for a read aloud.
2. Listen to the teacher read From Seed to Pumpkin by Wendy Pfeffer.
3. Answer comprehension questions.
4. As a whole group, discuss the different stages of growing a pumpkin.

EXPLORE

Teacher Will:

1. As a whole group, hold the pumpkin where they can see. Ask the students questions about pumpkins.
 - a. Is a pumpkin a fruit or vegetable?
 - b. Where are pumpkins grown?
 - c. How do they grow?
 - d. Can you eat a pumpkin?
 - e. Do you know what is inside of a pumpkin?
2. Next, cut the top of the pumpkin off to show the students what it looks like inside. Show the students the inside of a pumpkin and show them a seed. Pass a seed around for them to feel.

Students Will:

1. Students will come together as a whole group.
2. Think about and answer the pumpkin questions.
3. Take turns feeling the pumpkin seed and passing it around.

EXPLAIN

Teacher Will:

1. As a whole group, fill out the pumpkin investigation chart or poster board.
2. Read each section of the board out loud then tell the students to turn to their shoulder partner to discuss their answers.
3. After the students have had a moment to discuss with their shoulder partner, call on students to answer the questions and fill out the chart in front of the class.

Students Will:

1. Students will listen to the question the teacher asks about the pumpkin investigation chart.
2. Students will turn to their shoulder partner to discuss their answers
3. Students will then help the teacher fill out the pumpkin investigation chart by answering the questions and describing the pumpkin.

ELABORATE

Teacher Will:

1. Show the students the Life Cycle of a Pumpkin worksheet and the Life Cycle of a Pumpkin stages cut out sheet.
2. Read the directions to the students and explain to them that they will be cutting out the pictures on the cut out page and glueing the pictures onto their worksheet.
3. Pass out the Life Cycle of a Pumpkin worksheet, Life Cycle of a Pumpkin stages cut out, glue and scissors.
4. Give the students enough time to independently cut and paste their Life Cycle of a Pumpkin worksheet.
5. Collect these worksheets before doing the next step.

Students Will:

1. Follow the directions of the teacher back to their desks.
2. Listen to the teacher explain the Life Cycle of a Pumpkin worksheet.
3. Cut out the pictures on the Life Cycle of a Pumpkin stages page.
4. Glue the pictures in the correct order on their Life Cycle of a Pumpkin worksheet.
5. Students will turn these in to the teacher when they are done and wait for the next instruction.

EVALUATE

Teacher Will:

1. Hand out a blank notecard to each student.
2. Write the life cycle stages on the white board. (Seed, Sprout, Vine, Flower, Green pumpkin, Pumpkin) Do not write these in order on the board.
3. Have the students independently write each stage of the lifecycle of a pumpkin in the correct order on their notecard.
4. Collect these to evaluate.

Pumpkin Life Cycle Spinner

1. *(This next part can be used if you have extra time, or can be put in a small group center for the students to play during the week that they are learning about pumpkins)* The students will play the Pumpkin life cycle spinner game.
2. The students will be grouped into small groups and each group will have a Pumpkin Life Cycle spinner.

The teacher will explain to the students that they are to take turns spinning the spinner. Wherever it lands, the student who spun the spinner has to say the word it landed on and explain what part of the life cycle of the pumpkin it is.

Students Will:

1. Using the given words on the board, the students will write the life cycle stages on a note card.
2. Students will turn these in when they are done.

Pumpkin Life Cycle Spinner

1. Students will get into groups. Either table groups, center groups or groups that the teacher assigns.
2. The students will listen to the directions from the teacher.
3. The students will take turns spinning the Pumpkin Life Cycle spinner.
4. When each student spins the spinner, they will explain the picture that the spinner lands on.

This would be a good activity for review or to continue learning in centers.

CLOSURE

Teacher Will:

*To prepare for this have peat pots, soil and seed ready.
Have enough soil in each peat pot so the students just
have to put their seed in the pot and add water.*

1. Have the students continue to stay at their desks.
2. Explain to the students that we will be planting a pumpkin seed for them to take home to grow.
3. Pass out a peat pot with soil in it to each student.
4. Pass out a pumpkin seed to each student.
5. Demonstrate how you use your finger to make a hole in the soil to place the seed in.
6. Tell the students to make a hole in the soil, then place their pumpkin seeds in the hole. Have the students cover their pumpkin seed with soil.
7. Go around with water to water each student's pumpkin seed.
8. Place the peat pots somewhere by a window for the rest of the day until the students can bring their seeds home.

Students Will:

1. Follow the directions of the teacher.
2. Once the teacher tells them to, the students will make a hole in their soil for their pumpkin seed.
3. The students will then put their pumpkin seed in the hole that they made.
4. The students will now cover their pumpkin seed with more soil.
5. The students will wait for the teacher to water their seed, then place their seed along the window.
6. At the end of the day, the students will bring these home to take care of and water at home.