

LESSON *plan*

Grade: Standard 3

Subject: Science

Cycle 4

Week 1 of 3

Lesson #6

Duration: 60 Minutes

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Lesson Standards: SC 6.07 Determine, describe, and investigate how selected plants and animals grow and discuss the factors that affect the plant and animal growth rate.

Learning objective/s:

- Investigate and describe how selected local plants and animals grow.

Materials needed:

- Life Cycles Visual
- One 1-2 day old bean from the classroom “germinated seed bag” for each pair of students
- Inside a Bean Visual (If beans do not sprout)
- Bean Study Handout (class set)
- Magnifying glass or hand lens
- Colored Pencils

Key Vocabulary:

Germinate
Hilum (*hīlām*)
Micropyle (*mīkrā,pīl*)
Root
Cotyledon (*kāda’lēdn*)
Hypocotyl (*hīpə’kāt*)
Plumule (*plōomyōol*)

Hook/Intro: (10 min)

“A few days ago, we created our hydroponic seed chambers. What do you think our seeds look like?”

Lead Into:

- “As we’ve discovered, animals undergo a life cycle.”
- Present and review the “Life Cycle” Visual.
- “Do you think plants go through a life cycle?” Encourage students to share examples of various plant life cycles and discuss the transformations involved.
- Explore and attach images of the watermelon life cycle to the visual. Discuss how the plant matures into an adult, which ultimately produces flowers and fruit.

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Direct Instruction

- “Today, we are going to investigate a pinto bean seed.” Show a dried bean. “This is a dry edible bean that is ready to soak in water and cook. Our beans have been soaked in water, but will not be cooked. It is now germinated, or ready to sprout into a plant. We are going to open it up and take a peek inside to see how the plant develops.” Pass out a germinated seed from the “germinated seed bag” to each pair of students. If the beans did not sprout, use the “Inside a Bean” visual.
- Encourage students to discuss and describe their observations regarding the exterior of the bean.
- Provide the “Opening a Bean Seed” worksheet. Together, read and discuss the external components of a seed. Use a hand lens or magnifying glass for a detailed examination of the beans.
- Demonstrate the process of opening a bean seed by following the instructions outlined in the “Opening a Bean Seed” handout.
- Once the bean is opened, identify and investigate the internal structures of the seed.

Independent Practice:

Students will draw and color the inside of the bean, then add arrows to attach the vocabulary word to the corresponding part of the plant.

Closure:

Hang diagrams and let students walk around and leave sticky notes with compliments.

