ACES WILDLIFE RESCUE
AMBERGRIS CAYE, BELIZE

LESSON plan

Grade: Standard 3

Subject: Science

Cycle 4 Week 2 of 3 Lesson #11
Duration: 60 Minutes

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.
- Identify environmental factors that affect growth (e.g., water, light, food, space, temperature).
- Conduct simple experiments to observe how changes affect growth.
- Promote awareness of how healthy ecosystems support life.

Materials needed:

- Chick and Tree Visual
- Plant Videos
- Class chart paper
- Bean seeds from the seed chambers
- Small recycled containers (cups, cut bottles, coconut shells etc) with a drainage hole punched (class set)
- Large nail or sharp object to punch holes in containers
- Soil
- Sand
- Watering Container
- Tray for plant drainage
- Plant Journal Handout
- Centimeter measuring stick or rulers

Key Vocabulary:

Growth Rate
Water
Sunlight
Temperature
Food
Shelter
Photosynthesis

Hook/Intro: (10 min)

- Display Chick and Tree visual.
- Pose the question: “Which one grows faster?” Introduce the term growth rate. (how fast something grows)

Lead in:
“Today, we’re going to plant your baby bean plants and observe their growth rate, but first, we need to learn what makes them grow.”

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Direct Instruction:

- Watch the video titled “How Do Plants Grow for Kids | Learn about Photosynthesis” on YouTube by Learn Bright (7:29 minutes). Be ready to pause the video at 7:30 to answer the review questions at the end.

Create a Class Chart of Plant Needs:
Plants need sunlight, water, soil, space to grow, and a suitable temperature. Circle the three essential needs for plant growth: sunlight, water, and soil.

- “What do you think will happen to a plant if it receives no sunlight?”
- “What do you think will happen to a plant if it is not watered?”
- “What do you think will happen to a plant if it is planted in sand instead of soil?”

Group activity:
Explain to the students that today, they will work with three other plant scientists. Each scientist will plant one of their bean seeds, which will be used in the experiment to observe what happens when one of the three core needs is missing.

Show the students this video to illustrate the experiment:
“Grow Your Own Plants! - sciencegoals SciShow Kids” (5:30 minutes) YouTube

After the video, inform the students that the plants deprived of sunlight will be placed in a dark cupboard or under a dark box to insure they receive no sunlight.

- When planting the bean seedlings, make sure the cotyledons are above the soil.

Divide the students into groups of four and have them decide which scientist’s plant will be deprived of water, sunlight, or sand instead of soil, and which plant will serve as the control.

It’s best to have each group go to a designated planting station to do their planting. Students will need supervision, as it can be difficult to manage the whole class planting all at once.

Independent Practice

Distribute the Plant Journal handout. Have students complete page #1 and day #1 of the Plant Journal. Place the plants in the correct location for the experiment.

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Week 2 of 3

Closure:
Have student groups share and compare predictions.