

Student Teacher Candidate: Jessica Kelley
Lesson Subject(s)/Title: Plant Growth
Lesson Date(s): 9/20/18
Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Soil, seeds, water

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

What do plants need to grow?

What rate do you think the plant will grow at with and without sunlight? Do you think the plant will grow at the same rate if it is in a closet with no sunlight?

PURPOSE:

For the students to see the growth the plants make in two different settings, and to learn what they need to grow.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

Students will set up an experiment to determine what factors are necessary for plant growth. Students will measure and compare plant growth under different environmental conditions.

STANDARDS:

Standard - 3.1.4.A2

Describe the different resources that plants and animals need to live.

DIFFERENTIATION STRATEGIES:

LD Students: For students with learning disabilities I would have them work with somebody who can scaffold them and essentially help them gain more knowledge.

ANTICIPATORY SET:

The students will do a "Think Pair Share" with a friend and talk about what plants need to grow and the rate the plant will grow at with and without sunlight.

INPUT/ ACQUIRE NEW KNOWLEDGE:

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

Activity: The students will get to plant their seeds. One of their plants will go in the sunlight and one will go in a room with no sunlight. This will test the theory of how fast or slow the plant will grow in sunlight verses in a dark room with no sunlight. They will get to collect data throughout around 6 weeks or so that they can collect measurements (how tall the plant is). This will tell us if plants grow at the same rate in sunlight and without sunlight.

CLOSURE/ASSESSMENT:

The students will write their hypothesis on a piece of paper telling me if they think the plants will grow at the same rate, or if they think one of the plants will end up growing faster than the other plant.

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

The students need to go ask their parents one question and bring it back to the class to share. "Do you think that plants grow at the same rate if they are in sunlight or in a room with no light? Why?"

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

EVALUATION/ASSESSMENT OF STUDENTS:

The students will get to collect data and then at the end they will graph showing us the rate that both of their plants grew. Throughout this process the students will have to water their plants, unless told not to by the teacher.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Tell the students to do a think pair share answering the essential questions.2. The teacher will have the students break off into groups of 2-3 to plant their seeds and place them in specific spots in the room.3. The teacher will then have the students predict which plant they think is going to develop quicker or if they will both develop at the same rate.4. Every Friday: The teacher will have the students collect measurements.5. After 6 weeks: The teacher will have the students will make a graph showing how the plants progressed throughout the month and a half. Then have them draw a conclusion saying if their predictions were right, and why?	<p>The students will:</p> <ol style="list-style-type: none">1. Work with a partner to answer the essential questions.2. They will break off into groups of 2-3 and plant their seeds in a cup of soil and water them.3. They will put their plants in two different spots, one by the window and one in the closet.4. They will predict, individually, on which plant they think will develop quicker or if they will develop at the same rate.5. Every Friday: The students will collect measurements telling how tall the plant has gotten.6. After 6 weeks: The students will make a line graph showing how the plants progressed throughout the month and a half.7. The students will draw a conclusion saying if their predictions were right and why?
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