Gr. 3 - Understanding Life Systems

Growth and Changes in Plants

Bending Plants

Specific Expectations:

1.2 Assess the impact of different human activities on plants, and list personal actions they can engage in to minimize harmful effects and enhance good effects.

2.1 Follow established safety procedures during science and technology investigations.

2.4 Investigate ways in which a variety of plants adapt and/or react to their environment, including changes in their environment, using a variety of methods.

2.5 Use scientific inquiry/experimentation skills, and knowledge acquired from previous investigations, to investigate a variety of ways in which plants meet their basic needs.

3.1 Describe the basic needs of plants, including air, water, light, warmth, and space.

3.4 Describe how most plants get energy to live directly from the sun.

Big Idea (for lesson):

Students build a box that lets select amounts of sun in to feed the plant, and students develop tracking sheets to see how the plant bends to adapt to the situation and seeks the light.

Accommodations:

- ☒ Increase time
- ☒ Visual Aids
- ☒ Manipulatives
- ☒ Chunking
- ☒ Step-by-Step
- ☐ Scaffolding
- ☒ Copy of Notes
- ☒ Student Grouping

Differentiated Instruction:

- ☒ Content: Use demo to show the content as you offer verbal descriptions.
- ☒ Process: Have students work in pairs and support each other if physical impediments exist.
- ☒ Product: Students may show their final product in pairs, and communicate their findings either verbally, visually, or through written means.
- ☐ Other: _____

Bloom's Taxonomy:

- ☒ Knowledge
- ☒ Comprehension
- ☒ Application
- ☒ Analysis
- ☐ Synthesis
- ☐ Evaluation

Multiple Intelligence:

- ☒ Verbal/Linguistic
- ☒ Logical/Mathematical
- ☒ Visual/Spatial
- ☒ Bodily/Kinesthetic
- ☒ Naturalist
- ☐ Musical/Rhythmic
- ☒ Interpersonal
- ☒ Intrapersonal

Delivering The Lesson:

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Portion & Timing	Grouping:			Introduction:	Materials
Minds On: **10 mins**	W ☒	S ☐	I ☐	Teacher does a demonstration for light/dark vision adaptation: -Have students tightly cover one eye for at least 5 minutes. Next, turn off the lights so that the room is quite dim. Have students open one eye at a time and compare what they see. -Ask students why the eye that was closed can see better than the one that was left open? (*Answer: the closed eye was adapted to the darkness already.*) -Ask students which eye they predict will see better when the light is turned back on? (*Answer: the dark-adapted eye is "dazzled", and takes time to adapt back to the light again*).	
Action: **20 mins**	W ☒	S ☒	I ☒	Have students build their "bending plants" setup according to the instructions on the handout. Teacher can circulate and ask questions of the different groups: -What do you predict will happen to the plant as it grows? -What necessary things for living things to survive is missing for this plant because of the box? (*Answer: light*). -Do you think plants are able to adapt to new situations just like your eyes were?	Bending Plants Handout (Materials listed)
Consolidate: **10 mins**	W ☐	S ☒	I ☒	As an end-of-period activity, have students check in on their plants every couple of days. You may want them to make a table of their observations, or draw/write about what they see.	Journal/Log sheets