

Gr. 1 - Understanding Life Systems

Needs and Characteristics of Living Things

Bending Plants

Specific Expectations:

2.1 Follow established safety procedures and humane practices during science and technology investigations.

2.2 Investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth, and space, using a variety of methods and resources.

2.4 Investigate the physical characteristics of plants and explain how they help the plant meet its basic needs using a variety of methods and resources.

3.1 Identify *environment* as the area in which something or someone exists or lives.

3.2 Identify the physical characteristics of a variety of plants and animals.

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 <input checked="" type="checkbox"/> | S <input type="checkbox"/> | I <input type="checkbox"/> | 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? (<i>Answer: the closed eye was adapted to the darkness already.</i>) -Ask students which eye they predict will see better when the light is turned back on? (<i>Answer: the dark-adapted eye is "dazzled", and takes time to adapt back to the light again.</i>) | |
| Action: 20 mins | W <input checked="" type="checkbox"/> | S <input checked="" type="checkbox"/> | I <input checked="" type="checkbox"/> | 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? (<i>Answer: light.</i>) -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 <input type="checkbox"/> | S <input checked="" type="checkbox"/> | I <input checked="" type="checkbox"/> | 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 |