

Basic Needs of Plants

4th Grade

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Benchmarks:

SLC 16: Students will identify the 4 basic needs [food or an energy sources, gases to take in, water, shelter/protection/habitat.] for organisms to survive. Students will identify how certain characteristics help organisms meet their basic needs. Students will distinguish between necessary and unnecessary conditions for growth and survival and explain why certain conditions can prevent organisms from surviving.

Objectives:

To learn the 4 basic needs of organisms and the needs of plants in particular.

Materials:

- growing grass
- water
- sunlit windowsill
- shady spot in the room

Initial Demonstration:

Examine the plants that have been growing on the windowsill for some time. What has changed about them? Why?

Target Observations:

- Notice that the plants are growing.

Initial Model:

- Organisms need certain things [basic needs] in order to survive.

Procedure:

Put plants back on the windowsill and let them grow for a few more weeks. It is important that the plants be exposed to light and that they are watered [lightly, a couple spritzes of water from a spray bottle every day will work] every day for a week or two.

What are the basic needs of a plant? What do they need to survive? Talk about what things we have given to the plants to make them live.

Take away a basic need from different subgroups of the plants. Observe as they fail to thrive over the next few weeks. Have the students measure the growth of their plants and describe the way that the plant looks. This will take a week or two to see results, so make the students leave room in their journals for recording data in an organized manner.

Discuss about how plants need certain things to survive and that how, if they are lacking them, they will die. If there is time compare the needs of plants and animals. Use the kids themselves as an example. Another good example would be any pets that they have. Then you can extrapolate to wild animals.

Target Observations:

- The plants don't look as healthy.

Target Revised Model:

- The plants will die or be less healthy if certain things are taken away from them.

Summary:

Plants were observed to grow when their basic needs were satisfied. When some of these needs were removed, the plants began to look sick and die. All living organisms must meet their basic needs or they will not be healthy.