

Growing Plants

Topic: Plants
Objectives: The students will know that <ul style="list-style-type: none">plants have basic needs, including nutrients, air, water, light, and a place with sufficient space to grow. Students will be able to <ul style="list-style-type: none">make repeated observations of an object or event from multiple positions.develop a question from one or more observations.predict outcomes based on actual observations and evidence rather than random guesses.communicate observations and data with simple graphs and pictures, oral and written statements, and with numbers.answer questions by conducting simple experiments/investigations, using nonstandard measuring units and simple tools, such as a magnifying glass or a balance. A simple experiment is one that changes only one thing at a time (tests only one variable), gives quick results, and provides easily observable changes.conduct simple experiments/investigations related to plant needs by changing one variable (nutrients, air, water, light, or place to grow) at a time. Students do not need to know the term variable.
Materials: Bottle biology for each table Plant Dirt

1. Begin the lesson by telling students they will be growing plants to see the effect of the presence or lack of the presence of light on plant growth.
2. Go over the parts of the plant with students again.
3. Have students set up their experiment telling them they will be putting one plant in the window and one plant in the closet.
4. Follow the bottle biology directions to set up.
5. Have students make observations of plants over a couple of weeks.
6. Discuss results with students.

Materials

- One 2-liter soda bottle
- One bottle cap
- Wicking material-fabric interfacing or cotton string
- Water, soil and plants

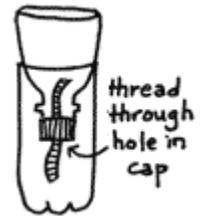
Step 1 – Remove label from the 2-liter bottle. Cut bottle 1 cm below shoulder.



Step 2 – Poke or drill a 1 cm hole in bottle cap.



Step 3 – Thread a thoroughly wet wick strip through bottle top, invert top, and set into base. Wick should reach bottom of reservoir and thread loosely through cap.



Step 4 – Fill reservoir with water. Add soil and plants to top chamber. To be effective, the wick should run up into soil, not be plastered along a side of the bottle. For better drainage, place a layer of gravel, sand or vermiculite in the bottom of the soil unit. Saturate wick in water, then insert into column threading through the cap.