

Gardening on the Rocks

(Amaze your students by growing plants without soil.)

Objective:

Students will investigate alternate ways of growing plants.

You'll Need:

- Shallow containers
- Clean rocks or pebbles
- Plant or root tops (carrots, beets, turnips, parsnips, or radishes)

Procedure:

1. Wash and rinse rocks in warm water. Air dry.
2. Fill several shallow containers with small rocks or pebbles.
3. Add water to cover the layers of rocks.
4. Cut off the top 1/2 to 1 inch of the root vegetable. If leaves are present, pinch off all but 1/8 inch or tiny buds.
5. Place several vegetable tops cut side down on the layers of rocks, making sure that the cut side is covered with water.
6. Place in a well-lit location and observe for signs of growth.
7. Add water as needed.

Try this too:

- Grow your own pineapple plant

Cut the top off a pineapple leaving about 3/4 inch of the fruit attached. Place on stones for 2 to 3 weeks until roots appear. Then move the plant to a pot filled with soil (pineapples prefer a potting soil mixed with sand). Cover the base well with soil and place on a well-lit windowsill.

- How about a sweet potato plant?

Fill a deep container with rocks or pebbles to within 1 inch of the top, adding water until the rocks are covered. Choose a sweet potato that has small roots or buds and cut off 2 inches from the rounded end. Place the rounded piece, cut side down, on the rocks. Place on a well-lit windowsill. Check the water level daily, keeping the cut edge always under water.

Note: When purchasing vegetables to use for this demonstration, look for those with signs of growth at the top. These will produce a showy garden sooner than those without signs of growth.

Evaluation:

- Write about it.

Which variety of seed showed the first signs of growth? Which variety grew the tallest?

Did the variety of seed that showed the first signs of growth turn out to be the

tallest plant?

If this activity were repeated, would the results be the same. Why or why not?

- Graph it.

Use the data collected in step seven to develop a line graph. Use a different color for each variety of seed shown.

- Draw it.

Illustrate the developing plants, showing the size of each variety of bean plant. Label your illustration.