

Growing Plants from Food Scraps



Educational Farm & Nature Preserve

Objective: To make predictions and record observations about plants growing from food scraps. To notice what affects the success of plant growth (water, light, etc.)

Background: We often think about growing plants from seed. We can also grow more plants using food scraps. Plants contain energy, so instead of throwing away the energy, we can use it to grow another plant. By attempting to grow various plants from food scraps in the classroom or at home, students will have the opportunity to see a plant growing they may have never seen before, be reminded of where food comes from, observe, record, make predictions, smell, and taste. These activities also can begin or follow conversations about plant parts (root, stem, leaves etc.)

Pineapple Plant

1. Use the leafy top or crown of a pineapple. It should have about a ½ inch of “pineapple meat” still on it and have any dead leaves taken off. Leave the top out to dry for about 10 days.
2. Insert crown about 1 inch deep in a pot of sand in order to root it. Keep sand moist. After the roots have developed, the pineapple plant is ready to be planted in soil.
3. Pineapples like well drained soil (they are from the bromeliad family). Place broken pot pieces or small rocks in the bottom of the pot. Fill with healthy soil.

ODE Common Core Tie-In

This activity can be changed and added to in order to accommodate various grade levels. The science inquiry and application processes integrate well with planting. Here are some standards that it works well with.

Grade K Life Science

Topic: Physical and Behavioral Traits of Living Things

Concept: Living things are different from nonliving things

Grade 1 Life Science

Topic: Basic Needs of Living Things

Concepts: Living things have basic needs, which are met by obtaining materials from the physical environment.

Living things survive only in environments that meet their needs.

Grade 3 Life Science

Topic: Behavior, Growth & Changes

Concept: Plants and animals have life cycles that are part of their adaptations for survival in their natural environments.

Grade 5 Life Science

Topic: Interconnections within Ecosystems

Concepts: All of the processes that take place within organisms require energy.

- Put the potted pineapple where it will get light and moist air. A mist spray bottle will help keep the air moist. This plant likes to be watered through leaves and the crown, but lightly watered in the soil.
- Watch your pineapple grow! This plant is hardy but will grow slowly.

It is possible some children have never had a pineapple before. This science center is a good opportunity to talk about the environment where pineapples, what other plants grow there, and sample taste a pineapple.

Sweet Potato Vine (can also use this method for Irish potatoes)



- Use a sweet potato that is old, firm, and plump. It will help if it already has sprouts growing.
- For a planter, use a clear glass jar so students can see the roots develop.
- Place the thinner part of the potato in the jar. Half of the potato should be in the jar and half should be out. If the jar opening is too large to support the potato, use toothpicks on each side.
- Fill the jar with water so only the bottom end of the potato is covered.
- Put the jar in the dark for 10 days. Be sure to check the water level every couple of days so it remains constant.
- After the 10 days, place the jar in a warm, sunny spot.
- When shoots are 2 to 3 inches long, clip all except 3 or 4 of the strongest shoots. This will help the plant be healthier and stronger.
- In spring, you can plant the sprouts in a garden to grow even more sweet potatoes.



Carrot, Beet or Turnip Plant

Planting various root plants can make for a good compare/contrast discussion amongst students.

- Cut back the green top leaving only about an inch.
- Cut from the lower or tip end of the vegetable, leaving a piece about ½ inch long.



3. Place this piece, along with its inch green top, facing up in a shallow dish. Place pebbles or stones around it to hold it in place.
4. Put water in dish. It should be level with the top of the vegetable and stay at a constant level.
5. Place the dish in a window that will receive light.



Citrus Plants

Use seeds from grapefruit, lemons, tangerines or oranges.



1. Soak the seeds in lukewarm water overnight.
2. Plant the seeds in potting soil in an egg carton. Cover the seeds with ¼ inch soil.
3. Place the egg carton in a warm, dark place and keep soil moist.
4. When the sprouts show two pairs of leaves, separate the plants and replace in individual pots about 4 inches in diameter. When potting, be careful not to damage the roots.
5. After a few days, move the pots to a sunny, warm spot.

Follow up/extension

Compare and contrast how various plants grow. Students can record their observations by taking photos, drawing, or writing in journals. Set up an experiment with a control plant and variables (amount of water, sunlight, soil etc.). Have students hypothesize and observe.