

Plants In Space

Activity Objectives

- To investigate the value of green plants in space research
- To discover the best converter of light energy to biomass

Materials

- ✓ Wheat or Rye seed
- ✓ Oats (whole only, not milled)
- ✓ Corn seed
- ✓ Potting soil
- ✓ Three half-gallon milk cartons
- ✓ Balance scale
- ✓ Grow-type fluorescent lamp (top of plants should be 7.5-10 cm from lamp)

Instructions

Procedure A

1. Cut the milk cartons in half and poke drainage holes in the bottom of each carton.
2. Fill with potting soil and plant the seeds.
3. Keep moist.
4. Grow the plants under a fluorescent lamp.
5. Record your results on a graph.

Procedure B

1. After 14 days, pull the plants.
2. Wash off the dirt and dry with a paper towel.
3. Weigh the plants and record the results on a graph.

Procedure C

1. Dry the plants in the sun until they are crisp.
2. Weigh the plants and record the results on a graph.

Questions

Have the students think about and answer how the plants will help the atmosphere on an International Space Station.

Which plant is the best converter of light energy to biomass?

How can knowing more about plant growth in space benefit plant growth on Earth?