

The Energy of Decay

Materials

- Fruit that decays rather quickly (e.g. banana) (3 for each group of students) Note: Use fruit that has been bruised, damaged, or partially eaten as this will decay at a faster rate than fruit that has not been touched.
- Sealed plastic bags/bins to reduce odor and pests (2 for each group of students)
- Container with lid filled with dirt (1 per group of students)
- Refrigerator
- Goggles (1 per student)
- Gloves or tongs (1 per student) Note: determine if children have latex allergies before providing gloves
- Magnifying glasses (1 per student)
- Crayons or colored pencils
- Journals

Instructions

1. Think about how the following items can be useful by being repurposed: an old metal soup can, old

Item	Repurposed for Reuse Ideas
Metal Soup Can	
Plastic Milk Jug	
Newspaper	

plastic milk jug, and an old newspaper. Brainstorm and discuss.

2. Identify some possible uses for an old piece of fruit. Brainstorm and discuss.

Fruit	Repurposed for Reuse Ideas



3. Investigate the conditions that produce the most rapid decay of a piece of fruit. Discuss the variables that will change in the investigation (e.g. one piece of fruit will be placed in a plastic bag/bin at room temperature, another buried in dirt inside a container with a lid, and another placed in a plastic bag/bin in the refrigerator labeled clearly as an experiment.). Be sure that the bag has plenty of air/oxygen in it before it is sealed.

Make a prediction, which environment will produce the most rapid decay.

4. Observe the fruit using a magnifying glass every 2-3 days for 2 weeks and record their observations below using words. Students are encouraged to take pictures on electronic devices (or draw what they see if cameras are not available) and include them in their overall observations. Use all of your senses EXCEPT taste as you record observations. **To avoid contact with bacteria, do NOT handle the decaying fruit directly. Wear goggles and use gloves and tongs as a safety precaution while opening the containers and observing the fruit. During storage, keep food in a sealed airtight container to reduce odor and pests.**

Resources:

<http://www.countrysideinfo.co.uk/decompos.htm>

<http://teachers.egfi-k12.org/the-energy-of-decay/>

Fruit Decay Observation Sheet

Team Names: _____

Test One: _____ in a Plastic Bin at Room Temperature

Week 1, Day 1:	Week 1, Day ____:	Week 1, Day ____:
Week 2, Day ____:	Week 2, Day ____:	Week 2, Day ____:

Test Two: _____ Buried in Dirt

Week 1, Day 1:	Week 1, Day ____:	Week 1, Day ____:
Week 2, Day ____:	Week 2, Day ____:	Week 2, Day ____:

Test Three: _____ in a plastic bag in the refrigerator

Week 1, Day 1:	Week 1, Day ____:	Week 1, Day ____:
Week 2, Day ____:	Week 2, Day ____:	Week 2, Day ____: