

Name _____



Hands-On Activity

Explore online.

Engineer It • Where Does Our Trash Go?

Materials



What happens to trash?

Step 1



Bury the lettuce, napkin, and cup. Make sure it is covered with the soil.

Step 2



Water the soil every three days for two weeks.

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Hands-On Activity Small Groups 20–30 min for Step 1 and 2
20 min for Step 3

Engineer It • Where Does Our Trash Go?

3D Learning Objective

SEP Obtaining, Evaluating, and Communicating Information

Children explore what happens to trash when the choice is made to put it in a landfill.

Suggested Materials A foil pan, soil, napkin pieces, pieces of a foam cup, lettuce, and water. Apple or potato peelings may be used instead of lettuce. The pan should be deep enough so the objects can be completely buried.

Preparation

You may choose to complete this activity as a whole group by having volunteers share the tasks at each step. Be sure children put on gloves before handling soil or burying objects.

Activity

STEP 1 Take pictures or have children make drawings of the objects before burying them. Monitor children as they bury the objects. Point out that the objects should have soil under them as well as on top of them.

STEP 2 Ask: Why do we water the soil? **Watering the soil is like rain falling on it. Ask:** What do you think the objects will look like after two weeks? Record children’s responses for use during Step 3 of the activity, which will be done in two weeks.

STEP 3 Have children put on gloves before digging up the objects. **Ask:** How did the objects change? **The lettuce began to fall apart. The napkin only changed a little. The foam cup did not change. Ask:** What do you think would happen to the napkin and the cup in a landfill? **They would be there a long time without falling apart.**

Hands-On Activity, continued

DCI Developing Possible Solutions

STEP 4 Children should analyze their results and conclude that recycling or reusing objects helps reduce trash. Their drawings may show an object, such as a foam cup, being reused as a pencil holder or other container.

DCI Human Impacts on Earth Systems

Children should understand that people can make choices to reduce their effect on the environment. Most human-made objects do not break down quickly. The more of these objects people discard, the more landfills are needed and the more resources are needed to make more of the objects. **Ask: What can people do to save natural resources? People can reduce the resources they use by reusing and recycling objects.**

Claims, Evidence, and Reasoning

Children should make a claim that some trash breaks down and some does not. They should cite evidence that the lettuce broke down the most and the foam cup did not break down at all. **Ask: How does your evidence support your claim? The lettuce and napkin started to break down, while the foam cup did not break down at all.**

Scoring Rubric for Hands-On Activity	
3	States a claim supported with evidence that some trash breaks down and other trash does not
2	States a claim somewhat supported with evidence that some trash breaks down and other trash does not
1	States a claim that is not supported by evidence
0	Does not state a claim and does not provide evidence

Step 3

Dig up the lettuce, napkin, and foam cup. Tell why trash is harmful to the land.

Step 4

Draw a solution to help reduce the amount of trash that goes into a landfill.

Drawings may vary but could include objects being reused or recycled.

Make a claim.

Sample Answer: Some trash breaks down. Other trash stays the same.

What is your evidence?

Drawings may vary but should show that the lettuce and napkin started to break down while the foam cup did not.