

Time to Decompose

3R's (Reduce, Reuse, Recycle)

Background

When trucks bring garbage to Hartland Landfill it is taken to the active face and dumped on the ground. Once the truck has moved away a compactor will crush and compress everything, so it's as small as possible. This saves space and allows the landfill to last longer. Compressed garbage is then covered in gravel or dirt. As time goes on, layers of garbage and gravel are repeatedly built on top of each other. Decomposition often relies on oxygen and the correct temperature and moisture. While garbage does decompose in a landfill, it takes much longer because there isn't much oxygen or moisture after it's crushed and buried.

Activity Instructions

There are a few ways to explore how long things take to decompose in a landfill. Use one of the attached handouts or;

1. Gather commonly recycled materials or materials listed in the table below.
2. Print labels or have students write the times to decompose on scrap paper.
3. Place materials around the room.
4. Have students walk around the room and leave a label with the time they think it would take that item to decompose.
5. Once all students have visited each item, review the findings.

Discussion Questions

Did you find any of the times surprising? Why would burying items in a landfill be an issue? If we had recycled all these materials what new things could have been made? What are alternatives to throwing things in the garbage?

Answer Key

Paper towel (4 weeks); Apple core (2 months); Plastic bag (500 years); Aluminum can (200 years); Glass bottle (1 million years); Styrofoam cup (unknown)

Time to Decompose

Cut out each item below and arrange them in a line. Start with the item you think will take the **shortest** amount of time to decompose and end with the one that will take the **longest** time to decompose.



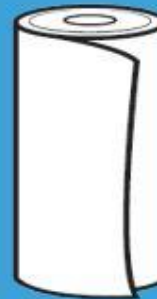
Plastic bag



Cans



Glass jars



Paper towel



Styrofoam



Apple

Time to Decompose

How long do you think it takes things to start to decompose or breakdown in a landfill? Use the provided times to label the items with the time you think it will take them to decompose.



Options:

1 million years

500 years

Unknown

4 weeks

2 months

200 years