



Game: Decomposition Timeline

In this activity, you will play a matching game to determine how long it takes for different materials to decompose in landfill.

Please note: these numbers vary based on many factors including landfill location, compaction rates, temperature, and access to sunlight. These numbers are approximations only but paint a serious picture in regards to the necessity to reduce, recycle and compost.

Timeline Instructions:

1. Start by asking residents if they know what it means to decompose. The definition of decompose is to rot or break down. Tell residents that we are looking at different items and trying to match them to a time frame in which we think they would decompose in a landfill. Tell them you understand that some of the times have large gaps (example a plastic bag could take 10 - 1,000 years). Tell them this is because we are still uncertain about how long it takes some items to decompose, as they are relatively new inventions, and that the decomposition of items can depend on the climate of the place where the landfill is located. If a place has a warm climate, the sun's energy will help to break down materials at a faster rate. Let them know that you understand some of the items can be recycled, composted, or reused, but we are assuming that people made a mistake and threw them into the trash.
2. Print and cutout the following items and decomposition times. Break residents up into groups (however many seem necessary) and give each group a set of the items and times. Have residents work in their groups to try and match items with their decomposition time. Once all groups have finished their matches, go item by item and see what each group put. Once they announce their match, let them know what the correct answer was if they weren't correct. Make sure to discuss the items
3. Questions to ask residents:
 1. Why do you think it is important that we know this information?
 2. Why do you think compostable items decompose faster than items that we recycle or put in the trash?
 3. (Example: Why does a banana peel only take 4 weeks to decompose? Because it is a natural item that we put in our compost. It comes from our Earth so it does not take as long for it to decompose and turn back into soil).
 4. What did you learn from this game?

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Item	Decomposition Time
Plastic Water Bottle	Up to 450 years
Apple Core	4 Weeks
Plastic Bag	10- 1,00 years
Banana Peel	4 weeks
Wool Socks	1-5 years
Plastic-Coated Paper	5 years
Leather	50 years
Steel Can	50 years
Plastic Six-Pack Holder	450 years
Aluminum Can	2-200 years
Disposable Diaper	500 years
Glass Bottle	1,000,000 (1 million) years

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