

NATURE ACTIVITY

CARTON LANDFILL



Kids will explore trash and its disposal by creating mini “landfills” in repurposed paper cartons. They will investigate what happens to common household waste when buried under soil and plants. They will learn about the importance of the 3 Rs: REDUCE, REUSE and RECYCLE.

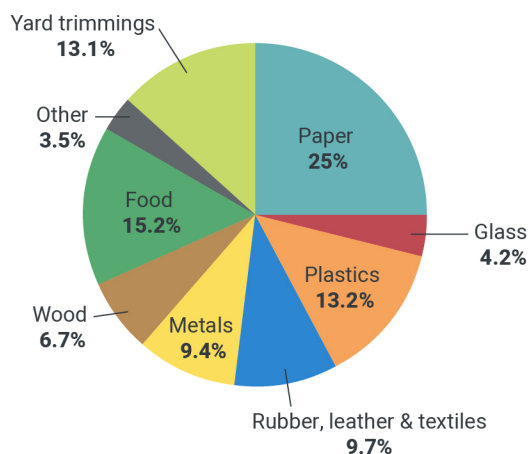
WHAT YOU'LL NEED:

- ☐ Paper cartons (at least 1 per child)
- ☐ Potting soil
- ☐ Newspaper or tray
- ☐ Common household trash including things made of paper, metal, glass, and plastic (at least 2 small samples per child)
- ☐ Grass seed such as annual rye or wheatgrass

TIME: 4+ weeks

INTRODUCTION:

According to the EPA, in 2017 Americans generated about 268 million tons of trash. While 94 million tons of this material was recycled or composted, there is still much room for improvement. In this activity, kids will explore what happens to materials that are disposed of in landfill and the benefits of composting and recycling instead. An analysis of the waste generated shows the following categories and percentages:



REDUCE, REUSE AND RECYCLE.

The 3 Rs (reduce, reuse, and recycle) are very important for helping us to decrease the amount of materials going to landfills. They are listed in order of priority. The best way to tackle the problem of waste is to reduce the amount of unnecessary materials we are using on a regular basis. For example, use cloth napkins instead of paper, buy products in bulk to reduce packaging, and use reusable water bottles instead of single-use water bottles. If reducing is not an option, the next step should be finding a way to reuse things efficiently. For example, a paper carton can be a pot for seed starting or a plastic milk jug can become a watering can. Finally, if you can't reuse something, then recycle it so its materials can be reclaimed to manufacture new things.

Follow the Nature Activity instructions on next sheet.



Presented by



With support from



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INSTRUCTIONS:

STEP 1

Collect an assortment of common waste items such as paper cartons, plastic bottles, fruit and vegetable scraps, glass, paper, a metal can, and/or an old piece of clothing. The items need to be safely cut into small pieces that would fit inside of your paper carton. Ask kids to sort items and consider what a particular item was used for and how it could be recycled.

EXAMPLES:

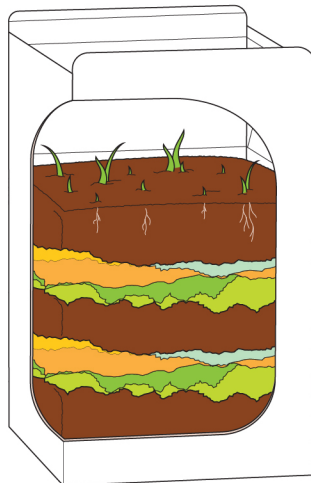
- A plastic bottle can be made into new plastic items and fabric.
- Fruits and vegetables be made into compost and put back into the garden.
- Paper including cartons can be recycled into more paper, paper towels, or toilet paper.
- Glass can be made into new bottles or jars.
- An aluminum can become another aluminum can or foil.
- Clothing can become new clothing, rags for cleaning, or other textiles.

ASK KIDS:

- What items cannot be recycled?
- What happens to these materials? Where do they go?

STEP 2

Share that you are going to make mini-landfills. Provide at least one paper carton per child (with the top open and small holes at the bottom for drainage). Let each child choose one common waste item from your samples. They can also choose more than one waste item, or make multiple mini-landfills if supplies are available.



STEP 3

Layer moist potting soil and the chosen waste item in your carton. Make sure a layer of potting soil is the top layer.

STEP 4

Plant ryegrass or wheatgrass seeds in the top layer of potting soil. Water the containers and allow them to grow for 4 to 6 weeks. For comparison, you may also want to plant a few cartons that just have potting soil and seeds (no waste item).

ASK KIDS:

- Predict what they think will happen to their waste item over time. Will it change? Will it stay the same?

STEP 5

After 4 to 6 weeks, dump out the contents of their mini-landfill in a tray or on a piece of newspaper. Investigate the waste items. Ask kids to describe the differences they see. Ask, What happened? Was your prediction correct?

* The garden can be a great place to help you practice your 3 Rs. From using paper cartons to start seeds to turning old disposable silverware into plant labels, there are many ways to creatively use "waste" products to help your garden thrive. Composting your food scraps, yard trimmings, and food-safe wood can be an especially great way to recycle. Composting turns organic matter waste into a nutrient-rich growing medium for the plants in your garden. In addition to adding nutrients to the soil, compost also improves soil texture and helps with water absorption and draining.

