STEM at HOME

SCIENCE ★ TECHNOLOGY ★ ENGINEERING ★ MATH

PRESENTED BY: girlstart

T-Shirt Upcycling

Reduce, reuse, recycle! Learn all about the ecological importance of this phrase as you upcycle a t-shirt into a reusable tote bag.

TEKS:

SCI 6/7/8.1 B: The student is expected to practice appropriate use and conservation for resources, including disposal, reuse, or recycling of materials.
SCI 8.11: The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems.

Materials:

- Old t-shirt (size adult medium or larger shirts work best)
- Permanent or fabric maker
- Ruler
- Scissors

How To:

1. Take out your old t-shirt and lay it evenly on a flat surface in front of you.
2. Use scissors to cut the sleeves off of the shirt.

3. Turn the shirt inside out. Use a permanent or fabric marker to trace around the shirt's neckline, and cut along the mark to remove the neckline.

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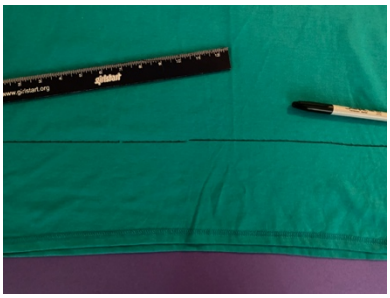
4. Draw a horizontal line across the entire shirt around 3-4 inches from the bottom.



5. Cut slits/fringe from the bottom of the shirt to the line that you just drew, around half an inch apart. Line up the bottom and top layers of the shirt so they match up and you cut both layers at the same time.

6. Tie a double knot between each front and back pair of fringe, moving from left to right across the shirt.

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7. Turn the shirt back right-side-out and you'll have a completed tote bag! The fringe is the bottom of the tote, and the cut-out sleeves act as straps. If you notice any holes in the bottom of the bag near the fringe, you can go back and tie additional double knots in neighboring pieces of fringe.

STEM Explanation:

You just upcycled a t-shirt into a reusable tote bag! Upcycling is the process of converting old materials into something new and useful. Instead of throwing your old t-shirt away, you changed it into a bag that you can use every day. This is great for the environment because it keeps unnecessary waste out of landfills. Have you ever heard of the phrase, "reduce, reuse, recycle?" This phrase is commonly used when teaching people about the best way to lessen their trash-related environmental impact. Did you know that the words reduce, reuse, and recycle are in a specific order, based on how good that action is at protecting the environment?

Let's use a plastic bag as an example. Our first priority should be to reduce the number of waste products that we use in the first place. For a plastic bag, this could be done by using a reusable bag (like your upcycled t-shirt tote!) so that you don't even need a plastic bag. Our second priority should be to reuse whatever waste products we do have to use. This can be done by upcycling the plastic bag into a trash can liner, plastic bag jewelry, or even a rug! (Google "plarn" to learn more about a wonderful way to upcycle your plastic grocery bags.) Finally, our third priority is to recycle. Recycling can consume a lot of energy and water, but if we cannot reduce our use of a waste product, or find a way to reuse it, we should recycle it!

Career Connection:

Environmental engineers solve ecological problems to protect humans from the environment and protect the environment from humans. They deal with hazardous waste-water management, water supply, alternative energy, air pollution control, land management, and toxic materials control.

Resources:

https://mommypotamus.com/no-sew-t-shirt-tote-bag-tutorial/):
https://www.fastcompany.com/3046428/4-cities-that-are-getting-rid-of-all-of-their-garbage
https://www.epa.gov/recycle

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