Autumn Peltier
Water Filtering Experiment

Autumn Peltier is a 16-year-old Indigenous clean water activist. Starting to speak out at just 8 years old, she is the youngest "Water Warrior", who is an official water protector and advocates for universal clean drinking water. As a young girl growing up in the Wikwemikong First Nation in northern Ontario, Canada, Peltier realized that not all tribes had access to clean water and started to fight for a solution. She has addressed the United Nations twice in an effort to help those communities without drinkable water. A water filter is something that removes any unwanted items from your water, which improves the water's quality. In this project, we will be experimenting with the water filtering process by creating our own filter!

1

Gather materials:
- 2 Glass Jars
- Coffee Filters
- Pebbles / Sand
- Plastic Cup or 2-Liter Plastic Bottle
- Dirty Water
- Scissors / Box Cutter

2

If using a 2-liter plastic bottle, first remove the bottom third of the bottle carefully with scissors or a box cutter.

3

If using a plastic cup, cut a hole on the bottom of the cup.

4

Add 3-4 coffee filters to the bottom of your cup or bottle.

5

Then, add a layer of sand. You can place about 1.5 - 2 inches worth.

6

Add a layer of pebbles, again about 1.5 – 2 inches worth.

7

Place your cup or bottle inside a glass jar. This is your filtering system, so you should have some space in your jar for water to drain out of the bottom hole.

8

Now collect some water into the other glass jar. This could be water from a nearby pond, lake, or stream. How does this water look? Would you want to drink this water?

NOTE:
You can create your own "dirty water" by placing dirt, rocks, and leaves from outside into your water.

9

Now, let's try to filter our water and make it clean! Pour your dirty water into your filtering system slowly.

10

Watch how water starts to drain from the bottom hole. What do you notice? Does your water look differently from when you first collected it? How so?

WHAT'S HAPPENING

The original water put into the filter was full of dirt, grass, and leaves. You may notice that after putting the water through the filter, it loses a significant amount of those bulky items. If you started with darker or cloudy water, your water may change color and clarity as well. For us, the water became slightly cloudy but was very clean otherwise. What would happen if we ran our filtered water through the filter again? Do you think the color and clarity would change even more? Sometimes, even filtered water needs to be put through the filtering system again to make sure it's clean enough to drink! Explore further by adding different materials to your dirty water, such as oil or small bits of garbage. How do these objects change your water when filtered?

This experiment helps us realize a few things:

1. It's important to try to keep our water clean by not polluting.

2. Clean water should be accessible to all communities. If you drank dirty or contaminated water, you could get sick, but water filtering allows for clean drinking water, which can help improve health and energy!

3. Autumn started speaking out when she was a child, just like you. You can make a difference no matter how old you are!