Water Filtration Experiment

Purpose:

To explore how water filtration allows us to purify dirty water.
Note: We do not *disinfect* water in this experiment, so it is **not** safe to drink.

Materials:

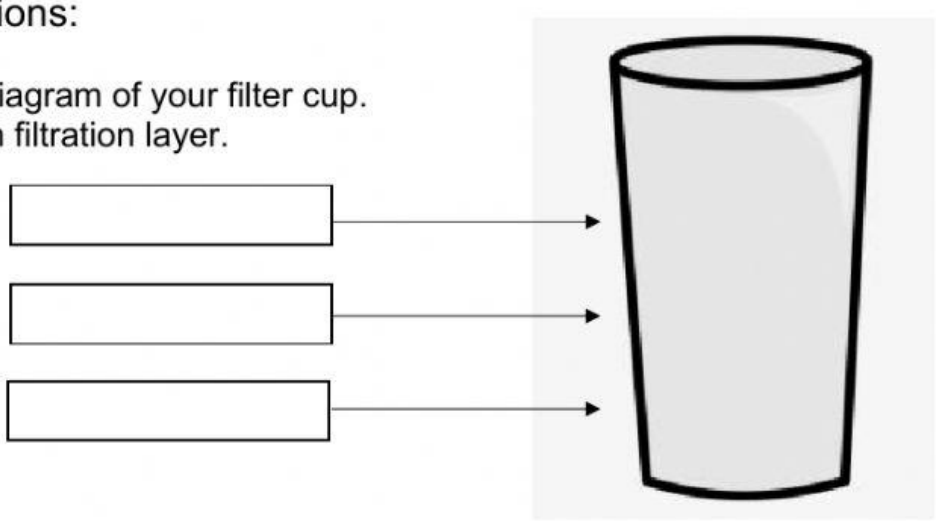
- 1 glass jar
- ½ cup sand
- ½ cup gravel
- 1 measuring cup
- 4 coffee filters
- 1 cup "polluted/dirty" water (combine water with a handful of dirt, mud, leaves, bits of plastic)
- A plastic cup with a hole in the bottom

Steps:

1. Line the plastic cup with all four coffee filters.
2. Next, add ½ cup of sand.
3. Then, add ½ cup of gravel.
4. Place the bottom of the cup in the jar.
5. Use the measuring cup to pour the dirty water into the plastic cup. Watch the water filter through the cup into the jar.
   Keep some of the dirty water to compare at the end.

Observations:

Create a diagram of your filter cup.
Label each filtration layer.



LIVEWORKSHEETS

Draw a labeled diagram of the water before and after filtration.
Describe the water before and after filtration.

Water *before* filtration	**Water *after* filtration**
Colour: _____ Smell: _____ Transparency (Is it clear?): _____ Is it drinkable? _____	Colour: _____ Smell: _____ Transparency (Is it clear?): _____ Is it drinkable? _____

Discussion:

Even if the water looks clean, could it still be undrinkable? _____

What kind of pollutants may not be filtered out using a homemade filter?

_____

_____

_____

_____

Imagine if *you* had to filter all of your water before using it.

This experiment was adapted from "Water Filter," PBS Kids, pbskids.org, 2008.

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