

Build a water filter

Grades 3-6

Materials:

- Plastic water or soda bottle
- Scissors or knife (get an adult to help!)
- Coffee filters
- Rubber band
- Cotton balls
- Rice, sand, gravel or activated charcoal
- Dirt and debris
- Tap water
- Clear jar or cup
- Paper towels
- Food coloring



Instructions:

1. Cut the bottom off of a plastic bottle. Turn the top upside down and place into a clear container to make a funnel.
2. Make dirty water: mix one cup of water with dirt, leaves, or debris. Make sure there is more water than sediment.
3. Place a coffee filter inside the bottle neck.
4. Add cotton balls on top of the coffee filter.
5. Add rice, sand, gravel, or charcoal to create additional filtration layers.
6. Secure another coffee filter over the top using a rubber band.
7. Slowly pour dirty water into the filter. What happens as it moves through each layer?
8. Collect the filtered water and compare to the original sample. Try filtering the water several times to observe any changes.

