



MAKE A WATER FILTER



KEY IDEAS

Discover how water gets cleaned by the environment by creating a filter using a pop bottle and natural materials.

Skills | language; observation; science; fine motor skills

Duration | 20-30 minutes

Setting | indoors or outdoors

Materials | plastic pop or water bottle with lid, scissors, pen, sand, grass, various sizes of rocks or pebbles, soil, cup, water



ACTIVITY

1. Using scissors, cut the plastic bottle in half.
2. Make a hole in the lid using a pen.
3. Flip the top half of the bottle with the plastic lid onto the bottom part of the bottle so they are nested together.
4. Add a layer of natural materials, starting with sand, then grass, and last a layer of rocks or pebbles.
5. Make the dirty water that you will filter by mixing water and soil together in a cup.
6. Pour the dirty water through your filter and watch to see whether it comes out clearer on the other side!
7. Experiment with your design and natural layers to see how it can be improved.
 - You can also use household filters such as a coffee filter, tea filter, cotton balls, or cloth to make your water filter better.



QUESTIONS

- What would happen if you poured the water through the filter twice? Three times? Do you think the water would be any cleaner?
- What did each layer filter out of the water?
 - Water slips easily through material, but bigger pieces get trapped by rocks, grass and sand.



SAFETY

- Ask an adult to help you cut the bottle in half.
- Even though it's been through your filter, your water will still not be clean enough to drink.



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