DISCOVERY MUSEUM at Home

Backyard and Beyond

Water Filtration Experiment

What you need:

- Empty containers that are taller than their width, and preferably clear
- Materials to use as filters: cloth, paper, plastic, sponges—anything porous that will fit over the opening of the containers
- "Dirty" water: collect from a puddle, pond, stream, or other outdoor source, or create a sample by adding dirt, leaves, and other materials to tap water
- Optional: rubber bands or string to hold your filter material in place on a container

What you do:

- Place one type of filter material over a container, and secure in place with a rubber band or string, if needed. Tip: it works well to have the material be a little loose over the container.
- Carefully pour some of the "dirty" water into the filter so that it flows through the material and into the container.
- Observe (and listen) as the water goes into the container. Does the water in the container look the same as it did before you poured it? Why might this be?

Things to think about:

- Experiments don't always turn out the way we expect! Scientists use the scientific method to make a hypothesis about what will happen in an experiment, observe and record what happens, and draw conclusions from the results. Can you create a new water filtration experiment of your own? Some ideas to consider:
- Experiment with different types of filter materials to see if some filters "clean" the water better than others.
- Test how long the same amount of water can take to flow through different kinds of filters.
- Can you create a better water filter using what you have learned from your first experiments?