



## 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?