Lesson Plan: Filtering Water

Subject: Physical Science

Age Group: 4-5th Grade

Supplies Needed:

- Pitcher of water
- Dirt
- Salt
- Scissors
- Gravel
- Sand
- Cotton balls
- Cups
- Soda bottle
- Scissors

Introduction:

- Ask the students if they've ever seen a water filter or some kind of water purification tool.
- Ask why we might need to filter water.
- Begin the experiment.

Instructions:

1) Mix dirt, salt, and sand into a cup of water.
2) Put the top half of the soda bottle upside-down (like a funnel) inside the bottom half.
3) The top half will be where you build your filter; the bottom half will hold the filtered water.
4) Layer the filter materials inside the top half of the bottle.
5) Ask which material might remove the dirt from the water and in which order you should layer the materials.
6) Pour the dirty water through the filter and observe what the filtered water looks like.
7) Take the filter apart and look at the different layers.
8) Ask which material removed what from the water.
9) Wipe the bottle clean and try again.
10) Try putting materials in different layers or using different amounts of materials.

Follow-up:

- It's important to purify the water we drink because there may be toxins in unfiltered water.
- Where do these toxins come from?
- Large industry waste, household and lawn chemicals and every thing in between.
- Humans are made of about 72% water, therefore we need to consume a good amount each day in order to stay healthy.
- The quality of water we drink is vital to our health.

Source: http://pbskids.org/zoom/activities/sci/waterfilterpartii.html