



Water Filter Challenge!

Challenge: Make a water filter. Then upload your pictures to:
<https://surreyscouts.smugmug.com/upload/rJCRRm/science>

Hydro-neers wanted. Invent a filter to clean dirty water.

Clean water is important for survival, how clean can you make dirty water.

Materials Needed

- 2-liter soda bottle cut in half
- napkins or paper towels
- gravel, sand and cotton balls for your filter
- dirty water, you can make it by adding cooking oil, food colouring, pieces of paper, and tiny pieces of Styrofoam to water

Instructions

1. Put the top half of the soda bottle upside-down (like a funnel) inside the bottom half. The top half will be where you build your filter; the bottom half will hold the filtered water.
2. Layer the filter materials inside the top half of the bottle. Think about what each material might remove from the dirty water and in what order you should layer the materials. For an added challenge, use only two of materials to build your filter.
3. Pour the dirty water through the filter. What does the filtered water look like?
4. Take the filter apart and look at the different layers. Can you tell what each material removed from the water?
5. Wipe the bottle clean and try again. Try putting materials in different layers or using different amounts of materials.