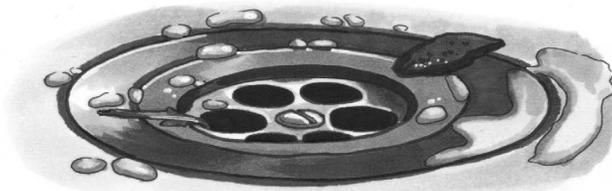
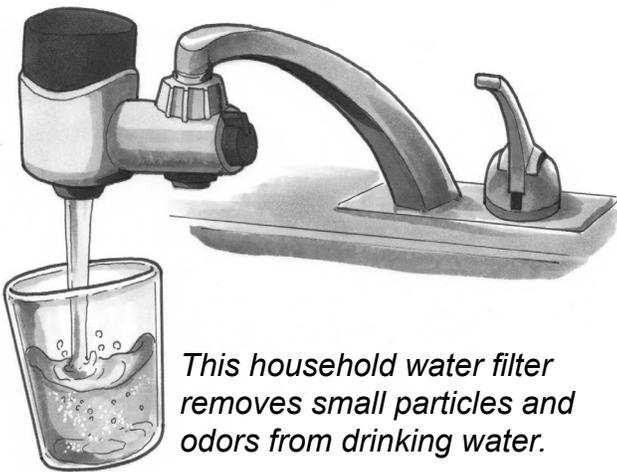


Engineers design water filters in many shapes and sizes! Take a look at some water filter technologies.



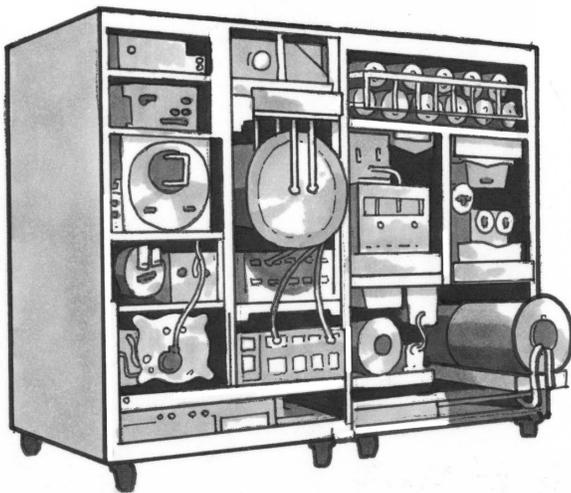
*A simple drain cover in a kitchen sink can catch large pieces of food and prevent them from clogging pipes.*



*This household water filter removes small particles and odors from drinking water.*



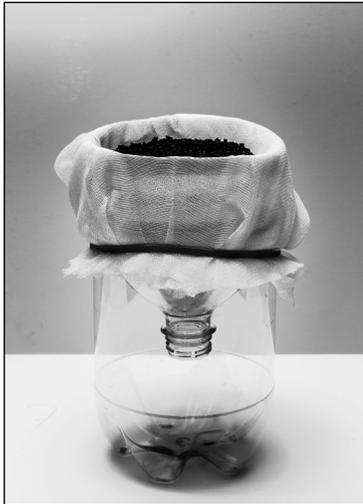
*This filter technology, inspired by a straw, was engineered to provide quick and portable water filtration.*



*This water filtration system uses complex processes to remove salt and body waste from water in space.*

**Did You Know?**  
American astronauts on the International Space Station will filter and reuse their own pee to drink the next day!

1. Place filter material in the top of the Filter Base. (In this example, cheesecloth is used to keep the charcoal from falling through the funnel.)



2. Pour a dirty water sample into the open top of the Filter Base.



3. Water flows through the filter material into the bottom of the bottle.

4. Remove the top of the Filter Base and place used filter materials in the foil trays.

5. Measure the quality of the water sample in the bottom of the bottle.



6. Repeat with each filter material by pouring a new sample of dirty water through each filter material.

We are filtering water from the:

Shower

Bathroom sink

Laundry

Toilet

Water Quality BEFORE Filtering	Clarity	Color	pH	_____

Water Quality AFTER Filtering				
Filter Material Tested	Clarity	Color	pH	Optional
5 cotton balls				
1 square of cheesecloth				
1 paper towel, half-sheet				
1/4 cup sand (with cheesecloth lining)				
2 Tbsp limestone (with cheesecloth lining)				

How were you able to *improve* the water quality of your sample using the filters?

Which filters could you combine to *improve* the water quality even more?

