

## MAKE YOUR OWN WATER FILTER

We are very lucky that we have lovely wonderful clean water when we turn on a tap. In fact, tap water in the UK is amongst the cleanest in the world!

By using clever cleaning processes; we can take out all the harmful germs and bacteria that could make us unwell. Have a go at making your own water filter at home and see if you can get the water as clean as the water that comes out of your tap!

### What you'll need:

- |                          |                      |                          |              |                          |                     |
|--------------------------|----------------------|--------------------------|--------------|--------------------------|---------------------|
| <input type="checkbox"/> | A plastic bottle     | <input type="checkbox"/> | Large stones | <input type="checkbox"/> | Muddy water         |
| <input type="checkbox"/> | Sand                 | <input type="checkbox"/> | Cotton wool  | <input type="checkbox"/> | Charcoal (optional) |
| <input type="checkbox"/> | Gravel/ small stones |                          |              |                          |                     |

### What to do:

1. Cut the bottom of the bottle off (about 2/3 of the way down, keep both parts of the bottle)
2. Either stuff cotton wool into the neck of the bottle or wrap some fabric around the end covering the hole and hold it in place with the elastic band. *(If you use cotton wool we recommend that you make a small hole in the lid with a sharp knife or scissors and put it back on the bottle to stop the cotton wool falling out.)*
3. Now turn the bottle upside down and place it into the smaller section you cut off.
4. We now need to layer the other materials. Start with the charcoal *(you can crush this if you like)*, then the small stones or gravel and finally add the large stones.
5. Now pour the muddy water into your filter and see what happens to the water! As it travels through the layers it should be getting cleaner. *Try putting the materials in a different order and try again to see that happens? Which works better?*

