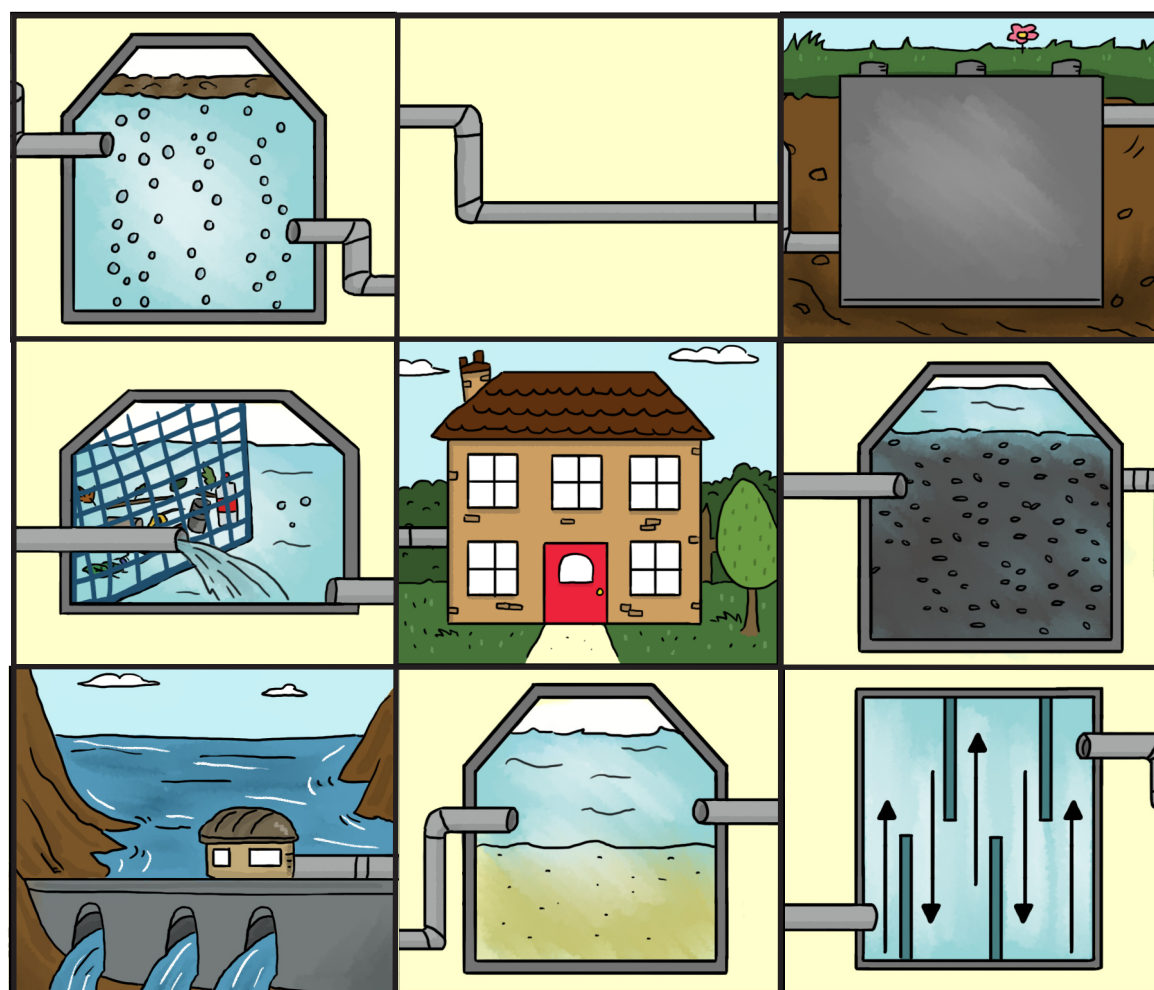


# WATER TREATMENT

Have you ever thought about how we clean water? From source to tap it takes around 3 and a half hours to get the water clean enough for us to use - amazing!

Find out how we clean your water by watching the video on Kidszone. Cut out the pictures, labels and descriptions below. Put them in order to show how we make the water clean!



## LABELS

Reservoir

Carbon filtering

Taps

Clarification

Filter

Mixer

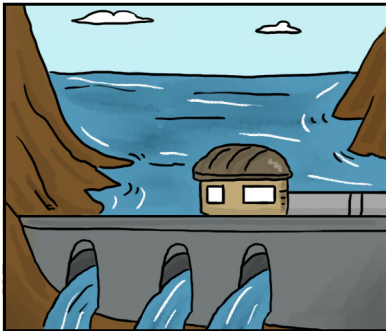
Disinfection

Inlet

## DESCRIPTIONS

Water enters the clarification tank. The big bits float to the top and are either removed, recycled or sent to our sewage treatment works.	Water is sent from the reservoir through the pipes to the inlet of the treatment works.	Water is mixed with chemicals and sent in lanes up and down a big tank to remove smaller pieces of dirt and grit	Here we add chemicals to the water to make sure it is safe for you to drink, we then store this in underground reservoirs before sending it to our homes.
Water is filtered one last time through granulated carbon (which looks a little like coffee granules). This takes out any tiny particles before we send to disinfection.	Water is then passed through layers of different materials to remove smaller bits	We store water in big lakes called reservoirs, you can even visit them!	You can use your wonderful water to keep hydrated and healthy.

# WATER TREATMENT ANSWER SHEET



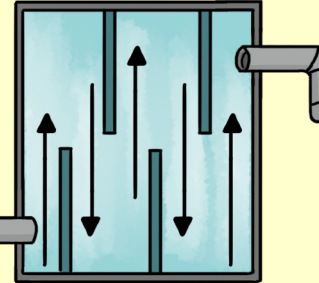
**Reservoir**

Water enters the clarification tank. The big bits float to the top and are either removed, recycled or sent to our sewage treatment works.



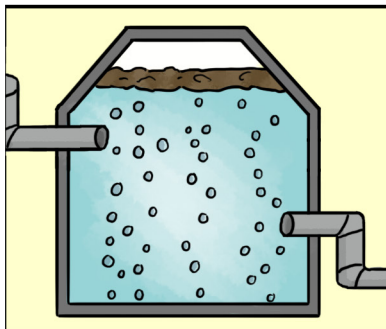
**Inlet**

Water is sent from the reservoir through the pipes to the inlet of the treatment works.



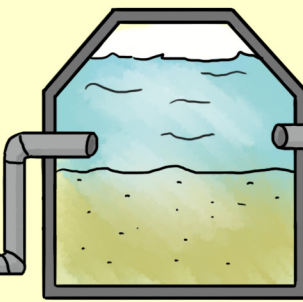
**Mixer**

Water is mixed with chemicals and sent in lanes up and down a big tank to remove smaller pieces of dirt and grit



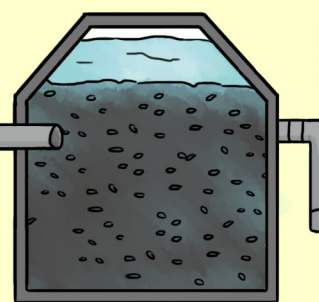
**Clarification**

Water enters the clarification tank. The big bits float to the top and are either removed, recycled or sent to our sewage treatment works.



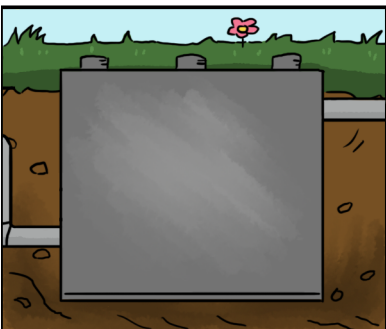
**Filter**

Water is then passed through layers of different materials to remove smaller bits



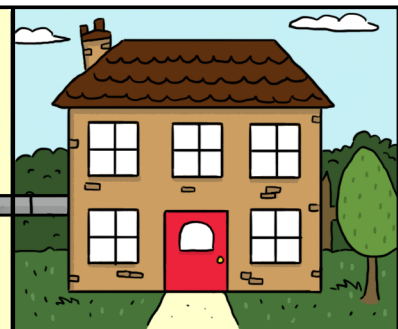
**Carbon filtering**

Water is filtered one last time through granulated carbon (which looks a little like coffee granules). This takes out any tiny particles before we send to disinfection.



**Disinfection**

Here we add chemicals to the water to make sure it is safe for you to drink, we then store this in underground reservoirs before sending it to our homes.



**Taps**

You can use your wonderful water to keep hydrated and healthy.

## 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?*

