Water Treatment

Info Sheet 03

Introduction

Once the water is collected we can't just drink it without making sure it's absolutely pure and safe.

Rainwater might seem pure and clean, but by the time it has fallen through polluted air, and run along our streets, down hills or across muddy fields it has picked up a lot of dirt along the way.

Water treatment is so important because the microorganisms that cause diseases such as cholera, typhoid and dysentery are removed. To make sure that only the highest quality water reaches your taps samples are taken throughout the treatment process and the distribution system. These samples are analysed in a laboratory.

The Treatment Process

River water is generally dirtier than groundwater and has to undergo a very careful and thorough treatment process. Some natural cleansing of groundwater can take place as water trickles through soil and rocks.

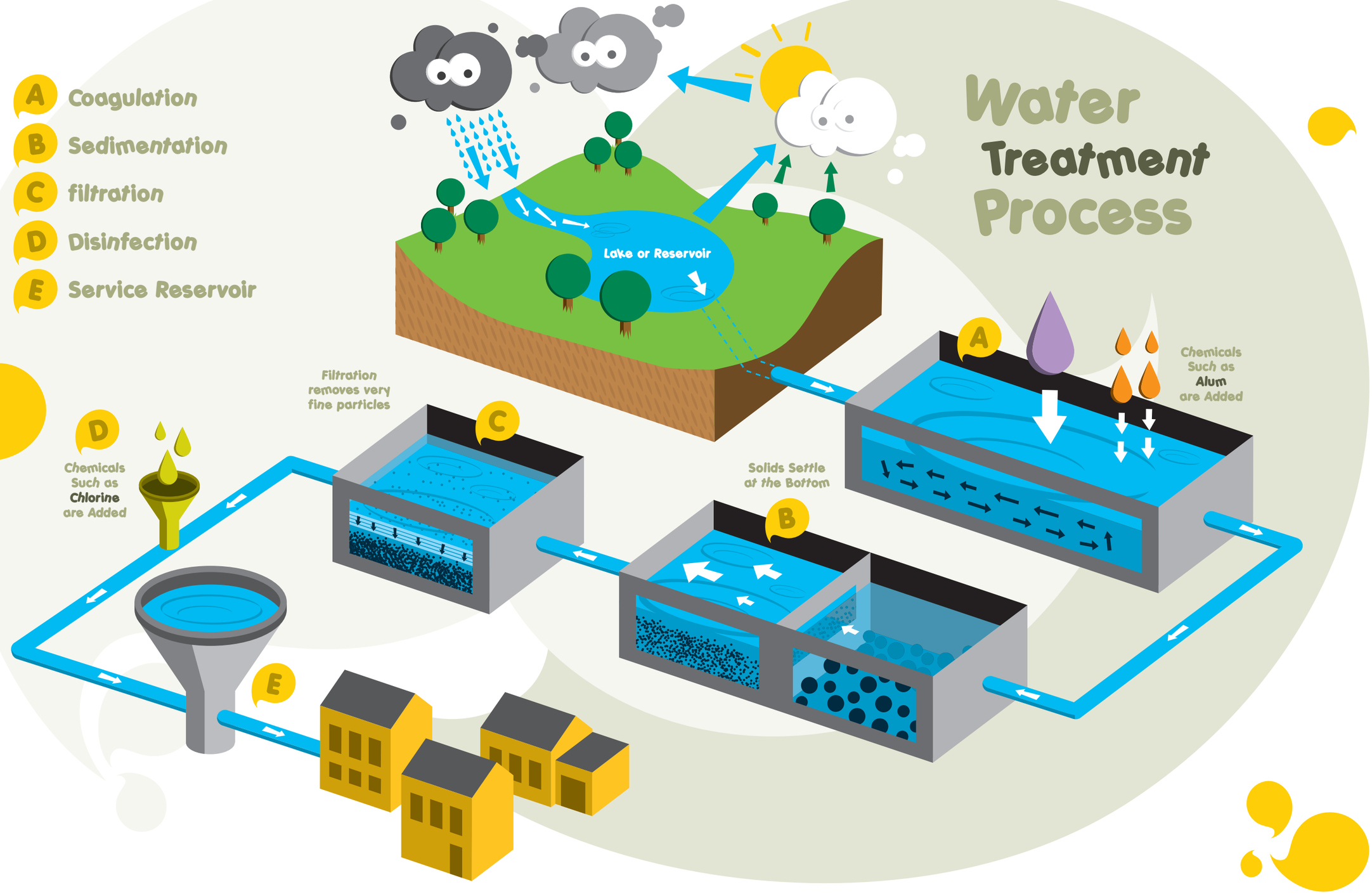
The stages of the treatment process - *See image of the **Water Treatment Plant** overleaf*

A Water taken from rivers is first screened at intake points to catch any floating debris. Then we pass the water through big tanks where a number of chemicals including Alum are added. The alum forms tiny, sticky particles, which slowly gather, removing colour and suspended dirt. This is called **coagulation**.

B The dirt and alum – now known as floc – become heavy enough to sink to the bottom of the tank. This is called **sedimentation**.

Water Treatment Process

A Coagulation
B Sedimentation
C filtration
D Disinfection
E Service Reservoir



C The clear water at the top is then passed through filters, which are made of sand and gravel, and remove any remaining ‘suspended matter’. This is known as **filtration**.

D A chemical called chlorine is added to kill any remaining germs. Samples of the treated water are tested to make sure they are pure and of the right quality.

E The clean water is then stored in a great big tank called a **service reservoir**. When water is needed, it is transferred through a vast network of pipes to homes, offices, factories and your school!

The reservoir levels drop during the day when demand is at its highest. At night when the demand is low, the service reservoir has time to fill again with water from the treatment works. When morning comes, it will be full and ready to meet the demands of the new day.