

Water Purification

Water Purification is the removal of contaminating substances from 'raw' water to produce water that is pure enough for humans to drink.

Use these words to complete the sentences below:

Viruses Taste smell minerals Fungi chemical pollutants bacteria appearance algae



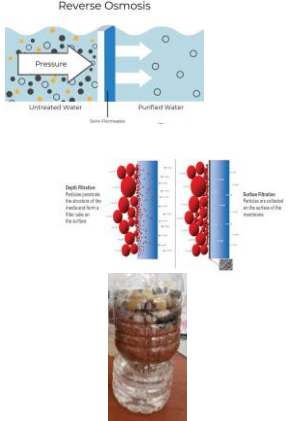
Substances that are removed during the process of purification include A _____,
 B _____, F _____, man-made C _____ P _____,
 V _____, and M _____.

Substance removed improve the water's S _____, T _____, and A _____.

Is it possible to tell whether water is safe to drink just by looking at it?

Deep groundwater; Shallow groundwaters; Upland lakes and reservoirs; Rivers, canals and low land reservoirs. These are sources of D _____ W _____.

Methods Of Water Purification (in order of effectiveness)

<p>_____</p> <p>This is the most certain way of killing all micro organisms. Water boils at 212° F or 100° C and micro-organisms are being killed from 160° F (70° C).</p>	<p>gniliob</p> 
<p>_____</p> <p>There are two types of chemical treatment: those using <u>iodine</u> and those using <u>chlorine</u>. The temperature, clarity and pH level of water can affect the effectiveness of the chemicals.</p>	<p>lacimehc noitartlif</p> 
<p>_____</p> <p style="text-align: center;">Filters do not filter out viruses.</p> <p>There are two basic types of filters:</p> <p>1) <u>Membrane Filters</u>: which use thin sheets with precisely sized pores that prevent objects larger than the pore size from passing through.</p> <p>2) <u>Depth Filters</u>: which use thick porous materials such as carbon or ceramic to trap particles as water flows through the material.</p>	<p>noitartlif</p> 

Experiment to be done during the session

(1) Water Purification

You will need a (preferably) clear water bottle cut in half with scissors (both parts needed)

Strong paper towel such as 'Plenty'

Cotton wool or cotton balls

Clean fine sand if possible

Pebbles and/or gravel

A plastic cup of dirt with bits of sticks/straw/grass, etc. to make some dirty water.

If you do not have all the materials, don't worry. Just get creative and substitute materials with what you have. (e.g. uncooked rice, pasta, dried peas, beans, lentils. Anything you think will make a great filter.)



Activity to be done before the session

(2) Build indoor Camp Shelter

You will need Sheet/s, Blanket/s, Duvet or anything you think will help to make a great indoor camp shelter.

Build with the help of chairs, stools, tables, sofas etc. Be creative.

Whatever you do, you must be able to shelter under it.

Take a photo, print it and include in your folder as evidence against Jesus our Refuge. Also have it to show to the rest of us.

Have Fun.

