

## Water.

Water is a chemical compound of oxygen and hydrogen, the latter gas forming two thirds of its volume. It is the most **abundant** of all chemical compounds, five seventh of the earth's surface being covered with water. As we know, water does not burn, on the contrary, it is generally used for putting out the fire. Therefore it seems remarkable that the two gases which it is composed of act in the opposite way: one of them - hydrogen - burns, the second oxygen - making things burn much faster than air does. Hydrogen is the **lightest** gas known, oxygen being slightly heavier than air.

Now, although these two gases, when taken separately, can be compressed into a much smaller space by pressure, water is one of the most incompressible substances known, the properties of a compound being unlike the properties of the elements of which it is made. By means of hydraulic **accumulators** water can be subjected to a **tremendous** pressure without appreciably reducing its volume.

But in spite of its resistance to compression, it has been calculated that at ocean depths water is compressed to such an extent that the average sea level is 35.6 metres lower than it would be if water were absolutely incompressible.

Water like air is never found quite pure in nature but contains various salts and minerals in solution. Salt water being heavier, some things will **float** in it which would **sink** in fresh water, hence it is easier to swim in salt water. When sea water freezes the salt separates from it, ice being quite pure.

The almost endless applications of water are such that without it all life would **cease**. Water is necessary for the existence of man, animals and plants, every living thing containing large amounts of water. Being a solvent of most substances it is indispensable in chemistry and medicine. When used in engineering its great resistance to compression enables it to transmit **enormous** power. When we drink water it is almost immediately **coursing** through our system, the body being **purified** of poison which is **carried off** in solution. When heated, water changes into an invisible gas; freezing it we get a solid block of crystals. When evaporated it forms clouds from where it falls on the earth as rain or snow, the soil **absorbing** the water which appears on the surface again in the form of **streams** to begin a new cycle of evaporation. In its various changes it is **indestructible** disappearing only to appear again in another form. It goes round and round, the total amount of water on the earth never changing.

**Read the fact file and fill in the gaps with the correct words from the box:**

water cycle raindrops covered distillation human body  
oxygen (2) species liters bathtubs food.

1. A fully grown tree can drink enough water each day to fill four .....
2. ....are not tear-shaped. Scientists have discovered they resemble the shape of a small burger bun.
3. About 70 % of the .....is water.
4. More than half of the world's animal and plant .....live in the water.
5. Almost 75 % of the earth is.....in water.
6. We need to drink at least two .....of water a day and we can only last a few days without water.
7. Most of our .....consists of water. Tomatoes for example contain 95% water, apples 85 %, potatoes 80 % and beef 61 %.
8. We can remove all the impurities from water by the process called .....
9. Water must be decomposed to obtain .....
10. There are four stages in the .....: condensation, precipitation, accumulation and evaporation.
11. A molecule of water consists of two atoms of hydrogen and one atom of .....

## GRAMMAR: Active and Passive Voice

	Active voice	Passive voice
<b>Present Simple</b>	We <b>study</b> Chemistry at the university.	Chemistry <b>is studied</b> by us at the university.
<b>Present Continuous</b>	We <b>are studying</b> English now.	English <b>is being studied</b> by us now.
<b>Present Perfect</b>	We <b>have studied</b> Chemistry for two years.	Chemistry <b>has been studied</b> by us for two years.
<b>Past Simple</b>	We <b>studied</b> Chemistry at school.	Chemistry <b>was studied</b> by us at school.
<b>Past Continuous</b>	This time last week we <b>were studying</b> English.	English <b>was being studied</b> by us this time last week.
<b>Past Perfect</b>	I <b>had not studied</b> Chemistry before I entered the Chemistry faculty.	Chemistry <b>hadn't been studied</b> by me before I entered the Chemistry faculty.
<b>Future Simple</b>	We <b>will study</b> Colloid Chemistry next term.	Colloid Chemistry <b>will be studied</b> by us next term.
<b>Future Continuous</b>	We <b>will be studying</b> Colloid Chemistry for the whole term.	-----
<b>Future Perfect</b>	I <b>will have passed</b> the exam in chemistry at the end of this term.	The exam in chemistry <b>will have been passed</b> by me at the end of this term.

### Exercise 1. Compare the following two sentences and answer the questions:

- 1) Why is the agent/doer not mentioned in the first one?
- 2) When is it not necessary to mention the doer?
- 3) When do we use Passive Voice?

This element **is called** hydrogen.      Periodic Table **was devised** by Mendeleev.

### Exercise 2. Find examples of Passive Voice in the text of “Water”

### Exercise 3. Transform active sentences into Passive Voice.

1. Students can use all the necessary equipment in the laboratories free of charge.
2. Chemists will produce a lot of new substances.
3. Our students make many experiments in the laboratory.
4. Lomonosov formulated and experimentally proved the law of matter conservation.  
matter.
5. We are going to use two types of thermometers in our work.