



Science Fun!

How Important Is Water?

The existence of water is essential for life on Earth besides its many uses. Water covers around 70% of the Earth's surface! The following are more interesting facts about water.

- Water is made up of two elements which are hydrogen and oxygen. The chemical formula for water is H_2O . The formula means each molecule of water is made up of two hydrogen atoms bonded to a single oxygen atom.

Water has three different states - liquid, solid and gas. The word water usually refers to water in its liquid state. The solid state of water is known as ice. The gas state of water is known as steam or water vapor. Water in the form of ice is found at the polar ice caps on the planet Mars. Some scientists have also suggested the possibility of liquid water on the red planet.

- Pure water has no smell and no taste. Water also expands as it cools in freezing conditions. Water has been known to burst water pipes as it freezes to ice.

- The three largest oceans on Earth are the (largest) Pacific Ocean, the (second largest) Atlantic Ocean and the (third largest) Indian Ocean. In the Pacific Ocean is the Mariana Trench which is the deepest known point in the world's oceans!

Water from the sea or ocean is known as seawater or saltwater. On the average, every 2.2 pounds of seawater contains 1.2 ounces of dissolved salt. Ocean tides are caused by the rotation of the Earth and the gravitational pull of the Moon and Sun acting on ocean water.

- The longest river in the world is the Nile River as it's 4,132 miles long. The second longest river in the world is the Amazon River at 4,000 miles in length. The longest river in the United States is the Missouri River. At around 2,340 miles in length, it is slightly longer than the Mississippi River at 2,320 miles long. These two rivers combine to form the longest river system in North America.

- The water cycle involves water evaporating (turning into gas), rising to the sky, cooling and condensing into tiny drops of water or ice crystals that we see as clouds. Then they fall back to Earth as rain, snow or hail before evaporating again and continuing the cycle.



- Water makes a good solvent with many sugars, salts and acids. On the other hand, oils and fats don't mix well with water.

- Most people around the world have access to clean drinking water but it is a major problem in the poorer areas of the world. Water pollution and low quality water can lead to dangerous bacteria, disease and viruses. Clean drinking water is needed for humans to avoid dehydration. The amount you need each day depends on the temperature, how much activity you are involved in and many other factors.

- An important use for water is in agricultural irrigation. This is when water is artificially added to soil in order to assist the growth of crops.

- Electricity can be created from hydropower, a process that uses water to drive water turbines connected to generators. There are many hydroelectric power stations around the world.

- Water also plays a role in cooking. Steaming and boiling foods are known cooking methods. You may have seen this when someone is making pasta.

- Water is also used for fun! Water sports are very popular such as swimming, running through the sprinklers and waterskiing. During Michigan's winter months, when the water is frozen we play hockey, ski, ice skate and snowboard!