



Water – the most Precious Drop

Where is it, What does it do...where does it all go?

Water FACTS around the World

Can you go with the flow?

There is a huge network of watery places around the planet all with different names.

Rivers are large natural streams of flowing water that empty into lakes, estuaries, or oceans. **Streams** are smaller bodies of water that flow in natural or artificial channels and **lagoons** don't bother to go anywhere... they just collect!

The largest bodies of water are the **oceans**. Did you know that they are all connected to each other? Until the year 2000 there were only 4 oceans, but then, a group called 'The International Hydrographic Organization,' decided it was time for a new ocean. They named it the Southern Ocean – so now there are 5 oceans!

Seas are smaller parts of oceans which are sometimes partly enclosed by land.



Raging River Rides

The **Amazon River** is the widest river with the most flowing water. The water flowing from the Amazon into the Atlantic accounts for 20% of all fresh water that drains from rivers into the oceans.

The **Nile** is the longest river in the world and one of the few to flow North. Egyptians have relied on the Nile flooding for crop irrigation for 1,000s of years.

The **Missouri-Mississippi** is the longest river system in North America. Mississippi means '*father of waters*' in the Algonquian Indian language.

The **Yangtze River** is the longest river in Asia. The world's biggest dam, the Three Gorges Dam is on the Yangtze and provides hydro electric power to the Chinese.

The **Congo River** in Africa is also known as the Zaire, meaning '*the mother of all rivers*'.



Great Waterfalls of the World

In Africa, the countries of Zambia and Zimbabwe are divided by a great waterfall called **Victoria Falls** - considered to be the largest waterfall on the planet.

Niagara Falls is the second largest falls and acts as a border between Canada and the USA. 20% of all the fresh water in the world is in the 4 Upper Great Lakes which cascade over these falls.

Iguaçu Falls in South America, divide Argentina from Brazil. They came into existence after a huge volcanic eruption. Iguaçu means "great water".

Angel Falls has the longest single drop of any waterfall (above ground!) Located in Venezuela, it is named after a U.S pilot who crashed nearby while looking for gold. It is 807 metres high.

The largest waterfall on Earth is actually underwater in the **Denmark Strait**. It slowly cascades downward for 3.5 kilometres. This waterfall is more than three times as tall as Angel Falls



Did you know?



Sink or Swim

The Pacific Ocean is the largest ocean in the world. It covers 28% of the planet's surface and is larger than all the dry land put together. It is home to the Mariana Trench which has the deepest point on the planet called Challenger Deep - 10 kilometres beneath the surface. If you put Mount Everest down there, the peak of Everest would still be more than 2 kilometres below the surface!

The Amazon River carries water through 6 countries from the Andes in Peru, through Bolivia, Venezuela, Colombia, Ecuador and Brazil before emptying into the Atlantic Ocean. Did you know that it is so wide that there are no bridges across its entire length?

Water can dissolve more substances than any other liquid so we are very useful for carrying the valuable chemicals, minerals, and nutrients which are absorbed, or drunk by plants and animals. Because we are so good at dissolving things we are known as the "universal solvent".

When big storms develop over the ocean, fast winds create huge waves, sometimes called tidal waves but they have nothing to do with tides! The biggest waves on the planet are called **tsunamis** (meaning harbour wave in Japanese). They are caused by undersea earthquakes, volcanoes or landslides.

The driest and one of the wettest places in the world are right next to each other! The mountains that collect all the rainfall to make the largest river in the world - the Amazon River - are also responsible for preventing the Atacama Desert (which is right next door) from receiving any of rainfall.



Hydro Electric Power

Since the 1930's, the construction of huge dams to provide hydro electric power for millions of people has been ongoing. Many of these dams have blocked entire river basins. In 1936 the Hoover Dam (US) was completed. It is visible from space.

The Itaipu Dam is a 7.7 kilometre-long dam complex at the Brazil-Paraguay border. It has 18 generators, took 18 years and cost \$18 US billion. Engineers had to shift the course of the seventh largest river in the world, the Parana River, before building it. It took almost 3 years to carve a 2 km diversion channel for the river.

The biggest Hydro Power plant and concrete Dam in the world will be the Three Gorges Power Plant in China. When completed in 2009, it will generate 12% of China's power, stretch more than 1.5 kilometres across the Yangtze River and rise 183 metres above the valley floor. More than one million people living on the river banks have to move to higher ground.

World-wide, 19% of the world's electricity generation comes from dams. Dams also provide the irrigation for almost 16% of the world's food.

About 80 million people have been displaced by dam construction and the loss of ecosystems, wild-life, forests and biodiversity is immeasurable.

Hydro Electric Power may be a great way to produce electricity but there are also many disadvantages. Building a dam often floods huge areas and interrupts the water supply and natural flow of the river. Farmers, fishermen, mill owners and anyone who may use the river for transportation, food or water will be affected. Sometimes many thousands of people need to be moved to construct a dam. It's not just the people that are affected. When a river is dammed, the living conditions in the river below the dam also change. Less water means fewer currents, less oxygen and less life. A change in the water supply will affect the ecosystems downstream and the impact on the environment can be tremendous.

So, next time you are thinking of building a dam, please make sure you consider all the consequences and the alternatives...