

# Water—The River of Life



## We All Need It



What do plum trees, puppies, penguins and people all have in common? They all need water to survive! Whether

from oceans, seas, rivers, streams or wells, water is what keeps all of us alive. A human being can go weeks without food but only days without water.

## Our Watery Earth



Water is the most abundant **substance**, or thing, on earth. In fact, water covers nearly three-fourths of Earth's surface. Of all the

water present on Earth, more than 97% is saltwater found within oceans and seas. Most of that water is not usable as drinking water. Since human beings cannot drink salt water we need **fresh water** to survive.

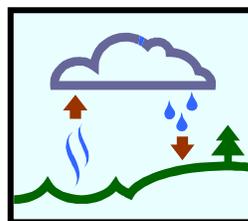
## How Much Fresh Water is There?



Two percent (2%) of the water on earth is in the form of fresh water found in ice caps, glaciers, and icebergs. This fresh water is frozen, so it's not usable

by living things. About 1% of the total water on Earth is fresh water that is found in lakes, streams, rivers, soil and underground pools or **aquifers**. Although this water is usable, most of it is hard to get to. That leaves much less than 1% (about 0.34 %) available to humans and animals to drink and use. That's like having 100 *dollars* in your piggy bank but only being able to use 34 *cents*!

## The Water Cycle



Water goes on amazing journeys! It travels the world, continually recycling itself into different forms. The first step water takes to recycle

itself is called **evaporation**. That's when the heat of the sun **evaporates**, or turns water into **vapor** or invisible gas. The vapor then floats up into the sky and when enough water evaporates, it **condenses**, or collects together in a cloud. Rain, hail, sleet or snow then **precipitate**, or fall, from the cloud onto the earth. Most of this precipitation falls into the ocean, but some of it falls onto our mountains, rivers and streams refilling our fresh water supply. When water collects in a certain location, like a river, this is called **accumulation**. The endless recycling of water is called the **water cycle** and it's how Earth has maintained its fresh water for millions of years. In fact, it's possible that the last lemonade you sipped, contained water that was once drunk by a T-Rex!

## Different Uses of Water



Human beings use water in many ways. The most **essential**, or necessary uses for water are for drinking and growing food. Without these things we wouldn't be able to survive. Unfortunately, a lot of people in the world—about 1.1 *billion*—don't have **access** to, or are able to get, safe drinking water. Compared to this, the United States as a whole uses four times more water than the world average!

Other human uses for water include growing crops to feed cows, pigs, chickens and other **livestock**; cleaning and cooling machines in factories; growing cotton for fabric; watering the lawn and garden; taking a bath or shower; washing clothes; filling swimming pools and artificial lakes; watering golf courses; and many other uses.

### "Eating" up our Water



A lot of the water we **consume** or use up, isn't for drinking, but for growing grains to feed animals like cows, pigs and chickens that we then

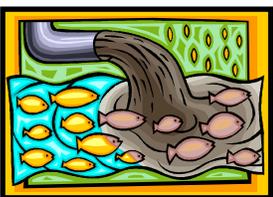
eat. As a matter of fact, it takes about 625 gallons of water to make one single hamburger! That's because hamburgers come from cows, and cows eat a lot of grain before they are turned into hamburgers. In order to grow all the grain that a cow eats during its lifetime, a lot of water is needed. That's why some people help conserve water by choosing to eat less beef. This can save hundreds of gallons of water a day!

### Water is More Precious than Gold



Even though it seems like we have an endless supply of fresh, clean water, we don't. Today, human beings—especially people in the United States—are using up fresh water faster than it is being **replenished**, or refilled. It's possible that we could run out of fresh, clean water if we don't get smart about how we use this precious liquid.

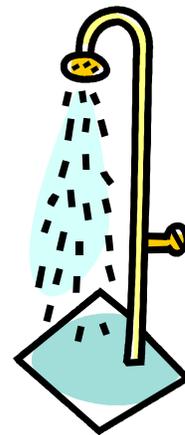
### Poisons in our Water



Not only is it possible that we could run out of fresh water, but much of the fresh water that *is* left, is being polluted

with **toxic chemicals** or poisons that are being dumped into our water systems. Some of these chemicals are common household items like chlorine bleach and paint. Other toxic substances include **pesticides** which are chemicals designed to kill insects, and **petroleum** products like gasoline and oil. Unfortunately, tons of chemicals are dumped and washed into our water every year. This water pollution not only damages the plants, animals, birds and fish that depend on a healthy water system, but it also harms our fresh water supply and makes some people sick.

### Let's be Water Wise!



There are many things we can do to protect our fresh water:

1. **Conserve**, or save, water by turning off the faucet when washing hands, brushing teeth or doing dishes.
2. Take a shorter shower.
3. Ask your parents to fix leaky faucets, and install low-flow faucets at home.
4. Choose to eat less beef, and more plant-based foods instead.
5. Never pour house paint, paint thinner or used motor oil down the drain, the storm drain or gutter. These poisons can end up in the bay or ocean and make the whales, dolphins, and fish that live there sick.
6. Take all dangerous materials to the **Hazardous Waste Facility** in your city.
7. Ask your parents to buy safer, **less-toxic** cleaning products for the home, and safer pest control for the garden.

