Water On Earth

The Earth is a very wet place. About 71% of the Earth's surface is covered in water. However, about 96.5% of that water is saltwater contained in the oceans. That is not good for us as humans because we need freshwater to survive.

Have a look at the image below. The scientists in the US Government who created the image have tried to show just how the water would look if it was gathered together. The biggest bubble of water represents all of the water on Earth, including salt and freshwater. The smaller bubble just to the right shows all of the fresh water that we could drink. However, most of the fresh water is deep underground. The smallest bubble (the one with the arrows pointing at it that might be too small for you to see) shows the water that is held in lakes and rivers and that we can access. That's not much at all, is it?

Lots more of the fresh water on Earth is locked away in ice caps at the North and South Poles. These are very important for the following reason.

The difference between fresh and saltwater is important. Saltwater freezes at a lower temperature than freshwater. Freshwater freezes at 0°C, whereas saltwater freezes at about -1.8°C. This might not seem like a lot, but scientists think that it might have serious consequences.

Our oceans are very good at storing heat from the Sun. This helps to keep the planet cool. With climate change, the ice caps are melting. This freshwater then flows into the oceans, making them less salty. This could mean that the oceans freeze over more quickly in the winter. The ice would then reflect back more of the Sun's heat rather than absorbing it. This would cool the Earth and lead to even more ice. This could lead to an ice age within a few hundred years.

Water in its gaseous form is also vital to life on Earth. Most

gaseous water is contained in clouds. These play an important role in the water cycle by transporting water thousands of miles around the world. Clouds are also really important for controlling the temperature of the Earth.

During the day, clouds stop a lot of the Sun's heat from reaching the Earth's surface. They also act like a blanket, trapping heat that does get through. This helps to control the Earth's temperature at night. Whether a cloud cools or heats the Earth depends on how high in the atmosphere it is. Higher clouds warm the Earth, and lower clouds cool it. At any time, about 65% of the Earth's surface is covered by clouds, so they really are an important part of our life!

VOCABULARY FOCUS

1. Find and copy a phrase that means something is "trapped".
2. What are "consequences"?
3. If something is in a "gaseous form", what does it mean?
4. Find and copy a word which means "moving".
5. Which word in the text means "taking something in"?

VIPERS QUESTIONS

S	Why might warmer temperatures lead to an ice age?
R	What type of water is most of the water on Earth?
R	Which type of clouds help to warm the Earth?
S	How do clouds help the water cycle?
R	How much of the Earth is covered in cloud?