



Have you helped the environment today?

2007 is the International Year of **Planet Earth:** Earth Sciences for Society

The program is organized into 8 broad themes. The scientists will try to answer questions about each that will help them create better living conditions on earth and help avoid some upcoming disasters. The themes are:

1. Groundwater : toward sustainable use.
2. Hazards: minimizing risk, maximizing awareness
3. Earth & Health: building a safer environment
4. Climate: the 'stone tape'
5. Resources: sustainable power for sustainable development
6. Mega cities: going deeper, building safer
7. Deep Earth: from crust to core
8. Ocean: the abyss of time

Inside the Earth

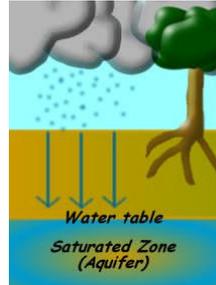
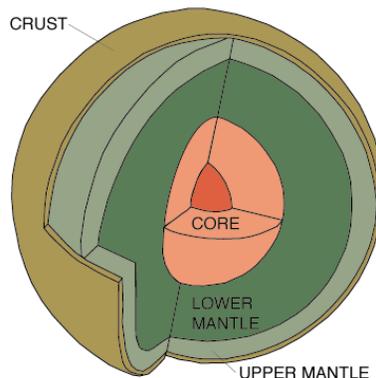
The Earth is made of many layers. The deeper layers are made up of heavier metals; they are hotter, denser and under great pressure.

The earth is made up of the core, the mantle, the crust and the surface.

The core is made up of iron and nickel and remains very hot, even after cooling for 4.5 million years. The core is divided into 2 layers, the solid inner layer and the liquid outer layer.

The mantle is the middle layer of the earth. It is made up of mineral rich with iron, magnesium, silicon and oxygen.

The crust is rich in the elements oxygen and silicon with lesser amounts of aluminum, iron, magnesium, calcium, potassium, and sodium. There are two types of crust. Oceanic crust is made of relatively dense rock called basalt. Continental crust is made of lower density rocks, such as andesine and granite.



Groundwater

Groundwater comes from the ground. Sounds pretty easy. More than 50% of Canadians drink groundwater every day. Groundwater is part of the water cycle.

Groundwater comes from rain, snow or sleet that soaks into the ground. The water moves down into the ground because of gravity, passing between all the soil and rocks until it reaches a depth where the ground is filled with water. It can form into underground lakes called aquifers. The top of the aquifer is called a water table. It's out of the aquifers that we get our water; we dig a hole and put in a well to bring up the water.

The water in lakes and oceans are called surface water. Surface water and ground water can change places. The water in the lakes can seep into the ground or the groundwater can run into a lake, becoming surface water. From here, the water cycle continues.

Hazards

The Earth can be a dangerous place, and is often made more dangerous by human intervention. Crucial to minimising the hazard potential from different geological threats facing people all over the world, is the accurate assessment and communication of risk.



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