THE GEOSPHERE

SOCIAL STUDIES

5th PRIMARY

Interstellar CRUISE
THE OTHER LAYERS

Apart from the Atmosphere, the Earth is divided in other 3 layers, this will help you understand a little bit better the way it works, and all the different things that are going on in our planet.

BIOSPHERE (LIFE)  
HYDROSHERE (WATER)  
GEOSHERE (GROUND)

BIOSPHERE

The biosphere is defined as the sphere or area around the planet Earth where life exists. This zone of life is HUGE. Most lifeforms live on or near the surface of Earth. However, some live deep within the hydrosphere (oceans, lakes and streams), while others thrive in the depths of the lithosphere (solid portion of Earth). For this reason, mapping the exact borders of the biosphere is quite challenging.

The lifeforms that make up the biosphere do more than just live on Earth. They also interact with it and are responsible for making great changes in the way that the Earth has evolved.
HYDROSPHERE

Water is one of the most common substances on the Earth. Covering over 70% of the surface of the Earth, it is easy to find. Even in a desert it is not hard to find water, if you know where to look. Scientists believe that the amount of water on Earth does not change appreciatively over time. In other words, the amount of water that is on the Earth today is the same amount that was on the Earth during the reign of the dinosaurs.

Some of the Earth’s water supply is temporarily locked up within the many lifeforms found across the Earth’s biosphere. Some organisms are made up of 95% water, while almost all the rest are more than half water.

GEOSPHERE

The geosphere is considered that portion of the Earth system that includes the Earth’s interior, rocks and minerals, landforms and the processes that shape the Earth’s surface.

The Earth’s interior is arranged somewhat like a layer cake, consisting of a series of layers that change in density, mineral composition and thickness with depth.
INNER CORE

The inner core is solid and dense; made up mostly of iron and nickel. Its temperature is between 4,000°C to 5,000°C and it is solid because it is under an enormous pressure.

- The inner and outer core make up about one-third of Earth’s mass.

OUTER CORE

The core, made up by the inner and the outer core, is the central part of the Earth below the mantle.

It is composed of the densest elements. The outer core is a dense liquid layer, made up of molten metals in constant movement.
MANTLE

The mantles is a layer of rock between the Earth’s crust and core. It has the following composition:
- It is made up of rocks with medium density.
- The mantel contains the 64 percent of Earth’s mass.

CRUST

The crust is the solid, outermost layer of the Earth, it is known as the thinnest layer of them all. The crust together, makes up less than 1 percent of the planet’s mass. The first part is 5 km to 8 km thick beneath the oceans (thin), and the thickest part is 20 km to 70 km thick beneath the continents.

The deepest we have dug is the Kola Superdeep Borehole in Russia which went about 12 km deep. There have also been some oil wells that have gone similarly deep. The deepest known cave is the Voronya cave which is about 2 km deep. Don’t forget that the Earth’s diameter is 6700Km...