Geography 21st May:

Assessment:

Explaining the Layers of the Earth:

To begin with, the layers of the Earth are split into 4 sections: Crust, Asthenosphere, Mantle, Core.

There are 2 types of crusts: Oceanic and Continental.

Oceanic:

This part of the crust is the liquid part. It is primarily composed by mafic rocks. Its density is 3.3 cm^3 and its temperature ranges from the ambient air temperature to 900 deg C. Its depth is 5-10 km (in certain areas) .

Continental:

This is part of the crust is the solid part mainly composed by felsic rocks. Its density is 2.7 cm^3 and its temperature ranges from the ambient air temperature to 900 deg C. It depth is between 30-50 km at certain areas and this was the first layer of the crust that formed.

The next part is the mantle, first is the Asthenosphere. The Asthenosphere is a partially molten layers of the Earth that is found at the depth of 80-193 km below the surface. Its density is 3.4-4.4 cm^3. Its temperature ranges from 900-1600 deg C. Its state is partially molten and it is mainly composed of peridotite. This is the upper part of the mantle.

Below the Asthenosphere is the Lower Mantle. The Lower Mantle has a density of 4.4-5.6 cm^3. Its temperature has the same range as the asthenosphere (900-1600 deg C) . It is located 660-2900 km below the surface. It is mainly composed of peridotite just like the asthenosphere and its state is solid. This is not included in lithosphere unlike the crust (s) and the asthenosphere.

The next section is the Core. The core is the hottest part of the earth with a temperature ranging from 4000-5000 deg C. This is the liquid part of the earth. It is composed of iron and nickel and its density ranges from 9.9-12.2 cm^3. The flow of molten iron and nickel dictates the magnitude and speed of the magnetic field.