**Economic Benefit of Rocks**

Rocks are of economic use to people because they provide us with important resources such as fertilisers and building materials.

Ground up Limestone has been used for many years as a natural fertiliser by farmers. It helps to make soil more fertile and so makes the land more productive. The limestone which is full of calcium carbonate decreased the acidity in soil. This is especially useful like in wet areas on the west coast of Ireland with high levels of rainfall.

Rocks such as limestone, sandstone and marble are extracted from the Earth’s surface and used as material in the building industry. Famous building like the GPO in Dublin are made from limestone. Marble is used to make tiles and also to make fireplaces, worktops and headstones.

**Formation of Limestone**

Limestone is a soft, grey, sedimentary rock that is easily weathered. An area of pure Limestone is known as a Karst region. Limestone was formed from the particles of rock and dead plants, sea shells and animals (fossils) that were deposited on warm shallow seas over millions of years. Layers of this material built up over time and were compressed and cemented together by the weight of water pushing down on it creating solid rock.

Limestone is a permeable rock. This means that water can pass through the rock. The reason for this is due to the fact that the water can travel along the bedding planes which separate the layers of rock and the joints which are vertical cracks in the rock. Because of the amounts of fossils in the rock, there is a high percentage of calcium carbonate in the rock. This makes the rock easy to weather and it dissolves by a process known as carbonation. An area of limestone I have studied is the Burren in County Clare.

**Formation of an Igneous Rock**

Igneous rocks are formed as a result of volcanic activity. Convection currents push hot liquid magma from the mantle onto the crust. This magma then cools and forms rock. If it cools quickly it forms basalt, if it cools slowly if forms granite.

The rock that I have studied is basalt. Basalt is a hard, heavy, medium grained resistant black rock that formed when magma cooled quickly. When lava spread out over the earth’s surface it cooled and hardened quickly because it came in contact with the cool air or sea water. Because it cooled quickly the tiny crystals can only be seen using a microscope. The Giant’s Causeway in Antrim is an example of where basalt is found. It is famous for its hexagonal shaped stepping stones which are a result of the rapid cooling of the lava.