Pye Bank CE Primary DSAT Knowledge Organiser

YEAR 3 — GEOLOGY: Are all rocks the same? — SCIENCE

KEY VOCABULARY

Earth's crust: the outer layer of the Earth. The Earth's crust is constantly moving and is made of huge plates of solid rock.

Detritus: the material in soil made from the remains of dead plants and animals.

Metamorphic rock: rock that has been changed by heat or pressure when mountains form. Some rock is also changed by being close to hot igneous rocks. E.g. slate and marble.

Sedimentary rock: rock formed from particles that have settled in layers and become joined together. E.g. sandstone and limestone.

Igneous rock: molten rocks from insider the earth. E.g. basalt and granite.

Lava: hot, molten rock that comes out of the Earth through a volcano. Lava is extremely dangerous and can destroy almost anything in its path, but will eventually cool back into solid rock.

Mineral: a natural material found on the Earth that is not from plants or animals.

Soil: the upper layer of earth, consisting of small loose particles of rock, minerals and humus.

Topsoil: the upper most layer of soil.

Subsoil: is the layer of earth that is just below the surface soil but above hard rock.

Base rock: is solid rock in the ground which supports the soil above it.

KEY CONCEPT – TYPES OF ROCK

The Earth's crust is made of rock. We can find rocks over every part of the Earth's surface. There are three types of naturally occurring rocks which is dependent on the way a rock has been formed (how it has been made).

Igneous Rock: These are rocks that have been formed from magma or lava below the Earth's crust. When rocks are pushed deep enough down into the Earth, they can melt to form molten rock. Below the surface of the Erath, molten rock is called magma but when erupted above the ground, usually through volcanoes, it is called lava.

Sedimentary Rock: rocks on the Earth's surface are gradually broken down into smaller pieces by water, ice, wind, plants and animals (known as weathering). These broken up pieces are called sediment and are transported away by rivers and wind. Sediments often collect at the bottom of lakes and oceans. Over time they are squashed together to become a sedimentary rock such as sandstone, limestone or mudstone. You can see the layers of sediment in the rock.

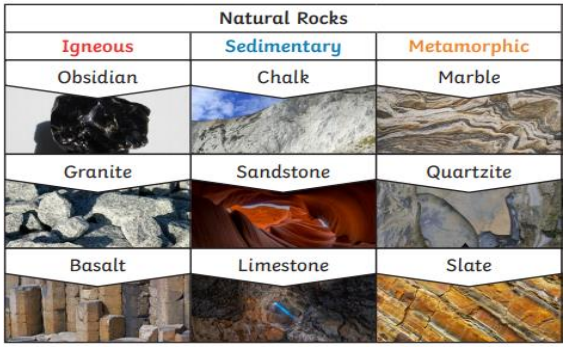
Metamorphic Rock: are rocks that have been changed over time. When rocks are pushed deep down into the Earth, grains and minerals ca become stretched, squashed and slightly melted from the extreme pressure and heat. This causes new rocks with different textures and minerals.

STICKY KNOWLEGDE

1. Rocks are classified according to how they were formed.
2. There are three main types of rock: igneous, sedimentary and metamorphic
3. Rocks can be sorted and classified by their properties. Some words we may use to discuss the properties of a rock are hard, soft, rough, sandy, smooth, waterproof, hardwearing, gritty and absorbent.
4. Soil comes from the ground when rocks are worn away (eroded) and from natural material from plants and animals.
5. Soil is made up of many layers. The main layers are topsoil, subsoil and base rock.
6. Soil is made up of different sized particles.
7. Water drains through some soils quicker than others.

KEY CONCEPT - TYPES OF ROCK

Here are some of the rocks that are naturally occurring:



Some rocks are manmade:

Brick Concrete Coade Stone

KEY CONCEPT - SOIL

Soil is the uppermost layer of the Earth. It is a mixture of different things:

- Minerals
- Air
- Rocks
- Organic matter (living and dead animals and plants)