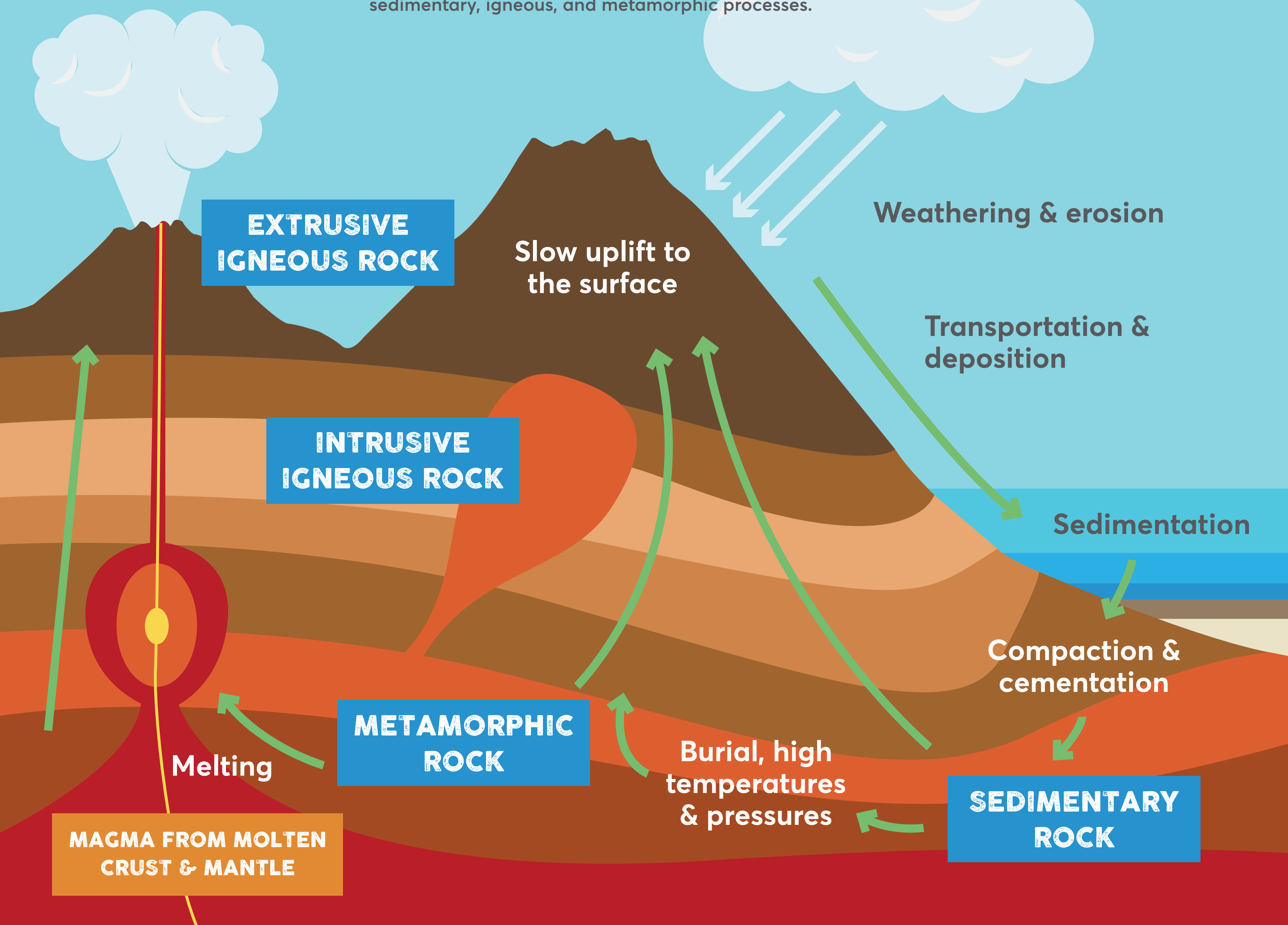


# THE ROCK CYCLE

On Earth, rocks are created and destroyed in cycles. Rocks are formed, broken down, moved around and deposited in different places. They can be compacted together and pushed deep towards Earth's magma where they melt or deform due to heat and pressure, to then be lifted again to the surface.

The Rock Cycle describes this formation, breakdown, and reformation of a rock as a result of sedimentary, igneous, and metamorphic processes.



## WHAT IS A ROCK?

All rocks are made from a mixture of minerals or solid chemical compounds that occur naturally on Earth with a characteristic crystal structure. Some rocks are formed from grains of older rocks and minerals that have been cemented together. Others are made from tightly interlocking mineral crystals.

Depending on how a rock has formed, it will belong to one of the following groups:

### SEDIMENTARY

**Sedimentary rocks** are formed from the broken remains of other rocks (**sediment**) that are transported away or eroded by rivers, wind or glaciers. Sediments then collect at the bottom of lakes and rivers, becoming **squashed** and **compacted** together to become sedimentary rock, such as **limestone**.

### IGNEOUS

All **igneous rocks** start out as **magma** and then cool down and turn from a liquid to a solid. This is known as **crystallisation**. Rocks formed from cooling lava on or near Earth's surface, such as **Basalt**, cool so fast that the crystals formed are tiny.

Magma deeper within the Earth takes longer to crystallise due to the **intense heat**. Rocks made here, such as **granite**, have larger crystals as they have more time to form.

### METAMORPHIC

**Metamorphic rocks** are formed from other rocks that are changed because of **heat** or **pressure**. Movement can cause rocks to be pushed deep down into the Earth. As a result, grains and minerals can be **stretched** and **squashed** from the extreme heat and pressure. This process is called **metamorphism**. They do not melt, but the minerals they contain are changed chemically, forming metamorphic rocks, such as **marble**.