

Rock cycle in the lab: Earth products and the processes that link them

Introduction

Today the laboratory will become the rock cycle! See how it all fits together in this laboratory-sized model.

What you will need

- a copy of the A4 sheet *The rock cycle*
- a set of rock specimens and photographs showing the products of the rock cycle

What to do

Work as a group. Put the sheet of A4 paper that shows the rock cycle on the table. The rock specimens and photographs represent the rock cycle products. Put these in the correct places on the A4 sheet of paper. For example, start by laying the photo showing 'rocks at the Earth's surface' next to the 'rocks at the Earth's surface' box on the diagram.

When you have tried this your teacher will lay out a large scale version. Check how well you did on yours.

Find out how the rock cycle products are linked together by the rock cycle processes.

Find out about the time scales of these processes. Some take minutes but some take millions of years.

What you found out

All the parts of the rock cycle are linked together into a sort of global 'machine'. This 'machine' is driven by energy from the Sun and from inside the Earth. The rock cycle involves physical, chemical and biological processes.

Questions

Q 1. The rock cycle involves processes that are chemical, physical, biological and also various combinations of all of these. List all of the processes shown on your rock cycle and write down which sort of process is involved. Put your answers in the table.

| Rock cycle process | Chemical, physical or biological? |
|-----------------------------------|-----------------------------------|
| <i>Weathering</i> | |
| <i>Erosion and transport</i> | |
| <i>Deposition</i> | |
| <i>Compaction and cementation</i> | |
| <i>Metamorphism</i> | |
| <i>Melting</i> | |
| <i>Rising</i> | |
| <i>Crystallisation under</i> | |

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| <i>Earth's surface</i> | |
| <i>Extrusion</i> | |
| <i>Deformation (folding, faulting, metamorphism)</i> | |

Extension question

Q 2. Does the rock cycle recycle things? If so, which things are recycled and how?