



## 8H Rocks

### 1. Rocks and Their Uses

<b>Geologist</b>	A scientist who studies rocks and the Earth.
<b>Rocks</b>	Naturally occurring substances made up of different grains.
<b>Minerals</b>	The chemical compounds in rocks- rocks are mixtures of different minerals.
<b>Porous</b>	Rounded grain rocks can absorb water because it gets into the gaps.
<b>Permeable</b>	Water can run through.
<b>Cement</b>	A building material made from limestone.
<b>Gravel</b>	A mixture of cement, sand and gravel.

### 2. Igneous and Metamorphic

<b>The Structure of the Earth</b>	
<b>Igneous Rocks</b>	Formed when molten rock cools down <i>e.g. basalt, granite</i>

<b>Magma</b>	Molten rock
<b>Lava</b>	Magma that reaches the Earth's surface.
<b>Metamorphic Rocks</b>	Formed by pressure and heat changing other rocks. <i>e.g. granite, slate and marble</i>

### 3. Weathering and Erosion

<b>Weathering</b>	When rocks are broken up by physical, chemical or biological processes.
<b>Erosion</b>	The movement of loose and weathered rock.
<b>Abrasion</b>	When rock fragments bump into each other and are worn away.
<b>Sediment</b>	Bits of rock and sand in streams or rivers.
<b>Glacier</b>	Rivers of ice that move slowly but can transport large pieces of rock.

4. Sedimentary Rocks	
<b>Sedimentary Rocks</b>	Formed when layers of sediment build up over time followed by compaction then cementation. <i>e.g. sandstone, mudstone</i>
<b>Sedimentary Rock Texture</b>	They are always made from rounded grains. Properties depend on the type of sediment that forms them.
<b>The Rock Cycle</b>	<p>The diagram illustrates the Rock Cycle with three main types of rocks: igneous rock, sedimentary rock, and metamorphic rock. Arrows show the transitions between them: 1. Igneous rock can become sedimentary rock through erosion and deposition. 2. Igneous rock can become metamorphic rock through increasing temperature and pressure. 3. Sedimentary rock can become metamorphic rock through increasing temperature and pressure. 4. Metamorphic rock can become sedimentary rock through erosion and deposition. A legend at the bottom defines the colors and symbols: purple for increasing temperature and pressure, red for melting and cooling, and green for erosion, deposition, and cementation.</p>

5. Materials in the Earth	
<b>Native State</b>	Metals found as pure elements in rocks.
<b>Ores</b>	Rocks that contain enough of a metal / metal compound to be worth mining.

<b>Extracting Ores</b>	Ores are obtained by mining, then crushed and chemical reactions used to obtain the metal.
<b>Mining Problems</b>	Damages the environment by destroying habitats and causes pollution.
<b>Rare Metals</b>	Hard to obtain which makes them expensive.
<b>Recycling</b>	Using a material again.
<b>Recycling Advantages</b>	Cuts down on pollution from mining and landfill sites, allows supplies to last longer and requires less energy.