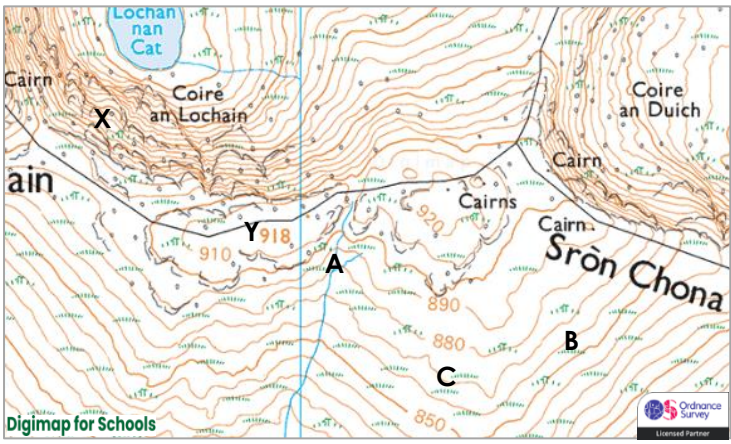


<p>1. Compare the <b>crust</b> and the <b>mantle</b> (e.g., thickness, made of... (L1, p.7)</p> <p>The crust is thin (10-70km thick) and made of solid rock. The mantle is thick and made of molten/semi-molten rock.</p>	<p>2. Define <b>topography</b>. (L3, p.8)</p> <p>The shape of the land.</p>	<p>3. What is a <b>contour line</b>? (L3, p.13)</p> <p>An orange line connecting points of equal height above sea level. Contour lines are used to show the shape of the land e.g., a steep hill or flat area.</p>
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4. Study the OS map extract below then complete 4a-f.



4a. What is **spot height** and how is it shown on a map? A spot height is a dot with a number next to it indicating the height of the land above sea level.

4b. What is the highest **spot height** on the map? 918m

4c. Which of A or B is **880m** high? A

4d. What is the land height at **C**? 870m

4e. Where is the land **steeper** – X or Y? X

4f. How do you know? The contour lines are close together at X. Each contour line indicates a height increase of 10m so close lines indicate steep land.

<p>5. What are the 3 <b>rock types</b>?</p> <ol style="list-style-type: none"> <li>1. igneous</li> <li>2. sedimentary</li> <li>3. metamorphic</li> </ol>	<p>6. Summarise the <b>rock cycle</b>. (L4, p.17)</p> <p>The rock cycle is the creation and destruction of rock in a continual cycle. Processes including melting, cooling, breaking down, compaction and pressure move rock through the cycle.</p>	<p>7. Does the amount of rock on Earth <b>change</b>? Why/why not? (L4, p.17)</p> <p>No – it stays the same. Rock continually moves through the rock cycle and changes form but always remains in the cycle.</p>
<p>8. Which process/es create <b>igneous rock</b>? (L4, p.17)</p> <p>Melting, eruption and cooling.</p>	<p>9. Which process/es create <b>sedimentary rock</b>? (L4, p.17)</p> <p>Breaking down of rock then compaction.</p>	<p>10. Which process/es create <b>metamorphic rock</b>? (L4, p.17)</p> <p>Heat and pressure.</p>

Summarise how the 3 landforms below formed. The explanations have been started for you.

<p>11. The <b>Giant's Causeway</b> (L5, p.20-21)</p> <p>Giant's Causeway is a group of rock columns in Northern Ireland. They formed 55 million years ago (mya) when there were eruptions of lava from the mantle. As the lava cooled, it formed igneous rock (basalt). The slow speed of cooling led to the rock cracking in a hexagonal shape.</p>	<p>12. <b>Wenlock Edge</b> (L6, .24-25)</p> <p>Wenlock Edge is a <b>limestone ridge</b> in west England. It formed &gt;400mya when <b>layers of sediment compacted</b> forming layers of limestone and shale rock. Tectonic activity lifted the layers diagonally. Rivers then wore away the shale leaving behind the limestone ridge.</p>	<p>13. The <b>Grampian Mountains</b> (L7, p.28)</p> <p>The Grampians are a group of mountains in Scotland. They formed 430mya when <b>tectonic plates collided</b>. This caused the land near the plate margins to crumple upwards forming mountains. Since then, heat and pressure have formed metamorphic rock, and lava eruptions have formed igneous rock.</p>
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**Stretch** – You overhear someone saying that any rock can turn into any other type of rock (e.g., igneous can become sedimentary or metamorphic, sedimentary can become metamorphic or igneous, etc. Are they correct or incorrect? Explain.

The statement is correct. When heat and pressure act on sedimentary and igneous rock in the crust, they turn into **metamorphic** rock. When igneous or metamorphic rock are broken apart and compacted, then turn into sedimentary rock. When sedimentary or metamorphic rock are melted then cool within or on top of the crust, they form igneous rock. Any type of rock can become any other type of rock depending on the processes that affect it.