



SFA Knowledge Organisers

Knowledge organisers act as an overview of concise 'must know' knowledge related to the big and small questions within the forthcoming topic being studied. They will be shared at the beginning of the unit to support revision, quick-fire quizzing, and homework.

Knowledge organisers will feature at the beginning of each knowledge workbook and usually consist of 1-2 pages of keywords, definitions and knowledge such as the example below:

<p>What is a landscape?</p> <p>A landscape has visible features that make up the surface of the land. Landscapes can be broken down into four 'elements':</p> <p style="text-align: center;">Landscape Elements</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p>Physical</p> <ul style="list-style-type: none"> • Mountains • Coastlines • Rivers <p>Human</p> <ul style="list-style-type: none"> • Buildings • Infrastructure • Structures </td> <td style="width: 50%; border: none;"> <p>Biological</p> <ul style="list-style-type: none"> • Vegetation • Habitats • Wildlife <p>Variable</p> <ul style="list-style-type: none"> • Weather • Smells • Sounds/Sights </td> </tr> </table>	<p>Physical</p> <ul style="list-style-type: none"> • Mountains • Coastlines • Rivers <p>Human</p> <ul style="list-style-type: none"> • Buildings • Infrastructure • Structures 	<p>Biological</p> <ul style="list-style-type: none"> • Vegetation • Habitats • Wildlife <p>Variable</p> <ul style="list-style-type: none"> • Weather • Smells • Sounds/Sights 	<p>Relief of the UK</p> <p>Relief of the UK can be divided into uplands and lowlands. Each have their own characteristics.</p> <p style="text-align: center;">Key</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p>Lowlands</p> </td> <td style="width: 50%; border: none;"> <p>Uplands</p> </td> </tr> </table>	<p>Lowlands</p>	<p>Uplands</p>	<p>Area: >600m Peaks and ridges cold, misty and snow common. I.e. Scotland</p> <p>Area: <200m Flat or rolling hills. Warmer weather. I.e. Fens</p>	<p>Erosion</p> <p>The break down and transport of rocks – smooth, round and sorted.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Attrition</td> <td style="width: 50%; border: none;">Rocks that bash together to become smooth/smaller.</td> </tr> <tr> <td style="border: none;">Solution</td> <td style="border: none;">A chemical reaction that dissolved rocks.</td> </tr> <tr> <td style="border: none;">Abrasion</td> <td style="border: none;">Rocks hurled at the base of a cliff to break pieces apart.</td> </tr> <tr> <td style="border: none;">Hydraulic Action</td> <td style="border: none;">Water enters cracks in the cliff, air compresses, causing the crack to expand.</td> </tr> </table>	Attrition	Rocks that bash together to become smooth/smaller.	Solution	A chemical reaction that dissolved rocks.	Abrasion	Rocks hurled at the base of a cliff to break pieces apart.	Hydraulic Action	Water enters cracks in the cliff, air compresses, causing the crack to expand.	<p>Transportation</p> <p>A natural process by which eroded material is carried/transported.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Solution</td> <td style="width: 50%; border: none;">Minerals dissolve in water and are carried along.</td> </tr> <tr> <td style="border: none;">Suspension</td> <td style="border: none;">Sediment is carried along in the flow of the water.</td> </tr> <tr> <td style="border: none;">Saltation</td> <td style="border: none;">Pebbles that bounce along the sea/river bed.</td> </tr> <tr> <td style="border: none;">Traction</td> <td style="border: none;">Boulders that roll along a river/sea bed by the force of the flowing water.</td> </tr> </table>	Solution	Minerals dissolve in water and are carried along.	Suspension	Sediment is carried along in the flow of the water.	Saltation	Pebbles that bounce along the sea/river bed.	Traction	Boulders that roll along a river/sea bed by the force of the flowing water.
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<p>Glaciation in the UK</p> <p>Over many thousands of years, glaciation has made an impression on the UK's landscape. Today, much of upland Britain is covered in U-shaped valleys and eroded steep mountain peaks.</p> <p>During the ice age</p> <p>Ice covered areas eroded and weathered landscapes to create dramatic mountain scenery.</p> <p>After the ice age</p> <p>Deep valleys and deposition of sediment revealed.</p>		<p>Human activity on Landscape</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;">Farming has changed the vegetation which grows there.</td> <td style="width: 33%; border: none;">Much of the rural landscape has been replaced by urban sprawls.</td> <td style="width: 33%; border: none;">Infrastructure such as roads and pylons cover most of the UK.</td> </tr> <tr> <td style="border: none;">Over thousands of years, much of the UK's woodlands have gone.</td> <td style="border: none;">Increasing population of the UK means more houses are needed.</td> <td style="border: none;">UK's marshes and moorlands are heavily managed by people.</td> </tr> </table>		Farming has changed the vegetation which grows there.	Much of the rural landscape has been replaced by urban sprawls.	Infrastructure such as roads and pylons cover most of the UK.	Over thousands of years, much of the UK's woodlands have gone.	Increasing population of the UK means more houses are needed.	UK's marshes and moorlands are heavily managed by people.															
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<p>Geology of the UK</p> <p>The UK is made from a variation of different rock types. The varied resistance of these rocks influences the landscape above.</p> <p>Igneous Rock Volcanic/molten rock brought up to the Earth's surface and cooled into solid rock.</p> <p>Sedimentary Rock Made from broken fragments of rock worn down by weathering on Earth's surface.</p> <p>Metamorphic Rock Rock that is folded and distorted by heat and pressure.</p>		<p>Climate and Weather in the UK</p> <p>The variations of climate and weather means there are different influences on the UK's landscape.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p>Climate</p> <p>The rainfall map of the UK shows variations in average rain.</p> <ul style="list-style-type: none"> • Less precipitation occurs in low land areas. East England • Most precipitation occurs in upland areas. Scotland. <p>These differences mean... Uplands experience more weathering, erosion and mass movement.</p> </td> <td style="width: 50%; border: none;"> <p>Weathering</p> <p>Mechanical Caused by the physical action of rain, frost and wind.</p> <p>Chemical Action of chemicals within rain dissolving the rock.</p> <p>Biological Rocks that have been broken down by living organisms.</p> </td> </tr> </table>		<p>Climate</p> <p>The rainfall map of the UK shows variations in average rain.</p> <ul style="list-style-type: none"> • Less precipitation occurs in low land areas. East England • Most precipitation occurs in upland areas. Scotland. <p>These differences mean... Uplands experience more weathering, erosion and mass movement.</p>	<p>Weathering</p> <p>Mechanical Caused by the physical action of rain, frost and wind.</p> <p>Chemical Action of chemicals within rain dissolving the rock.</p> <p>Biological Rocks that have been broken down by living organisms.</p>	<p>Average rainfall in the UK</p>		<p>Mass Movement</p> <p>A large movement of soil and rock debris that moves down slopes in response to the pull of gravity in a vertical direction.</p> <ol style="list-style-type: none"> 1 Rain saturates the permeable rock above the impermeable rock making it heavy. 2 Waves or a river will erode the base of the slope making it unstable. 3 Eventually the weight of the permeable rock above the impermeable rock weakens and collapses. 4 The debris at the base of the cliff is then removed and transported by waves or river. 																
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<p>Soil & Landscape</p> <ul style="list-style-type: none"> • Soils are created from weathered rocks, organic material and water. Rock types have influence over fertility of soil. • Low-lying areas such as the Cambridgeshire Fens have deep soil whereas uplands have thin soil. • Deep soil is more often associated with deciduous woodland rather than coniferous woodlands. 		<p>Freeze-thaw weathering</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%; border: none;"> <p>Stage One</p> <p>Water seeps into cracks and fractures in the rock.</p> </td> <td style="width: 25%; border: none;"> <p>Stage Two</p> <p>When the water freezes, it expands about 9%. This wedges apart the rock.</p> </td> <td style="width: 25%; border: none;"> <p>Stage Three</p> <p>With repeated freeze-thaw cycles, the rock breaks off.</p> </td> <td style="width: 25%; border: none;"> </td> </tr> </table>				<p>Stage One</p> <p>Water seeps into cracks and fractures in the rock.</p>	<p>Stage Two</p> <p>When the water freezes, it expands about 9%. This wedges apart the rock.</p>	<p>Stage Three</p> <p>With repeated freeze-thaw cycles, the rock breaks off.</p>																
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