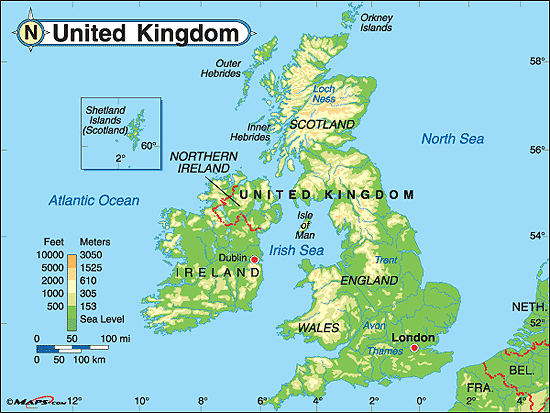
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YEAR 11 Geography Revision work booklet

Revision pack 4:

Paper 2: UK Geographical Issues

The UK’s evolving physical landscape



**Key terms word search**

Complete the key terms word search.

**S E H N C M D F E T Y S F V N N J W E H**

**E D D E L O K I N G W G A T O C E D L Y**

**D R E U V K N A S A R B O I T A J V B D**

**I F N L J I D S S C U A S L T B E M A R**

**M B T A Z R T H T A O A H H O L M E E O**

**E M A I O R H C G R R R E C O E M C M G**

**N Y U C O K Y V U B U R D C S I G L R R**

**T A N A K O D G A R I C I A T I O W E A**

**R O K L K W R P R N T T T G N N D A P P**

**C G S G M P A R G O Y S A I G T H V M H**

**N J A W C U U S P P Y L E S V R X E I W**

**F W O N R N L T H W B N H D G E B S O O**

**J D E P O S I T I O N O E G K U W M M M**

**X F R G A U C C P Y R A U T S E I A F F**

**J C A U M E A N D E R F D J J M E U V Z**

**K O P W C L C Z D N O I T I R T T A U E**

**O Y E F D R T R Z G V L K H O K M D Q H**

**N O I T A R I P S N A R T U R U U R F B**

**M Y M I V F O Y U Q H R M F A H J M O U**

**V L U Y T X N A L L U V I U M D K L O O**

ABRASION ALLUVIUM ATTRITION BACKWASH CONCORDANT CONSTRUCTIVE-WAVE DEPOSITION DESTRUCTIVE DISCHARGE DISCORDANT ESTUARY GEOLOGY GLACIAL GROYNE HYDRAULIC-ACTION HYDROGRAPH IMPERMEABLE LAG-TIME LONGSHORE-DRIFT MEANDER PERMEABLE SEDIMENT SWASH TRANSPIRATION VELOCITY WAVES WEATHERING

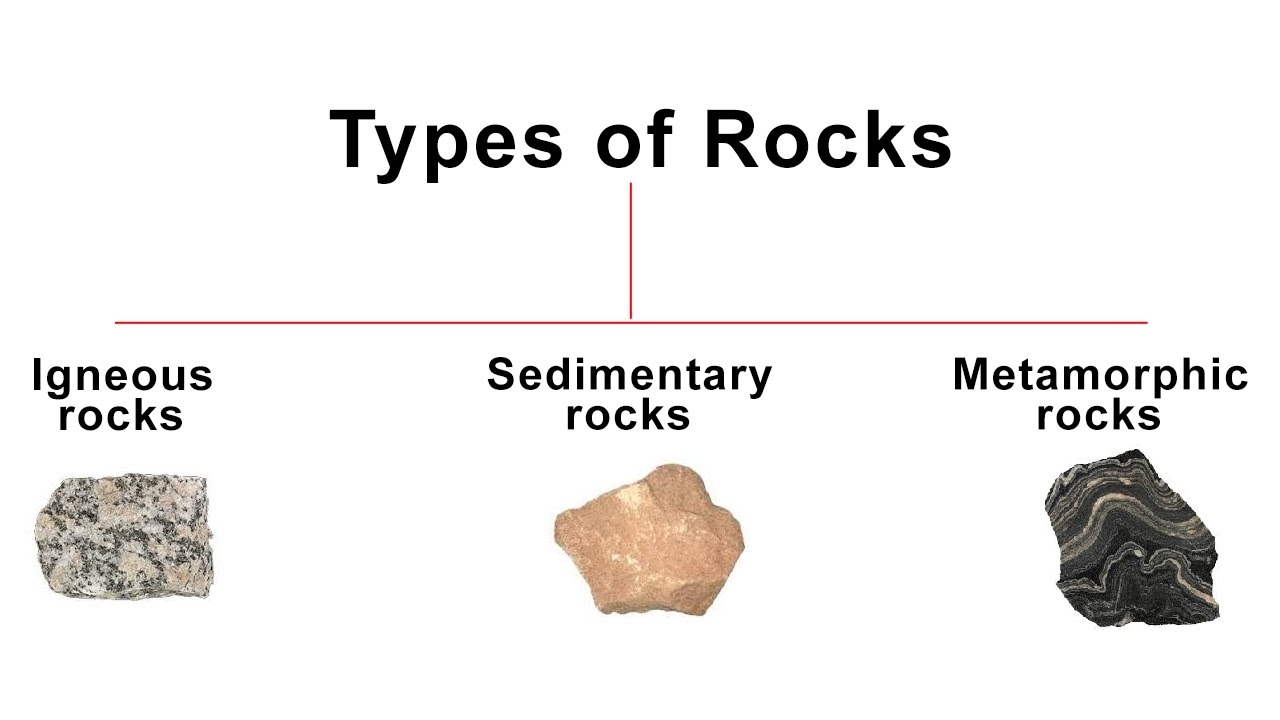
**Key words and definitions:**

|  |  |
| --- | --- |
| **Key word** | **Definition** |
| Alluvium | Fine sediments which are deposited by rivers |
| Attrition | A type of erosion where rocks/pebbles are carried by rivers or waves and worn down as they collide with each other so that they become smaller and rounded |
| Backwash |  |
| Bar | An area of sea, curved in shape which has been eroded between two headlands |
| Beach replenishment |  |
| Berm | A ridge of sediment found towards the back of a beach |
| Biological weathering |  |
| Bio physical weathering | The process of rocks being physically broken up by living things such as tree roots. |
| Clitter slope | The trail of deposited rocks from the action of freeze thaw weathering on tors |
| Concordant coasts |  |
| Constructive wave |  |
| Contour | Line on a map joining places of equal height above sea level |
| Corrosion | Chemical erosion caused by the dissolving of rocks and minerals by water. |
| Cove |  |
| Delta |  |
| Deposition |  |
| Destructive wave |  |
| Discharge | The amount of water flowing in a river, made up of its volume and speed, and measured in cubic metres per second. |
| Discordant coast |  |
| Drainage basin | The area of land drained by a river and its tributaries |
| Erosion |  |
| Estuary | The mouth of a river which gets very wide as it merges with the sea, it is tidal e.g. Thames Estuary |
| Fetch | The distance a wave has travelled towards the coastline over open water, the longer the fetch the more powerful the wave. |
| Freeze thaw weathering |  |
| Gorge |  |
| Gradient | How steep a slope, river channel or valley is. |
| Groyne |  |
| Hard engineering |  |
| Hydraulic action |  |
| HEP (hydro-electric power) |  |
| Hydrograph | A graph showing changes in a river’s discharge and rainfall over time. |
| Impermeable |  |
| Infiltration |  |
| Integrated Coastal Zone Management (ICZM) | A way to manage the coast and the land behind it sustainably, by involving everyone involved in using it. |
| Lag time |  |
| Landslip |  |
| Lateral erosion |  |
| Longshore drift |  |
| Meander | A bend in a river |
| Oxbow lake |  |
| Permeable | Allows water to pass through e.g. chalk |
| Prevailing wind | Direction in which the wind blows most frequently |
| Runoff |  |
| Saltation | Where sediment transported by rivers/waves is being bounced along the bed/sea floor |
| Sediment load |  |
| Shoreline management plan (SMP) | A plan which assesses the risks to a piece of coastline and how to manage these. |
| Slip-off-slope |  |
| Solution | The process where some rock minerals slowly dissolve in water, which is slightly acidic. |
| Sub-aerial |  |
| Surface run-off | Water running across the lands surface into rivers |
| Swash |  |
| Traction | The transport of sediment along a river bed or the sea floor through a rolling action |
| Transpiration |  |
| Tributary |  |
| V shape valley |  |
| Velocity |  |
| Wave cut platform |  |
| Weathering |  |

**UK Physical landscape**

Rock types complete the gap fill to identify the different types of rocks.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

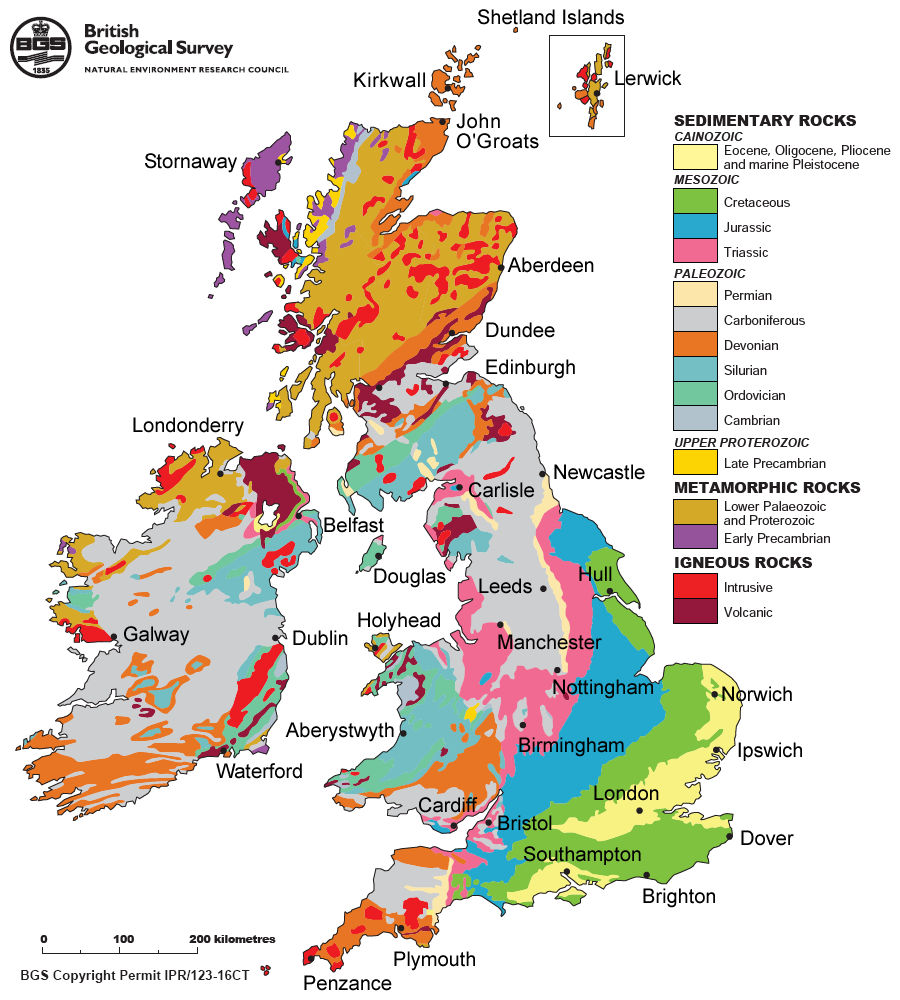


I am created by volcanic activity when magma or lava cools, forming rocks made of crystals that are usually hard. Granite is one example of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rocks.

I am an existing rock that has been changed by extreme pressure and heat. I have layers or bands of crystals and am very hard rock. Slate and schists are examples of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rocks.

I am formed of small particles that have been eroded, transported and deposited in layers, sometimes I contain the remains of plants and animals. Limestone is an example of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rock.

**Geological map of the UK and Ireland**



Which areas of the UK have igneous rocks? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Explain why the south east of England only have sedimentary rocks? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The UK and glaciation.**

18,000 years ago ice covered about 30 per cent of the land in the world. In Britain, ice covered land as far as the Bristol Channel. During the last ice age the temperature remained below 0°C which allowed the ice to remain on the land all year. **Weathering**

The predominant process is **freeze-thaw** weathering. Freeze-thaw describes the action of glacial meltwater on joints, cracks and hollows in rock. When the temperature reaches freezing point, the water inside cracks freezes, expands and causes the cracks to widen. When the temperature rises, the water thaws and contracts. This eventually causes rocks to break up. For freeze-thaw to take effect, the air temperature needs to fluctuate around freezing point.

Freeze-thaw weathering = angular rock fragments.

Look at the images below. Decide which of these features are formed from glaciation or from rivers.

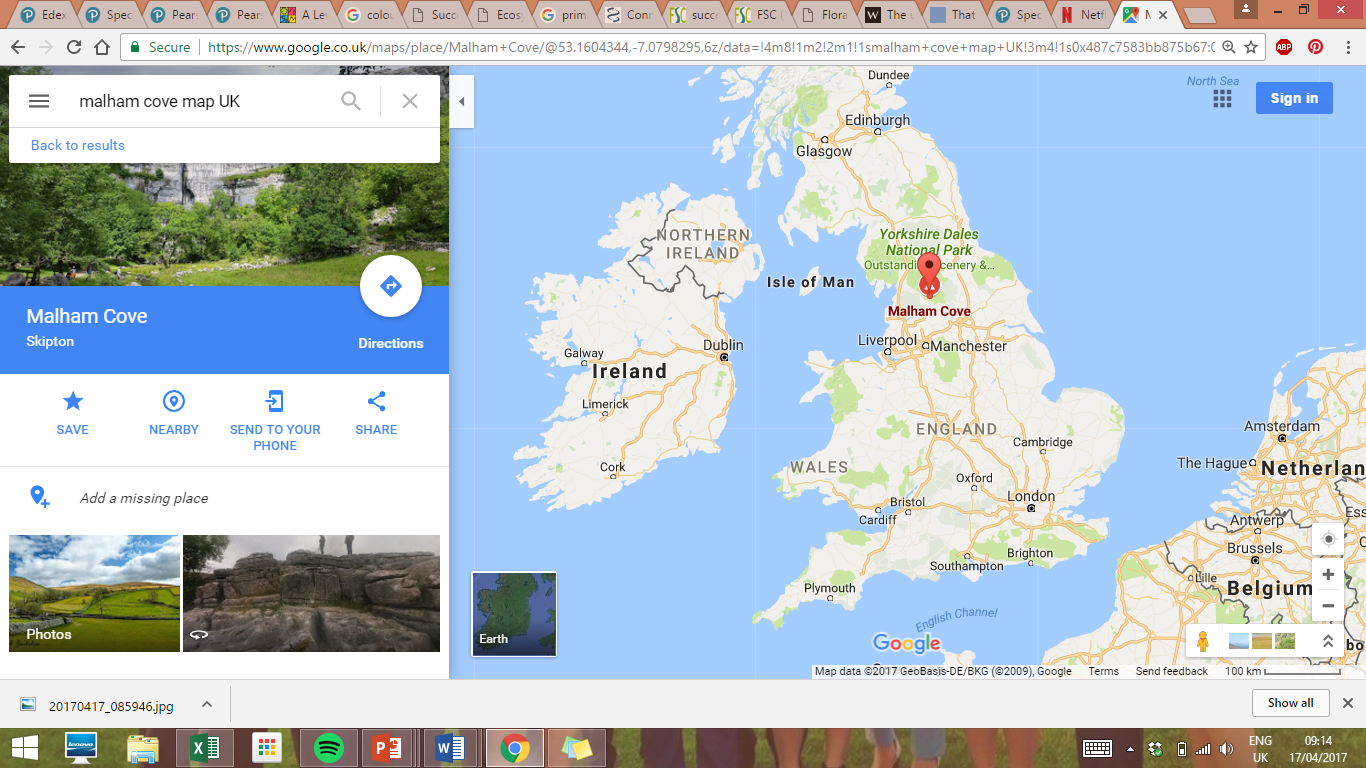
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Why does Scotland have a different rock type to England and Wales? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Malham Cove: Carboniferous Limestone:**

**Read through the information. Highlight information about the rock type and how Malham cove was formed.**

The **geology** at Malham cove is Carboniferous Limestone. This was formed during the **Carboniferous** period between 250 and 350 million years ago. Scientist have determined the age of this rock through **carbon** **dating** the fossilised small creatures that are part of the limestone.

***Carboniferous Limestone formation:***Carboniferous limestone is a **sedimentary** rock. This means it is made up of layers of small rock particles and other material, including small skeletons. When this limestone was formed 250 to 350 million years ago, the UK was covered by tropical seas, like the Barrier Reef in Australia today. As the tropical fish and corals that lived there died, they sank to the bottom of the sea floor, forming horizontal layers called **strata**.   
Over time, this material at the bottom of the sea was turned into rock. This occurred due to two processes:

As the skeletons fell, they crushed those beneath, eventually squeezing out water and compacting them into rock.

Calcium carbonate (a natural compound found in sea water) crystallised around the fragments. This cemented them together and even preserved some fossils in tact. This is why you can see some shells in the limestone around Malham cove today.

***Other Malham Cove Rock Strata:***

After the creation of Carboniferous limestone 250 to 350 million years ago, other rock strata were deposited over the limestone, for example sandstone and shale (both sedimentary rocks). The most resistant rock is Millstone grit, which makes up the highest points of Malham cove as it is the **most resistant**. This means it does not **erode** easily. The shale and sandstones underneath this millstone grit are **less resistant** = **erode** quicker.

***Key terms:****Carbon Dating:* using radioactive tests to find the age of rocks which have living material in. *Erosion:* means wearing away the landscape. *Carboniferous:* a geological time period that lasted from 250 million – 350 million years ago. *Strata:* horizontal layers of rock.*Sedimentary:*one of the three rock types. These rocks have layers formed from small particles of rocks and other material.

1. How has the Malham cove limestone moved for under the sea near the equator to where it is today? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Why is carbon dating not used for other rock types (igneous & metamorphic)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

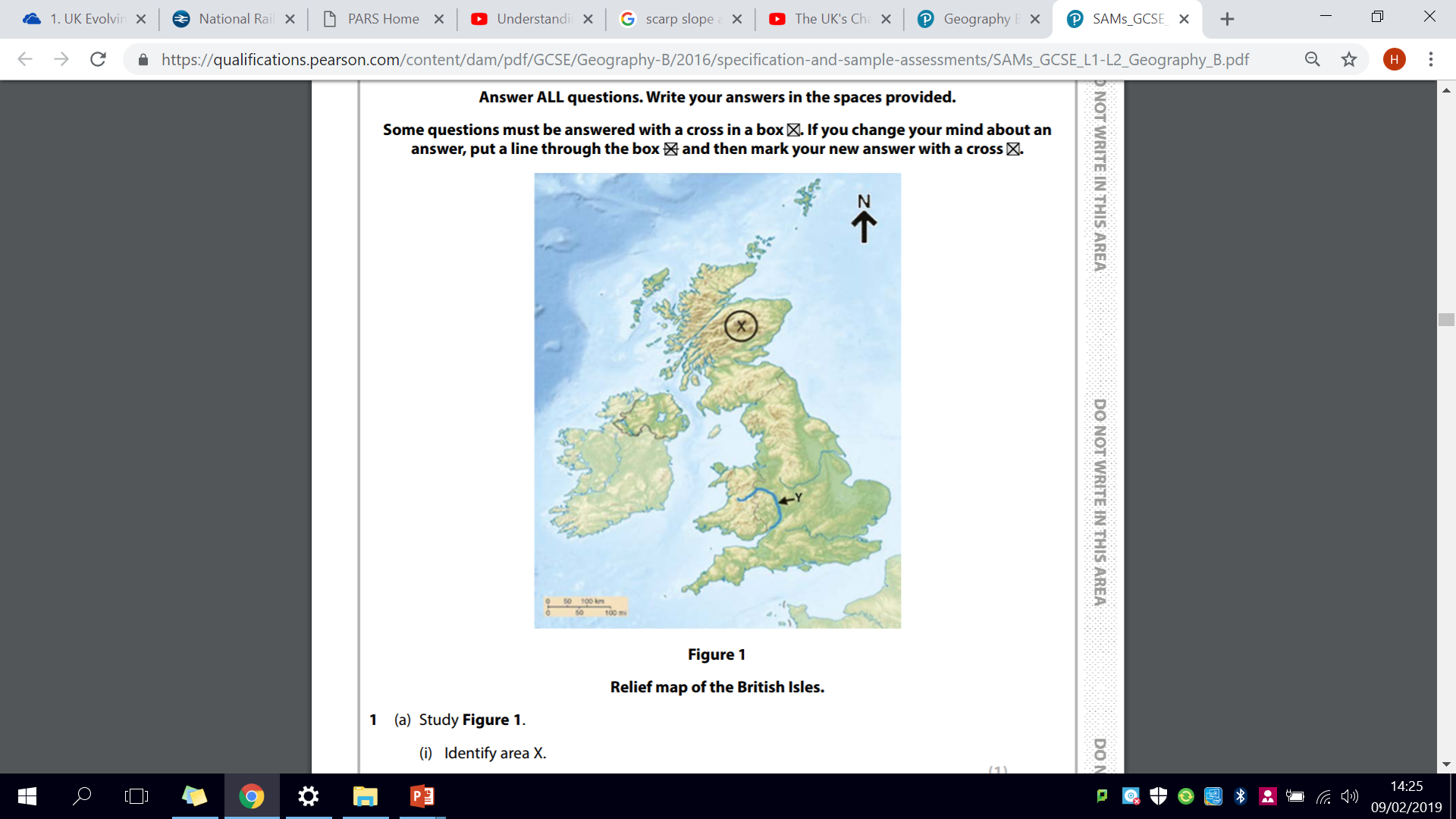
3. Explain **one** way in which geology has shaped the UK’s physical landscape. (2 marks) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How have humans changed the physical landscape? Upland and lowland regions.**

Look at the two images. Which location would you choose to build your home and move your people to? Why? Give reasons for your answer.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Skills Checker**

(a) Study Figure 1.

(i) Identify area X.

* + An upland area of Scotland
  + A lowland area of Wales
  + An upland area of Wales
  + A lowland area of Scotland

(b) Explain one way in which tectonics has affected the physical landscape of the UK. (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

