

F7 Geography Summer Exams Revision

Location Knowledge

You will need to be able to locate both **physical** and **human features** on a map of the **UK**. These are detailed in the map on the right.

Oceans and Seas

- North Atlantic Ocean
- North Sea
- English Channel
- Irish Sea

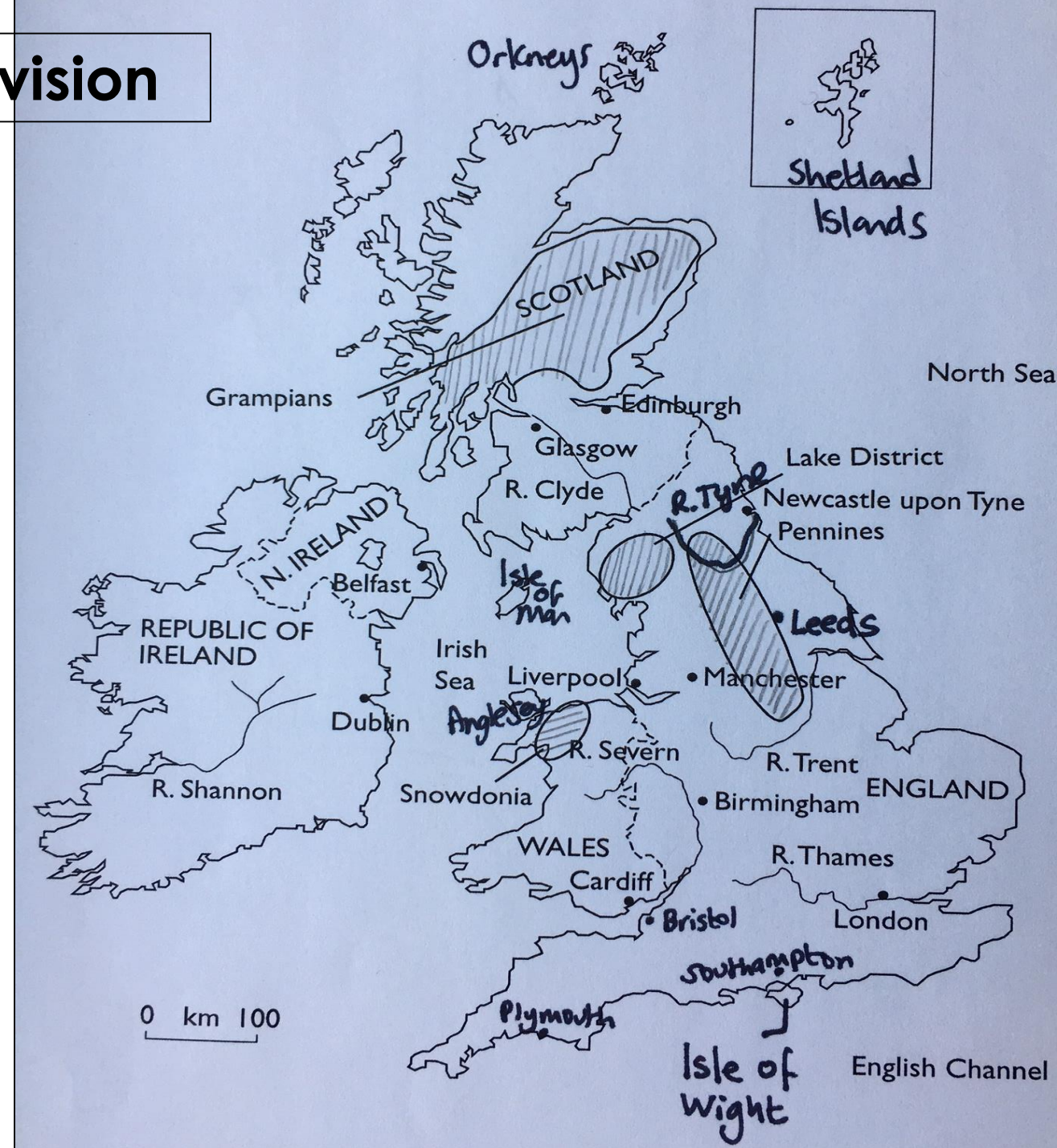
Islands

- Isle of Wight
- Isle of Man
- Shetland Isles
- Orkney Isles

Upland areas

- Lake District
- Pennines
- Grampians
- Snowdonia

Major cities of the UK and rivers.



Ordnance Survey (OS) Map Skills

Students should know and understand:

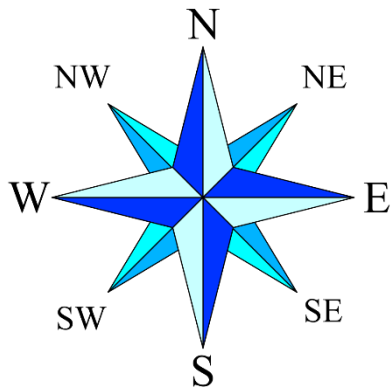
- 4-figure and 6-figure grid references
- eastings, northings
- spot heights and contours
- direction
- orientation (8 points of the compass)
- distance
- area

Students should be able to:

- follow routes
- identify relief and landscape features (slope steepness, plateau, flood plain, valley, headland, bay and features included in the glossary: see Appendix II)
- annotate simple sketch sections
- use maps in decision-making
- understand site, situation and shape of settlements

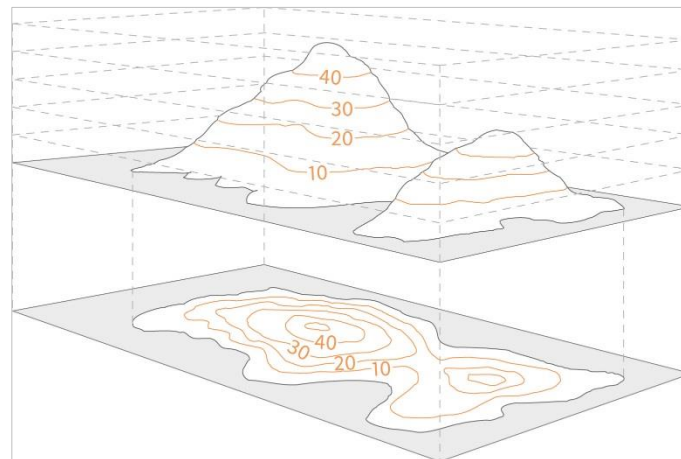
Direction

The exam will ask you to state the direction that one feature lies **from** another. The easiest mistake to make is to travel the wrong way between the two places. For example: *What direction is the church **from** the town hall?*



Spot Heights and Contours

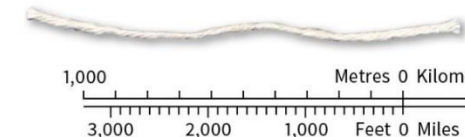
Hills, slopes and mountains are represented on a map using contour lines. These are lines that join places of equal height. By studying the contour lines you can work out lots about the surrounding terrain including gradients of hills, valleys and steepness of climbs.



Measuring Distance

You can measure **straight line distances** on a map with a ruler.

To measure **actual distances** from one place to another you can use a piece of string or a strip of paper.

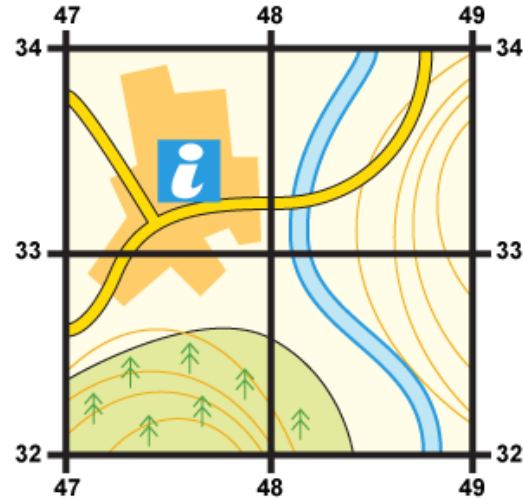


4 and 6 figure grid references

A grid of squares helps the map-reader to locate a place. The horizontal lines are called **northings**. They are numbered - the numbers increase to the east. The vertical lines are called **eastings** as the numbers increase in a northerly direction.

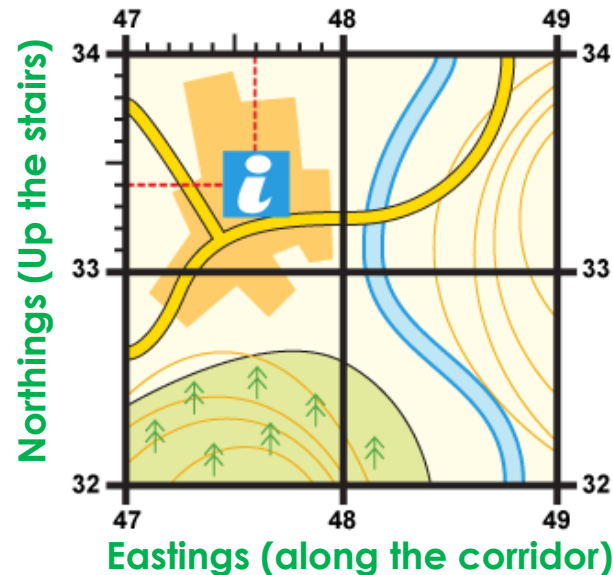
When you give a grid reference, always give the easting first: "**Along the corridor and up the stairs**".

Four-figure grid references can be used to pinpoint a location to within a square. To find the number of the square:



1. Start at the left-hand side of the map and go east until you get to the bottom-left-hand corner of the square you want. **Write this number down.**
2. Move north until you get to the bottom-left corner of the square you want. Look at the number of this grid line and add it to the two-digit number you already have. **This is your four-figure grid reference.** In this case, the tourist information office is in grid square **4733**

Six-figure grid references Sometimes it is necessary to be even more accurate. In this case you can imagine that **each grid is divided into 100 tiny squares**. The distance between one grid line and the next is divided into tenths.



1. First, find the **four-figure grid reference** but leave a space after the first two digits. **47_33_**
2. Estimate or measure how many tenths across the grid square your symbol lies. Write this number after the first two digits. **476**
3. Next, estimate how many tenths up the grid square your symbol lies. Write this number after the last two digits. **476334**
4. You now have a **six figure grid reference**. In this instance, the tourist information office is located at **476334**.

Weather and Climate

Within the water cycle, water moves from one state to another. This drives our weather.

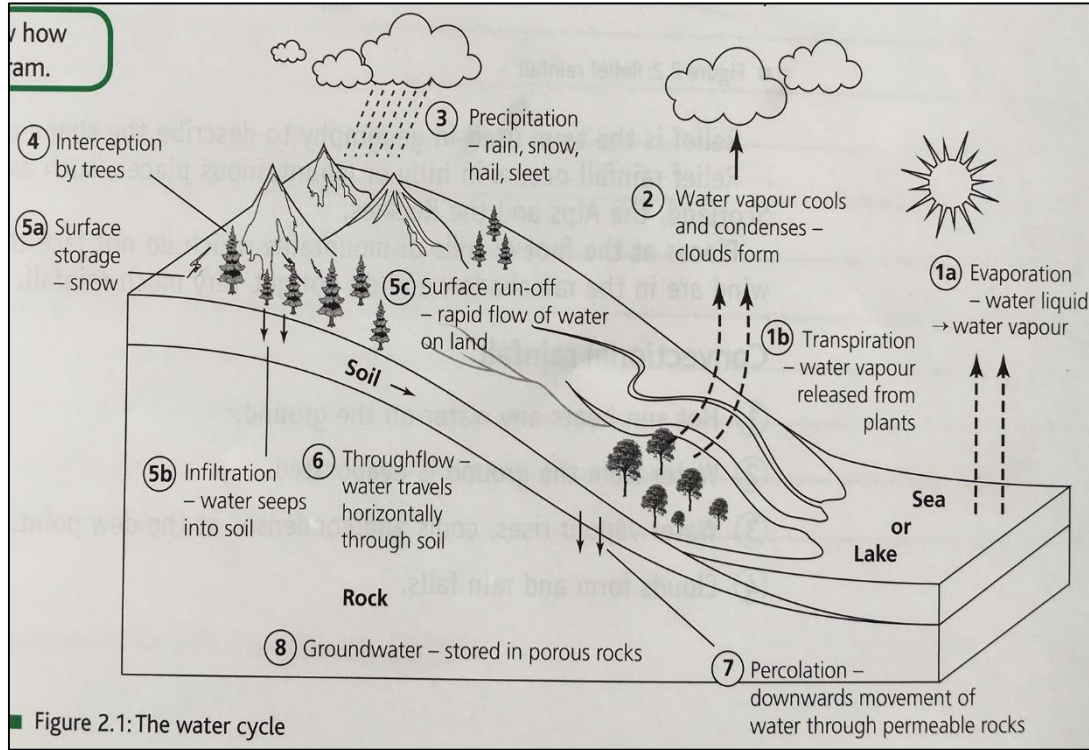


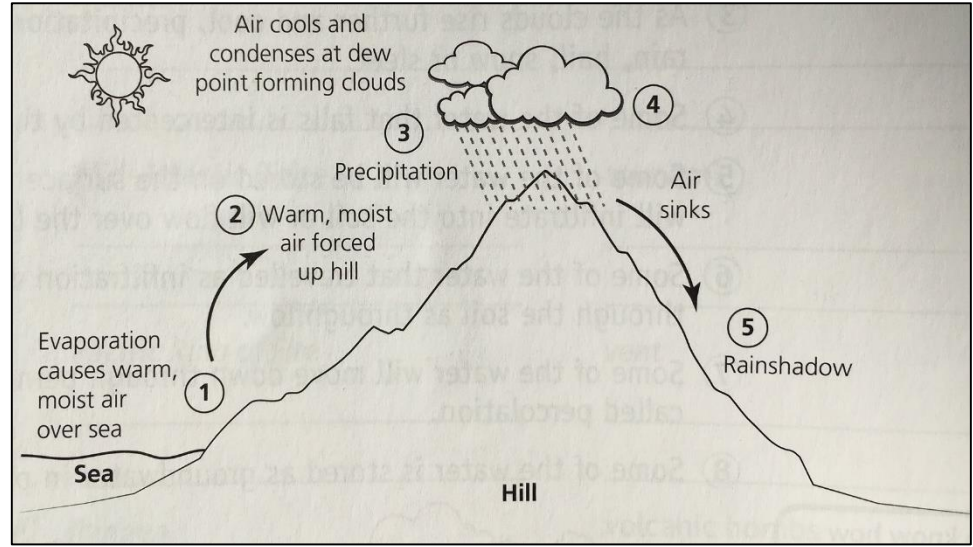
Figure 2.1: The water cycle

1. The water cycle begins when water from the sea or a lake **evaporates** to form **water vapour**. Water from plants is also turned to water vapour by **transpiration**.
2. This water vapour then rises, cools and **condenses** to form **clouds**.
3. As the clouds rise further and cool, **precipitation** will occur, in the form of rain, hail, snow or sleet.
4. Some of the water that falls is **intercepted** by the leaves on trees.
5. Some of the water will be **stored** on the surface (particularly if it is snow), will **infiltrate** into the soil or will flow over the land as **surface run-off**.
6. Some of the water that travelled as infiltration will move horizontally through the soil as **throughflow**.
7. Some of the water will move down through **permeable rocks** in a process called **percolation**.
8. Some of the water is stored as **groundwater** in porous rocks.

Relief is the term in Geography used to describe the **shape of the land**. Relief rainfall occurs in **hilly or mountainous places**, such as Wales, Scotland, and the Pennines. Places at the foot of hills or mountains which do not face the prevailing wind are in the **rainshadow** and do not get very much rainfall.

Relief Rainfall

1. **Evaporation** causes warm, moist air over the sea.
2. As the air approaches a **hill**, it is **forced to rise**.
3. As it rises, the **air cools** and then **condenses**.
4. **Clouds form** and **rain falls**.
5. The **air sinks** over the other side of the hill. No rain falls here in the **rainshadow**.

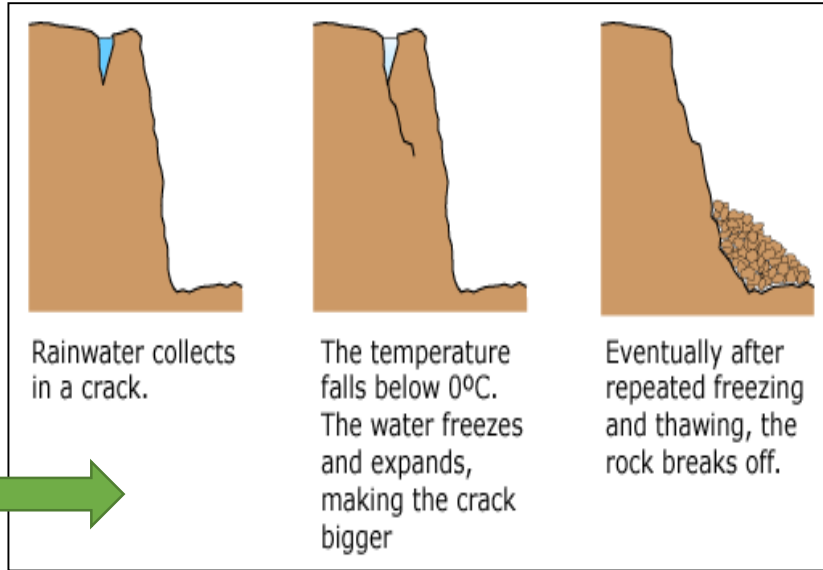


Rivers and Coasts

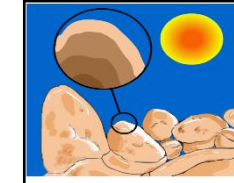
Weathering is the breakdown of rock. It is caused by **water** and **frost**, by **changes in temperature**, and by plants and animals. **Erosion** is the wearing away of land.

Physical Weathering

1. Freeze-thaw Weathering Most rocks are hard, but despite this they can be broken down by just a small amount of water getting into cracks in the rock. This is because water freezes as it expands. This creates powerful forces that can enlarge the cracks. As this **freeze-thaw** process is repeated and cracks spread through the rock. Eventually small pieces of rock (called **scree**) break off altogether.



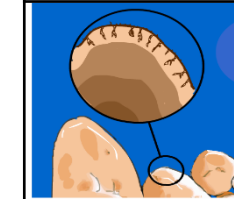
2. Exfoliation or onion-skin weathering



During the day the **sun heats up** the surface of the rock, causing the **rock to expand**.



During the night the rock **cools** down and **contracts**.



As the rock **expands** and **contracts** over and over again, small pieces of surface rock begin to **flake and fall off**.

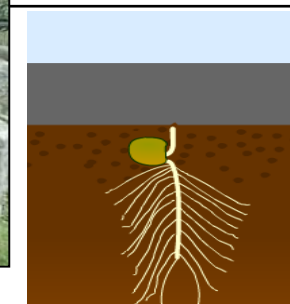
Weathering (Chemical)

There are also acids in the rain that can chemically eat away at rocks – especially rocks consisting of metal carbonates (such as chalk, limestone and marble).

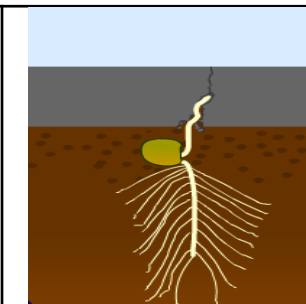
Firstly, there is **carbon dioxide gas** which dissolves in rain to form weak carbonic acid. This very slowly eats away at certain rocks. Secondly, there are **nitrogen and sulphur oxides** which produce much more acidic rain that can rapidly chemically dissolve the rocks.



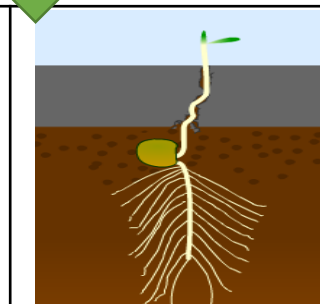
Weathering (Biological)



Plant roots can get into tiny cracks in rocks



As the roots push their way up to the surface of the rock, they force the crack open even further.

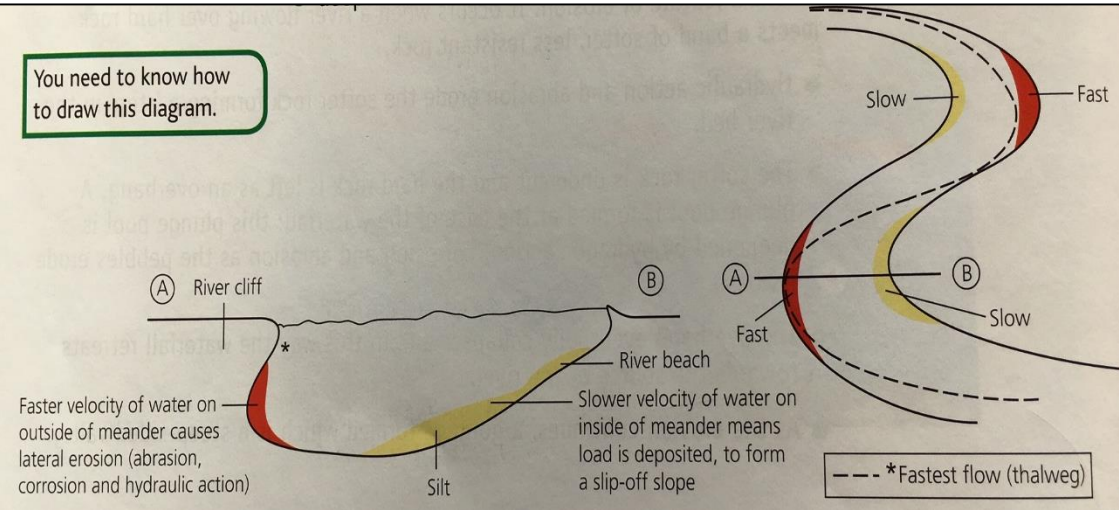
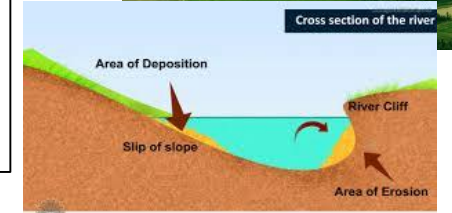


This causes small pieces of the rock to break away. This is called Biological Weathering.

Rivers and Coasts

Features of the lower course of the river - Meanders

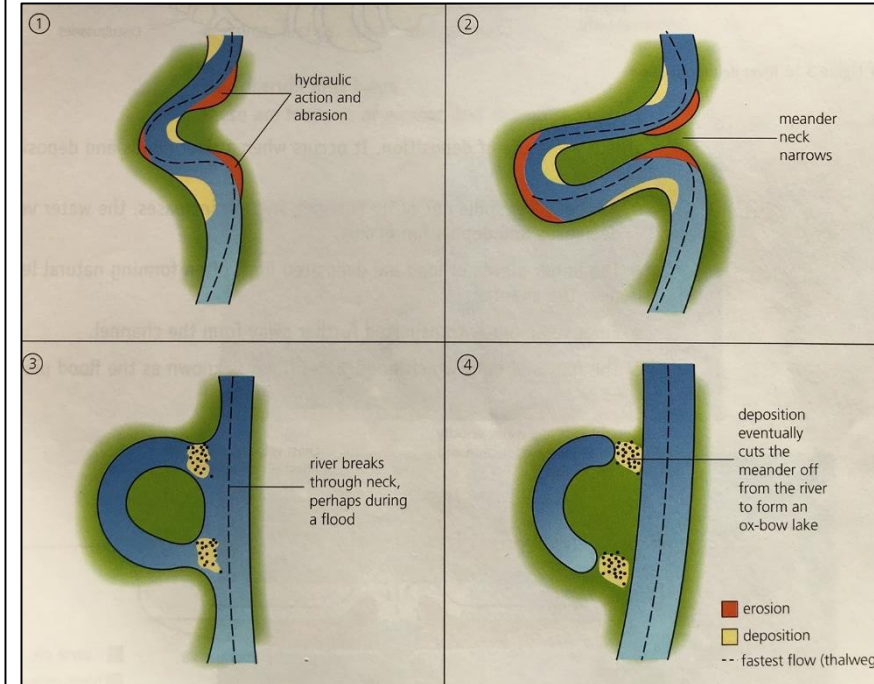
A meander is a feature of **erosion** and **deposition**. The river is **dynamic** – it is constantly changing its shape and therefore has a lot of **meanders (bends)** in it. These meanders are formed by **lateral (sideways) erosion**. As the river flows around a bend, the water flows **fastest** around the outside of the bend forming a **river cliff**. This creates erosion on the outside. The **slower flow** on the inside of the bend causes deposition and a **river beach (slip-off slope)** to form.



Ox-Bow Lake

This is a feature of erosion and deposition. It occurs where the horseshoe-shaped meander becomes tighter, until the ends become very close together and join to form a separate lake.

1. The outside of **two meanders** are eroded by hydraulic action and abrasion.
2. The river becomes more **sinuous** (has more curves and turns). This results in a **narrow neck of land** remaining between the two river cliffs.
3. Eventually, perhaps during a **flood**, the narrow neck of land is **eroded away** and the water takes the **more direct straight route downstream**.
4. **Deposition** occurs and eventually the old **meander loop is separated** from the river and forms an **ox-bow lake**.



Evaporation will cause the lake to become eventually dry.

A. Outside of a meander

- River cliff
- Fast velocity (*=fastest flow)
- Erosion (hydraulic action and abrasion)
- Deeper water

B. Inside of a meander

- River beach/slip-off slope
- Slow velocity
- Deposition
- Shallow water

Population and Settlement

Settlements and Services

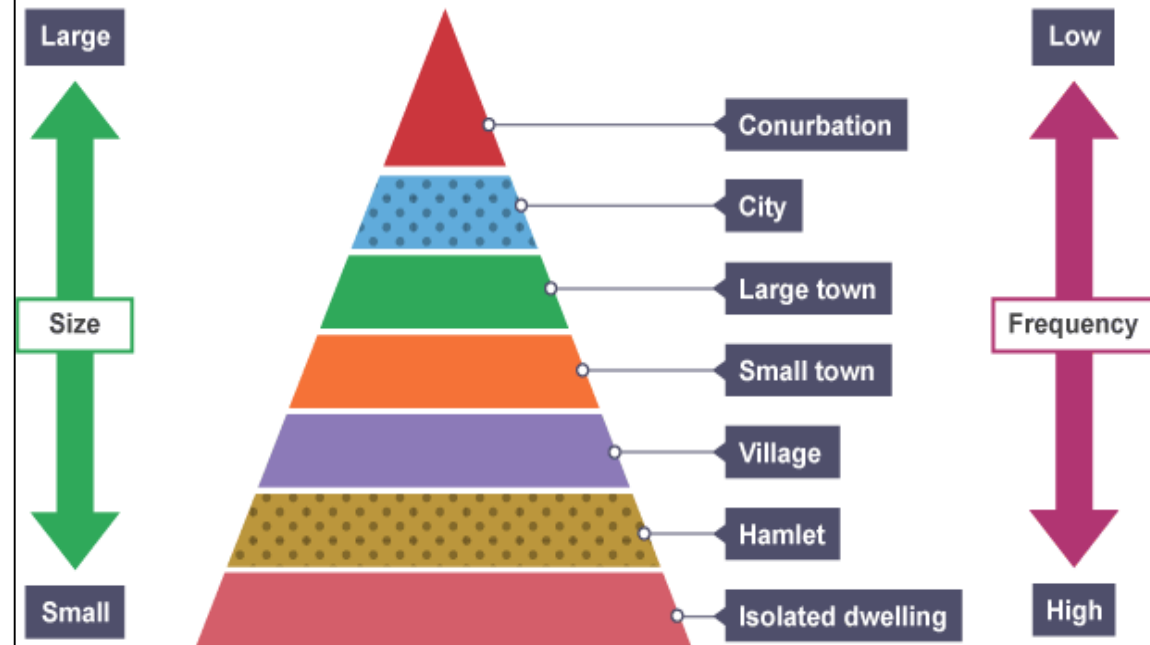
A **settlement** is a place where people live.

The **functions** of settlements are the things that happen there. A settlement may have **more than one function** and these may change over time and include;

- **Residential** – where people live.
- **Industrial function** – for factories (now tend to be in out-of-town locations).
- **Commercial function** – shopping facilities located there (& cinemas, leisure centres etc).
- **Service function** – hospitals, schools, libraries etc.
- **Tourism function** – place or attraction where people visit.
- **Administrative function** – local government offices are there.

Settlements and Services

All settlements are part of a **settlement hierarchy** in order of their size and importance. Small settlements, like hamlets and villages, are found in **rural** areas, surrounded by countryside. Larger settlements, like towns and cities are **urban**, or **built up** areas. Generally the larger a settlement, the higher its population and the wider range of goods and services it provides.



Goods and services can be classified into two groups:

Convenience Goods are **low value, everyday**, things people buy in a local shop or supermarket. For example, milk, sweets and newspapers.

Comparison Goods are **high value** things people buy **occasionally**. They are more likely to buy them in a large shopping centre. For example, clothes, phones and furniture.