

# **Form 7 Geography**

**Summer Exam Revision 2023**

# Location Knowledge -Asia

You will need to be able to locate both **physical** and **human features** on a map of **Africa**.

## Lines of latitude/longitude

- Equator
- International Date Line
- Tropic of Cancer

## Rivers

- River Yangtze
- River Ganges

## Mountain areas

- Himalayas

## Major cities of Africa

- Tokyo (Japan)
- Kabul (Afghanistan)
- Bangkok (Thailand)
- Jakarta (Indonesia)

## Oceans and Seas

- Pacific Ocean
- Indian Ocean



# Ordnance Survey (OS) Map Skills

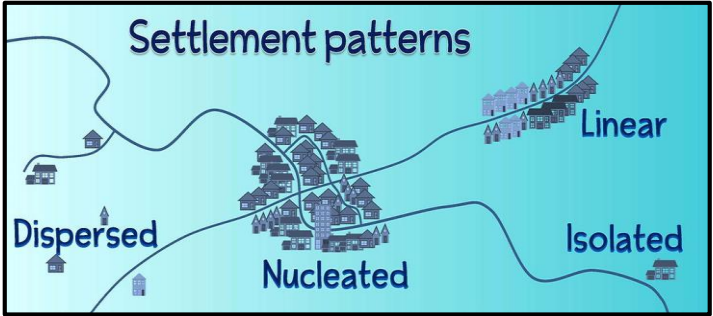
Students should know and understand:

- 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:

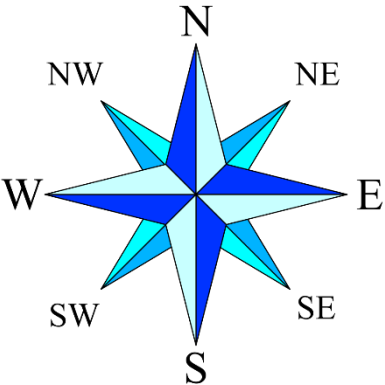
- follow routes
- identify relief and landscape features (slope steepness, plateau, flood plain, valley, headland, bay and features included in the glossary: see Appendix II)
- annotate simple sketch sections
- use maps in decision-making
- understand site, situation and shape of settlements

On the OS map section, there is a question about the shape or pattern of settlements. There are 4 main types of settlement pattern.



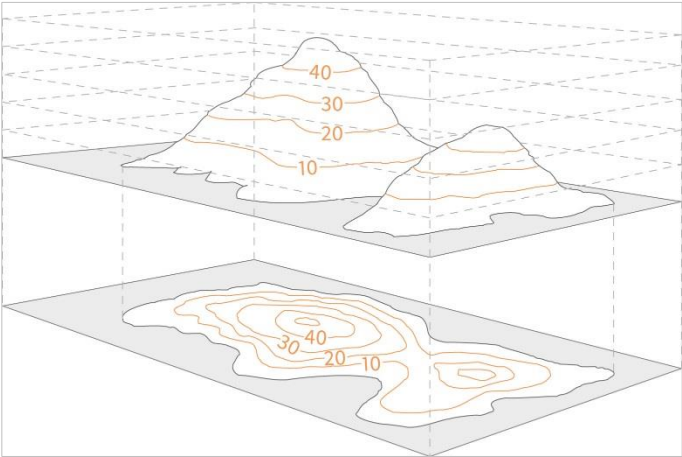
**Direction**

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**

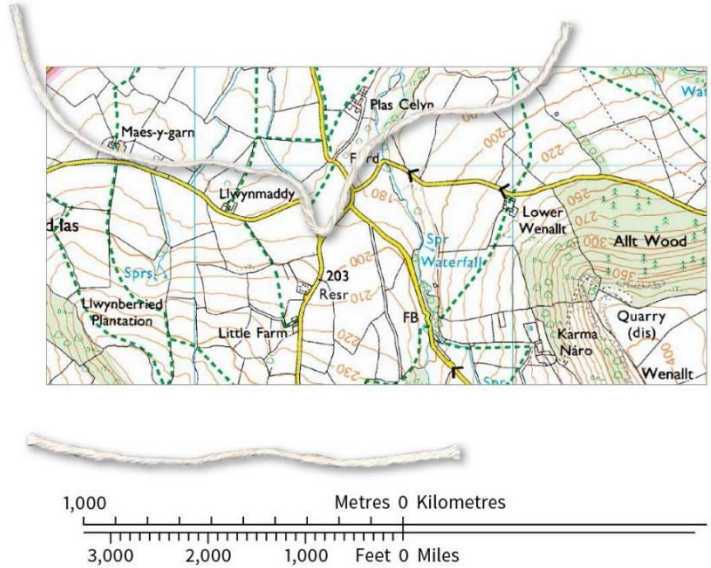
Hills, slopes and mountains are represented on a map using contour lines. These are lines that join places of equal height. By studying the contour lines you can work out lots about the surrounding terrain including gradients of hills, valleys and steepness of climbs.



**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.



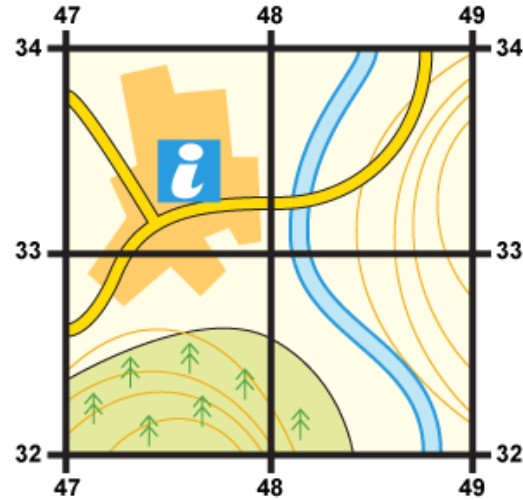


# 4 and 6 figure grid references

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 an northerly direction.

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

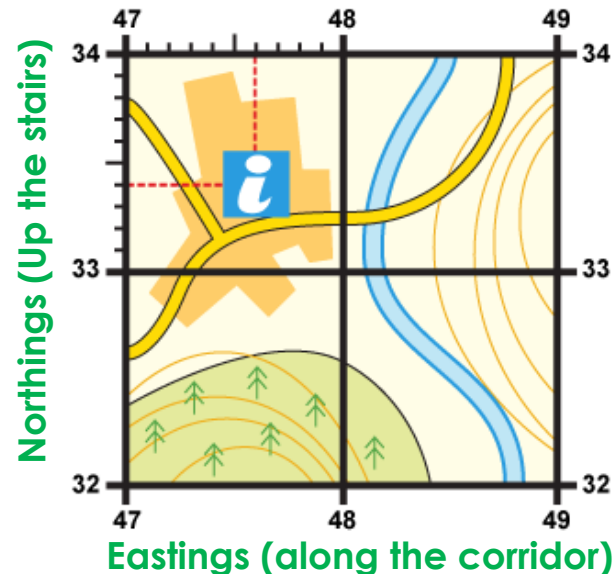
**Four-figure grid references** can be used to pinpoint a location to within a square. To find the number of the square:



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. **334**
4. You now have a **six figure grid reference**. In this instance, the tourist information office is located at **476334**.

# Weather and Climate

**What is the difference between weather and climate?**

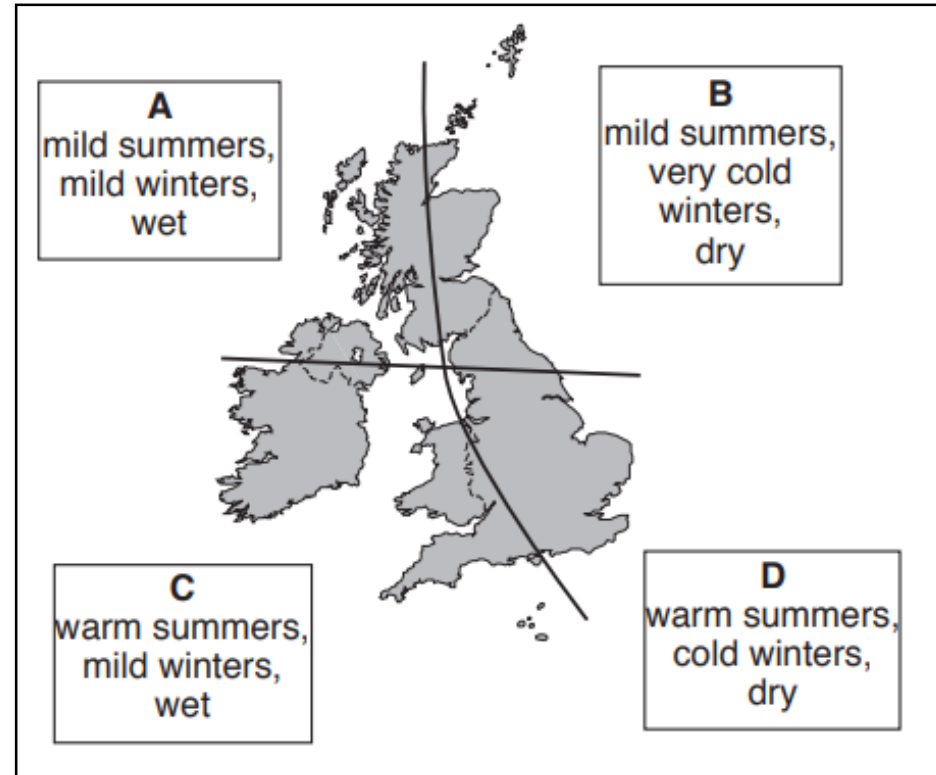
**Weather** – the day to day conditions in the atmosphere

**Climate** – the average pattern of weather conditions over a number of years.

**Different types of climate around the world include;**

Tropical, Arid, Temperate, Mediterranean, Polar and Mountain. Britain has a **Temperate** climate. (This means it is a **moderate climate** which is neither extremely hot, nor cold).

The UK has a **mild** climate or **temperate** climate and the sea affects the weather. In general, this means that the UK gets **cool, wet winters** and **warm, wet summers**. The weather is also very **changeable**.



**Microclimate** – the climate of a small area e.g. a garden, school grounds.

Microclimate is affected by;

- **Aspect** (the direction a place is facing)
- **Shelter**
- **Buildings**
- **Ground surface**

**Temperature variations across the UK.**

Even though we have a temperate climate. It is different for different parts of the UK.

**You need to know:**

**What factors affect the climate of the UK?**

- **Latitude**
- **Prevailing winds**
- **Relief**
- **Ocean Currents**
- **Altitude**

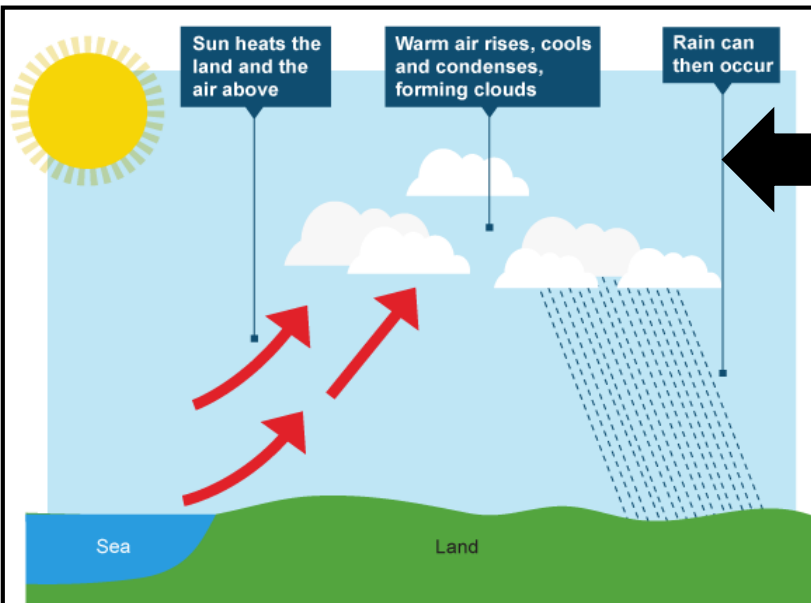
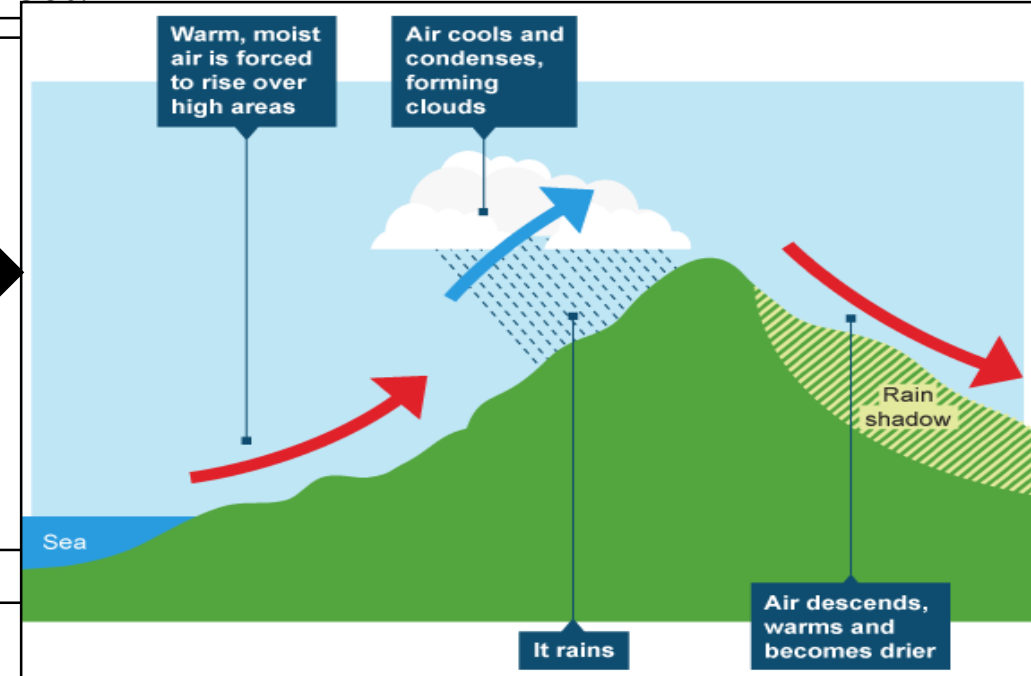
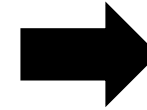
# Which types of rainfall commonly affect Britain?

There are 3 main types of rainfall, **Convectional**, **Relief** and **Frontal**.

You need to be able to draw an annotated diagram of **Relief Rainfall**. **Relief Rainfall** is common on the west of the UK due to the warm moist air coming in over the sea which is then forced to rise over mountainous areas.

## Relief rainfall

- Prevailing winds bring warm, moist air to the western British Isles.
- Air is forced to rise over high areas.
- Air cools and condenses.
- Clouds form and it rains.
- Air descends on the other side of the mountains.
- It warms up and therefore becomes drier.



## What is Convectional Rainfall?

- The sun shines on the ground and heats it up.
- When the land warms up, it heats the air above it.
- This causes the **air to expand** and **rise**.
- As the air rises it **cools and condenses**.
- Water droplets form and can become cumulonimbus clouds.
- If this process continues then rain will fall.

This type of rainfall is very common in **tropical areas** but also in areas such as South East England during **warm sunny spells**.

# Rivers and Coasts

## Processes of River Erosion

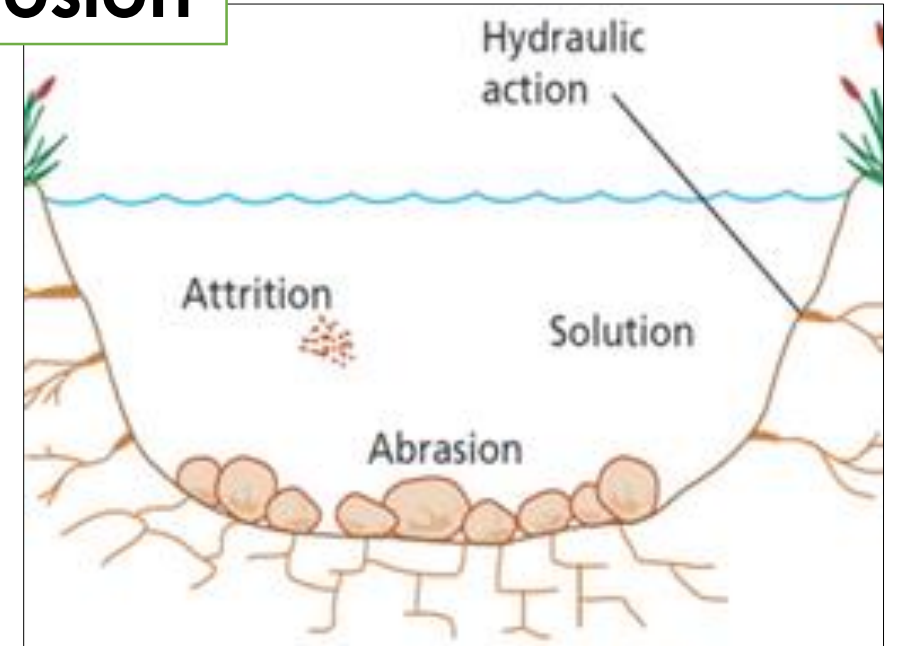
Rivers change the shape of the land. They do this in three ways;

**Erosion** – rivers **wear away the land** by the action of flowing water on the channel. They widen and deepen their valley.

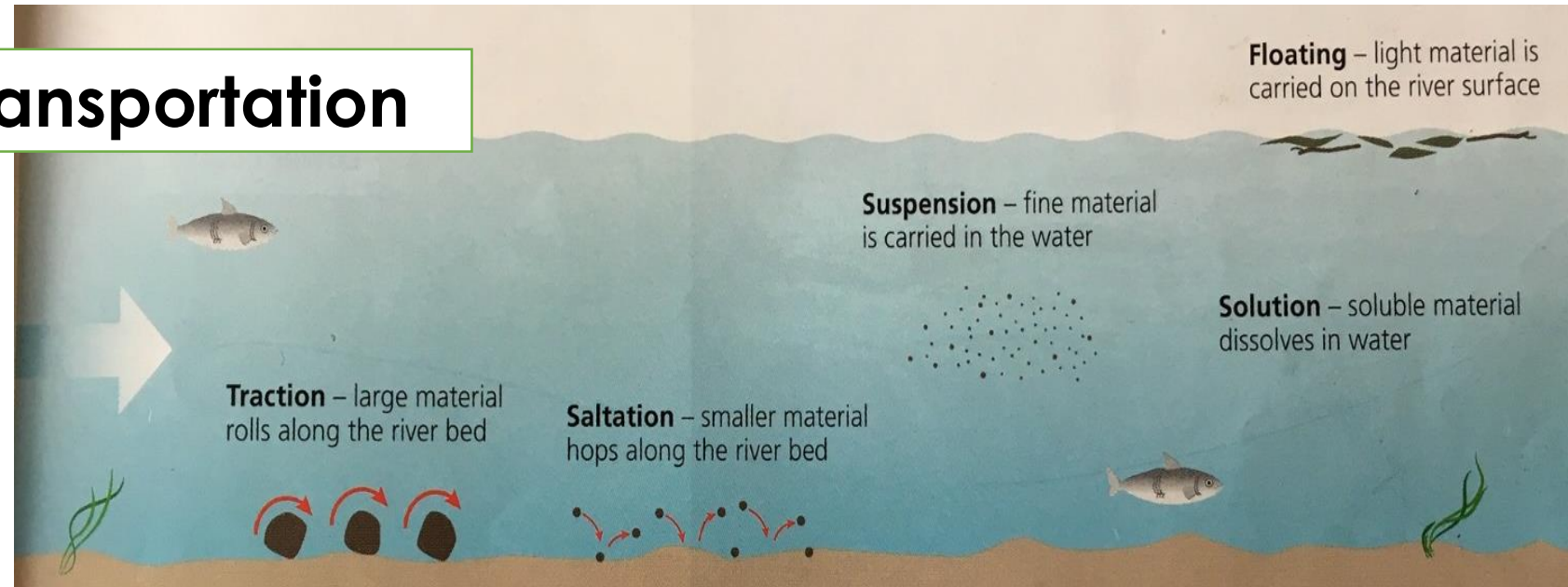
**Transportation** – rivers carry away the material they have eroded. The faster the river flows, the more material it can transport.

**Deposition** – as the river slows down, rivers **drop the material** they have transported. They build up new land.

**Weathering** – the **breakdown of rocks** in situ by mechanical, chemical or biological means.

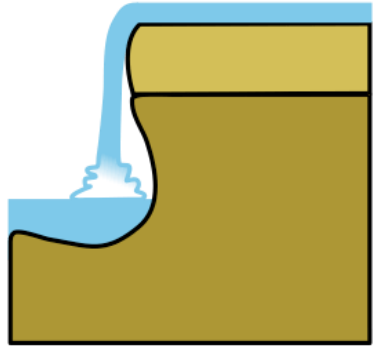


## Processes of River Transportation

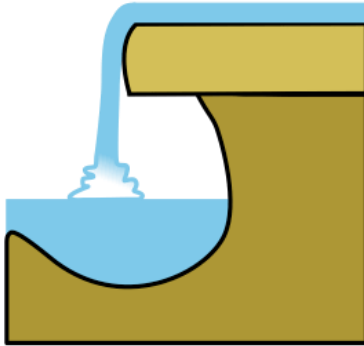




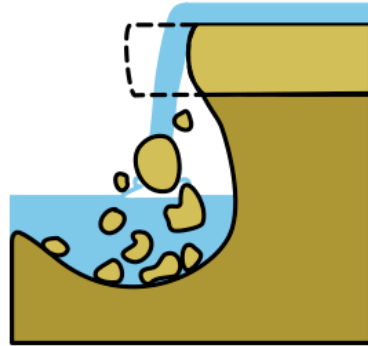
# What landforms occur in the upper course of the river? (2)



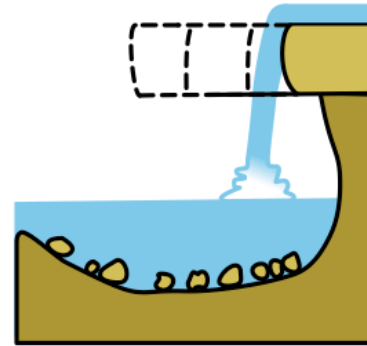
1. Waterfalls typically form in the upper stages of a river. They occur where a band of hard rock overlies a softer rock. Falling water and rock particles erode the soft rock below the waterfall, creating a plunge pool.



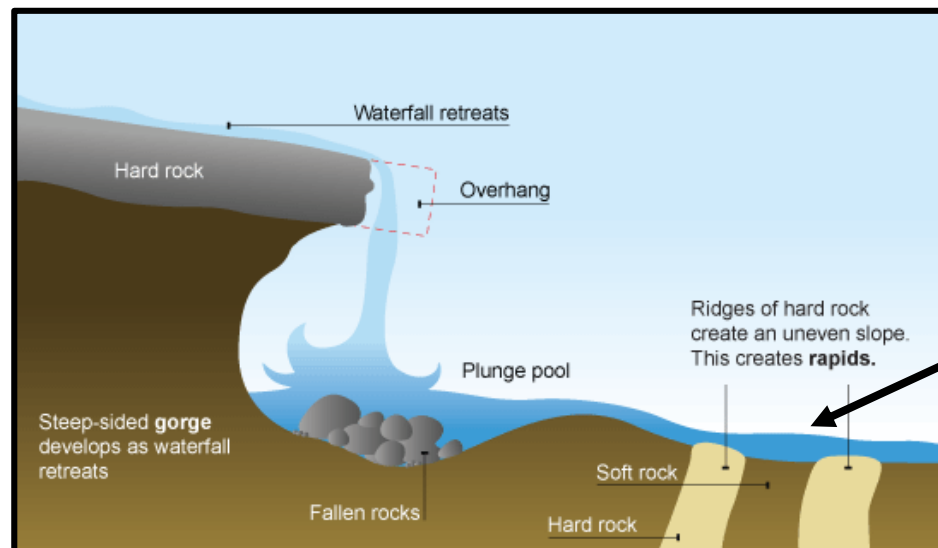
2. The soft rock is undercut by erosional processes such as hydraulic action and abrasion creating a plunge pool where water and debris swirl around eroding the rock through corraision further deepening it and creating an overhang.



3. Hard rock overhang above the plunge pool collapses as its weight is no longer supported.



4. Erosion continues and the waterfall retreats upstream leaving behind a gorge.

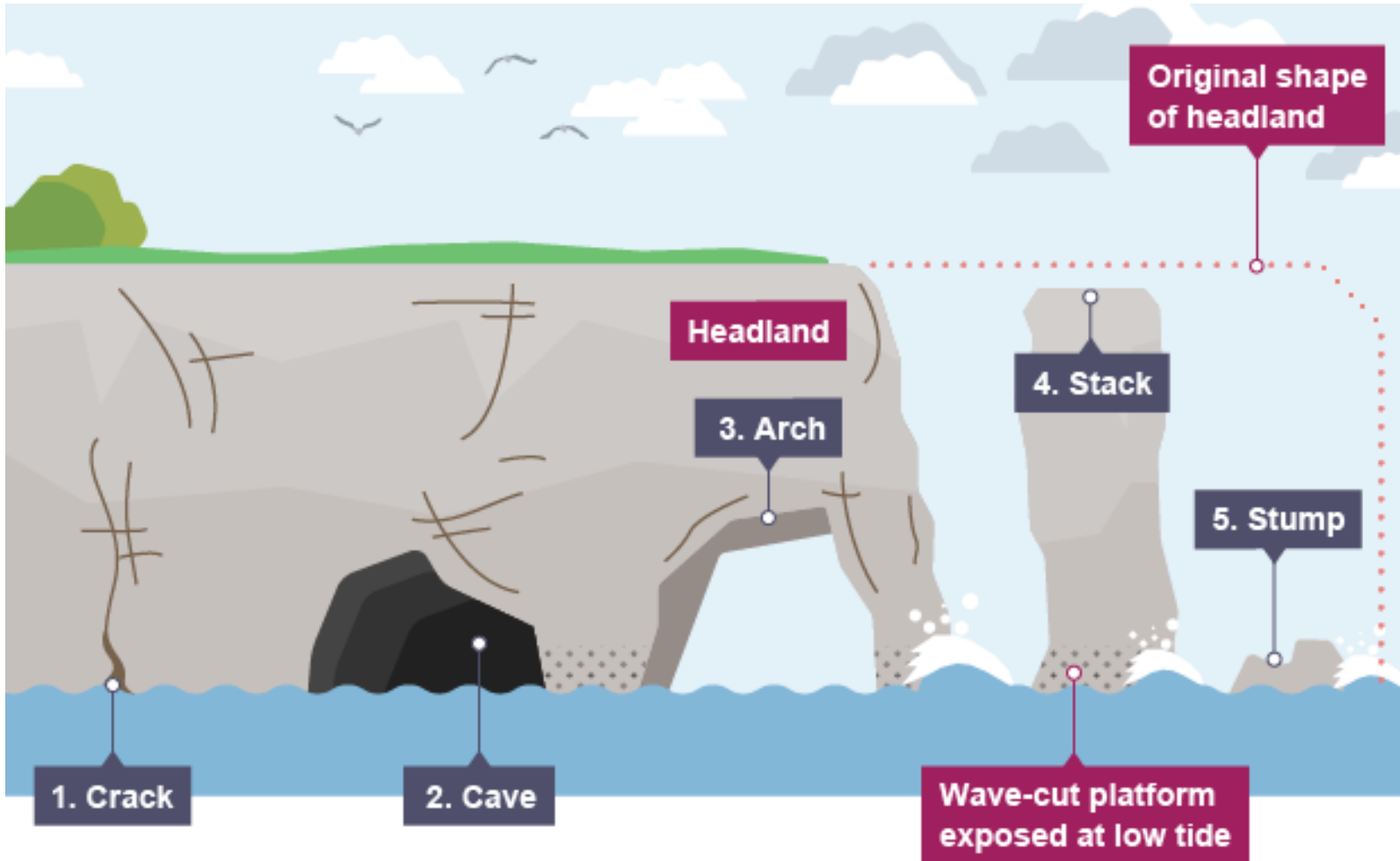


## Key Ideas

- **Erosion** is the main process operating in the upper course of a river.
- The direction of erosion is **vertical**.
- There are **four** main types of erosion – hydraulic action, attrition, abrasion and corrosion.
- Valleys are **v-shaped** with **interlocking spurs**.
- **Waterfalls** are formed where a river meets a band of less resistant rock. **Plunge pools** and **gorges** are features associated with the formation of waterfalls.
- **Rapids** are smaller scale features formed where finer bands of varying resistance of rock are found.



# Erosion of a Headland



1. **Cracks** are widened in the headland through the erosional processes of **hydraulic action** and **abrasion**.

2. As the waves continue to grind away at the crack, it begins to open up to form a **cave**.

3. The cave becomes larger and eventually breaks through the headland to form an **arch**.

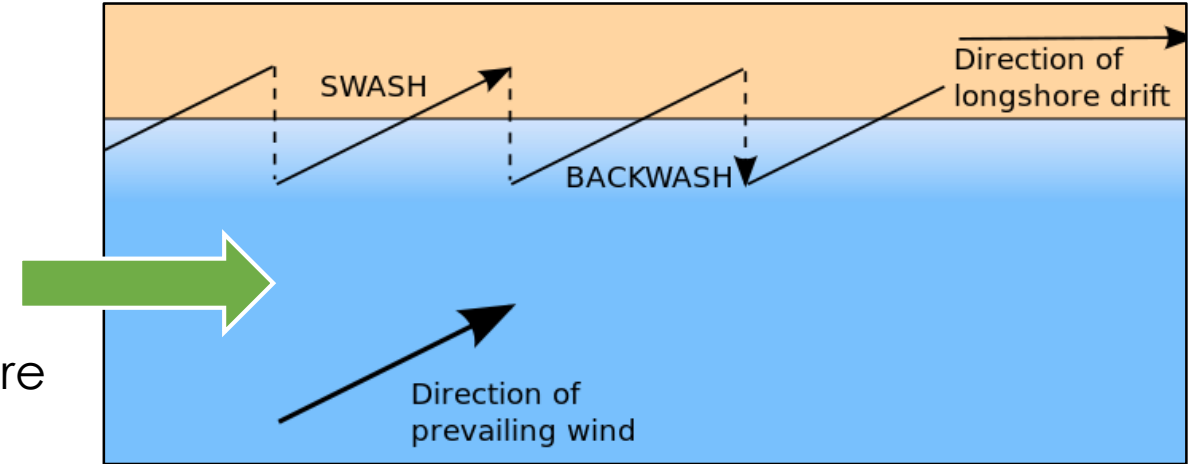
4. The base of the arch continually becomes wider through further erosion, until its roof becomes too heavy and collapses into the sea. This leaves a **stack** (an isolated column of rock).

5 The stack is undercut at the base until it collapses to form a **stump**.

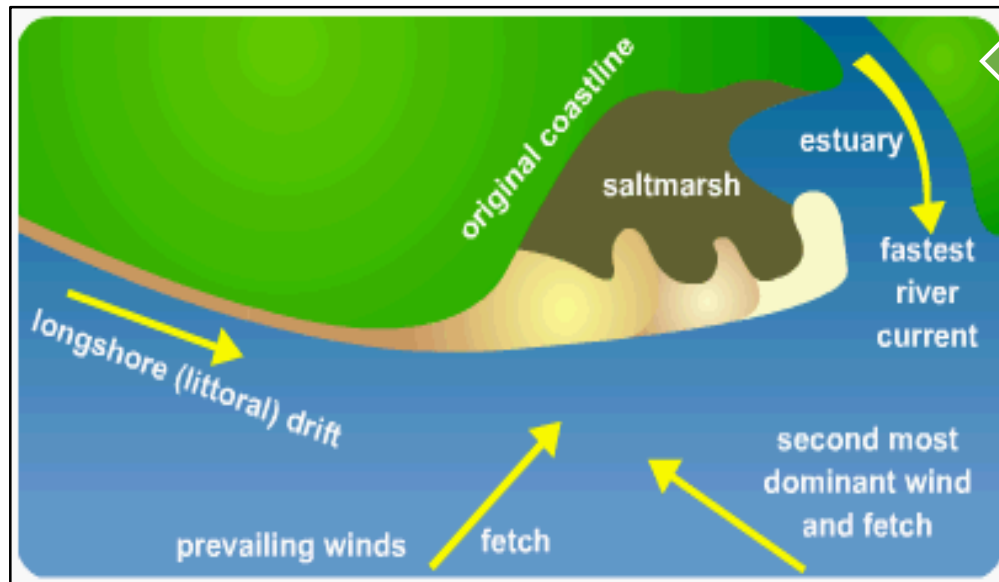
# Coastal Deposition Landforms

## How is sediment moved along a beach?

- Waves approach a beach at an angle of 45 (**swash**)
- This is due to the prevailing **wind** direction
- Waves return at right angles (**backwash**)
- This process moves sediment along a beach until there is a barrier or a break in the coastline.
- The process is called **Longshore Drift**.

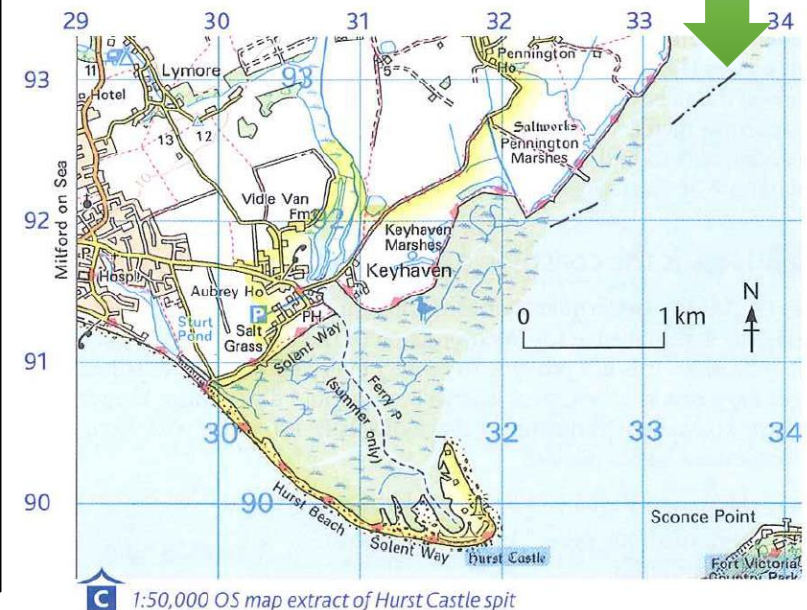


## Diagram to show how a sand spit forms.

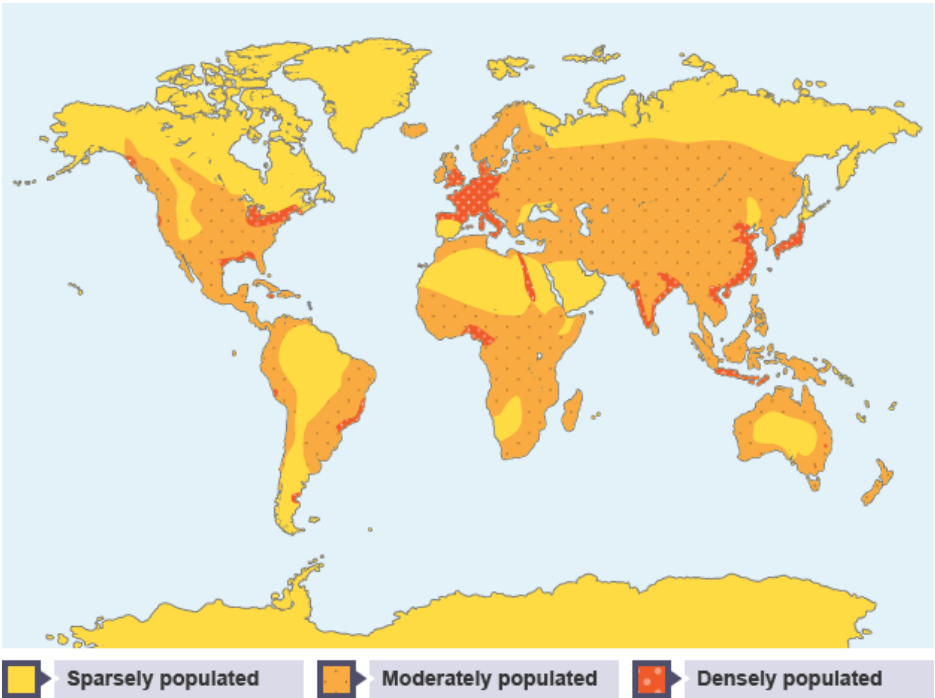


- **Longshore drift** moves sand along a beach
- When it reaches a break in the coastline it starts to be **deposited** and a **spit** forms
- The spit continues to grow outwards and may form a **hooked end** if the wind direction changes
- Behind the spit in the calm water a **salt marsh** may form
- **The spit will never grow over the estuary due to the moving river water**

On an OS map, a spit would look like this





# Population and Settlement



- **Population distribution** is the spread of people across the world, i.e. where people live.
- **Population density** is the number of people living in a particular area – usually 1 square kilometre – and can be written as total population/land area.

The **population** of the world is now **7.8 billion people**, the vast majority of whom live in the developing world. The world's population is spread unevenly across the globe with concentrations of large numbers of people living in the same area.

**Population density** is measured by the number of people per square kilometre. Areas can be densely or sparsely populated.  
**Densely populated areas** – lots of people, often crowded e.g. cities  
**Sparsely populated areas** – few people, lots of space e.g. countryside (rural)

<b>Densely populated areas</b> (lots of people live there)		<b>Sparsely populated areas</b> (few people live there)	
<b>Pleasant Climate</b>		<b>Too hot or too cold</b>	
Good farmland		Mountainous or steep slopes	
Industry and jobs		Natural Hazards e.g. volcanoes	
Good transport links (road, rail etc)		Poor transport links	