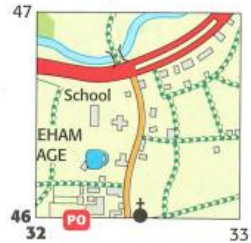


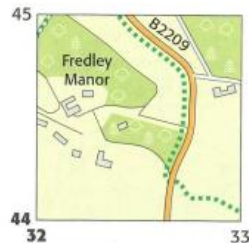
# Knowledge organiser: Year 7 Skills

## Using grid lines

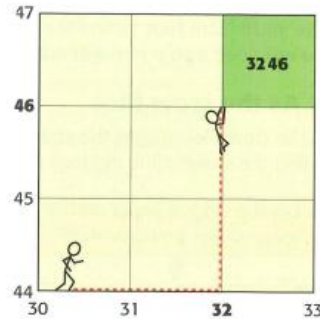
The map also has **grid lines** with numbers on. These help you find a place quickly. To find the school in the square with **grid reference** 3246:



Find the square where lines 32 and 46 meet in the bottom left corner – and then look for the school.



Fredley Manor is in the square with grid reference 3244. Lines 32 and 44 meet in the bottom left corner.



A grid reference gives the number along the bottom first. This shows how to find square 3246. Walk before you climb!

These grid references are called **four-figure**. Why?

## Six-figure grid references

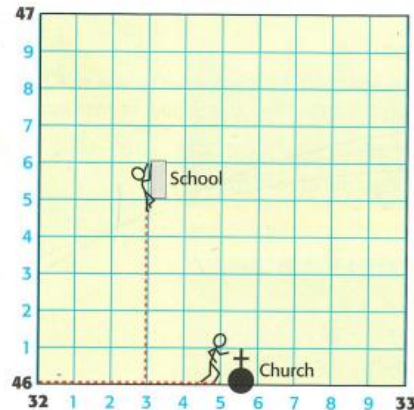
There is a school *and* a church in square 3246 above.

You can say exactly where each is in the square using a six-figure number. This is what to do:

- ♦ Divide the sides of the square into ten parts, in your mind.
- ♦ Count how many parts you must walk along before you reach the building, and how many parts you must climb.

For the school you go 3 parts along and 5 parts up. So its **six-figure grid reference** is 323465.

The one for the church is 325460. Do you agree?



## The scale

1 cm on the plan represents 30 cm in the room. That is the **scale** of the plan. You can show it in three ways.

**1** In words: **1 cm to 30 cm**  
or **1 cm represents 30 cm**

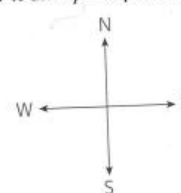
**2** As a ratio: **1 : 30**  
(say it as *1 to 30*)

**3** As a line divided into centimetres:

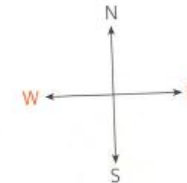


The scale should be marked on a plan so that people can tell the size in real life.

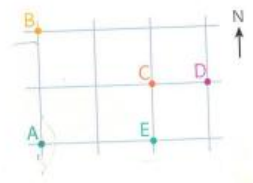
Lost? It always helps to know where north is.



North, south, east and west are our four key directions: N, S, E and W.

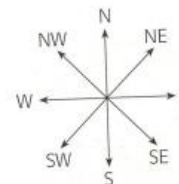


Don't get east and west mixed up. Remember they form the word *we*.

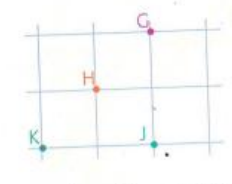


Here B is north of A. C is west of D. E is east of A.

We can add other directions in between, like this:



NE stands for north east (or north of east). SW stands for south west (or south of west).



Here, G is north east of H. J is south east of H. K is south west of H.

## Measuring distances and grid references - BBC Bitesize

### Did you know?

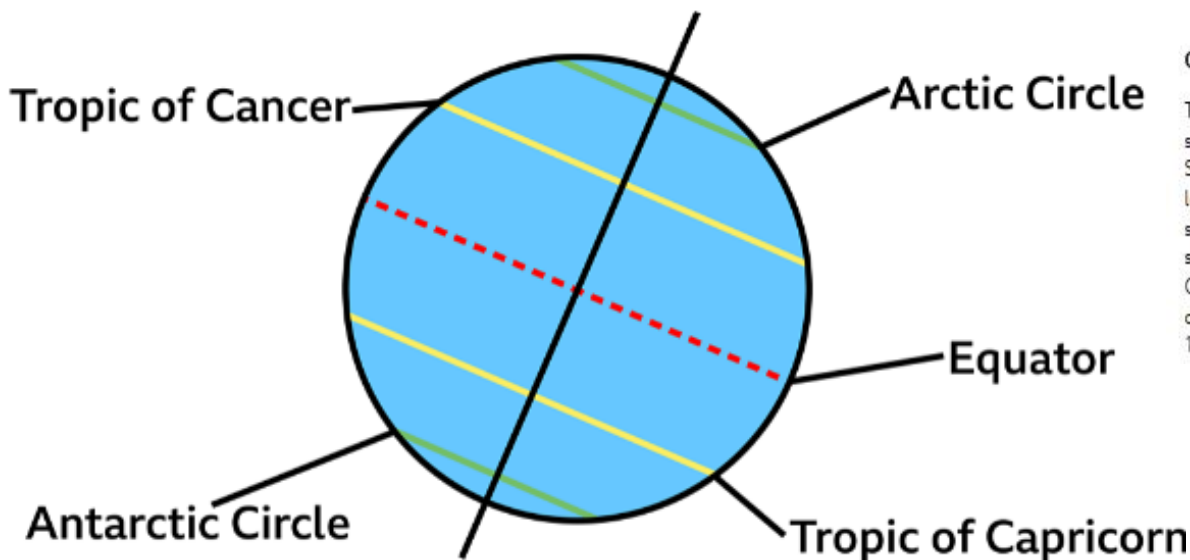
- ♦ A compass helps you find directions.
- ♦ The first compass was an iron needle floating in a bowl of water.

# Knowledge organiser: Year 7 Skills

## What is latitude and longitude?

We use imaginary lines to help locate where a place is in the world.

- We use lines of **latitude** to find out how far **north** or **south** a place is. These lines run **parallel** to the **Equator**.
- There are **five major lines** of latitude:
  - the Arctic Circle (the North Pole)
  - the Antarctic Circle (the South Pole)
  - the Tropic of Cancer
  - the Tropic of Capricorn
  - and the Equator.



The globe above shows the five key lines of latitude.

- We use lines of **longitude** to find out how far **east** or **west** a place is. These lines run from the top of the Earth to the bottom.

## Relief – height and shape of the land

Maps show height in a number of different ways:

### Spot heights and triangulation pillars

This map extract shows exact heights by a black dot with a number next to it. The number is the height above sea level in metres. The blue triangle represents a **triangulation pillar**; the networks of concrete pillars found in the UK that were used to make maps.



### Contours

These are lines drawn on maps that join places of the same height. They are usually an orange or brown colour. Some contour lines have their height above or below sea level written on them. It is possible to use them to see the shape of the land - if contour lines are close together the slope is steep, if they are far apart the slope is gentle. Contour lines are usually drawn at 10 metre intervals on a 1:50,000 scale map and at 5 metre intervals on a 1:25,000 scale map.



[Map symbols, direction and contour lines - BBC Bitesize](#)

[What is longitude and latitude? - BBC Bitesize](#)

Great Britain



United Kingdom



British Isles



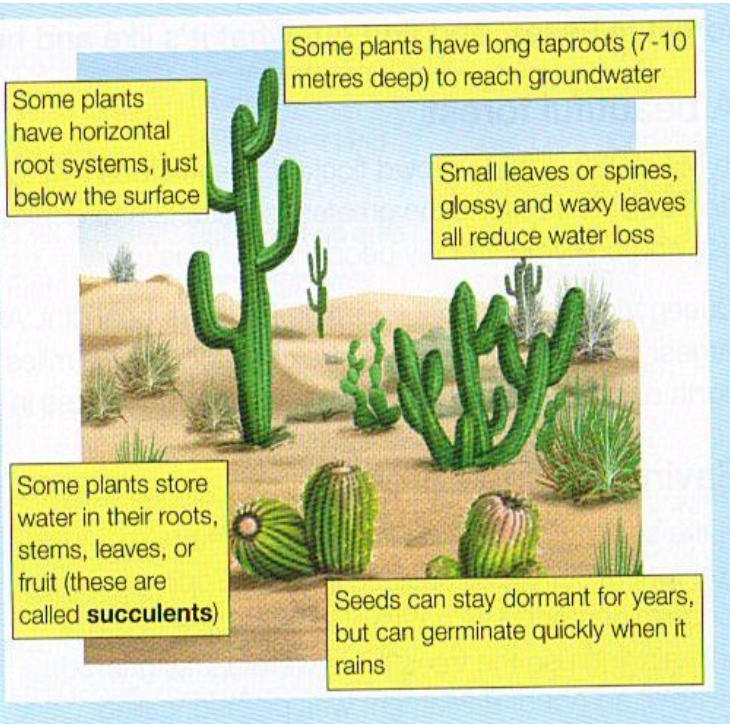
Capital cities



# Knowledge organiser: Year 7 Different climates

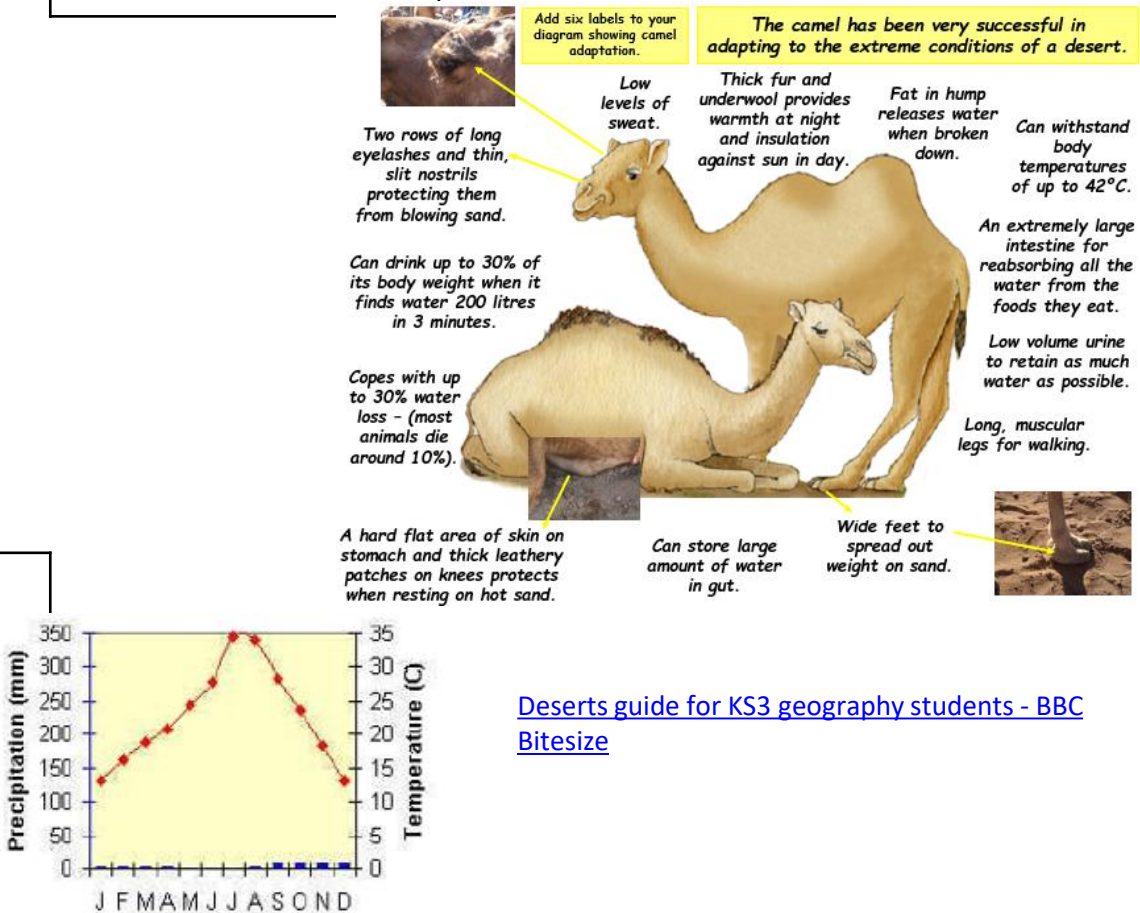
Hot deserts are usually found along the Tropic of Cancer and the Tropic of Capricorn.  
The Sahara desert in Northern Africa is an example.

## Plants adaptations in hot deserts



**The climate of hot deserts:**  
The climate is very **hot**. Summer daytime temperatures can exceed 40°C. However, at night the temperature can drop below 0°C.  
The climate is very **dry** with less than 250 mm of rainfall a year.  
**Study the desert climate graph.**  
Precipitation is shown by the bars.  
Temperature is shown by the line.  
The precipitation is 0mm in July.  
The temperature is 35C in July.

Weather	Conditions in the atmosphere that happen during the day.
Climate	Climate is the average weather conditions in a place over a long period of time.
Microclimate	The climate of a very small or restricted area, especially when this differs from the climate of the surrounding area.
High pressure/anticyclone	The air sinks. An area of high pressure over the UK means dry weather.
Low pressure/depression	The air rises. An area of low pressure over the UK means rain.



# Knowledge organiser: Year 7 Different climates

## Weather Instruments Vocabulary



**Thermometer**  
(Temperature)



**Barometer**  
(Air pressure)



**Rain gauge**  
(Rainfall)



**Anemometer**  
(Wind speed)



**Wind vane**  
(Wind direction)



**Hygrometer**  
(Humidity)

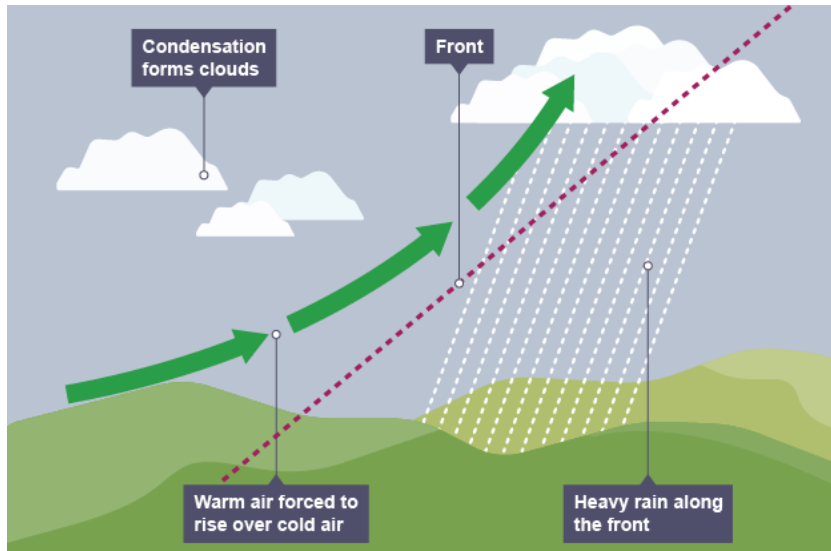


**Wind sock**  
(Speed and wind direction)

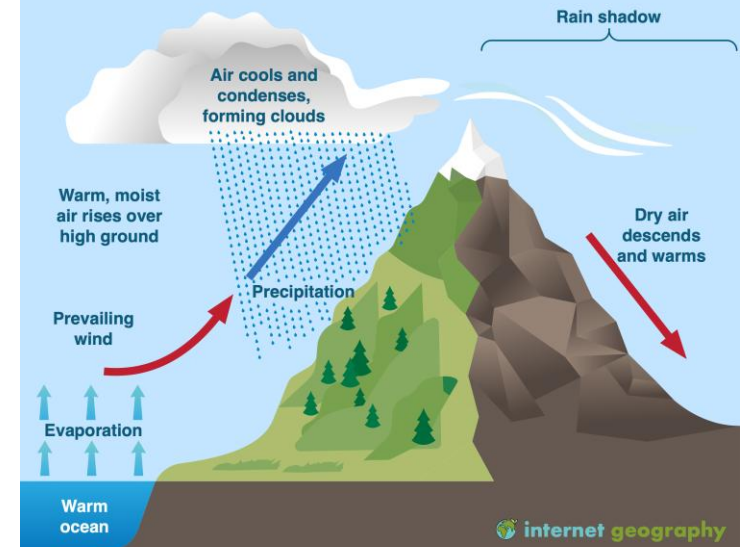


**Compass**  
(Direction)

## Frontal rainfall



## Relief rainfall



Cumulo-nimbus clouds are formed. Water droplets accumulate and fall as rain due to gravity

Air cools and condenses with height, forming clouds

Dew point

Warmer air rises

The sun heats up the ground

## Convectional rainfall

# Knowledge organiser: Year 7 Lagos

**Describe the location of Lagos.**

Continent = Africa  
Country = Nigeria  
Region= South-West Nigeria

**Opportunities and challenges**

Opportunities:

- 10 universities in Lagos state = education.
- 150,000 jobs by Eko City Atlantic in construction.
- Coastline = can trade with other countries.
- Two major ports and a fishing industry.
- Nollywood.

Challenges

- Farming pays low wages.
- Oil industry has caused pollution in the Niger Delta.
- Terrorist group, Boko Haram.
- In rural areas 40% don't attend primary school.
- Squatter settlement- Makoko.

Human geography	How human activity affects or interacts with the natural environment. For example – tourism, urbanisation and population.
Physical geography	Natural features. For example – rivers, mountains and volcanoes.
Environmental geography	Environmental geography is <b>the study of the impact of humans on the natural world</b> and how physical processes impact upon humans.
Push factors	Something negative that pushes you away from an area.
Pull factors	Something positive that attracts you to an area.
Squatter settlement	An illegal settlement where people live.
Urban	Town/city
Rural	Countryside
Continent	Landmass made up of different countries. There are 7 in total.
Rural-urban migration	Moving from the countryside to the city.
Urbanisation	Increase in percentage of people in a town/city.



**Makoko – squatter settlement**

In Makoko:

- One toilet is shared with 15 households.
- Pollution also occurs in the water due to poor sanitation systems. This means diseases such as cholera spread and make people sick.
- There is a lack of access to clean water. Supply switched on for 2 hours a day by the city authorities. People get sick from drinking the dirty water.
- Mosquitos give people Malaria which causes illness or even death.
- Malnutrition is widespread.
- In 2014, 19% of people were unemployed.

# Knowledge organiser: Year 7 The Yorkshire Dales

[What is a limestone landscape? - BBC Bitesize](#)

[Underground features - Upland limestone landscapes](#)

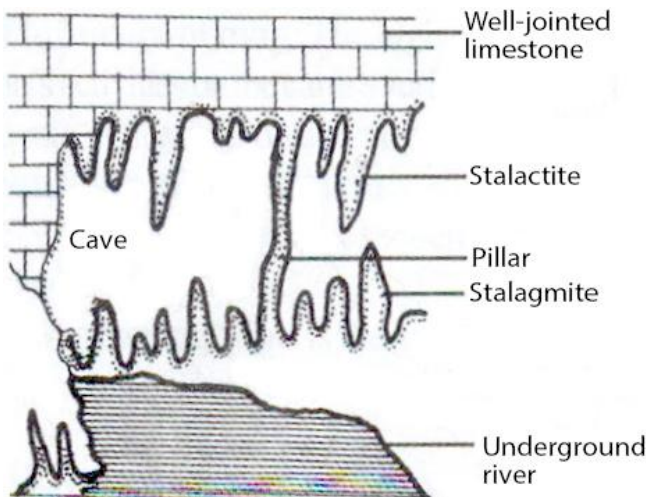
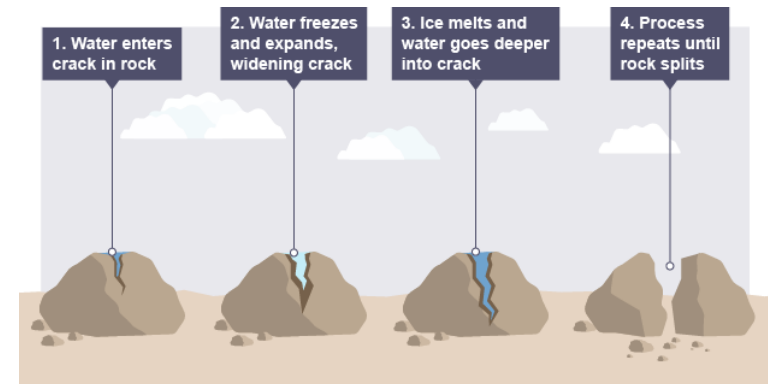
[- Revision - BBC Bitesize](#)

The Yorkshire Dales is in northern England. It has limestone scenery.

<b>Limestone</b>	A sedimentary rock, made up of calcium carbonate.
<b>Weathering</b>	The breakdown of rocks.
<b>Carbonation</b>	Chemical weathering. Acidic rainfall dissolves the calcium carbonate.
<b>Limestone pavement</b>	A flat surface with clints (blocks) and grykes (gaps). Formed by carbonation.
<b>Limestone cave</b>	Formed by carbonation. Found underground with stalactites and stalagmites (see diagram)
<b>Quarrying</b>	The removal of limestone from underground to use as a resource.
<b>Igneous rock</b>	Igneous rocks are formed through the cooling and solidification of magma or lava.
<b>Sedimentary rock</b>	Sedimentary rocks are types of rock that are formed in layers by the deposition and compaction of sediments.
<b>Metamorphic rock</b>	Metamorphic rocks arise from the transformation of existing rock to new types of rock due to changes in heat and pressure.



## Freeze-thaw weathering



## Problems of quarrying (see picture)

- The large hole is an eyesore
- Dust is created from blasting the rocks
- Noise is created from the blasting of rocks

## Benefits of quarrying:

- 110 jobs created
- Limestone is used as building stone

