



Knowledge Check 1
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Knowledge Check 2
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Atmosphere	Gases that surround the Earth.
Climate	The average weather conditions over a prolonged period (30Y)
Condensation	Water vapour cooling and turning back into a liquid.
Equator	A invisible line that splits the Earth into a northern and southern hemisphere.
Evaporation	Liquid to gas due to heating.
Ground water	Movement of water slowly through the rocks
Impermeable	Surfaces that do not allow water to pass through.
Infiltration	The movement of water into the soil.
Latitude	Invisible lines around the Earth to assist locating.
Permeable	Surfaces that allow water to pass through.
Precipitation	Rain, hail, sleet and snow.
Pressure	The weight of the air.
Relief	The physical shape of the land.
Saturated	When the soil surface is full and cannot absorb any more water.
Surface runoff	Movement of water over the surface of the soil.
Temperate	Seasonal zones. Areas that experience warm summers and cold winters.
Transpiration	The movement of water from plants into the air.
Tropical	Areas between the tropics that receive high year round rainfall and temperature.
Vapour	Water in gas form.
Weather	The day to day changes in the atmosphere.

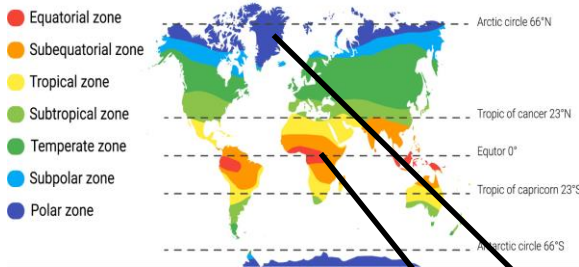
What is latitude and how does impact climate?

- Invisible lines that go around the Earth
- Latitude divides horizontally into a N/S hemisphere
- The Equator is a line of latitude that goes around the centre of the planet

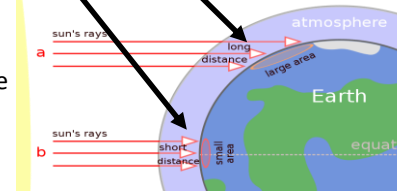


What impacts climate zones?

Climate zones are influenced by latitude. Latitude determines how much sunlight and rainfall a place gets! This therefore effects what can grow.



- The sun's heat is concentrated over a smaller surface area at the equator
- The sun's heat is spread over a larger area at the poles.
- The sun passes through less of the atmosphere at the equator, so less heat is lost giving higher temperatures.

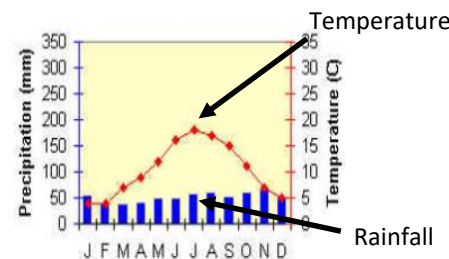


How do climate zones differ?

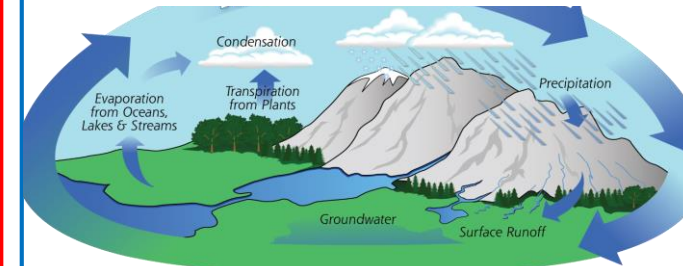
- Temperate zones have warm summers and cold winters.
- Tropical zones on the other hand are warm and wet all year round!
- Polar zones are very cold and dry.

What are climate graphs?

- Climate graphs show temperature and rainfall.
- Here, the highest temperature is 19
- The highest rain was in November, at 7 mm.

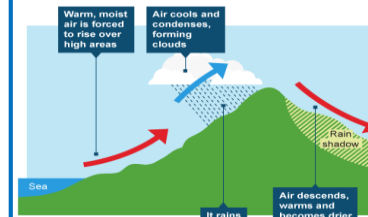


How does water move around the planet?



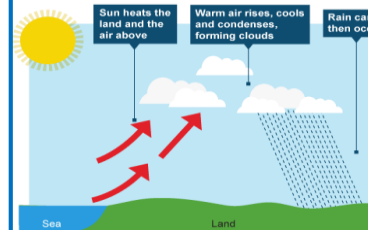
Why does it rain?

Cloud formation and hence rain involves the cooling of water vapour to allow condensation to occur.



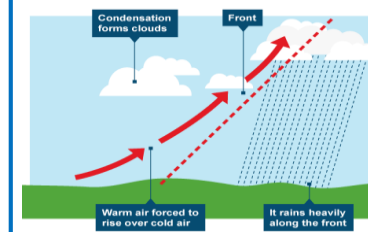
Relief rain

- Mountains cause air to rise.
- Water vapour cools and condenses.
- Rain shadow formed as air dries.



Convection rain

- Sun heats the ground.
- The ground heats the air which rises.
- It then cools and condenses.



Frontal rain

- Warm air is forced above cold air.
- This causes it to cool and then condense.



Montgomery Academy

Geography Dept.



KS3 Knowledge Organiser - Weather



Knowledge Check 3
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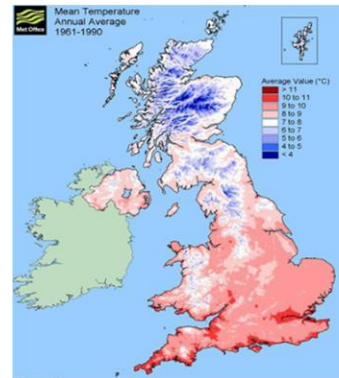
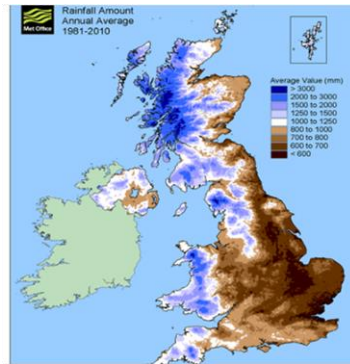


Knowledge Check 4
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Altitude	A vertical measure of height from sea level.
Economic	Factors wealth, trade, jobs.
Environmental	Factors impacting the natural surroundings and wildlife.
Extreme weather	Is severe, against the norm and unexpected. This weather is infrequent and often breaks records!
Social	Factors impacting people.
Throughflow	Water flows downhill within the soil

Does the UK's climate vary?

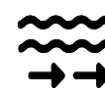
- Areas to the north of the UK are generally colder than the south.
- Areas to the south east and south west are the hottest.



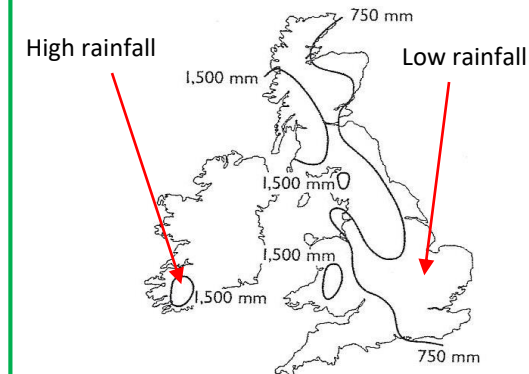
- North west Scotland is the wettest area.
- Eastern areas of the UK are drier than western areas.

Why are weather patterns different across the UK?

- Temperature decreases when air pressure falls. Air pressure drops with height.
- Areas of low latitude closer to the equator are warmer due to getting concentrated radiation.
- Winds originating from the north bring cold weather while southern winds bring warmth. Winds from across oceans are wet but continental winds are dry!
- Ocean currents in the North Atlantic such as the North Atlantic drift keep western areas much warmer in the winter. Ocean currents move warm water from the equator to the poles where it sinks and returns.
- Coastal areas are much wetter than inland areas due to increased moisture in the air from evaporation.



What are isoline maps?

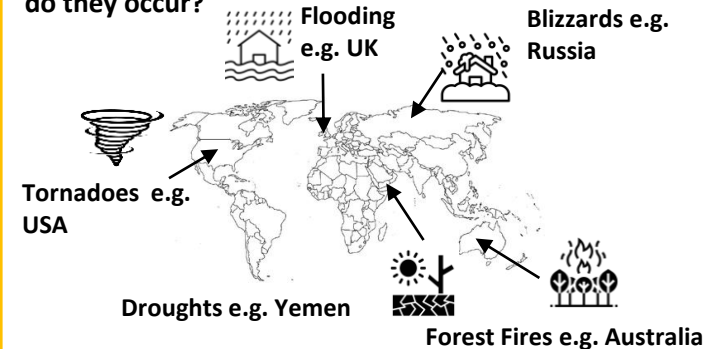


- Isoline maps show lines that join up areas or values that are equal. Here areas of equal rainfall are joined using a line.

What is extreme weather?

- Extreme weather is becoming more frequent.
- Examples include heat waves, torrential rain, blizzards.

What types of extreme weather are there and where do they occur?



How can extreme weather impact people?

	Impacts
Social	Injuries, death, destroyed houses
Economic	Businesses destroyed, cost of repair, loss of trade
Environmental	Forests destroyed by fire, habitat loss, flooding

Why does heavy rain cause flooding?

1. Large amount of rainfall saturate the soil.
2. The soil can no longer absorb rain water
3. Infiltration can no longer occur
4. Water moves quickly to river channels as surface runoff rather than throughflow.
5. The river becomes overwhelmed and bursts its banks.