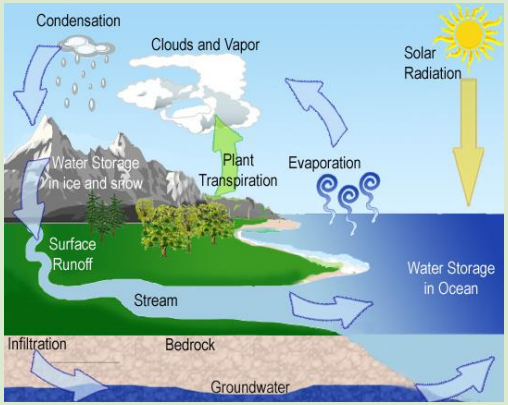
The difference between weather & Climate

Weather	describes the day-to-day conditions of the atmosphere. Weather can change quickly - one day it can be dry and sunny and the next day it may rain.
Climate	describes average weather conditions over longer periods and over large areas.

Water Cycle



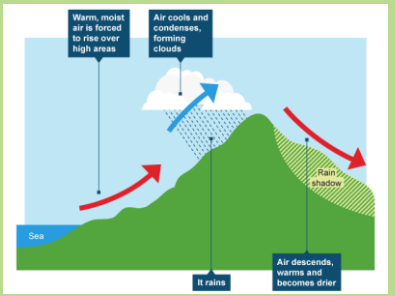
Evaporation	When the sun heats up water from the sea and it goes into the air
Condensation	When water vapour cools and turns into droplets.
Precipitation	Rain, snow, sleet, or hail that falls to the ground
Transpiration	The process by which moisture is carried through plants from roots and is released to the atmosphere.
Surface Runoff	When water runs off the surface of the ground
Infiltration	The process by which water on the ground surface enters the soil.

Weather Symbols

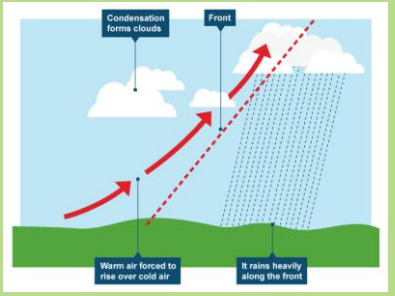
Weather symbols are used on weather maps as shorthand for the conditions in the atmosphere.

Light rain shower (day)	Drizzle	Light rain
Heavy rain shower (night)	Heavy rain shower (day)	Heavy rain

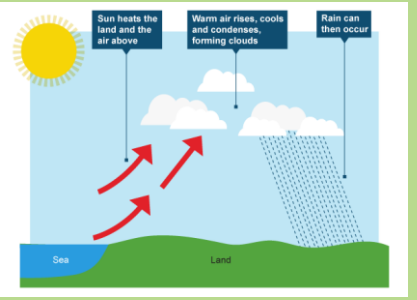
Types of Rainfall



Relief Rainfall
Prevailing winds bring warm, moist air to western Britain. 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.



Frontal Rainfall
The colder air mass is heavier than the warmer air mass, therefore the lighter, warmer air rises over the top of the heavier, colder air.
As the warm air is forced to rise it cools.
Condensation occurs and clouds form.
Rain occurs along the front.



Convectional rainfall
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. 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.

Year 7

Weather & Climate

What factors affect climate?

1)Latitude or distance from the equator. 2) Altitude or distance above sea level. 3) Distance from the sea. 4) Ocean currents. 5) Prevailing wind.

Measuring the Weather

Temperature	Temperature is a degree of hotness or coldness the can be measured using a thermometer.
Wind Direction & Wind Speed	Wind direction is reported by the direction from which it originates. Wind speed is measured in km/h. Measured using an Anemometer
Rain Gauge	A device for collecting and measuring the amount of rain which falls
Barometer	An instrument measuring atmospheric pressure, used especially in forecasting the weather
Oktas Scale	An okta is a unit of measurement used to describe the amount of cloud cover at any given location such as a weather station. Sky conditions are estimated in terms of how many eighths of the sky are covered in cloud.

Climate Graph

Climate graphs show average rainfall and temperatures typically experienced in a particular location. The temperature is shown on a line graph, and rainfall on a bar graph.