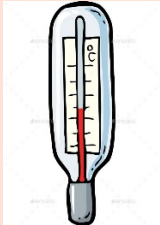


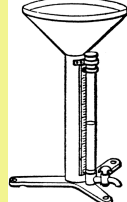


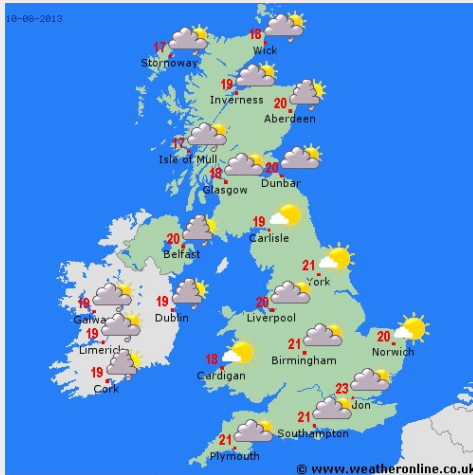
WEATHER AND CLIMATE

WEATHER

WEATHER			
It's the condition of our atmosphere			
ELEMENTS			
<p>Temperature</p> <p>It's the amount of heat in the air</p>	<p>Wind</p> <p>It's the movement of the air.</p>	<p>Humidity</p> <p>It's the amount of water vapour in the air</p>	<p>Precipitation</p> <p>It's water in liquid or solid form that falls from the air to the ground</p>
<p>It can be...</p> <ul style="list-style-type: none"> • hot • warm • cool • cold 	<p>It has two components:</p> <ul style="list-style-type: none"> • wind speed • wind direction 	<p>Air with a lot of water vapour is humid.</p> <p>Air with little water vapour is dry.</p>	<p>Precipitation can fall on the ground on four forms:</p> <ul style="list-style-type: none"> • rain • snow • sleet • hail
HOW WE MEASURE THEM			
<p>A thermometer measures temperature in degrees Celsius (°C).</p> 	<p>A weather vane shows wind direction using the cardinal points.</p> <p>An anemometer measures wind speed in kilometres per hour. (km/h)</p> 	<p>A higrometer measures relative humidity as a percentage. At 85% air feels very humid. At 20% air feels dry.</p> 	<p>A rain gauge measures precipitation in millimetres (mm).</p> 

WEATHER FORECAST

Meteorologists can use scientific data from the atmosphere to **predict the weather**. This is called **weather forecast**. The forecast can be shown on a **weather map** or in a **table** and you can see it on **TV, phone apps or websites**.



Long Term Forecast Updated: Wednesday, October 20, 2010, 10:00 MDT

	Thursday Oct. 21	Friday Oct. 22	Saturday Oct. 23	Sunday Oct. 24	Monday Oct. 25	Tuesday Oct. 26
Conditions 6am - 6pm						
	Sunny	Variable cloudiness	Cloudy with sunny breaks	Mixed precip.	Variable cloudiness	Light snow
P.O.P.	0%	10%	20%	80%	20%	90%
High	15°C	9°C	9°C	6°C	6°C	4°C
Low	-1°C	0°C	2°C	1°C	1°C	-4°C
Wind	SW 10 km/h	E 5 km/h	SW 5 km/h	S 5 km/h	SW 5 km/h	SW 10 km/h
24-Hr Rain	-	close to 1 mm	close to 1 mm	1-3 mm	-	-
24-Hr Snow	-	-	-	less than 1 cm	2-4 cm	1-3 cm

CLIMATE

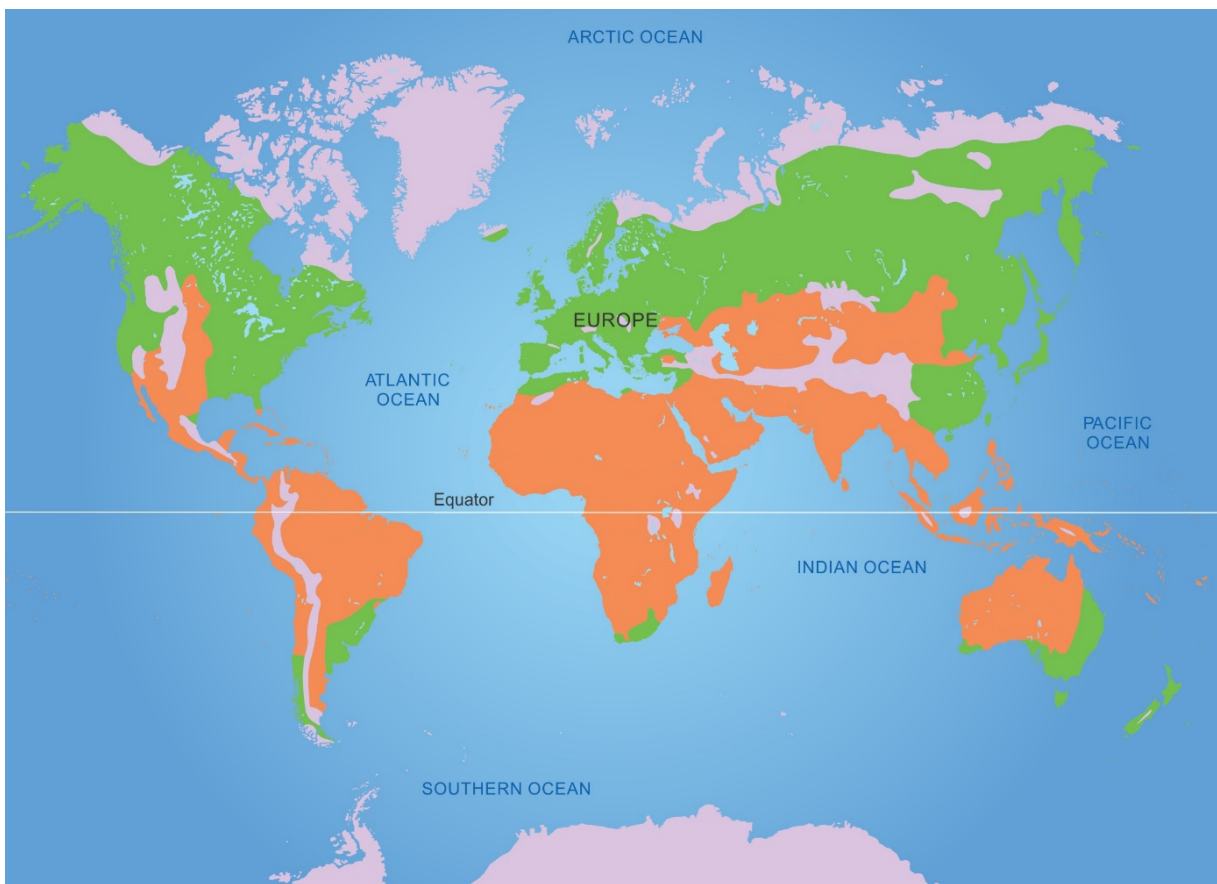
Climate is the typical weather in a place over a period of time. It is a **pattern** of temperature, humidity, wind and precipitation. **Weather** can change very quickly but **climate** changes very slow over many years.

Climate depends on **latitude** and **altitude**.

Latitude is the distance of a place from the Equator and **altitude** is how high a place is in relation to sea level.

CLIMATE ZONES

CLIMATE ZONES (temperature)		
HOT CLIMATE	TEMPERATE CLIMATE	COLD CLIMATE
It has high temperatures all year round.	It has four seasons . <u>Summers</u> are warm and <u>winters</u> are cool .	It has low temperatures all year round. High mountains have cold climates even if they are near the Equator. This is because of altitude .



CLIMATE CHANGE

Climate changes very slowly over time.

Nowadays temperatures are increasing. It's happening because human activity is changing the composition of the atmosphere.

This is called **global warming.**

Global warming is caused by:

- **burning fossil fuels:** this releases gases which pollute the atmosphere
- **deforestation:** This increases the amount of carbon dioxide in the atmosphere

As a **result of increasing temperatures, ice caps are melting** and the **sea levels are rising.** This has a big impact in wildlife.

Watch these videos on global warming:

- **Global warming for kids**
<https://www.youtube.com/watch?v=Vh8XVkzsn1Y>
- **Global warming**
<https://www.youtube.com/watch?v=PqxMzKLYrZ4&t=14s>

SPAIN'S CLIMATE ZONES

CLIMATE ZONE	TEMPERATURES	PRECIPITATIONS
Oceanic climate	Mild temperatures all year.	A lot of precipitation.
Mountain climate	Mild summers and cold winters.	A lot of precipitation including snow.
Continental Mediterranean climate	Hot summers and very cold winters.	Not much precipitation.
Mediterranean climate	Hot summers and mild winters.	Not much precipitation.
Subtropical climates	High temperatures all year round	Not much precipitation



CLIMOGRAPHS

Meteorologists **record weather data** to describe the climate of a place. This information can be shown on a **climograph**.

A **climograph** compares **temperature** and **precipitation**.

They are a combination of a line graph and a bar chart.

The **red line** shows **average temperatures** and the **blue bars** show **average precipitation**.

