METEOROLOGICAL MAGIC

WHAT IS WEATHER?

Weather describes the day-to-day conditions of the atmosphere.
It can change quickly - one day it can be dry and sunny and the next day it may rain.

Why do we need to know about the weather?

It affects:

How do we find out about the weather?

- Meteorologists measure weather conditions
- They use information collected at weather stations to report and make forecasts about future weather
- 50,000 weather stations worldwide- on land, ships and buoys at sea

What do they measure?

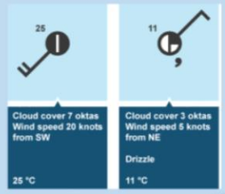
Temperature | Sunshine | Precipitation | Wind speed | Wind direction | Air pressure | Cloud cover and visibility

Weather conditions are plotted onto a synoptic chart

Remember:
Atmospheric conditions include temperature, precipitation, wind speed and direction, air pressure and cloud coverage/visibility.

Definition:

A synoptic chart is any map that summarises atmospheric conditions over a wide area at a given time. Charts are updated at least every six hours.

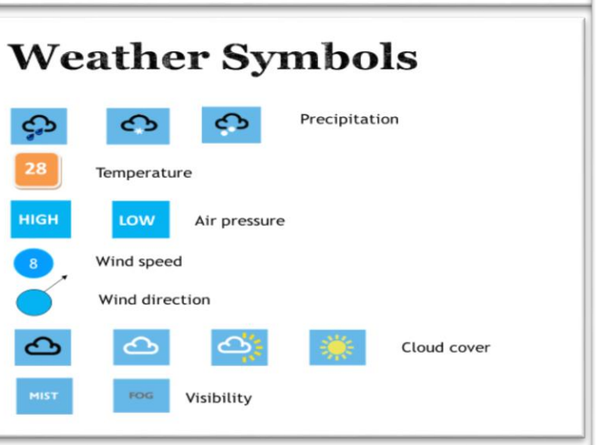


Standard symbols used on weather charts

Symbol	Precipitation	Symbol	Cloud cover	Symbol	Wind speed
•	Drizzle	○	Clear sky	◎	Calm
▽	Shower	◔	One okta	—	1-2 knots
●	Rain	◔	Two oktas	—	5 knots
✱	Snow	◑	Three oktas	—	10 knots
△	Hail	◑	Four oktas	—	15 knots
⚡	Thunderstorm	◕	Five oktas	—	20 knots
⁂	Heavy rain	◕	Six oktas	—	50 knots or more
⁝	Sleet	◐	Seven oktas		
⁘	Snow shower	●	Eight oktas		
=	Mist	⊗	Sky obscured		
≡	Fog				

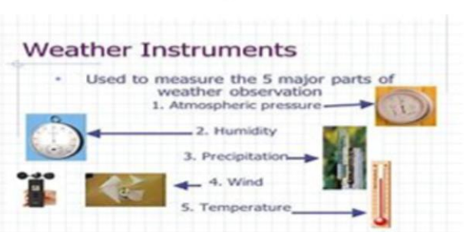
How can we measure the different elements of our weather?

Weather Symbols



BUILDING A WEATHER STATION

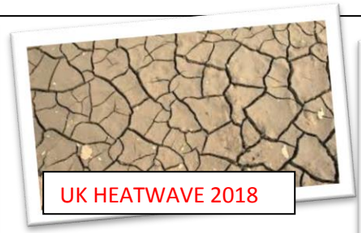
Meteorology is the study of all changes in the atmosphere, i.e. the layers of gases (air) that surround the earth. In order to do this we will need to study current weather conditions and the general climate in your area, and identify which factors most affect your daily temperature.
To do this, you must first make a weather station. Begin by designing and building some of the same instruments that meteorologists use.



EXTREME WEATHER

Extreme weather is when a **weather** event is significantly different from the average or usual **weather** pattern. This may take place over one day or a period of time. A blizzard or heat wave are two examples of **extreme weather** in the UK.

BEAST FROM THE EAST



UK HEATWAVE 2018

STORM CIARA

WEATHER

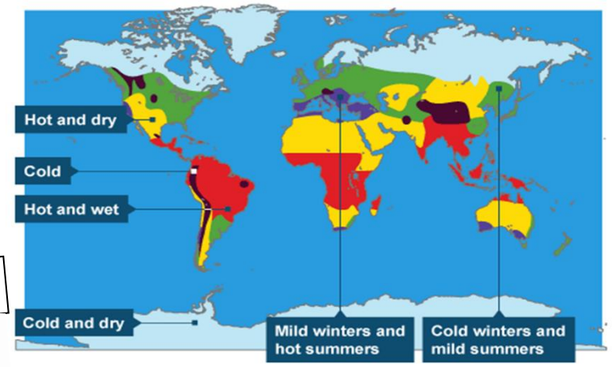
describes the day-to-day conditions of the atmosphere. It can change quickly - one day it can be dry and sunny and the next day it may rain.

CLIMATE

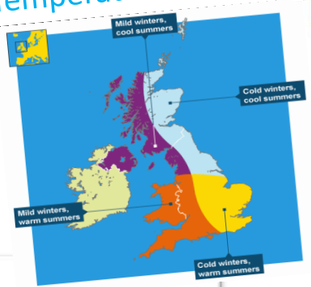
describes average weather conditions over longer periods and over large areas.

CLIMATE ZONES

The world is split into different climate zones. Each zone experiences different types of weather....



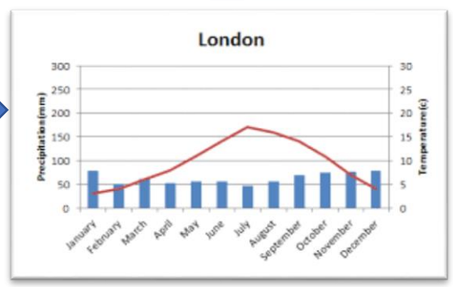
Temperate Climate



CLIMATE GRAPHS

PRECIPITATION IS SHOWN AS A BAR GRAPH

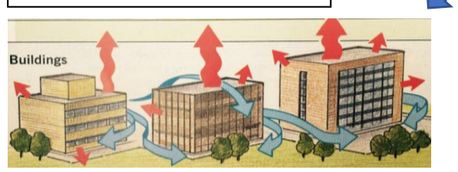
TEMPERATURE IS SHOWN AS A LINE GRAPH



MICROCLIMATES are small areas with a distinctive climate which is different to that of the surrounding area.

MICROCLIMATES can occur as a result of a number of factors. These are,

ALTITUDE – INCREASING HEIGHT



ASPECT- the direction a place is facing.

SURFACE COLOUR – dark surfaces warm up quicker than lighter ones.