

# Year 5 Merlins Science Summer 2

## Meteorology



Key Vocabulary	Definition
air mass	A large body of air in the atmosphere.
anemometer	A tool used to measure wind speed.
atmosphere	The layers of air wrapped around the Earth.
climate	The weather conditions in a region over a length of time.
exosphere	Outer layer of our atmosphere.
forecast	The prediction of the upcoming weather using scientific study.
front	Where two air masses meet.
lightning	An electrical charge moving through the air.
maritime climate	A climate influenced by the sea.
mesosphere	The third and coldest layer of our atmosphere.
meteorologist	A scientist who studies weather patterns and climate.
meteorology	The study of the weather.
stratosphere	The second layer of our atmosphere.
ozone layer	A layer in the atmosphere that absorbs ultraviolet radiation from the sun.
thermosphere	Fourth and hottest layer of Earth's atmosphere.
thunder	A loud rumbling or crashing noise heard after a lightning flash due to the expansion of rapidly heated air.
troposphere	The lowest part of the Earth's atmosphere.
weather	The current and temporary state of air outside.

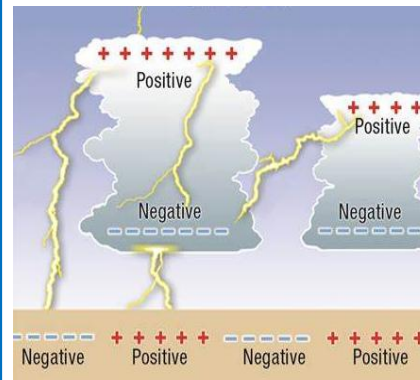
### How do meteorologists predict or forecast the weather?

Meteorologists also use satellites to observe cloud patterns around the world, and radar is used to measure precipitation, temperature, humidity, air pressure, wind speed, wind direction. This data is then plugged into super computers, which forecast models of the atmosphere.

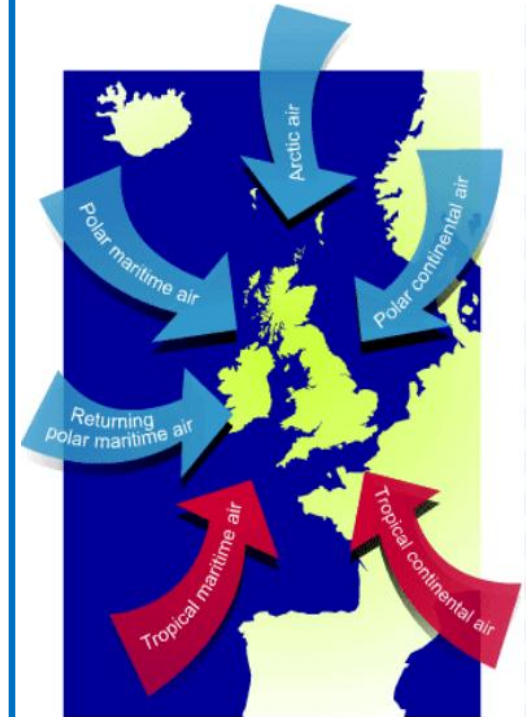


### What Causes Thunder and Lightning?

Lightning is caused by the build-up of static electricity in clouds, resulting in the discharge of electrical energy to the ground. Thunder is caused by the rapid expansion of air heated by lightning. The rapid expansion of heated air creates shockwaves, resulting in the sound we hear as thunder.



### The 6 air masses affecting the weather in the UK



### The 6 layers of Earth's atmosphere



The Earth's atmosphere consists of the troposphere, stratosphere, mesosphere, thermosphere, exosphere, and ionosphere. Each layer varies in temperature, composition, and function, from weather to protecting against solar radiation.