

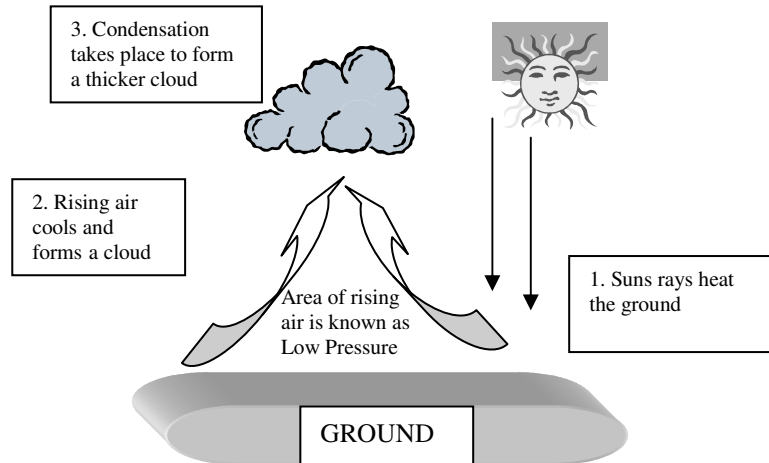
JUNIOR CERTIFICATE GEOGRAPHY

WEATHER

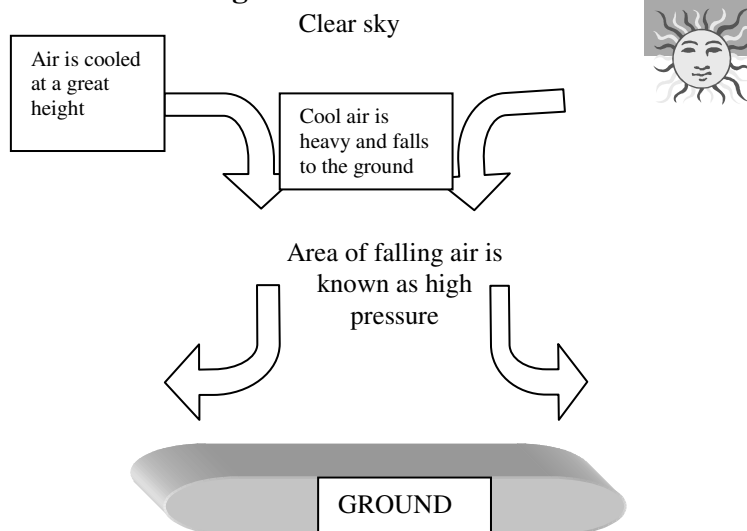
Weather is the condition of the atmosphere over a short period of time

Climate is the average condition of the atmosphere over along period of time

ASCENDING AIR –Low Pressure



DESCENDING AIR – High Pressure



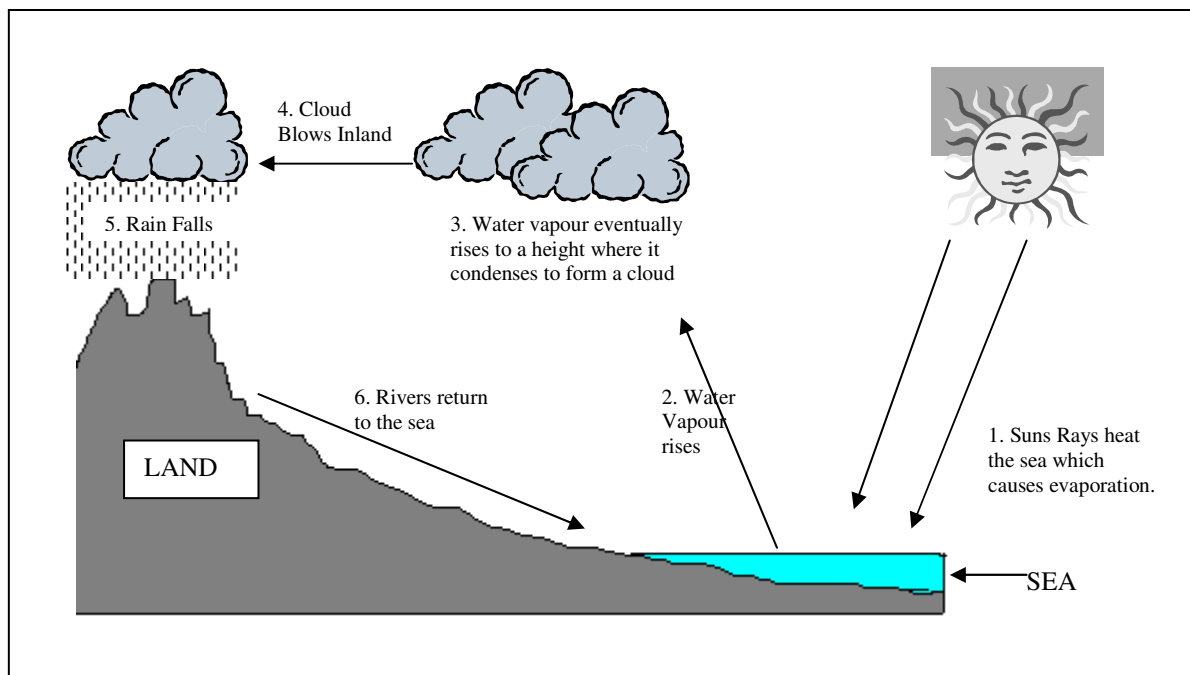
JUNIOR CERTIFICATE GEOGRAPHY

WEATHER (Continued)

A Depression or Low pressure system

Cold polar air meets warm tropical air. The meeting point is known as a front
The cold air forces its way under the warm air
The cold air begins to swirl round the warm air in an anticlockwise direction
This circular spiralling is known as a depression
Depressions usually bring wet and windy weather to Ireland

The Water Cycle



Heat from the sun evaporates sea water. This forms water vapour
Water vapour rises where it will eventually cool to form a cloud
The Cloud blows inland where it may rise more
The cloud eventually can't hold any more water vapour and so begins to rain
The rain goes into the rivers and groundwater and eventually flows back to the sea again
where the whole process repeats itself.

Precipitation is the name given to any type of moisture that falls from the sky eg rain, hail, sleet, snow, fog, mist.

RAINFALL

There are 3 main type of rainfall

Relief Rain

Convectional Rain

Cyclonic Rain

JUNIOR CERTIFICATE GEOGRAPHY

WEATHER (Continued)

RELIEF RAIN – normally on the west of Ireland

Winds coming in from the sea are full of moisture

When they hit the coastline (eg west of Ireland) they are forced to rise over mountains

The higher they rise, the more they are cooled so they form clouds

The water vapour then falls as rain on the side of the mountain it hits first. This is known as the windward side of the mountain.

The other side or dry side of the mountain is known as the Lee or rain shadow side.

CONVECTIONAL RAIN – normally near the equator or on a hot summers day in Ireland

On a very hot day the sun heats the ground

The air above the ground heats up and rises up quickly as it gets lighter

As the air rises it also cools quickly and condenses to form clouds and then begins to rain

This gives rise to heavy short bursts of rain and then dries up soon after

CYCLONIC RAIN – rain from a depression or low pressures system – typical winter Irish rain

As we see from the depression, this is where warm and cold air meet and mix.

The warm air is forced to rise causing the moisture in it to cool and condense

This then falls as rain along the boundary (front) between the cold and warm air. It is also known as frontal rain.

FACTORS AFFECTING IRISH WEATHER

Ireland is an Island close to the sea so more moisture

Our prevailing (most common) wind is from the Southwest so brings moisture from the Atlantic Ocean

The North Atlantic drift is a warm ocean current, which brings warm air with it – stops the coast from freezing

Mountains on the coast of Kerry Donegal and Mayo stops a lot of rain from getting inland

JUNIOR CERTIFICATE GEOGRAPHY

WEATHER (Continued)

RECORDING AND MEASURING THE WEATHER

Weather Stations use many instruments to record the weather and then make forecasts based on their recordings

Air Temperature is measured using a *thermometer*

Sunshine is measured by using a *Campbell-Stokes* recorder

Air Pressure is measured by a *mercury barometer*
aneroid barometer
barograph

Wind Direction is measured by a *wind vane*

Wind Speed is recorded by an *anemometer* and measured on the *Beaufort Scale*

Humidity (the amount of moisture in the air) is measured by a *hygrometer*

Rainfall is measured by collecting it in a jar called a *rain gauge*

A special box called a *Stevenson Screen* is used to many of the weather instruments

NOTES

To Find

Do this

Mean Daily Temperature	add the maximum and minimum temperatures and divide by 2
Mean Monthly Temperature	add the mean daily temperatures for the month and divide by the number of days in that month
Mean Annual Temperature	add the mean monthly temperatures and divide by 12
Daily temperature Range	maximum temperature of the day minus the minimum temperature of the day
Annual Temperature Range	temperature of the hottest month minus the temperature of the coldest month

With a temperature and rainfall chart, the *temperature is always the line*, and the *rainfall is always the bar*.

