

7.3

Year 7 Module 3

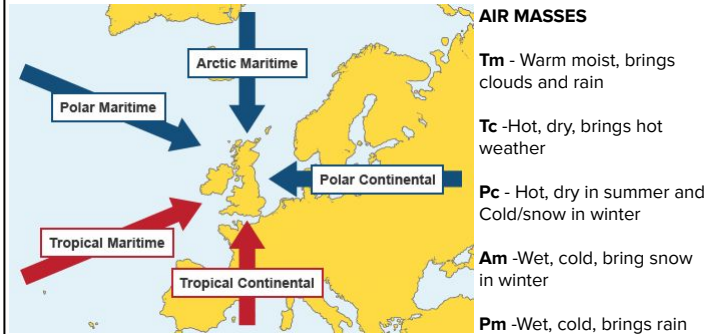
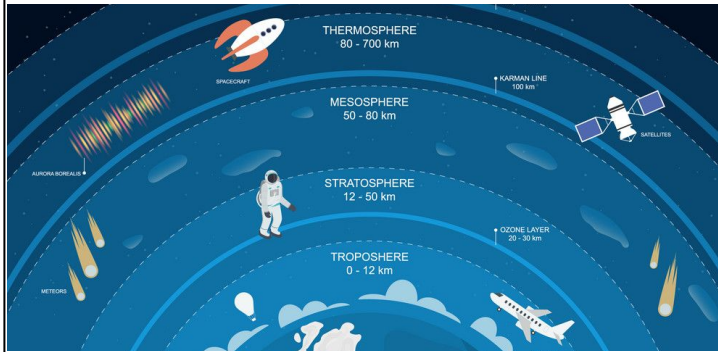
Search YouTube for: **GRS8.3**
 Watch an explainer video by searching for this code on YouTube

Our varied weather

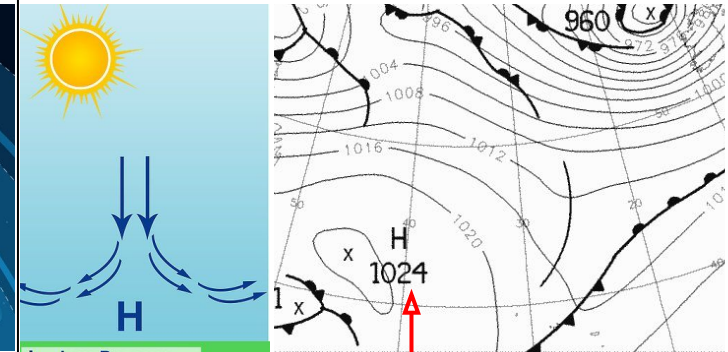


Geography Knowledge Organiser

7.3.1 - Atmosphere



7.3.2 - High pressure

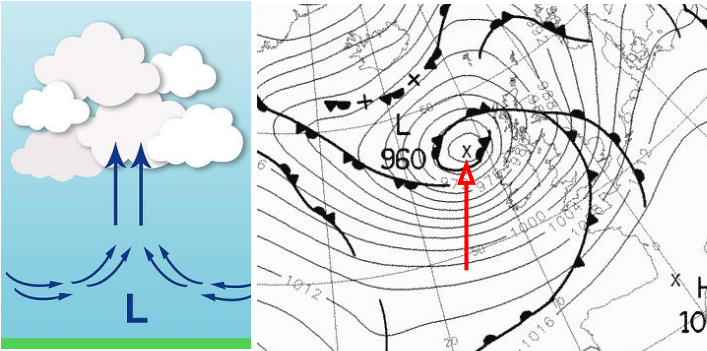


High pressure brings anticyclone conditions
 Anticyclones are areas of high pressure. They form when air in the upper atmosphere descends. The descending air moves in a clockwise direction. Anticyclones bring long periods of stable/calm weather.

On the isoline map (synoptic chart)
 Lines are spaced far apart. Numbers/pressure is usually over 1000mb

Weather conditions
In the summer: HOT DAYS, WARM NIGHTS, HEATWAVES, DROUGHTS, CLEAR SKIES, LITTLE WIND, DRY
In the winter: COLD DAYS, FREEZING NIGHTS, FOG/MIST, FROST, CLEAR SKIES, LITTLE WIND, DRY

7.3.3 - Low pressure

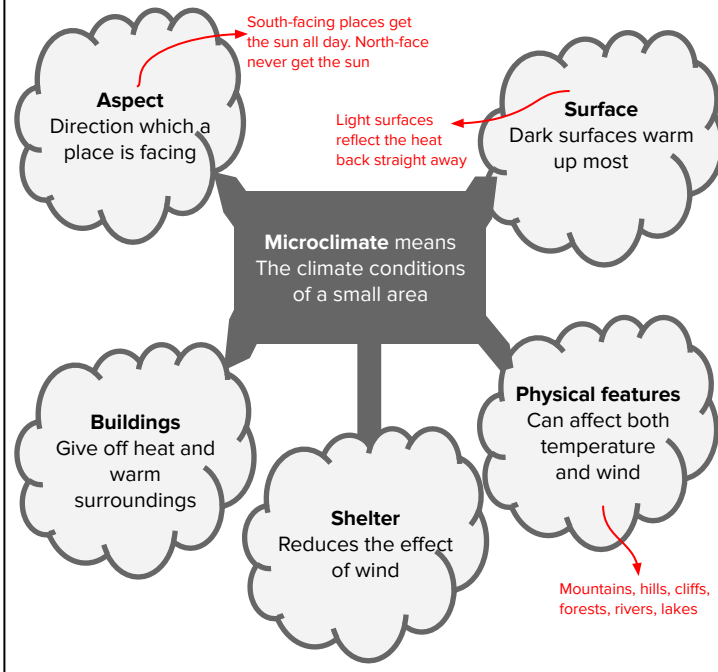


Low pressure brings depression conditions
 Depressions are areas of low pressure. They form when air in the lower atmosphere rises. The rising air moves in an anticlockwise direction. Depressions bring irregular periods of unsettled/stormy weather.

On the isoline map (synoptic chart)
 Lines are spaced very close together. Numbers/pressure is usually under 1000mb

Weather conditions
Wind - strong winds, the closer the isobars are, the stronger the wind is;
Wet - from light drizzle to intense storms;
Temperature - can fluctuate from temperate (warm) to cold;
Clouds - covered skies, usually with large dark cloud banks;
Storms - heavy wind and rain can bring storm conditions.

7.3.4 - Microclimate



7.3.5 - Climate change



Greenhouse Effect (GHE)
 The greenhouse effect is a process that occurs when gases in Earth's atmosphere trap the Sun's heat. This process makes Earth much warmer than it would be without an atmosphere. This is one of the things that makes Earth a comfortable place to live.

But now there are too many greenhouse gasses which is trapping too much heat.

Effects of climate change on the UK
 [S] increase in tropical diseases like malaria
 [S] increase in heat-related illness
 [S] increased immigration - environmental refugees
 [Ec] allow farmers to grow olives and lemons
 [Ec] hotter summers increases coastal tourism
 [Ec] ski resorts in Scotland will be lost
 [En] species migrate away as temperature increases
 [En] increased risk of rivers/coasts flooding
 [En] coast erosion = loss of sand dune habitat

Causes [H]=Human [N]=Natural
Factors which increase the greenhouse effect
 [H] agricultural(farming)
 [H] coal mining
 [H] burning fossil fuels
 [H] making cement
 [H/N] forest fires
 [N] decomposing plant material
 [N] volcanoes erupting
 [N] evaporation from lakes, rivers & oceans

Effects of climate change on the world
 [S] increase in tropical diseases like malaria
 [S] severe pressure on food availability
 [S] tension/conflict over water and food
 [Ec] crop yields are expected to decrease
 [Ec] need for additional energy for cooling needs
 [Ec] tourism problems, skiing, safaris etc at risk
 [En] Sea levels rise by between 18-59cm
 [En] The ocean circulation may be disrupted
 [En] Ice is melting worldwide, loss of polar habitats

Home study questions



7.3.1 - Atmosphere

DEVELOPING

Outline the layers of the atmosphere

SECURING

Describe the characteristics of the different layers of the atmosphere

MASTERING

Explain why humans are only able to live in the troposphere

CHALLENGE

How can ozone depletion influence climate change?

7.3.2 - High pressure

DEVELOPING

Describe the weather that high pressure creates

SECURING

Explain how high pressure conditions are created

MASTERING

How can high pressure be identified on a weather map?

CHALLENGE

Why does high pressure produce light winds?

7.3.3 - Low pressure

DEVELOPING

Describe the weather that low pressure creates

SECURING

Explain how low pressure conditions are created

MASTERING

How can low pressure be identified on a weather map?

CHALLENGE

Why does low pressure produce strong winds?

7.3.4 - Microclimate

DEVELOPING

How do buildings affect the temperature of a microclimate?

SECURING

Explain two factors that influence the temperature of a microclimate

MASTERING

Why are urban locations usually warmer than rural locations?

CHALLENGE

Explain why the coast may be warmer in the winter and colder in the summer

7.3.5 - Climate change

DEVELOPING

Identify three social effects of climate change

SECURING

Explain the greenhouse effect

MASTERING

How has pollution intensified the greenhouse effect?

CHALLENGE

What is the most significant effect of climate change?