



**Y8 Golden Thread:**  
How does Geography help us explain processes?

**Which processes have you studied?**

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**How have you demonstrated the skill to explain?**

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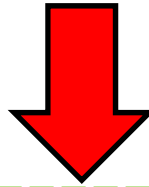
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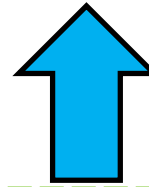
**KS3 Geography – Y8: Weather Knowledge Organiser**

Air pressure - the force exerted on the surface of the earth from the air above. Air can rise from the surface of the earth higher into the atmosphere, or it can sink towards earth. Air also moves across the surface of the earth, which we feel as wind.

**High Pressure:** air is sinking, as it sinks it heats up. There are no clouds in the sky as condensation is limited.

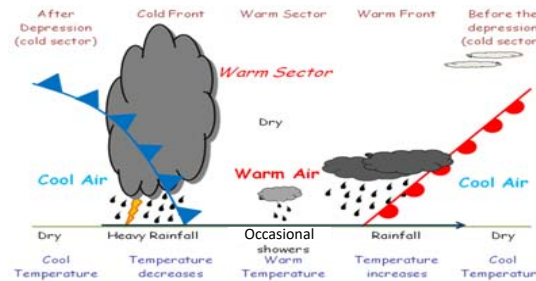


**Low Pressure:** air is rising, as it rises it cools down. There are clouds in the sky as condensation occurs as the air cools and water vapour turns to liquid.



A depression is when we have low pressure because two air fronts meet. The warm air rises above the denser cold air, this causes the low pressure. Clouds form and it rains.

A depression involves the passage of two air fronts, which both bring rain and windy conditions. When the warm front passes it brings warm, wet conditions. When the cold front passes it brings cold stormy conditions.



Tropical storms **DO NOT** form on the equator. They form **between 5 and 20° north or south of the Equator.**

Tropical storms need a lot of **heat** to form and a **sea surface temperature** of at least **26°C**, which is why they usually occur over tropical seas.

**Formation of tropical storms**

The warm air from thunderstorms and the deep, warm ocean surface (greater than 27 degrees) mix together and start to rise to create low pressure. Trade winds at the equator cause the storm to spin due to the earth's rotation. Air continues to rise and the pressure starts to decrease at higher altitudes. Air rises faster and draws in more warm air from the sea surface whilst sucking cooler air downwards. As the storm moves over the ocean, it picks up more warm moist air. The speed of its winds increase as more air is sucked in. It can take hours or days to fully form a hurricane. The eye has calm winds which are surrounded by a spinning vortex of high winds and heavy rain.



Here are some key words from this topic. **Can you add anymore?**

weather (n)	describes the day-to-day conditions of the atmosphere.
front (n)	a boundary between two air masses of different temperatures.
hazard (n)	something that threatens people or has the potential to cause damage, destruction and death.
depression (n)	an area of low pressure.
anticyclone (n)	an area of high pressure.
extreme weather (n/adj)	when a weather event is significantly different from the average or usual weather pattern.

**CEIAG Link:** For this topic we can make links to a variety of professions:

- Meteorologist
- Weather Forecaster
- Hydro Meteorologist
- Atmospheric Scientists
- Environmental Engineers
- Oceanographers
- Atmospheric Scientist



**If you are interested in the above careers, don't forget you can do some research and speak to Mrs Ackroyd.**