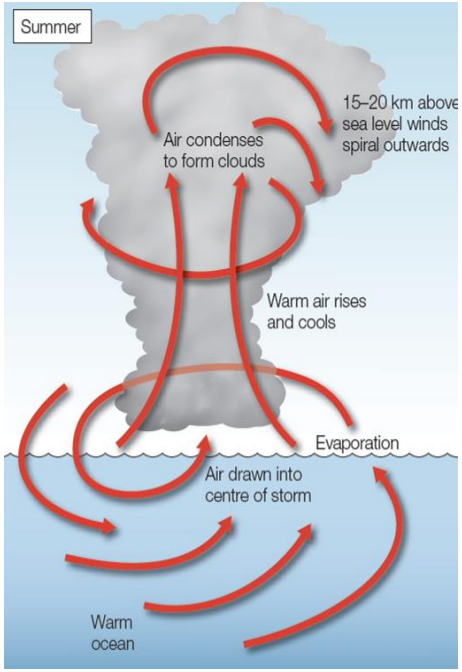
BROADSTONE MIDDLE SCHOOL

How do responses to weather systems affect the severity of their impact?

Knowledge Organiser Year 7 Geography – Spring 1

Formation of a Tropical Storm

1. Warm moist air from the ocean that is 26.5℃ rises, creating an area of low pressure.
2. Rising air condenses to produce cumulonimbus clouds.
3. As a tropical storm grows it is fed by more heat and moisture.
4. The spin of the Earth causes the rising air to spin.
5. Once over land the storm decays.



Natural Hazard

A natural hazard is a natural process which could cause death, injury or disruption to humans, property and possessions.

Meteorological Hazard

These are hazards caused by weather and climate

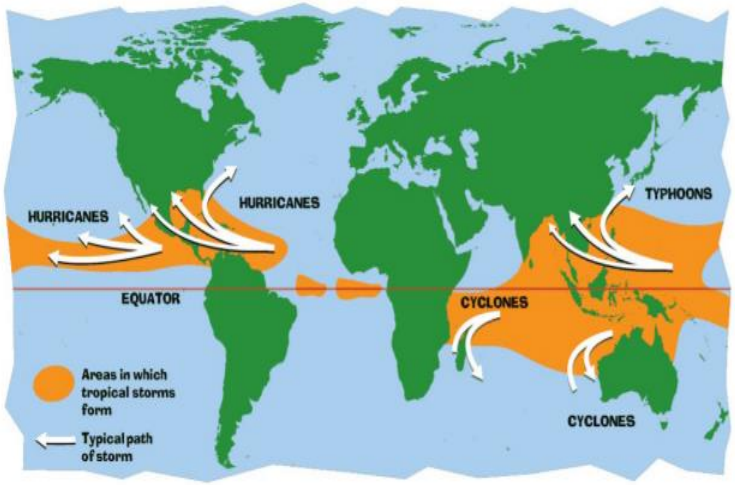
Coriolis Force

Due to the Earth's curved surface and rotation, the Coriolis force causes winds to bend and tropical storms to spin.

- ✓ Northern Hemisphere: winds curve to the right = spin anticlockwise.
- ✓ Southern Hemisphere: winds curve to the left = spin clockwise.

Distribution of Tropical Storms

They are known by many names, including hurricanes (North America) cyclones (India) and typhoons (Japan and East Asia). They all occur in a band that lies roughly 5-15° either side of the Equator.



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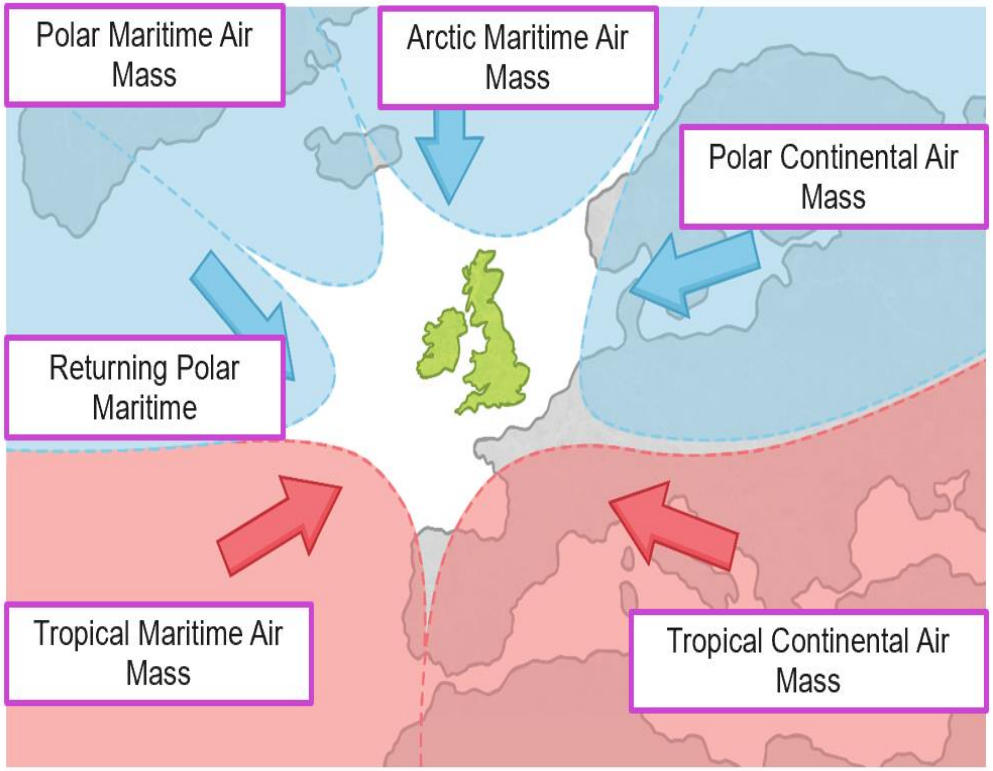
Air Masses

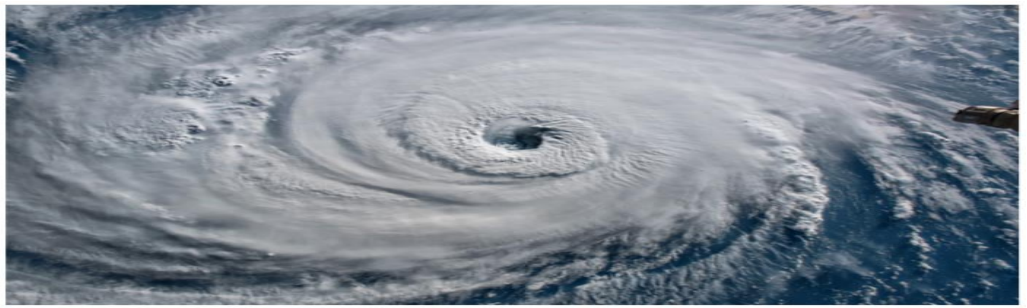


Polar and arctic air masses bring cold temperatures.

Tropical air masses bring warm temperatures.

Maritime air masses form over oceans, so bring moist air.

Continental air masses form over land, so bring dry air.

Management of Tropical Storms

Protection Preparing for a tropical storm may involve construction projects that will improve protection.	Flood defences e.g. Levees/Houses built on stilts Reinforced concrete
Planning Involves getting people and the emergency services ready to deal with the impacts.	Disaster kits for high risk areas/ Evacuation routes Education: teaching people about what to do in a tropical storm / FEMA / Land use planning
Prediction Constant monitoring can help to give advanced warning of a tropical storm	Warnings give people advice on the necessary action to take e.g. evacuation / National Hurricane Centre USA; Hurricane 'Pam' computer model, Satellites, Drop sondes, Ocean buoys, Doppler's, reconnaissance flights