TROPICAL CYCLONES

WHAT ARE TROPICAL CYCLONES?

Tropical cyclones are low pressure systems over tropical or sub-tropical waters, with storm activity and circulating winds at low levels. The storm can be five to six miles high, and up to 300 to 400 miles wide, though they can be even bigger. These storms can travel as fast as 40 m.p.h., but typically move at speeds of 10-15 m.p.h.

TROPICAL DEPRESSION

Wind Speed:
Less than 39 m.p.h

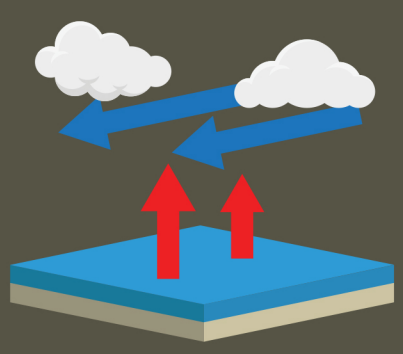
TROPICAL STORM

Wind Speed:
39-73 m.p.h

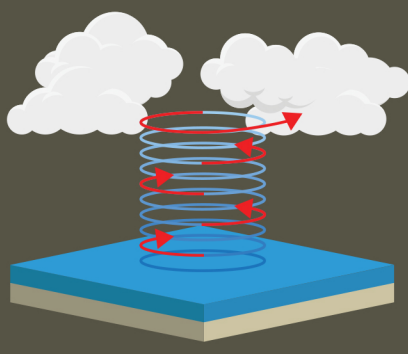
TROPICAL CYCLONE

Wind Speed:
74 m.p.h and above
Also Known As:
Hurricane/Typhoon

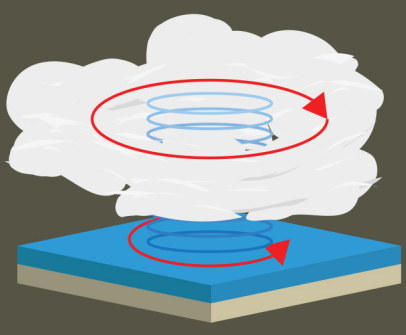
HOW DO THEY FORM?



The warm ocean causes water to evaporate, which forms clouds after coming into contact with the cool air above.



At the centre, a column of low pressure develops, forming a towering clound with winds around it.



The speed of the wind around the cenral column increases as the pressure weakens.

HAZARDS!

- Deaths
- Flooding
- Temporary Relocation
- Ruined Properties
- Damaged Exosystems
- Electrical Black Outs
- Spread of Diseases
- Damaged Agriculture

THE SAFFIR - SIMPSON SCALE

The severity of tropical cyclones is measured using the Saffir - Simpson scale, which assigns a rating based on the current windspeed.

CATEGORY 1

Winds:
74-95 m.p.h.
Strength:
Some damage and power cuts

CATEGORY 2

Winds:
96-110 m.p.h.
Strength:
Extensive damage

CATEGORY 3

Winds:
111-129 m.p.h.
Strength:
Well-built homes suffer major damage

CATEGORY 4

Winds:
130-156 m.p.h.
Strength:
Severe damage to wel-built homes, trees blown over

CATEGORY 5

Winds:
157+ m.p.h.
Strength:
Many buildings destroyed, major roads cut off

PREDICTION

Thanks to the advances in technology, including weather prediction computer models, our ability to forecast the developent of tropical cyclones has greatly improved.

Specialist cyclone forecasting centres around the world stuellite images and weather data to detect cyclones in their early stages. They are tracked once they have been detected, and using statistical and numerical models, forecast how the cyclone might develop.

Ships at sea also provide observations, as well as specially designed, reinforced aircraft. These aircraft are fitted with state-of-the-art instruments, and fly through and over tropicl cyclones.

All of these methods have greatly improved our knowledge of cyclones, and our ability to predict and forecast their arrival.