

# Hurricanes

Curriculum Planning and Development Division  
2020

# Outcomes

In this session you should be able to:

- Conceptualise the term hurricane
- Classify hurricanes according to the Saffir-Simpson Hurricane Wind Scale.
- Explain the system used to name hurricanes

# Hurricane

- **Hurricane** comes from the word **hurakan** which is an indigenous word that means evil spirits and weather gods.
- To European explorers it referred to the storm that battered their ships in the Caribbean.

# Hurricane

- Today, **hurricane** refers to a powerful spiralling tropical storm with winds of at least 119 kilometres an hour.
- It is capable of causing widespread damage both on land and sea (shipping).

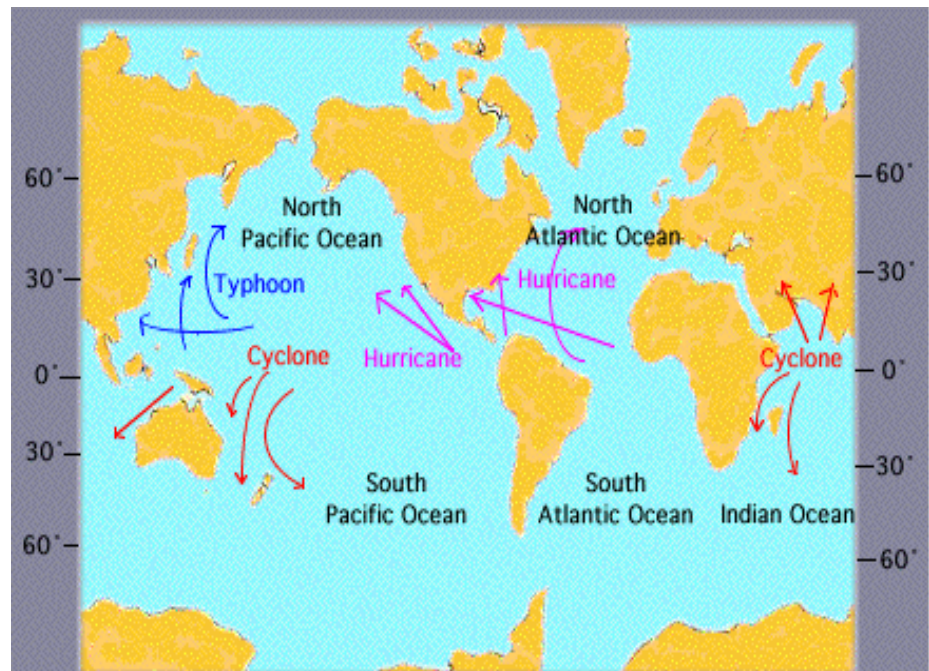
Do you know that these powerful storms are known by other names in other parts of the world?

# Tropical Storms

The map to the right shows that these powerful storms have different names around the world.

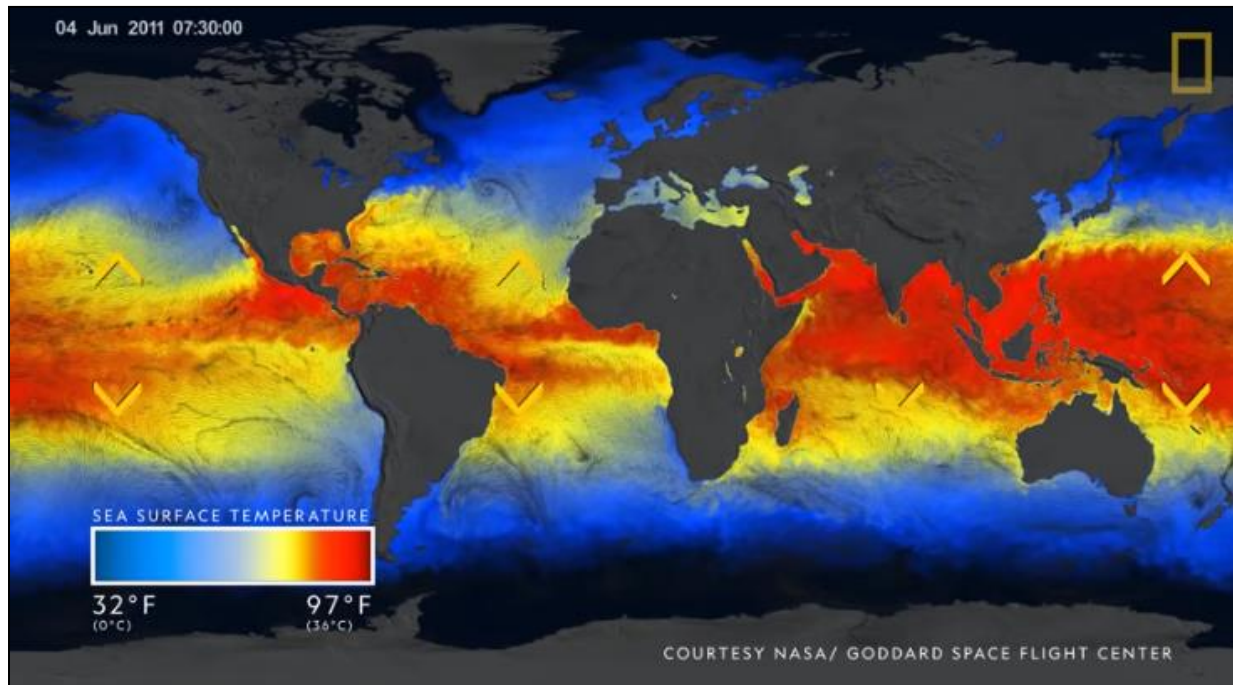
Name	Location (Ocean)
Hurricane	North Atlantic Central Pacific Eastern Pacific
Cyclones	South Pacific Indian
Typhoon	North West Pacific

World Map



# Purpose of Hurricanes

Hurricanes act as a temperature regulator as it moves heat energy from the equator to the poles.



# Formation of a Hurricane

View the following video which demonstrates how hurricanes are formed.

<https://www.youtube.com/watch?v=wPDolrGUrEc&t=6s>



# Activity 1

1. Go on the internet and find any two articles on hurricanes and read.
2. Give the name and the website address for each article. An example is given below.

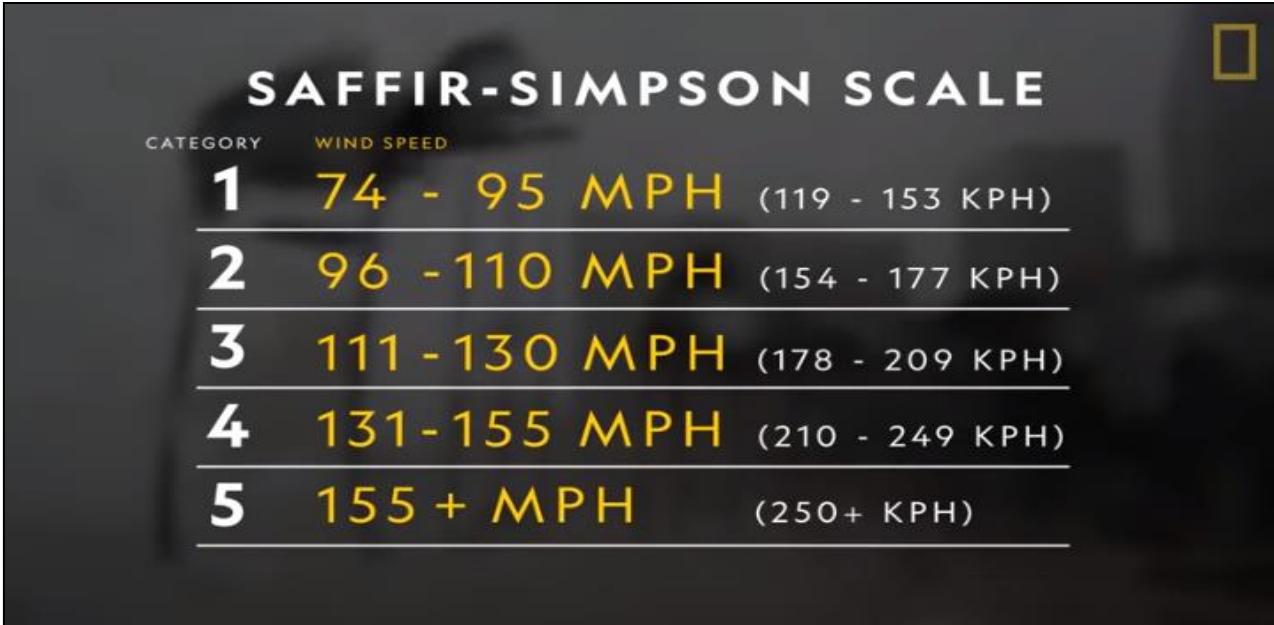
National Geographic: <https://www.nationalgeographic.org/>

3. Based on the video clip that you would have watched and your additional research, answer the following questions.
  - State the duration of the hurricane season?
  - Identify the latitudes in which hurricanes form and develop?
  - When is a tropical storm considered a hurricane?
  - What causes hurricane winds to weaken?



# Classification of Hurricanes

Hurricanes are classified according to **The Saffir-Simpson Hurricane Wind Scale**. It is a 1 to 5 rating based on a hurricane's sustained wind speed.



A graphic of the Saffir-Simpson Hurricane Wind Scale. It features a dark background with a faint hurricane image. The title 'SAFFIR-SIMPSON SCALE' is at the top in white. Below it, a table lists categories 1 through 5 with their corresponding wind speed ranges in MPH and KPH. The National Geographic logo is in the top right corner.

CATEGORY	WIND SPEED
1	74 - 95 MPH (119 - 153 KPH)
2	96 - 110 MPH (154 - 177 KPH)
3	111 - 130 MPH (178 - 209 KPH)
4	131 - 155 MPH (210 - 249 KPH)
5	155 + MPH (250+ KPH)

# The Saffir-Simpson Hurricane Wind Scale

This scale estimates potential property damage.

- ✓ A hurricane is given a Category 1 when its sustained wind speed is over 119 kilometres per hour.
- ✓ Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage.

## Activity 2

Go on to the internet and find examples of hurricanes which would have occurred in the Caribbean and matches each category of the Saffir-Simpson Hurricane Wind Scale.

Category	Hurricane	Sustained Wind Speed (Km/hr)
1		
2		
3		
4		
5		

# Naming of Hurricanes

- The World Meteorological Organization established strict procedures for the naming of hurricanes.
- This group maintains six alphabetic lists of names, with one list used each year.

Study the information provided on the next slide which shows past and future hurricane names in the Northern Atlantic and answer the questions that follow.

# Naming of Hurricanes 2019 -2022

2019	2020	2021	2022
Andrea	Arthur	Ana	Alex
Barry	Bertha	Bill	Bonnie
Chantal	Cristobal	Claudette	Colin
Dorian	Dolly	Danny	Danielle
Erin	Edouard	Elsa	Earl
Fernand	Fay	Fred	Fiona
Gabrielle	Gonzalo	Grace	Gaston
Humberto	Hanna	Henri	Hermine
Imelda	Isaias	Ida	Ian
Jerry	Josephine	Julian	Julia
Karen	Kyle	Kate	Karl
Lorenzo	Laura	Larry	Lisa
Melissa	Marco	Mindy	Martin
Nestor	Nana	Nicholas	Nicole
Olga	Omar	Odette	Owen
Pablo	Paulette	Peter	Paula
Rebekah	Rene	Rose	Richard
Sebastien	Sally	Sam	Shary
Tanya	Teddy	Teresa	Tobias
Van	Vicky	Victor	Virginie
Wendy	Wilfred	Wanda	Walter

## Activity 3

- What special sequence do you notice about the names of the hurricanes?
- What letters of the alphabet are not used to name hurricanes? Give reasons for your answer.

## Activity 3 continued

Do research to find the answers to the following questions.

- When are hurricane names retired?
- Imagine that the year 2022 experienced an unusually active hurricane season. Walter, the last name for 2022 has been used. What happens when we have exhausted all the names?

# Pre-Activity for Lesson 2

In preparation for our next lesson on the effects of hurricanes kindly research the following.

Besides Hurricane Dorian (2019)

1. Identify a hurricane that significantly affected the Caribbean.
2. State the category of the hurricane and its wind speeds.
3. Examine the effects of the hurricane to people, their property and the environment.



# Sources

- The United States -National Oceanic and Atmospheric Administration (NOAA)
- National Geographic Society

# Answers – Activity 1

- The hurricane season begins in on June, 01<sup>st</sup> and ends on November, 30<sup>th</sup>.
- Hurricanes develop over warm waters in the tropics between 5° and 20° latitude.
- A tropical storm is considered a hurricane when it attains a wind speed of 119 km/hr.
- Hurricanes weaken as they move north when they encounter land or cooler water.

## Answers – Activity 3

- In each year, the first tropical storm of the season is given a name that starts with A, the second storm is given a name that starts with a B, and so on. Additionally, women's and men's names are alternated.
- The letters Q, U, X, Y, and Z are not used because there are few common names starting with these letters.

## Answers – Activity 3

- Hurricane names are retired if they are deadly and destructive, for example, Hurricanes Gilbert, Sandy and Irene.
- After Walter, Greek letters are will be used to name tropical storms, for example, Alpha and Beta.

The End