

Unit 1 Assignments

Lesson Plan - Tropical Cyclones

Grade 11

Overview

In this lesson students will learn about tropical cyclones and tornadoes throughout the world. They will learn about the distribution of tropical cyclones, how tropical cyclones and tornadoes form and the conditions which make the strength of tropical cyclones and tornadoes increase and also the impact of tropical cyclones and tornadoes.

Time

4 x 40 minutes

Materials required

- Photos about the impact of tropical cyclones in different areas
- VCD of hurricane and tornadoes from discovery channel
- Synoptic chart of tropical cyclones in different areas
- Satellite images of tropical cyclones in 2009
- Worksheet of tropical cyclones

Objectives

Students will:

- Describe how a tropical cyclone develops and moves
- Understand how to analyze the tropical cyclones by using synoptic chart and satellite image
- Describe the impact of tropical cyclones to the environment

Class Procedure

Opening

Show a picture of the impact of Hurricane Katrina in US, 2005 and Typhoon Fengshen in Philippine, 2008.



Photograph A. Before .the storm.



Photograph B. After the storm



Typhoon Fengshen hits Phillippines, September 2008

- Ask students to express their opinions generated by the picture or what they heard/read regarding the news.
- Teacher asks questions about: How did this happen? How were the damages of the storm? If they were one of the people there, what would they do?
- Teacher chooses some students to express their opinions about that. (Students give answer based on their previous knowledge).

Content

Part 1

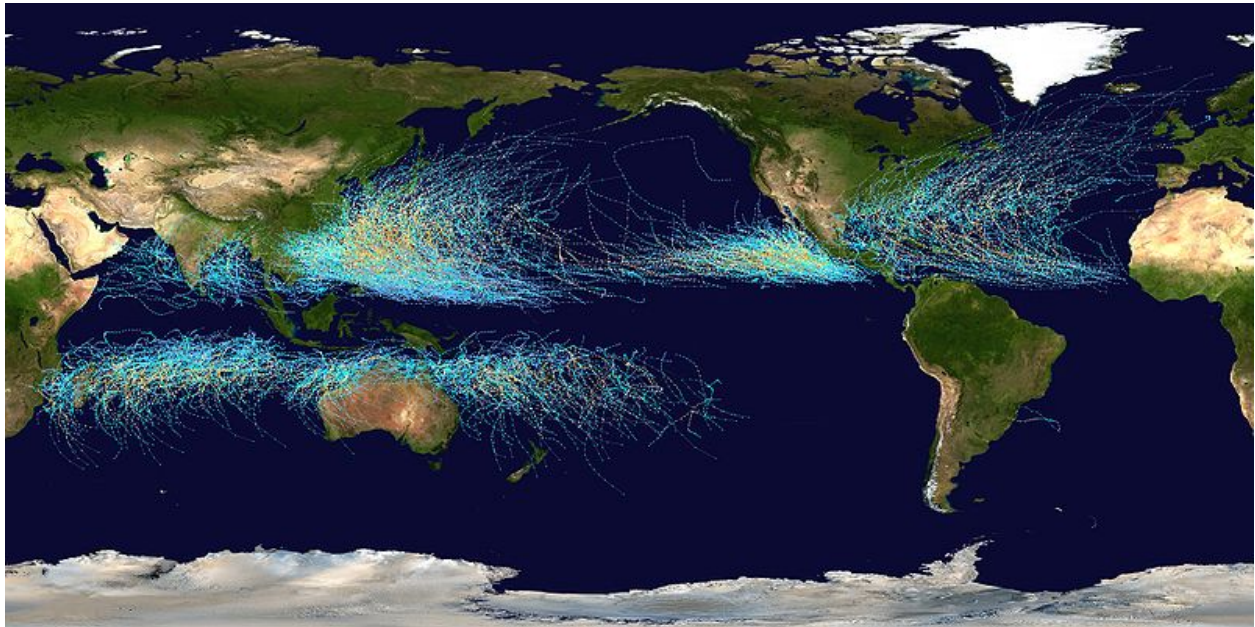
- Tell students that they will watch a short film about hurricane from School Discovery Channel VCD to learn how hurricanes form. (Students watch a short film first so they see and learn how the storm forms, after that teacher will explain the process step by step).
- Distribute the worksheet of tropical cyclones that will help them to understand the process and the impact of tropical cyclones.
- Students have 10 minutes to read and trace the questions.
- After the short film is over, students do the worksheet for 30 minutes.

Part 2

- Elicit about the process of hurricane which they have watched in the VCD. (Teacher asks 3 or 4 students to explain the process of hurricane).
- Teacher shows the concept map of how hurricane forms and the conditions that are needed by hurricane to form.
- Using their own words, students are encouraged to note down and summarize.
- Students' understanding will be evaluated by oral quiz. (Guided questions: How does hurricane form and in what conditions does the storm occur?)

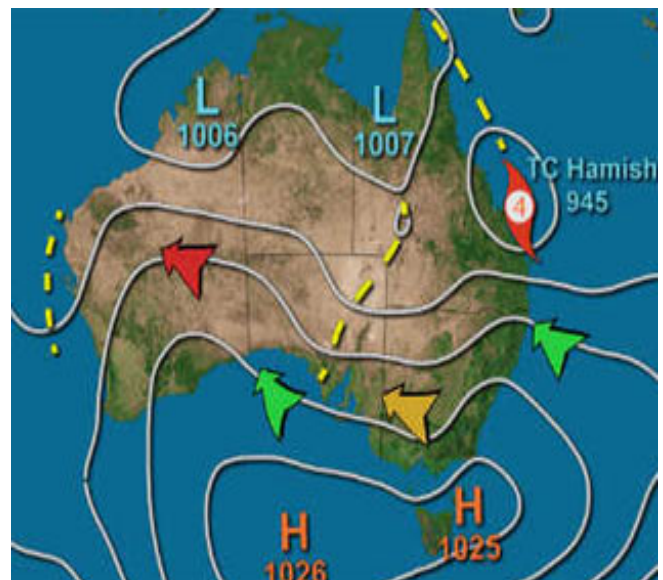
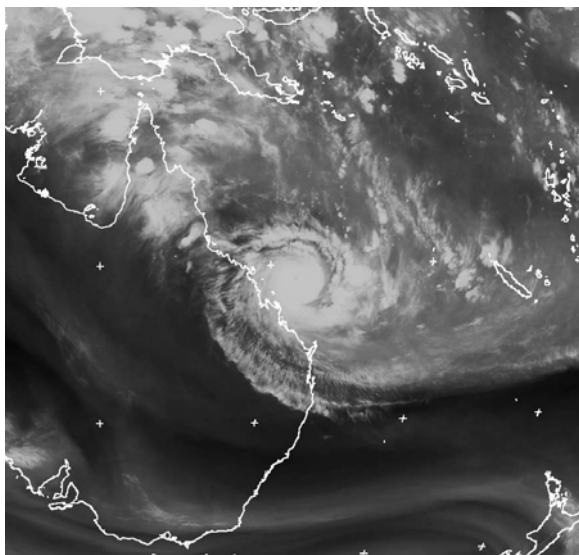
Part 3

- Show a slide about the distribution of tropical cyclones throughout the world.



Topic class discussion:

- Elicit why tropical cyclones only happen in areas near to equator. (Students use the explanation given to answer the question)
- Ask students why Brazil or Indonesia doesn't have this kind of storm? (The expected answer is Indonesia and Brazil is located in tropical areas ($10^{\circ}\text{N} - 10^{\circ}\text{S}$) which have the uniform air pressure throughout the year and makes an air stability condition).
- Show the satellite image and synoptic chart of Cyclone Hamish in Australia on March 2009 and explain what is shown by those images.



Part 4

- Have a sharing with Mr. Ross who has experienced the typhoons in his homeland (Northern Philippines). He will share about the impact and how his government dealt with this situation and had an evacuation process for the people. He also share the way people adapt and live in cyclone prone area.
- Teacher opens class discussion and students are expected to ask some questions regarding this matter.
- Elicit information about the impact of tropical cyclones and why the storm is categorized as a disaster.

Resources

Geography: An Integrated Approach; David Waugh, Nelson Thornes.

Advanced Geography, Garreth Nagle, Oxford.

VCD of Hurricane, Discovery Channel

<http://www.persianstudents.org/archives/001906.html>

<http://www.eosnap.com/?p=4390>

[http://www.ci.huntington-](http://www.ci.huntington-beach.ca.us/government/departments/fire/General_Info/PhotoGallery/PhotoGallery.cfm)

[beach.ca.us/government/departments/fire/General_Info/PhotoGallery/PhotoGallery.cfm](http://www.ci.huntington-beach.ca.us/government/departments/fire/General_Info/PhotoGallery/PhotoGallery.cfm)

http://www.javno.com/en-world/typhoon-skirts-philippines-en-route-for-taiwan_184717

<http://www.daylife.com/photo/0cLObqw4qnb33>

Name: _____ Class: _____ Date: _____.

Weather and Climate

Tropical Cyclones

Answer the following questions as completely as possible.

1. What conditions are needed for a hurricane to develop? (4 marks)

[illegible]

2. What is the eye of storm? (3 marks)

3. Briefly describe the areas and people at risk from hurricane damage. (6 marks)

[illegible]

4. Write a story which consists of 100 – 150 words about what you have learnt about hurricane.

[illegible]