Teacher Resource

Episode 7
26th March 2019

Cyclones Explained

Focus Questions

1. Discuss the *Cyclones Explained* story as a class and record the main points of the discussion.
2. Do cyclones form over warm or cold ocean water?
3. What forms when water evaporates and rises into the sky?
4. Who tracks cyclones?
5. How many categories are there to describe the strength of cyclones?
6. What windspeed did Typhoon Tip reach in 1979?
7. What type of damage can a category 1 cyclone have on the environment?
8. What is a storm surge?
9. What can be done to help prevent cyclone damage?
10. What do you understand more clearly since watching the BTN story?

Activity

Class discussion

Before watching the BTN *Cyclones Explained* story hold a class discussion to find out what your students know about cyclones.

- What do you know about cyclones?
- What are some of the things that might happen when a cyclone occurs?
- Make a list of words that relate to cyclones. Make your own classroom glossary after watching the BTN *Cyclones Explained* story.
- Have you heard about the recent cyclone in Australia? What do you know about it?

Activity

Class Discussion

Discuss the BTN *Cyclones Explained* story as a class. Ask students to record what they know about weather, climate and extreme weather. What questions do they have? Use the following questions to help guide discussion:

- What is extreme weather? Develop a class definition.
- What makes a weather event extreme?
- What are some examples of extreme

Key Learning

Students will develop a deeper understanding of cyclones in Australia and the impact on people and the environment.

Curriculum

Science – Year 6
Sudden geological changes and extreme weather events can affect Earth's surface.

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions.

Scientific knowledge is used to solve problems and inform personal and community decisions.

Geography – Year 7
Causes, impacts and responses to an atmospheric or hydrological hazard.

weather events in Australia?

- Give examples of extreme weather in other countries.
- How does extreme weather impact on people and the environment?
- Which parts of Australia are most affected by extreme weather?
- Can we predict extreme weather events?
- How can we prepare for extreme weather?
- Have you ever experienced extreme weather? Discuss in pairs.

Activity

Cyclone categories

The strength of a cyclone is expressed in categories. In Australia, category five cyclones are the strongest, bringing the most destructive winds. Students will investigate the different cyclone category ratings including wind gusts and the effects on people and the environment.

Category	Estimated wind gusts (km/h)	Effects on people and the environment
One		
Two		
Three		
Four		
Five		

Activity

Topic for inquiry

Students will start to think like a meteorologist and develop their own question/s for inquiry, collecting and recording information from a wide variety of sources. Students may develop their own question for inquiry or select one or more of the questions below.

- What tools help scientists to detect and categorise cyclones?
- How are cyclones tracked and measured? Describe and compare old and new discoveries.
- How do cyclone warnings help people prepare for a catastrophic natural disaster? Why is the early detection of cyclones important? Investigate how people can prepare for a cyclone and create a survival plan. Visit the BOM website to help write your plan.
- Why and how are cyclone names chosen? Watch this ABC Education video – How to name a cyclone, to learn more.
- How do tropical cyclones form? Use a diagram to show how a cyclone forms.
- Where in Australia do cyclones occur? Why? Create a map to show the regions in Australia affected by cyclones.
- Meteorologists track the movement of cyclones using latitude and longitude. What is the difference between latitude and longitude and how are coordinates used to track cyclones on a map? Use cyclone Trevor, Cyclone Veronica or Cyclone Idai as an example in your research.

Further investigation

Using the primary and secondary sources of information, students will find out more about Cyclone Trevor, Cyclone Veronica or Cyclone Idai and answer the following questions.

- Where did the cyclone form?
- Where did it travel? On a map mark where the cyclone travelled.
- What wind speed did the cyclone reach?
- What category was this cyclone?
- What damage did it cause inland?

Activity

Cyclone in a bottle

In this *Science Web* lesson students identify the similarities and differences between the formation and features of cyclones and experiment using the simulated 'cyclone in a bottle' activity. Use this link to download the activity and related worksheets http://scienceweb.asta.edu.au/years-5-6/unit3/lesson-three/yr56-unit3-lesson-three.html. Watch this Tornado tube video to see how it works.

Useful Websites

ABC News – Here's everything you need to know about cyclones
https://www.abc.net.au/news/2018-12-14/what-you-need-to-know-about-cyclones/10579026

ABC News – Tropical Cyclones Explained
https://www.abc.net.au/news/2011-02-01/tropical-cyclones-explained/1926870

ABC News – Tropical cyclone categories explained
https://www.abc.net.au/news/2015-11-19/tropical-cyclone-categories-explained/6956092

Bureau of Meteorology – Cyclones FAQ
http://www.bom.gov.au/cyclone/faq/