



Teacher Resource

American Heatwave

Focus Questions

Discuss the BTN story as a class and record the main points of the discussion. Students will then respond to the following:

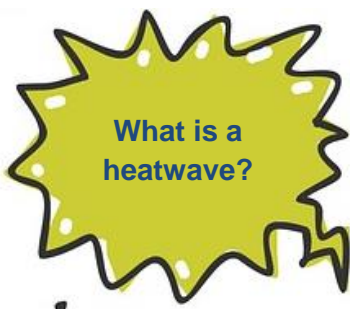
1. Briefly summarise the BTN story.
2. How hot did it get in Death Valley in California?
3. Complete the following sentence. Heatwaves start with changes to the temperature on the surface of the _____.
4. What is a heat dome?
5. How has the US heatwave affected people and places?
6. What other extreme event is occurring in the US?
7. What other countries are experiencing record temperatures?
8. What are scientists saying about these intense natural weather events?
9. Think of three questions you have about the heatwaves. Share them with the class.
10. What did you learn watching this story?

Activity: Class Discussion

After watching the BTN American Heatwave story, facilitate a class discussion, using the following questions to get the discussion started.

Use a mind map to record your student's responses.

- What words would you use to describe a heatwave? Use a mind map to record your responses.
- Why causes heatwaves?
- What impact do heatwaves have on people and places?
- How can we protect ourselves from heatwaves?
- Have you ever experienced a heatwave? Describe how it affected you.
- What do you want to learn about heatwaves?



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KEY LEARNING

Students will investigate what heatwaves are, what causes them and how they impact people and places.

CURRICULUM

Geography – Year 5

The impact of bushfires or floods on environments and communities, and how people can respond.

Geography – Year 7

Evaluate sources for their reliability and usefulness and select, collect and record relevant geographical data and information, using ethical protocols, from appropriate primary and secondary sources.

Interpret geographical data and other information using qualitative and quantitative methods, and digital and spatial technologies as appropriate, to identify and propose explanations for spatial distributions, patterns and trends, and infer relationships.

Science – Year 6

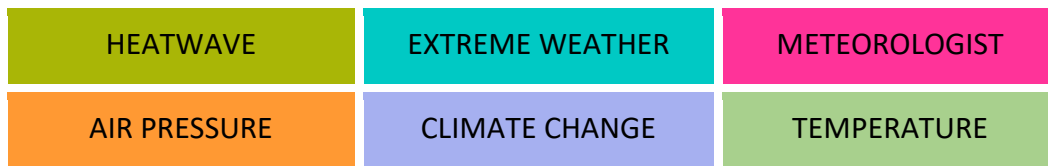
Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives.

The growth and survival of living things are affected by physical conditions of their environment.

Sudden geological changes and extreme weather events can affect Earth's surface.

Activity: Mind Map

Ask students to think of words they associate with the word HEATWAVE. Record students' ideas on a mind map with the word HEATWAVE in the middle. Below are some suggested words.



Ask students to clarify their understanding of the key words by writing down what they think the word means. Swap definitions with a partner and ask them to add to or change the definition. Check them using a dictionary or other source.

Activity: Research project

After watching and discussing the BTN American Heatwave story, what questions do students have and what are the gaps in their knowledge? The following KWLH organiser provides students with a framework to explore their knowledge on this topic and consider what they would like to know and learn.

<i>What do I <u>k</u>now?</i>	<i>What do I <u>w</u>ant to know?</i>	<i>What have I <u>l</u>earnt?</i>	<i><u>H</u>ow will I find out?</i>

Students will develop their own question/s to research or select one of the questions below.

- What is a heatwave? Use scientific words to help explain this extreme weather event.
- How are heatwaves in Australia and other parts of the world similar or different?
- How do experts predict when a heatwave is going to occur?
- How are heatwaves dangerous?
- How are heatwaves measured?
- How can we prepare for heatwave conditions and reduce the impact of heat stress? Create a public awareness campaign that targets people living in heatwave prone areas.
- Which areas in Australia do you think would be most at risk of experiencing a heatwave? Highlight on a map.

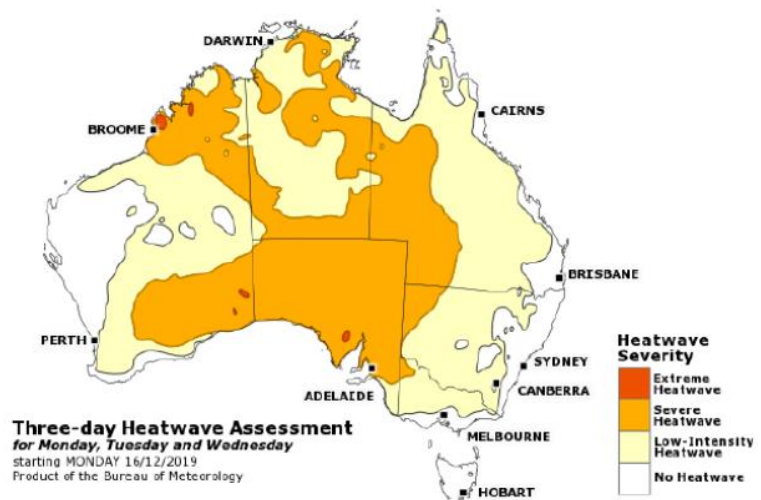
Possible ways for students to present their research include:

- A 'Did You Know' Fact sheet
- Oral Presentation
- [Prezi](#) presentation
- Create an infographic using [Canva](#)

Activity: Act like a meteorologist

Students will start to think like a meteorologist and analyse the map below, which was produced by the [Bureau of Meteorology](#). Students will then respond to the following questions:

- What features do you see on this map? Make a list.
- What does the map tell us?
- What does it measure?
- What does the colour coding tell us?
- What area does it cover?
- What period of time does this map cover?
- What is the purpose of this map?



Further investigation

[BOM Map](#): Example of a heatwave assessment map and text

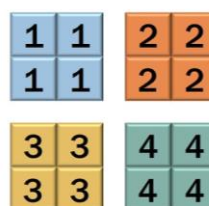
- What is a heatwave? How does the Bureau of Meteorology define a heatwave?
- How is a heatwave measured? Who measures heatwaves? What instruments are used to measure heatwaves?
- How is a heatwave assessment map different to a heatwave forecast map? Explain using your own words.

Activity: Jigsaw learning activity

In this activity students will work cooperatively to learn more about extreme weather events. Each group will become experts and then share what they have learnt with other students.

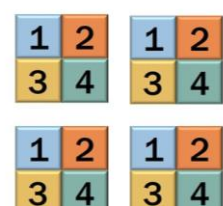
Round 1 – Focus Groups

Divide students into groups and give each group a different text to read and discuss.



Round 2 – Task Groups

Mix the groups so that students can bring their specific focus to a common task or problem.



Form groups

Divide the class into 5 x Focus Groups (or more depending on your class size). Each Focus Group will be assigned a different type of extreme weather event to investigate and become experts (for example heatwaves, bushfires, floods, drought and cyclones). Each group will need to decide how they will collect and communicate the information they find during their research. For example, students can create a model, a short video or an infographic.

Research

Each Focus Group will respond to the following questions to become experts:

- Describe what the extreme weather event is using scientific words. Use illustrations to help with your explanation.
- What hazards can this extreme weather event cause?

- Identify ways to protect the people and places experiencing this extreme weather event.

Share

Mix the Focus Groups to form Task Groups (Tasks Groups include one student from each of the Focus Groups) to share the information they have collected. Students will share the information they have collected and learn from one another.

Reflect

Students will reflect on the activity by responding to one or more of the following questions:

- What did you enjoy about this investigation?
- What did you find surprising?

Activity: BTN stories

These BTN stories look at the impact extreme weather has on people and the environment. After watching any one of the BTN videos ask students to respond to the discussion questions (to find the teacher resources go to the related BTN Classroom Episode and download the Episode Package).



[Extreme Weather](#)



[Mt Resilience AR App](#)



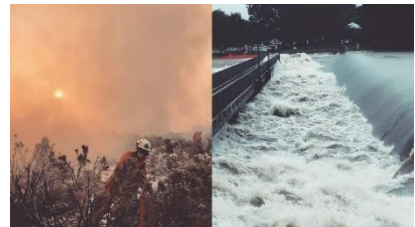
[Weather Science](#)



[Heatwaves](#)



[NSW Floods](#)



[Fires & Floods](#)

Useful Websites

- [Heatwaves](#) – BTN
- [Heatwave Knowledge Centre](#) – Bureau of Meteorology
- [Why heatwaves happen and where they come from](#) – ABC News
- [How hot is your school?](#) – ABC Education
- [What is El Nino?](#) – BTN
- [How to survive a heatwave](#) – ABC Education
- [Weather Science](#) – BTN