

EPISODE 2:
Deadly Wildfires and Resilient Lives

CHAPTER 1:
**Wildfires:
A Growing Threat**

*Originally Aired:
02/02/2020*



FOR DISCUSSION

Why has there been an increase in wildfires?



TERM TO KNOW—*Indian Ocean Dipole (IOD)*

Differences in the surface temperatures of the Indian Ocean between the east and the west create a ‘dipole.’ This dipole affects rainfall in both regions.

For example, warmer temperatures in the Indian Ocean in the west caused more rainfall and flooding in east Africa. Cooler temperatures in the east Indian Ocean caused drought in Australia. This pattern is a positive (+) Indian Ocean Dipole. A negative (-) process would have cooler Indian Ocean temperatures in the east and warmer ocean temperatures in the west. (This meteorological phenomenon has only been understood for the last 20 years.)



INVESTIGATIVE QUESTION

Check out this [infographic](#) from Australia’s government’s Bureau of Meteorology explaining IOD. Investigate:

- What conditions occur in Australia during a + IOD?
- What regions become drier?
- How does a + IOD compare to a - IOD?
- Take a deeper dive and research El Niño and La Niña and how these meteorological cycles affect weather in the western hemisphere.

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CHAPTER 2:
**Earthlings: Are We
Alone in the Universe?**

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FOR DISCUSSION

What is the process for scientists to research life beyond Earth?



TERM TO KNOW—*Exoplanet*

A planet which orbits a star outside of our solar system.



INVESTIGATIVE QUESTION

We know that for life to be sustained, water must be available. But what about other chemicals? There has been excitement about Venus' atmosphere and evidence of phosphine gas. What's the fuss all about? Jump online and determine how evidence of phosphine might lead to clues about:

- Whether Venus be habitable?
 - If water existed on Venus?
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CHAPTER 3:
Real Person or Digital Fake: Can You Tell the Difference?

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FOR DISCUSSION

How can the use of deep fakes be misleading and alarming?



TERM TO KNOW—Deep Fake

Video which uses artificial intelligence to change or alter faces and sound.



INVESTIGATIVE QUESTION

Radzi discussed the use of video deep fakes but students can examine how images are similarly doctored and spread through social media.

In January, 2020 an Australian photo of a girl wearing a gas mask, holding a koala, and standing in front of smoke went viral on Twitter. Students can imagine seeing the tweeted photo, determine the message of the photo, and then further read to discover how it was created by a photographer through Photoshop. What was the purpose of the photographer in creating this manipulated image?

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CHAPTER 4:
**No Arms nor Legs,
But Tio Rises Up**

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FOR DISCUSSION

With physical challenges, how can a teenager stay positive?



TERM TO KNOW—Empathy

Recognizing and understanding the thoughts or feelings of somebody else. This can be another person, an animal, or even a character in a story.



WRITING PROMPTS

Students can articulate how Tio conveys empathy for Tendi, his friend from school. How did helping Tendi relieve Tio of his frustration? How might students use empathy to both help others and help themselves?

Sources: David, Leonard, "Is There Life on Venus? These Missions Could Find It," *Scientific American*, 23 September 2020, www.scientificamerican.com/article/is-there-life-on-venus-these-missions-could-find-it/. Accessed 8 October 2020.

Drake, Nadia, "Possible sign of life on Venus stirs up heated debate," *National Geographic*, 14 September 2020, www.nationalgeographic.com/science/2020/09/possible-sign-of-life-found-on-venus-phosphine-gas/. Accessed 8 October 2020.

"Empathy," *Psychology Today*, www.psychologytoday.com/us/basics/empathy. Accessed 8 October 2020.