

**EPISODE 10**
6th March 2024

**KEY LEARNING**

Students will learn what black holes are and find out how they were first discovered.

**CURRICULUM**

[**Science – Year 7 (v8.4)**](https://www.australiancurriculum.edu.au/Search/?q=ACSSU117)

[**Science – Year 9 (v8.4)**](https://www.australiancurriculum.edu.au/Search/?q=ACSHE158)

[**Physics – Unit 3 (v8.4)**](https://www.australiancurriculum.edu.au/Search/?q=ACSPH094)

[**Science – Year 7 (v9.0)**](https://v9.australiancurriculum.edu.au/search?TTN=q%3DAC9S7U04&on=AC&AC=q%3DAC9S7U04%26pageOffset%3D0)

[**Science – Year 9 (v9.0)**](https://v9.australiancurriculum.edu.au/search?TTN=q%3DAC9S9H02&on=AC&AC=q%3DAC9S9H02%26pageOffset%3D0)

Teacher Resource

**Black Holes**

# Focus Questions

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

1. Use 3 words to describe a black hole.
2. What is the name of the hot, glowing material that orbits around

 black holes?

1. How are black holes found?
2. What is the border of a black hole called?
3. What is the name of the process when something is stretched as it

 approaches a black hole?

1. Describe what ‘escape velocity’ is?
2. In which century did the idea of ‘escape velocity’ come about?

a. 1600s

b. 1700s

c. 1800s

8. How many light years across is the supermassive black hole that Australian

 scientists have discovered?

# Activities

* Create a slideshow presentation about black holes. Research and explain:

 - What is a black hole?

 - Provide a brief history on black holes

 - Write 5 interesting points about a well-known black hole

* Gravitational Pull is the force of attraction between the Earth and another

 mass object. Devise an experiment to explain this theory and share it with

 the class.

* Imagine you could be transported to another world through a black hole.

 Write a fictional story about the experience and where it would take you.

* Research the job of an Astrophysicist. Write a job description for the role.