



Teacher Resource

Kangaroo Fossils

Focus Questions

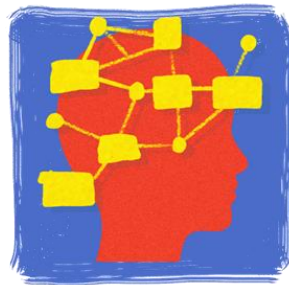
Discuss the BTN story as a class and record the main points of the discussion. Students will then respond to the following:

1. What does the short-faced kangaroo look like? Describe its characteristics.
2. How many years ago did the short-faced kangaroo become extinct?
3. Fill in the missing gaps. The short-faced kangaroo is a type of _____ fauna.
4. What did palaeontologists recently uncover in a cave in East Gippsland?
5. What questions would you like to ask a palaeontologist?

Activity: Class Discussion

Discuss the BTN Kangaroo Fossils story as a class and record the main points on a mind map with FOSSILS in the centre. Students will respond to the following:

- What are fossils?
- Have you ever seen a fossil?
Where did you see it and what did it look like?
- How are fossils formed?
- How old are the fossils found in the cave thought to be?
- What did you learn from this story?
- What does this story make you wonder?
- Think of three questions you would like to ask about the story.



What
questions do
you have?

What surprised
you about this
story?

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KEY LEARNING

Students will learn about how fossils are formed and what they tell us about the past. They will also create a profile of a species of megafauna.

CURRICULUM

Science – Year 5

Examine how particular structural features and behaviours of living things enable their survival in specific habitats.

Science – Years 5 & 6

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

Science – Year 6

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available.

Science – Year 7

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available.

Activity: Glossary

Students will brainstorm a list of key words that relate to the BTN Kangaroo Fossils story. Here are some words to get them started.

| | | |
|---------------|------------|-----------|
| FOSSIL | EXTINCT | MARSUPIAL |
| PALAEONTOLOGY | EXCAVATION | MEGAFUNA |

Ask students to write what they think is the meaning of each word (including unfamiliar words). They will swap definitions with a partner and ask them to add to or change the definition. Check these against the dictionary definition.

Activity: Fossils Research

Discuss the information raised in the BTN Kangaroo Fossils story. What questions were raised in the discussion and what are the gaps in students' knowledge? The following KWLH organiser provides students with a framework to explore their knowledge on this topic.

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

Students will develop their own question/s to research or choose one or more of the questions below. Encourage students to collect and record information from a wide variety of sources and present the information they find in an interesting way.

- Why is the short-faced kangaroo considered an important discovery in palaeontology?
- What can the size and shape of a fossilised bone tell us about the animal it belonged to?
- How are fossils formed? Use illustrations to help describe the process.
- How does finding fossils help scientists learn about the past?
- How do the layers of the Earth help us to work out the age of fossils?
- What are the different types of fossils? Create a graphic that explains each type.
- What are the challenges of excavating fossils from a cave?
- What is the role of a palaeontologist? What are the different parts to the job of a palaeontologist and what skills do they need to have?
- What tools and techniques do palaeontologists use to excavate and study fossils?
- Investigate another extinct animal that lived in Australia. What do we know about them?
- What are Australia's megafauna? When did megafauna exist and how do we know they existed?
- What theories are there for the extinction of Australia's megafauna? Investigate possible causes.
- Research the Pleistocene – the time when megafauna roamed Australia.

Activity: Megafauna Profile

Students will investigate in more detail the short-faced kangaroo or another species of megafauna using the following questions to guide their research.

- Common and scientific names.
- What type of animal is it? (mammal, reptile, bird)
- How big was it?
- Where did it live? Describe the habitat.
- What did it eat? Was it a herbivore or carnivore?
- How long ago did it live?
- When did it become extinct? What are some possible causes of its extinction?
- What existing species it is similar to?
- Interesting fact.



[Source of image](#)

Find out more about the short-faced kangaroo [here](#) including photographs of the skeleton fossils found in the cave and a video explaining how the fossils were extracted and the challenges palaeontologists faced.

Activity – Choose an Activity

Working individually or in pairs, students can choose one or more of the following activities to try. Ask students what they learnt doing the activity.

Make your own fossil

Learn how impression fossils are formed by making your own fossil using clay. [Follow the instructions](#) on the Australian Museum website.

Compare the kangaroos

How does the short-faced kangaroo compare to today's kangaroos? Show the similarities and differences on a Venn diagram.

Quiz

Create a [Kahoot!](#) quiz about fossils and/or the short-faced kangaroo.

Megafauna story


Choose a species of megafauna and write a fictional story and about it or write about a day in the life of.

Activity: Reporter for a day

Students will be a reporter for a day and investigate the discovery of ancient kangaroo fossils in a cave in Victoria. Write an online news report for kids explaining how the fossils were found and why it's an important scientific discovery. Student's reports will answer the 5 W's – Who, What, Where, When and Why?

Things for students to think about:

- Who is your target audience? Use age appropriate language and themes.
- Write a headline that is short and to the point.
- Use words and pictures in your report.
- Find information from a variety of sources.
- Present the facts and/or opinions clearly and accurately.



Who, What,
Where, When
and Why?

Visit BTN's [Rookie Reporter Training](#) and [Becoming a Journalist](#) to learn more about how to make a news story.

Useful Websites

- [Cavers and scientists unearth near-complete short-nosed kangaroo fossil from East Gippsland cave](#) – ABC News
- [Short-faced Kangaroo](#) – Museums Victoria Collections
- [What are fossils?](#) – Australian Museum
- [How do fossils form?](#) – Australian Museum
- [Megafauna](#) – Australian Museum