



Teacher Resource

Darling River Fish Deaths

Focus Questions

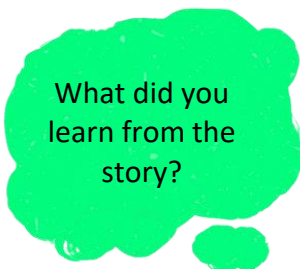
Discuss the BTN story as a class and record the main points of the discussion. Students will then respond to the following:

1. Where is Menindee? Find on a globe, wall map or digital application such as Google Earth.
2. What are the causes of hypoxic blackwater?
3. What impact has the fish deaths had on the quality of drinking water?
4. How have the fish deaths impacted farmers?
5. What did you learn from this story?

Activity: Personal Response

After watching the BTN Darling River Fish Deaths story, ask students to finish one or more of the following incomplete sentences:

- Learning about the fish deaths made me feel...
- This story made me wonder...
- BTN did a story about fish deaths because...



Activity: Class Discussion

Discuss the information raised in the BTN Darling River Fish Deaths story. Use the questions below to guide the discussion.

- What do you know about the Murray-Darling river system?
- Who do you think depends on the river system?
- Whose responsibility is it to look after the Murray-Darling river system?
- Why is the health of the Murray-Darling important?
- Why have a large number of fish died in the Darling River recently?

EPISODE 8

28th March 2023

KEY LEARNING

Students will investigate how changing conditions for fish populations in the Murray-Darling river system impacts their growth and survival. They will also learn more about a native fish species.

CURRICULUM

Science – Year 4

Living things depend on each other and the environment to survive.

Science knowledge helps people to understand the effect of their actions.

Science – Year 6

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

Geography – Year 5

The influence of people, including Aboriginal and Torres Strait Islander Peoples, on the environmental characteristics of Australian places.

The environmental and human influences on the location and characteristics of a place and the management of spaces within them.

Activity: Glossary

Students will brainstorm a list of key words that relate to the BTN Darling River Fish Deaths story. Here are some words to get them started.

SPECIES	OXYGEN	MURRAY-DARLING BASIN
FLOODWATERS	BLACKWATER	BACTERIA

Further investigation: What is hypoxic blackwater? Write a short explanation of what it is and how it affects fish populations.

Activity: Research project

Discuss the information raised in the BTN Darling River Fish Deaths 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>know</u> ?	What do I <u>want</u> to know?	What have I <u>learnt</u> ?	<u>How</u> will I find out?

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

- Who relies on the Murray-Darling river system? How do they use or rely on it?
- How has people's use of the Murray-Darling river system changed over time? Record the information on a timeline.
- What is blackwater? What causes it and what impact does it have on people and animals? Watch [this video](#) to learn more.
- What is being done to prevent fish deaths? Include both long and short term actions.
- How is River Country important to First Nations people?
- What impact might the poor health of the Murray-Darling river system have on the traditional owners?
- How were communities along the Murray River affected by the floods in recent months? Watch [this BTN story](#) to learn more.



Activity: Native Fish profile

Students will research and write a profile of a native fish species found in the Murray-Darling river system. Students can use the animal profile worksheet at the end of this activity to record their findings. Encourage students to use a range of sources to find their information.

Research

Students will research and create a profile of a native fish species. Students can use the Animal Profile at the end of this activity.

- Illustration or photo
- Scientific and common name
- Appearance
- Habitat
- Feeding and diet
- Behaviours and adaptations
- Predators/threats
- Interesting facts



Activity: The Murray-Darling river system

[BTN River Kids](#) is a documentary that looks at life along Australia's largest river system, the Murray-Darling river system. It's narrated by Tyrone, a Ngarrindjeri boy, who introduces us to people who depend on it. The documentary highlights the importance of Australians working together to look after the Murray-Darling river system and how the river system supports people, wildlife, and the economy.



The River Kids documentary features some kids that live along the Murray-Darling river system. As you meet the kids in the documentary, think about how they all depend on the river system for different reasons.

Class discussion:

- How has the health of the Murray-Darling river system changed since the documentary was made?
- Brainstorm a list of reasons why.
- Why is the health of the Murray-Darling river system important?



Activity: Aboriginal Dreaming

Water has an important place in Dreaming stories in Aboriginal and Torres Strait Islander culture. Dreaming stories pass on important knowledge, cultural values, and belief systems to later generations. Many sites of Dreaming significance are located along the Murray River.

Students will develop a deeper understanding of the connection Indigenous people have to water and the Murray River. Students will develop their own question/s to research or choose one of the questions below.

- How has the Murray River changed over time? Watch this BTN [River Kids](#) story to learn more. Explain in your own words why the Murray River is important to Ngarrindjeri people and how the Murray River has changed.
- What does Ngurunderi Dreaming explain? Students will practise their storytelling skills by taking it in turns to read the [Ngurunderi Dreaming story](#) aloud to the class.
- How was the Murray River made? Listen to this [Bangerang story](#) about how the Murray River was made. Find the Bangerang words for Murray River and water. Illustrate an aspect of this Dreaming story to present to the class.
- What Aboriginal Dreaming stories teach us about the importance of water? For example, the [Rainbow Serpent](#), Ponde or [Tiddalick](#). Compare and contrast these stories. Choose one to research in more detail and present your findings in an interesting way.

Activity: Run the River

[Run the River – A Water Sharing Challenge](#) is a game where students learn about the challenges of balancing water use and also learn more about the natural water cycle.

[Lesson notes and game guide for teachers](#)



Useful Websites

- [Dead Fish in NSW](#) – BTN Newsbreak
- [Fish deaths](#) – Murray-Darling Basin Authority
- [The Menindee fish kills](#) – Australian Museum
- [Fish kill clean-up finally underway at Menindee, a week after creatures began clogging up river](#) – ABC News
- [Murray-Darling Warning](#) – BTN

ANIMAL PROFILE

Scientific
Name

APPEARANCE

Common Name

ADAPTATIONS

Unique Features
or Interesting Facts

HABITAT

THREATS