

Teacher Resource

Murray-Darling Warning

Focus Questions

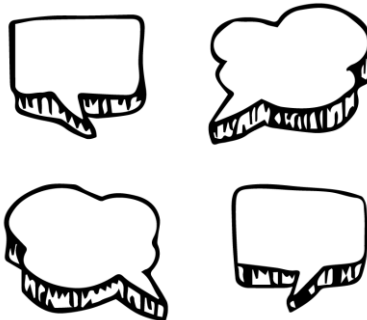
1. Where is Menindee? Find using Google Maps.
2. Which states does the Murray-Darling river system span?
3. Low water levels in parts of the Darling River have caused an outbreak of _____.
4. What does the Government say has caused millions of fish in the Darling River to die?
5. About how much of Australia's food supply comes from farms in the Murray-Darling Basin?
 - a. 1 quarter
 - b. 1 third
 - c. 1 half
6. What is the role of the Murray-Darling Basin Authority?
7. Why was there a big investigation into the Murray-Darling Basin Plan?
8. What is being done to help Murray cod near Menindee?
9. Name three facts you learnt watching the BTN story.
10. How did this story make you feel? Discuss in pairs.

Activity

Learning about the Murray-Darling river system

Before watching the BTN *Murray-Darling Warning* story, hold a class discussion asking the following questions:

- What do you know about the Murray-Darling river system?
- What words would you use to describe the Murray-Darling river system?
- Why is the Murray-Darling river system important?



After watching the BTN *Murray-Darling Warning* story, discuss with students what they learnt about the Murray-Darling river system. Ask students to respond to one or more of the following:

- Who do you think depends on the Murray-Darling river system? Brainstorm and record your thoughts as a class.
- Whose responsibility is it to look after the Murray-Darling river system? Make a list.
- Why do you think BTN covered this issue?

Key Learning

Students will investigate how changing physical conditions for fish populations in the Murray-Darling river system impacts on their growth and survival.

Students will explore the environmental characteristics of the Murray-Darling river system.

AC Curriculum

Science – Year 5

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

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.

Students will write a personal response to the BTN *Murray-Darling Warning* story. Leave a comment on the BTN *Murray-Darling Warning* story page. Ask students to finish one or more of the following incomplete sentences:

- This story made me feel....
- This story made me wonder...
- The Murray-Darling river system is special because...
- We can protect our rivers by...

Activity

Scientific investigation

In December 2018 and January 2019, up to a million fish were found dead in the Darling River. The sudden and unexpected death of so many fish is called a mass fish death. There can be many reasons behind mass fish deaths but often they are caused by natural events.

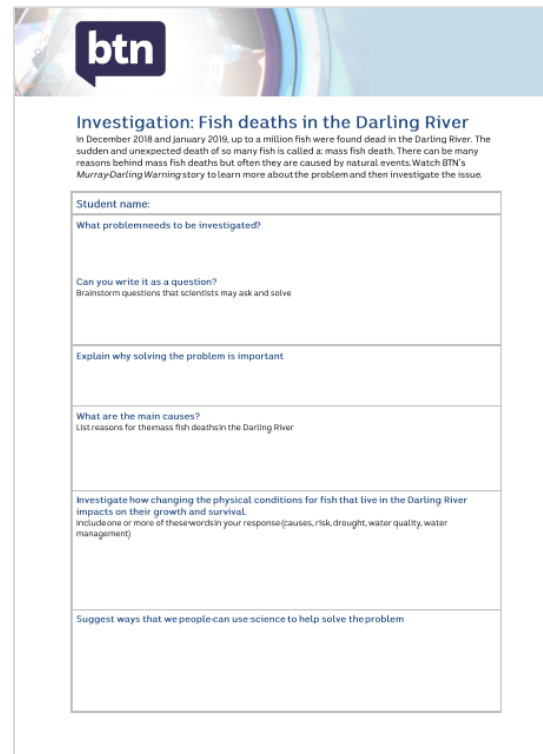
In small groups, students will work together using scientific knowledge to investigate the issue. Students can use the *Investigation worksheet* (at the end of this activity) to record their findings.

Some questions for research include:

- What problem needs to be investigated?
- List reasons for the mass fish deaths in the Darling River
- Describe the impact that drought can have on the fish population in the Darling River.

Visit the MDBA website for more information on fish deaths in the Basin.

<https://www.mdba.gov.au/managing-water/drought-murray-darling-basin/fish-deaths-basin>



The worksheet is titled "Investigation: Fish deaths in the Darling River" and includes a BTN logo. It contains a brief introduction about mass fish deaths and a series of questions for students to investigate. The questions are: "What problem needs to be investigated?", "Can you write it as a question? Brainstorm questions that scientists may ask and solve", "Explain why solving the problem is important", "What are the main causes? List reasons for the mass fish deaths in the Darling River", "Investigate how changing the physical conditions for fish that live in the Darling River impacts on their growth and survival. Include one or more of these words in your response (causes, risk, drought, water quality, water management)", and "Suggest ways that we people can use science to help solve the problem".

Activity

Model

Make a class model or map of the Murray-Darling river system to display in your classroom. Use Google Maps to find towns (including Menindee, NSW) along the Murray-Darling river system and include on your model.

Consider including some of the following elements:

- Locks, weirs and barrages
- Lakes and reservoirs
- Iconic sites
- State borders
- Indigenous names for places
- The start and end of the river
- The Murray Mouth
- A scale

Activity

How do we use 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 young 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.



Watch BTN's [River Kids documentary](#) to meet some of the kids that live along the Murray-Darling river system and find out how they depend on it 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?

Teachers can download the supporting teacher resource for topics of inquiry and other activities.

[BTN River Kids teacher resource](#)

Students will choose one or more of the inquiry questions (listed in the teacher resource) to investigate and present their findings in an interesting way.



Activity

Rookie reporter

How are you connected to the Murray-Darling river system? What are your stories? Make a video and send it into BTN -

<http://www.abc.net.au/btn/>



Useful Websites

Murray-Darling Basin Authority – Fish deaths in the Basin

<https://www.mdba.gov.au/managing-water/drought-murray-darling-basin/fish-deaths-basin>

ABC News – Thousands more fish found dead at Menindee as locals fear there will be `none left`

<https://www.abc.net.au/news/2019-01-28/fears-of-more-menindee-fish-kill-as-photos-emerge-of-dead-bream/10755004>

BTN – River Kids

<http://www.abc.net.au/btn/classroom/river-kids/10524662>

Murray-Darling Basin Authority – Run the River: App

<https://www.mdba.gov.au/education/apps>

Murray-Darling Basin Authority – Teacher Lesson packages

<https://www.mdba.gov.au/education/lesson-packages>



Investigation: Fish deaths in the Darling River

In December 2018 and January 2019, up to a million fish were found dead in the Darling River. The sudden and unexpected death of so many fish is called a mass fish death. There can be many reasons behind mass fish deaths but often they are caused by natural events. Watch BTN's *Murray-Darling Warning* story to learn more about the problem and then investigate the issue.

Student name:

What problem needs to be investigated?

Can you write it as a question?

Brainstorm questions that scientists may ask and solve

Explain why solving the problem is important

What are the main causes?

List reasons for the mass fish deaths in the Darling River

Investigate how changing physical conditions for fish populations in the Darling River impacts on their growth and survival.

Include one or more of these words in your response (causes, risk, drought, water quality, water management)

Suggest ways that we people can use science to help solve the problem