Teacher Resource

Episode 34
24th November 2020

Murray-Darling Wetlands

Focus Questions

1. What was the main point of the BTN story?
2. What states and territories does the Murray-Darling river go through? Locate on a map.
3. How may wetlands can be found along the Murray-Darling river?
4. Wetlands along the Murray-Darling river are getting the water they need. True or false?
5. How does flooding improve the health of wetlands?
6. What has changed the natural flow of the Murray-Darling river? Give one example.
7. Why did the Government create the Murray-Darling Basin Plan?
8. Complete the following sentence. Part of the plan was to protect wetlands by allowing _____ into floodplains.
9. Why are wetlands important?
10. What questions do you have about the story?

Activity

Discussion

Before watching the BTN *Murray-Darling Wetlands* story...

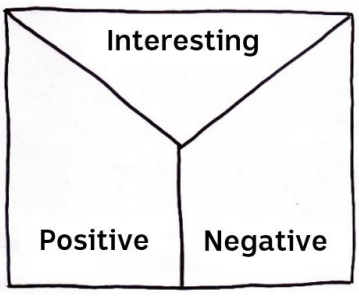
- What is a wetland? Can you think of a simple definition?
- What does a wetland look like?
- Where can you find wetlands?
- What animals can you find in a wetland? Make a list.
- What or who depends on wetlands?
- What do you know about the Murray and Darling Rivers? Brainstorm and record your thoughts as a class.

Activity

Note taking

Students will practise their note-taking skills while watching the BTN *Murray-Darling Wetlands* story. After watching the story, ask students to reflect on and organise the information into three categories. What information in the story was...?

- Positive
- Negative or
- Interesting



Key Learning

Students will learn about the importance of wetlands to people, animals and the environment.

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 5
Living things have structural features and adaptations that help them to survive in their environment.

Science – Year 6
The growth and survival of living things are affected by physical conditions of their environment.

Science – Year 7
Interactions between organisms, including the effects of human activities can be represented by food chains and food webs.

Classification helps organise the diverse group of organisms.

Activity

Glossary

After watching the BTN *Murray-Darling Wetlands* story students will brainstorm a list of key words. Students may want to use pictures and diagrams to illustrate the meaning and create their own glossary. Here are some words to get them started.

Ecosystem	Biodiversity	Conservation
Water	Species	Organism
Cycle	Habitat	Irrigation

Activity

KWLH

The KWLH organiser provides students with a framework to explore their knowledge on the topic of aquaponics and consider what they would like to know and learn.

What do I know?	***What do I want to know?***	***What have I learnt?***	***How will I find out?***

Questions for inquiry

Students will develop their own question/s for inquiry about wetlands. Students will collect and record information from a wide variety of sources. Students may develop their own question for inquiry or select one of the questions below.

- What is a wetland? Include as many of the following terms in your explanation: ecosystem, habitat, biodiversity, absorb pollutants.
- What is the difference between a river, floodplain and wetland? Find a simple definition for each and then explain to a classmate.
- Why are wetlands important? Think about the social, cultural, economic and ecological importance of wetlands.
- About how many wetlands are there in the Murray-Darling river system? Choose one area to explore in more detail, for example the Coorong, Wonga or Macquarie marshes. What Indigenous group have a strong connection to the area? Locate the area on a map.
- How do wetlands absorb pollutants and improve water quality? Include these words in your explanation: filtering system, sediment, nutrients and pollutants.
- How can we help the wetlands? Identify some of the threats to wetlands and then suggest some ways that people can help protect our wetlands. Design a poster to raise awareness about the importance of wetlands
- There are 5 wetland ecosystem groups (arid, alpine, coastal and marine, estuarine and inland riverine wetlands). Choose one wetland system to explore in more detail. What are the characteristics of that wetland?
- Wetlands can be permanent, semi-permanent or seasonal. What does this mean?
- Why should we protect our wetlands? Write a persuasive piece of writing explaining your reasons.

Activity

Scientific exploration

Provide students with the opportunity to think and behave like biologists. As a class, plan a study trip to a wetland. Alternatively, you can visit a virtual or interactive wetland as a class, for example Catchment stories – QLD Wetland Program, Bittern Coastal Wetlands Virtual Tour or Ecolinc Discovering Wetlands.

In this activity students will be given the mission to explore the wetland, identify animals and plants in the ecosystem, and record any observations they make about the wetland. Students will work individually or in small groups and use the following as a guide.

Plan

As a class, plan a visit to a wetland. Write a list of things you may need for the exploration, for example: pen and paper for taking notes, clipboard, camera and magnifying glass, nets, buckets, containers. Predict what the wetland might look like and what you might find.

Explore

Visit the wetland and carry out an exploration of the area. Choose a spot in the environment to investigate. Look and listen for evidence that animals live in the area. Remember to respect and care for the environment, including any animals and plants, during your observations.

Collect

Collect as much data as you can about what you see and record what you find. Write notes and sketch what you see to help in your investigation. Record what you see with a stills or video camera.

- What does the wetland look like? Take photos and draw pictures.
- What animals and plants can you find? If you are not sure what they're called take a photo and identify each species back in the classroom.
- What are the animals doing?
- Take a sample of water. Can you find any organisms in the sample?
- What interactions or interdependence do you notice?

Share

Return to the classroom and share/compare your findings.

Analyse

Analyse your findings and write a short summary of your investigation. Respond to the following questions:

- Did you find any animals during your investigation? If yes, identify, describe and classify what you found. If you didn't see any animals did you find any evidence that animals live in the area?
- Can you create a food web including any of the species you found in the wetland? Draw a diagram.

Research

Develop your own question/s for inquiry about wetlands, for example:

- What might the wetland look like at different times of the year?
- Choose a wetlands plant or animal to research in more detail. How has it adapted over time to survive in wetland conditions.

Reflect

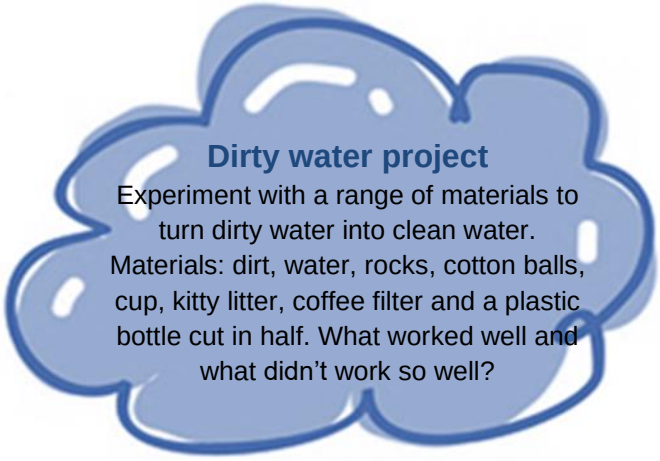
Reflect on the investigation by responding to one or more of the following questions:

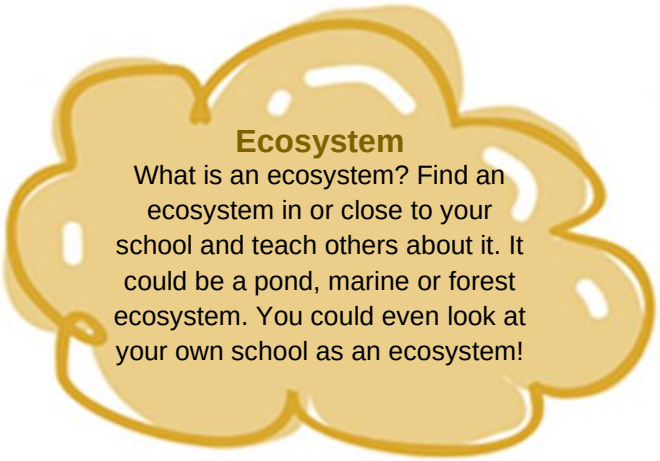
- What did you enjoy about this investigation?
- What did you find surprising?
- What would you do differently next time?

Activity

Choose a project

Individually or in small groups, students will choose one of the following projects to work on and then present their findings to the class.





Useful Websites

Water from Murray-Darling Basin plan not being delivered to wetlands, Australian-first report finds – ABC News
https://www.abc.net.au/news/2020-11-17/murray-darling-missing-water-in-floodplains/12887342

Wetlands of the Murray-Darling Basin – Murry-Darling Basin Authority
https://www.mdba.gov.au/sites/default/files/pubs/Macquarie-Marshes-Poster.pdf

Murray-Darling Warning – BTN
https://www.abc.net.au/btn/classroom/murray-darling-warning/10790804

Fish Rescue – BTN
https://www.abc.net.au/btn/classroom/fish-rescue/11505940

River Kids – BTN
https://www.abc.net.au/btn/classroom/river-kids/10524662

What are wetlands? – Department of Agriculture, Water & Environment
https://www.environment.gov.au/water/wetlands/about