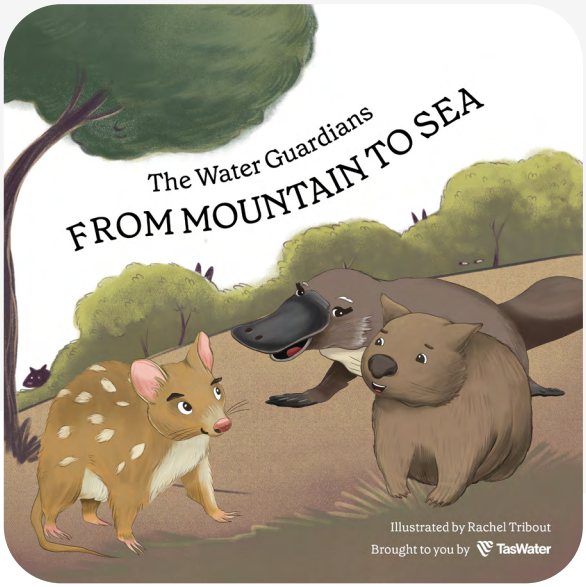
The Water Guardians program

Always learning for a thriving Tasmania

Teacher guide



TasWater's water literacy primary program, The Water Guardians, helps young students learn about the importance of water through fun, engaging, and curriculum-aligned activities. This document provides teacher resources and tips to support the water literacy program, helping students in Prep to Year 2 understand key concepts about the importance of water and how we can all look after it.

The purpose of the program is to inspire students to care for water by teaching them that we 'borrow' water from local sources. These sources are vital for native plants and wildlife. We share this water with other users like farmers, swimmers, and picnickers.

Every part of the program, from content to illustrations, is designed to focus on water in a uniquely Tasmanian context. Additional resources and links to all the lessons can be found on the teacher dashboard, giving you everything you need to support your students in learning about water conservation and its role in their everyday lives.

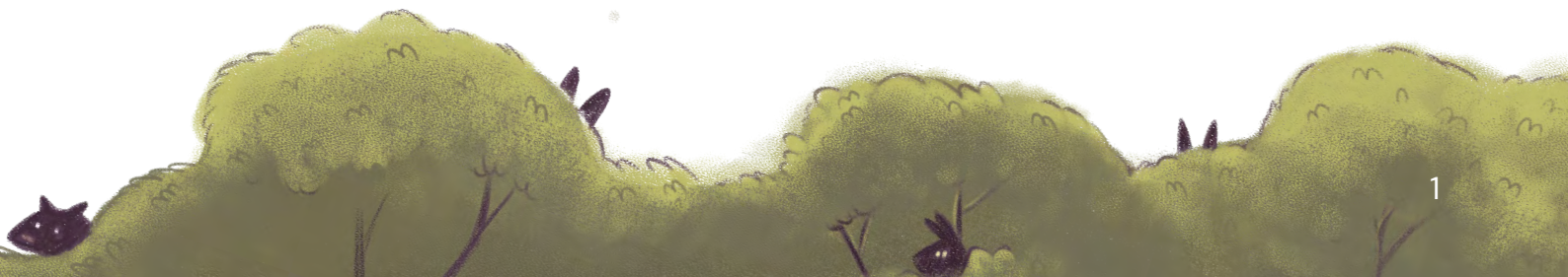
Workshop overview

This workshop is made up of three interactive lessons that focus on water conservation, water quality in the environment, and the importance of water for health. Lessons are aligned with the TasWater storybook 'The Water Guardians: from mountain to sea', and are relevant to Tasmanian water sources.

Each lesson is designed to take approximately 45 minutes and can be delivered by teachers as a group activity or completed individually by students.

The workshop is supported with offline activities, at home activities, discussion questions, and collaborative exercises to enhance engagement and understanding. It begins with a short pre-knowledge quiz to assess prior understanding, followed by the three-part lesson series. The workshop concludes with a final quiz to reinforce key concepts and assess students' understanding of the water conservation and responsible water use messages.

All activities are designed to be used flexibly; teachers may select the content that best suits their teaching cohort and environment.



Learning intentions and key messages

Students will learn to:

- Understand the importance of water conservation
- Recognise water saving and water wasting habits
- Identify different water sources

Students will learn about:

- Human needs for water
- The different states of water
- The water cycle

Resources

Provided by program:

- Prep-2 teacher guide
- 'The Water Guardians: from mountain to sea' animation – introduction to the storybook
- 'The Water Guardians: from mountain to sea' storybook
- Interactive classroom digital activities
- Take home activity pack
- Offline activity worksheets

Required:

- Interactive display such as an Interactive Whiteboard (IWB)
- PC or device with internet access
- Student devices (optional - if students are completing the workshop independently)

Assessment

- Pre-knowledge quiz
- Questioning
- Participation
- Activities
- Summative quiz

Differentiation

Teachers are encouraged to use their discretion when presenting the material in this workshop. Base participation on your students' individual needs, and existing knowledge and understanding. This module has been designed for Early Stage 1-Stage 1 (Prep-Year 2) students, with links to the Australian Curriculum.

Australian curriculum links Prep - 2

General capabilities

- Digital Literacy
- Literacy
- Ethical Understanding
- Personal and Social Capability
- Critical and Creative Thinking
- Intercultural Understanding

English

AC9E2LA09 experiment with and begin to make conscious choices of vocabulary to suit the topic

AC9E1LE02 discuss literary texts and share responses by making connections with students' own experiences

AC9E2LY05 use comprehension strategies such as visualising, predicting, connecting, summarising, monitoring and questioning to build literal and inferred meaning

Humanities and Social Sciences (HASS)

AC9HSFK03 (Geography) the features of familiar places they belong to, why some places are special and how places can be looked after

AC9HS1K03 (Geography) the natural, managed and constructed features of local places, and their location

Science

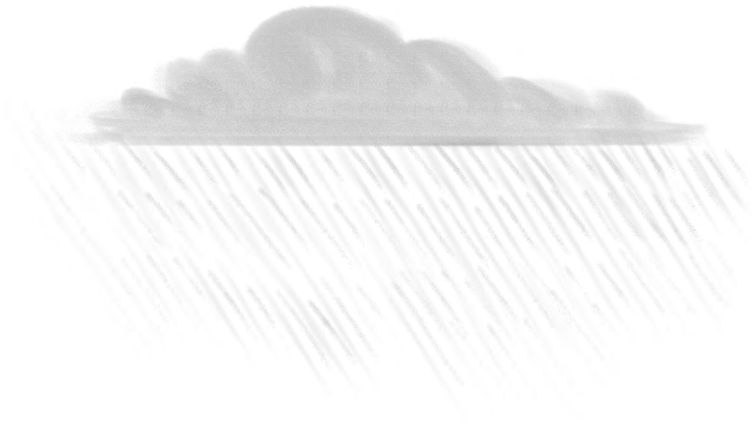
AC9SFU01 observe external features of plants and animals and describe ways they can be grouped based on these features

AC9S1U01 identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs

Using the online module

Introduction

Before you begin the online module, use this activity to introduce students to the water cycle and the processes that occur when water moves through different environments.



Puddles to clouds (evaporation)

Have the whole class crouch low to the ground. 'We're little puddles on the earth, resting after the rain.

Oh no, the sun is coming out! Can you feel its warmth? It's making us light and lifting us up slowly! *(Encourage students to rise slowly, reaching up high like they're evaporating into the air).*

Cloud formation (condensation)

'We're floating way up in the sky now! Look around—there are so many of us up here!

The air is cold, and we're starting to stick together.' *(Students shuffle closer together, mimicking water vapour turning into clouds).*

'Now, we've become a big, fluffy cloud, but uh-oh...we're getting heavier as we collect more water!' *(Encourage students to stretch out and sway slowly like a growing cloud).*

Rainfall (precipitation)

'We're too heavy to stay up here. What's going to happen? Yes, we're falling back down as raindrops!' *(Students gently wiggle their fingers as they slowly crouch back down to the ground, mimicking raindrops falling).*

Puddles to clouds one more time!

We're muddy puddles again. After a while the sun comes back out, which is nice and warm.

Do you remember what happens when the puddles warm up? Yes, we start to lift and float back up into the sky!

Cloud formation

Remember it's cold way up here, so what do we do? Huddle! We're forming clouds...

Rainfall

We're getting heavy again now, what happens next? Yes, we're falling back down as raindrops!

Onto the ground (collection/ infiltration/run-off)

'Now we're back on the ground again, soaking into the earth where plants, animals, and people can use us.' *(Then encourage students to stand up again, stretching their arms wide as if they're the trees or animals benefiting from the water).*

And that's how water moves around the Earth, around and around with the weather, in the water cycle.

Animation and Chapter 1 of 'The Water Guardians: from mountain to sea'

Students view the 30 second Prep-2 animation. Here, they will meet the animals and understand the key messages within the narrative.

The teacher will then read Chapter 1 of 'The Water Guardians: from mountain to sea' storybook in its entirety to students prior to beginning Lesson 1.

Challenge question – Chapter 1

Posing challenge questions to students has three key benefits.

- It encourages **critical thinking** by getting them to analyse and evaluate information.
- It boosts **engagement** by making learning more interesting and motivating.
- It helps develop **problem-solving skills** by requiring students to apply what they know to real-life situations.

Ask the following question, record students' responses and then take opportunities throughout the lesson to 'check in' with students.

Are they able to use their new knowledge to confirm, add to, or alter their responses?

Winnie the wombat is miserable with all the rain on the West Coast of Tasmania. She doesn't understand why we need to conserve water.

Why do you think we need to be careful with how much water we use, when it seems like there is so much of it?

Beginning the workshop

After listening to Chapter 1, students log in to the online workshop **Prep-2 TasWater water literacy primary program**, via their devices (e.g. school laptops or iPads/tablets).

Students commence the pre-session quiz and their responses will help you understand how much they already know about the topic. Discuss the responses and answers to the pre-session quiz with your class. Ask students to share their ideas and views about water in addition to any questions they have. Identify aspects they would like to know more about.

Next, guide students through the online workshop activities, one lesson at a time.

Pre-knowledge quiz questions:

Question	Answer
1. Why does Laurel the platypus think it's important to save water?	**D)** Because water is precious and needed for people, animals, and plants
2. What did Keith do that upset Laurel the platypus and Winnie the wombat?	**B)** Leaving the tap running while brushing his teeth and taking a long shower
3. True or False: Water is a liquid, but it can also be a solid and a gas.	**True**
4. The most important reason people need water is to:	**A)** Stay hydrated to help the body function properly
5. Some places you can find water include:	**D)** All of the above
6. What happens next to water in a puddle when the sun shines on it?	**B)** It disappears into the air

Main body of workshop

Lesson 1: Water conservation (Questions 7-12)

Question 7: Water's many forms – spotting the states

Display Question 7. *Think about the different places you see water every day. Can you share an example of where you find water as a solid, liquid, and gas?*

Sample questions for students:

What do you notice about ice? Is it hard or soft? Can you hold it in your hand?

What does liquid water feel like? How does it help plants and animals?

What happens when you see steam? Can you see it clearly, or does it disappear?

Question 8: Where can we find water?

- Set a timer for 1 minute. Students take turns quickly naming a place you find water (e.g. river, pool, rain) until the timer goes off. Encourage them to think of as many as they can.
- Once the timer is up, display Question 8 and give students the sorting words (natural and human-made water places, or states – these may need to be explained). Have them drag and drop the items into the correct categories on the board or their personal devices.

Extension opportunity: Have students research specific rivers or lakes in Tasmania that are important to the Palawa people and discuss what water means for them. Does it give students a new perspective on water?

Question 9: Winnie's weather worries

- Show image of Winnie in Question 9. As a class, click on the markers together, reading out loud the text that appears, discussing how Winnie is affected by the wet conditions.
- Students share how they feel when it is wet. Are there things they cannot do? Does it affect their mood?

Question 10: Aunty Laurel's water-saving advice

- Display Question 10. *Let's think about what Aunty Laurel says about saving water. Why do you think her advice is important? Can you share one way you save water at home or school?*
- Work together as a class to match Aunty Laurel's advice to each water-saving message.

Extension opportunity: Have students create a poster or infographic that shows some of Aunty Laurel's advice.

Question 11: Vocabulary flip

- **Offline activity 1: Vocabulary treasure hunt**

Preparation

Place vocabulary cards around the classroom or outdoor space for students to find.

Instructions

Explain to the children that they will go on a treasure hunt to find the vocabulary cards hidden around the room or playground. As they find each card, they must bring it back to the group. Once all cards are collected, sit in a circle and go through each card together.

For each word, ask students to describe what they see in the picture, and encourage them to say the word out loud. You can ask questions like, What animal do you see? or What does that house look like? You can also refer to stanzas from the story, e.g. The magnificent monotreme let out a long sigh, 'You're nocturnal, I get it Winnie, so am I.' Finish the activity by asking students to draw their favourite vocabulary word and share it with the class, reinforcing their understanding through creativity and discussion!

- Display Question 11 and complete as a class.

Question 12: Water saving or water wasting?

- Display Question 12 and categorise the cards as a class. Ask students whether they do any water-saving actions in their home? Do they have any others they can share with the class?
- **Offline activity 2: Water hero vs. water villain trading cards**

Set up

Introduce the concept of water heroes (those who save water) and water villains (those who waste water).

Provide students with examples of water-saving and water-wasting actions, such as fixing leaks or leaving the tap running while brushing teeth.

Instructions

Each student will design their own water hero or water villain trading card.

- Choose a character type: Will their character be a Water Hero or a Water Villain?
- Create a name for their character that reflects their water-saving or water-wasting behaviour (e.g. Drip Defender for a hero who fixes leaks).
- Describe their special powers or traits: What makes them a hero or villain? For example, a hero might use rainwater to save plants, while a villain runs the hose during the hottest part of the day.
- Draw an illustration of their character to make the card fun and visually appealing.
- Write a short description explaining the character's behaviours. For heroes, the focus is on water-saving actions, and for villains, it's on water-wasting habits.
- Once the cards are designed, students will share their creations with the class.
- As each student presents their water hero or water villain, the class can discuss whether the behaviours are helpful or harmful to water conservation.

Challenge question revisited – Chapter 1

Sample answer: At first, Winnie the wombat doesn't understand why saving water is important. She thinks there's plenty of it. But Laurel helps her see that water is special and should be treated carefully. She talks about how wasting water can hurt the environment and future animals and people.

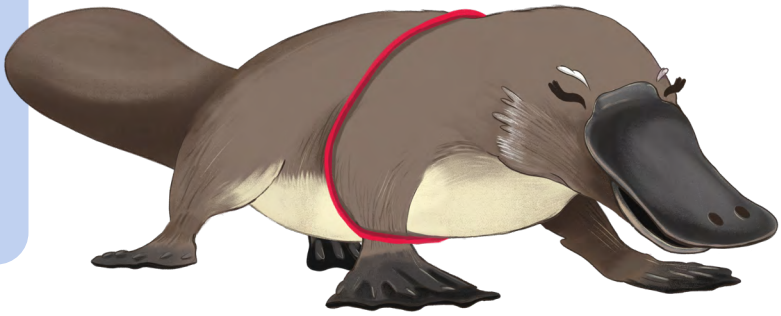
Lesson 2: Water quality (Questions 13-17)

The teacher will read Chapter 2 of 'The Water Guardians: from mountain to sea' storybook in its in its entirety to students prior to beginning Lesson 2.

Challenge question – Chapter 2

Ask the following question, record students' responses and then take opportunities throughout the lesson to 'check in' with students. Are they able to use their new knowledge to confirm, add to, or alter their responses?

In the story, the animals face the problem of littering, which harms their environment and drinking water. When Jaz finds Aunty Laurel tangled in a hair tie, we see how litter can hurt wildlife.



Why is it important to keep our environment, and water clean?

Question 13: Introduction to the water cycle

- **Water transformation experiment**

Preparation

Gather materials like a clear bottle with a lid, a small amount of water, a small piece of ice, and a sunny spot or a lamp to represent the sun.

Instructions

1. Show the water: Start by pouring a small amount of water into the clear bottle. Ask the students to observe the water and talk about how it looks and feels.
2. Add ice: Next, add the small piece of ice to the bottle (will it float or sink?), put the lid on, and ask the students what they think will happen to the ice as it sits in the water.
3. Mark the water level on the outside of the cup.
4. Introduce heat: Explain that the sun or the lamp will act as the heat source. Place the cup in a sunny spot or under the lamp, explaining that this will heat up the water.

Observation time

Allow the students to watch as the ice begins to melt and the water gets warmer. Ask them questions like, What do you see happening to the ice? and How might the water feel now? Discuss how the ice melting is the water changing states from solid to liquid.

Demonstrate evaporation

After the ice has melted, explain that if you leave the bottle out long enough (or if it gets hot enough), the water will eventually evaporate and turn into vapour. After a while, check the water level in the bottle, is it still at the same level? If not, where has it gone? Is it on the walls of the bottle?

Is any of it getting so heavy, it is falling back to the liquid at the bottom of the bottle?

Conclusion

Conclude the activity by explaining that when water gets hot enough, it changes into vapour and goes up into the air. Discuss the importance of water in the environment and the need to stay hydrated, especially on hot days. Encourage students to think about other times they have seen water change, like puddles disappearing on a sunny day or even ice cream melting (it's the water in the ICE cream changing states).

- Display Question 13 and click on the markers, reading through the simplified water cycle as a class. Are there any other processes within the cycle that students can add?

Extension opportunity: Students explore how the Palawa people managed water availability, did they store or move water, or did they have to move around to find more? Students can present a short summary of Tasmanian aboriginal practices around water availability.

Question 14: The impact on wildlife

- Display Question 14: Why is it important to put your rubbish in the bin? Ask students to discuss the options with a partner for one minute, encouraging them to think about the effects of litter on wildlife. After a minute, bring the class back together and ask them to raise their hands for their chosen answer. Select the answer as a class. Once the correct answer (B) is revealed, provide reinforcement as per quiz feedback (That's correct! Litter can harm animals and the environment; it is important to put your rubbish in the bin or take it with you.) Emphasise the importance of proper disposal of rubbish and how it helps maintain a healthy environment.
- ### Offline activity 3: Create a litter monster

  Activity: Have students create a 'litter monster' using recycled materials (like cardboard, plastic bottles, and paper).

  Note: for safety and hygiene reasons, do not use actual litter and avoid any food packaging that may contain traces of allergens such as nuts.

  As they construct their monsters, discuss how the types of litter might harm wildlife and how they can help prevent it. Each student can share one fact about how their chosen material could impact animals.

  Ask the students if they would be happy to drink water with rubbish in it.

Question 15: How litter affects the environment

- Display Question 15. Students are to use their senses to describe the scene, imagining they are an animal. How does it smell? What would it sound like to walk on? How would it feel on your paws? If you mistook the rubbish for food, what would it taste like? Does it look like anything else?
- Click on each of the markers and pause as you read about each piece of litter and the impact it could have on wildlife and waterways.

Question 16: The clean up

- Display Question 16. Ask *If you could be any animal helping Jaz clean up the shore, which one would you be and why?* Encourage students to think about what special skills or qualities their chosen animal might bring to the cleanup effort. Match each step with the actions the animals took to clean up the shore.
- *Can you think of a time when you helped clean up your school or neighbourhood? How did it make you feel? What other ways can we be like Jaz and the animals to keep our environment clean?*

Optional: Students can think of a catchy slogan or a fun song that they could share to encourage others to keep the environment clean, similar to what Jaz might have said.

Question 17: Before and after

- Display Question 17. As students slide between the images, prompt them with questions to encourage observation.
- *What do you notice about the shoreline in each picture? How do the colours look different? Which image makes you feel happier?*

Optional: Give students a piece of paper and ask them to draw their own 'before' and 'after' scenes of a place they want to clean up (like their playground, home, or a park). Encourage them to share their drawings and discuss how they would feel after their cleanup effort.

Challenge question revisited – Chapter 2

Sample answer: Keeping our environment clean is important because it helps protect animals and our environment. Litter can hurt wildlife and make it hard for them to find clean water. When we clean up, we make sure all living things have a safe place to live. A clean environment is better for everyone, including us! By picking up litter, and stopping it from blowing away in the first place, we can help the planet and all its creatures.

Lesson 3: Water for health (Questions 18–22)

The teacher will read Chapter 3 of 'The Water Guardians: from mountain to sea' storybook in its entirety to students prior to beginning Lesson 3.

Challenge question – Chapter 3

Ask the following question, record students' responses and then take opportunities throughout the lesson to 'check in' with students. Are they able to use their new knowledge to confirm, add to, or alter their responses?

Jaz explains, 'Have a look at what's going on, so much of the water is salty or it's gone.' This confuses Winnie.

Why do you think it's important for us to learn about where our water comes from and how to take care of it?

Question 18: Winnie's weather worries (West Coast)

- Show image of Winnie in Question 18. As a class, click on the markers together, reading out loud the text that appears, discussing how Winnie is affected by the dry conditions.
- Students share how they feel when they haven't had enough to drink. Are there things they cannot do? Does it affect their mood? How does it affect their body?

Question 19: Salt water versus fresh water

- Allow students to share personal experiences about where they've seen or used water (e.g. at the beach, in a lake, from a tap at home).
- Have you ever seen a river or lake? What did it look like? Did you know if it was safe to drink?
- Display Question 19 and have students identify each water source. Do they think it is fresh water or salt water? Is it drinkable? Flip each card to reveal the answers. Summarise their ideas and emphasise that even though water seems abundant, we need to be mindful of how we use it and make sure we protect our precious freshwater sources.

Optional: Go onto the TasWater website and see if you can find out what the water source is for your school. Ask students if anyone has been there or knows anything about it. Can they draw a picture of it?

Question 20: Why do people need water?

- **Charades – Water needs**

  Create charades cards for different scenarios where water is needed. Examples:

  - Drinking water: Pretend to drink water after a long run.
  - Cooking: Act out washing vegetables or boiling water for pasta.
  - Bathing: Mimic taking a shower or bathing a pet.
  - Watering plants: Pretend to water a plant or garden.
  - Cleaning: Act out washing hands or cleaning a surface.

  ### Instructions

  A student comes to the front of the classroom and reads the scenario (for younger students the card is read to them). They act out the scenario, showing how water is needed. The rest of the class guesses what they are doing.

  ### Discussion points

  - What did you notice about each scenario?
  - Ask students to reflect on the different ways water is used in their skits.
  - Why is it important to have water for these activities?
  - Discuss how each scenario would be affected if there was a lack of water.
  - How can we ensure we have enough water for these needs?

- Did you know we also need water for our bodies to function properly? Water can be found in our blood, saliva, sweat and tears! Display Question 20 and complete the matching activity as a class.

Question 21: East and West

- Display Question 21. Do students know what this map represents? Which side is the West Coast and which side is the East Coast? Do they recall from the story which coast receives more rainfall? After a short discussion, read through the differences together.

Optional: Water tug-of-war

Set up

Create two large areas on the classroom floor (using tape or hula hoops) labelled West Coast and East Coast. The West Coast will be filled with blue counters representing abundant water, while the East Coast will have only a few counters to represent water scarcity.

Instructions

- Split the class into two teams, representing the East Coast and the West Coast. The West Coast team has plenty of blue counters while the East Coast team needs to collect water to survive.
- The goal is for the East Coast team to come up with water-saving strategies to earn more blue tokens from the teacher, like fixing leaks, collecting rainwater, or taking shorter showers (each strategy earns a counter).
- The West Coast team, with more water, must work on keeping their water safe by providing water-wasting actions like leaving the tap on or watering plants at midday. If they stop enough water wasting actions, they keep their tokens.
- After the game, bring the teams together for a discussion on the differences between water availability in the two regions. Ask questions like, Why did the East Coast team have to work harder for water? and How can people on the West Coast use their water wisely?

Question 22: What are you made of?

Display Question 22 and answer as a class. Encourage students to look at the image to support their answer.

Discussion questions:

If our bodies are made up of about 60% water, what do you think happens to us when we don't drink enough water?

Can you think of some times when you felt really thirsty? What did you do?

How does drinking water help us feel and play better?

Why do you think it's important to drink water every day?

What are some fun ways we can remember to drink more water?

Challenge question revisited – Chapter 3

Sample answer: Learning about where our water comes from and how to take care of it is important because water is essential for all living things. It helps us understand that not all water is safe to drink and that we need to use it wisely. By conserving water, we can make sure there is enough clean water for everyone—plants, animals, and future generations.

Post-session quiz

Encourage your class to complete the post-knowledge quiz independently. It is identical to the pre-knowledge quiz, so your students' responses will indicate improvements in their understanding of water conservation, water quality and water for health.

Question	Answer
1. Why does Laurel the platypus think it's important to save water?	**D)** Because water is precious and needed for people, animals, and plants
2. What did Keith do that upset Laurel the platypus and Winnie the wombat?	**B)** Leaving the tap running while brushing his teeth and taking a long shower
3. True or False: Water is a liquid, but it can also be a solid and a gas.	**True**
4. The most important reason people need water is to:	**A)** Stay hydrated to help the body function properly
5. Some places you can find water include:	**D)** All of the above
6. What happens next to water in a puddle when the sun shines on it?	**B)** It disappears into the air

Post-workshop discussion:

Invite your students to share any interesting or important lessons they have learned from the workshop. Revisit the three challenge questions and student responses. Identify gaps in the students' learning and review the relevant workshop activities if necessary.

At home activity pack

Students are encouraged to continue learning about water literacy at home, with their families. The TasWater 'At home activity pack' is a supporting resource that can be included in newsletters, on school communication apps, or shared on a learning management system (LMS). The 'At home activity pack' shares the key messages that students have learned with their class. It includes conversation starters and a fun family activity designed to extend water literacy from the classroom into the home.

Additional resources

Water cycle songs: GoNoodle has a catchy water cycle song with dance moves! Search 'GoNoodle – water cycle' online to find it.

Hydro Tasmania: Learn how Hydro Tasmania manages water sources and explore their educational resources at Hydro Tasmania.

Bonorong Wildlife Rescue: Tasmania's largest 24/7 Wildlife Rescue Service supports thousands of animals each year. Save their hotline, 0447 264 625, and check out their 'What Can I Do?' section.

Platypus protection: Rubbish can be deadly for wildlife. 'Seize it, Snip it, Bin it!' helps prevent loop trash injuries. Visit Hobart Rivulet Platypus and the Australian Wildlife Society for more.

Wind-proof your bins: Light recycling materials often escape in Tasmania's wind. Some Councils offer free bin latches to prevent spills without affecting collections. Contact your Council or purchase a latch online.

Dark Sky for wildlife: Birds like shearwaters and penguins are disoriented by nighttime light reflections. Learn more about the dark sky movement at Dark Sky Tasmania.

Helping native wildlife: Make your area a haven for wildlife with native plants, water sources, and safe spaces. Find tips at TassieCat and backyard bandicoot tips from the City of Hobart.

NASA water education: For a space-themed view on water's importance, search 'NASA water education' online.

If you have any questions or would like to share your water literacy activity experiences, please feel free to reach out by emailing communityprograms@taswater.com.au or to find out more about your water please visit www.taswater.com.au