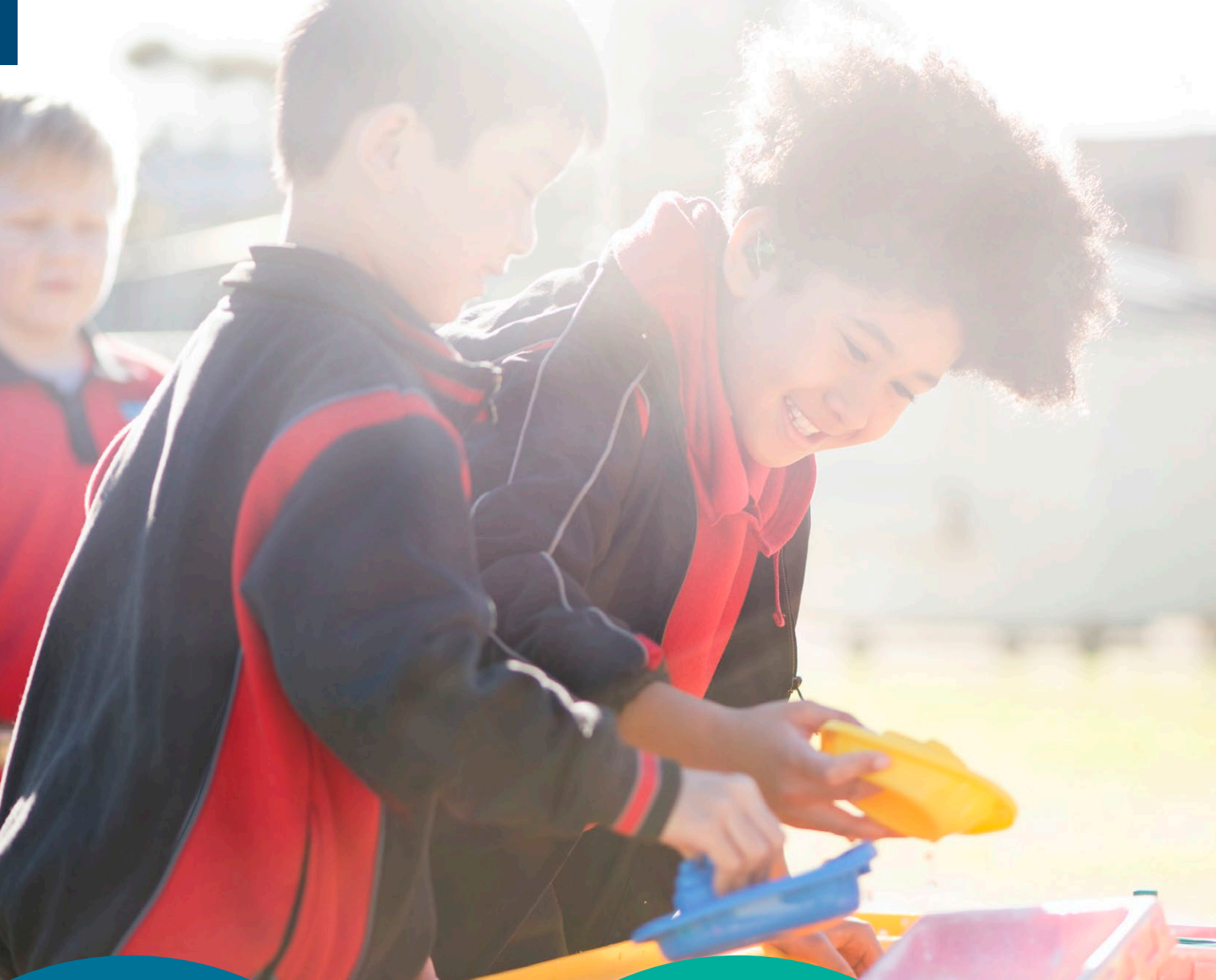


Teaching Waterwise

An early childhood resource

Waterwise Schools Program

WATER CORPORATION waterwise

Waterwise Starters Kit

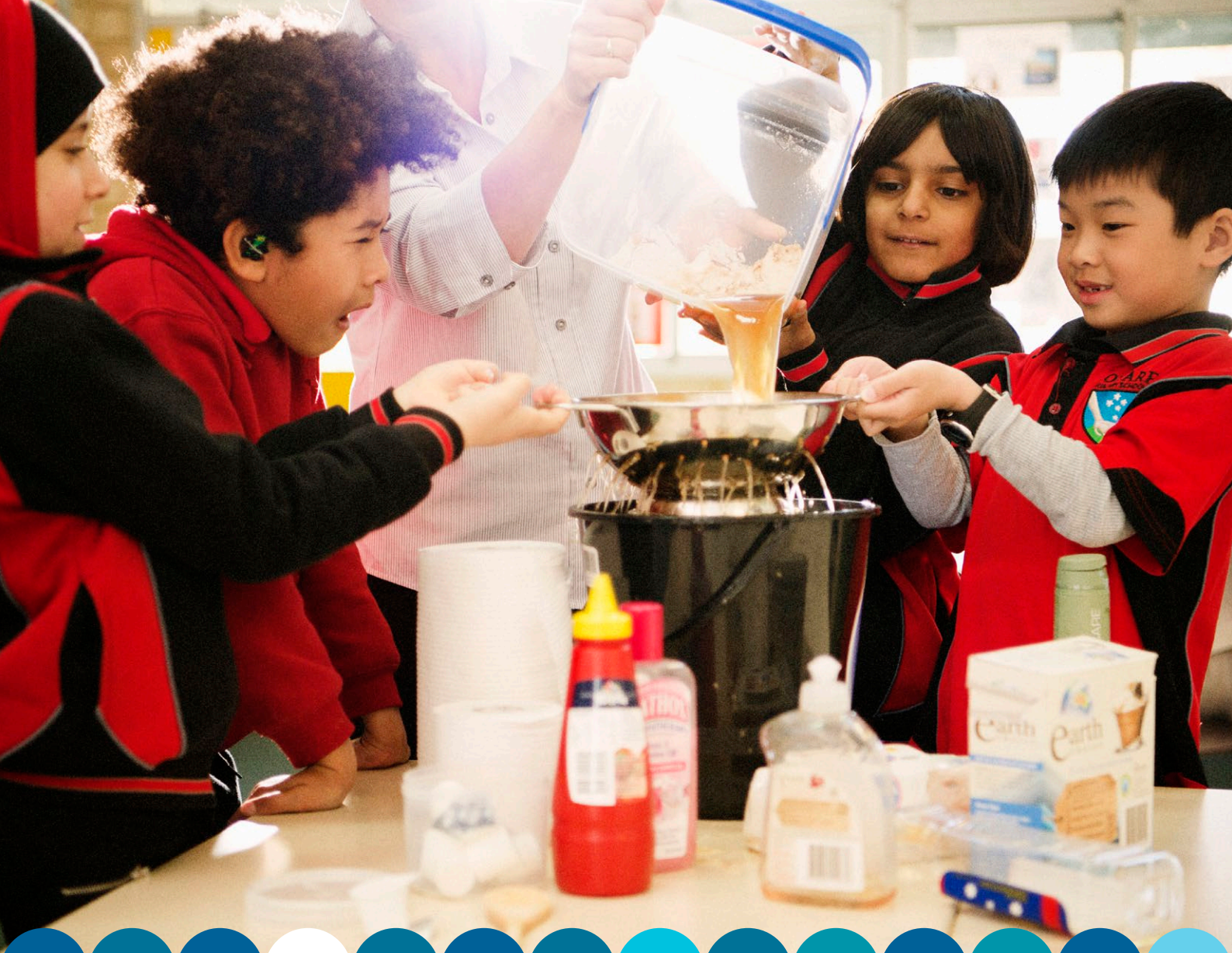
ISBN 1 74043 945 7

Water Corporation
John Tonkin Water Centre
629 Newcastle Street
Leederville WA 6007

watercorporation.com.au/waterwiseschools

2854.8.2016

Contents



How to provide a waterwise service

Links to the National Quality Standards

The National Quality Standards (NQS) sets a high national benchmark for early education and care and outside school hours care services in Australia.

There are seven quality areas that are important outcomes for children as part of the NQS. When implementing the suggestions in this booklet, you will be compliant with at least four quality areas including: educational program and practice; children's health and safety; physical environment; and collaborative partnerships with families and communities.

Quality Area 1 – Educational program and practice

Standard 1.1 Program
The educational program enhances each child's learning and development

Element 1.1.1 Approved learning framework
Curriculum decision making contributes to each child's learning and development outcomes in relation to their identity, connection with community, wellbeing, confidence as learners and effectiveness as communicators.

Element 1.1.3 Program learning opportunities
All aspects of the program, including routines, are organised in ways that maximise opportunities for each child's learning.

Quality Area 2 – Children's health and safety

Standard 2.1 Health
Each child's health and physical activity is supported and promoted.

Element 2.1.2 Health practices and procedures
Effective illness and injury management and hygiene practices are promoted and implemented.

Element 2.1.3 Healthy lifestyle
Healthy eating and physical activity are promoted and appropriate for each child.

Quality Area 3 – Physical environment

Standard 3.2 Use
The service environment is inclusive, promotes competence and supports exploration and play-based learning

Element 3.2.3 Environmentally responsible
The service cares for the environment and supports children to become environmentally responsible.

Quality Area 6 – Collaborative partnerships with families and communities

Standard 6.2 Collaborative partnerships
Collaborative partnerships enhance children's inclusion, learning and wellbeing.

Element 6.2.3 Community engagement
The service builds relationships and engages with its community.

Being waterwise is easier than you think

The following tips will help you identify areas where you can save water inside and outside your centre.

Waterwise tips for inside

- Teach effective handwashing practices and encourage children to turn off the tap while lathering their hands
- Encourage children to use the half flush, if you have one
- Avoid pre-rinsing dishes before putting into the dishwasher
- If you are looking at upgrading your centre's dishwasher or washing machine, installing a WELS rating of four stars or higher will increase water efficiency
- Ensure that you are only using your dishwasher and washing machine with full loads
- Wash toys in the dishwasher
- Collect the water used to wash fruit and vegetables and reuse it on the garden
- Having low flow taps will save you water
- Use a bucket of water to clean paintbrushes rather than a running tap
- Conduct a basic water audit
- Place posters at water-use areas to encourage water saving behaviours (page 8)

Waterwise tips for outside

- Ensure the plants in your garden are waterwise
- Create a waterwise verge
- Stick to your watering roster and water once per watering day, before 9am or after 6pm
- Turn off your sprinklers if there is rain forecast
- Reduce sprinkler times by 2 minutes per station
- Ensure that your soil has good water retention by applying a soil improver and using wetting agents when required
- Hydrozone: group plants with similar water needs
- Apply chunky, coarse mulch to reduce evaporation
- Use catch cups to test how efficient your sprinkler system is
- Use a broom instead of a hose to clean outside
- Encourage children to water gardens with watering cans
- Install a rainwater tank to use for water play and to feed toilets.
- Reduce lawn by including paved areas and waterwise gardens
- Use a dripper system in garden beds

For further information head to watercorporation.com.au/save-water

Spread the word

We encourage you to involve parents/guardians and grandparents in waterwise activities to spread the waterwise message beyond the classroom. Here are some ideas to involve families

- Communicating water-related messages via school and community newsletters
- Publicising your water use via assemblies, online newsletters, signs etc, on a monthly basis
- Participating in National Water Week activities (page 6)
- Working with local media to publicise your waterwise projects
- Using your social media platforms to promote waterwise activities and messages
- Conducting a display of water books
- Creating a notice board in the entrance with waterwise tips and information
- Organising fetes to raise money for waterwise activities or a water-related charity

Annual water themed events

Link your learning to special water themed days and weeks throughout the year.

February
World Wetlands Day

March
Clean Up Australia Day
World Water Day

April
Earth Month
World Health Day
Earth Day
Arbor Day

June
World Environment Day

July
National Tree Day

August
World Water Week
National Science Week
Keep Australia Beautiful Week

September
Biodiversity Month
World Rivers Day
Conservation Week

October
National Water Week
National Nutrition Week
Global Handwashing Day

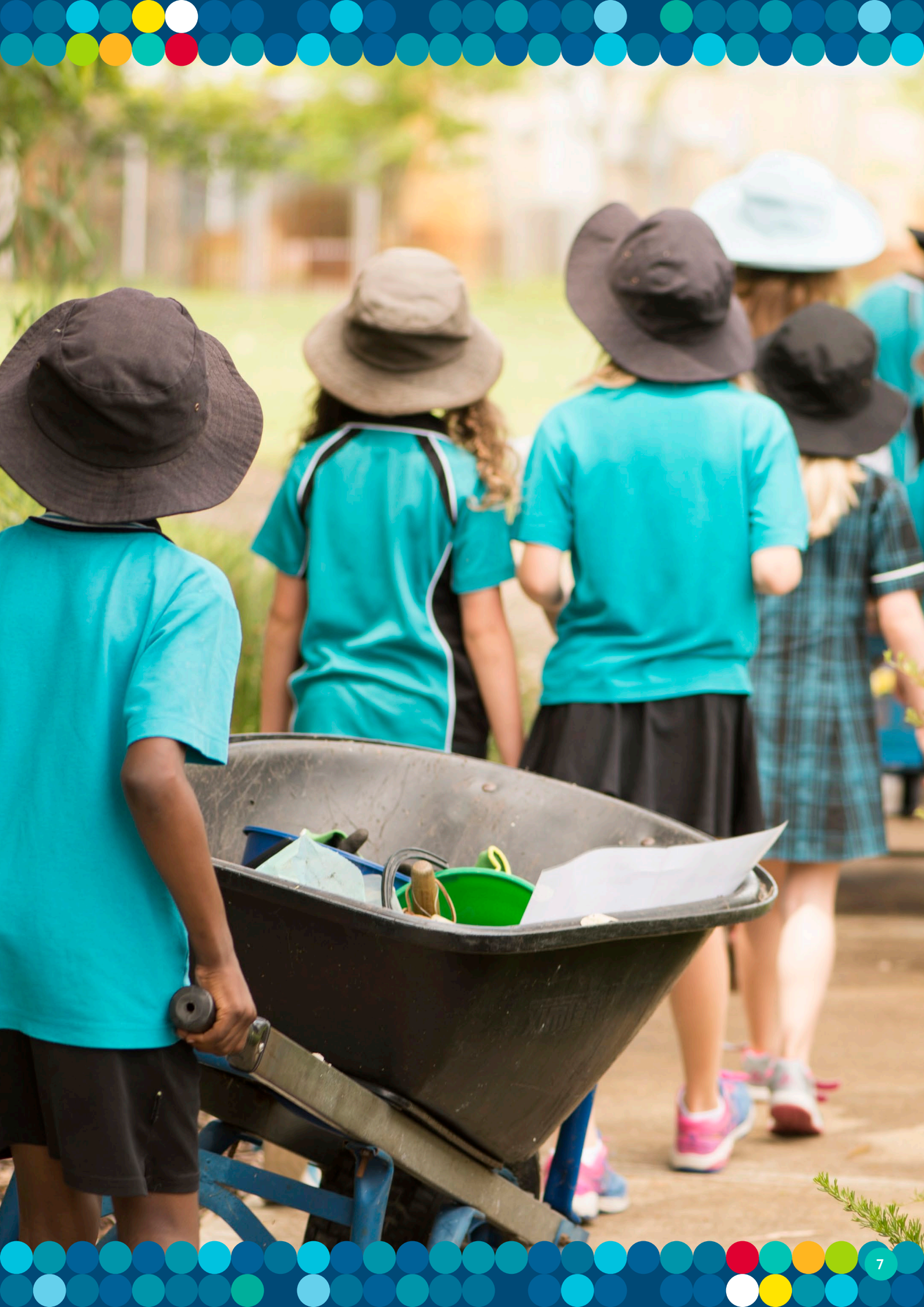
November
National Recycling Week
World Toilet Day

National Water Week

National Water Week makes a splash across Australia, inspiring individuals, communities and organisations to work together to build awareness around the value of water.

How you can celebrate National Water Week:

- Conduct the activities provided in this book
- Make a bulletin board with 'Water' as the heading and encourage children to draw water-related pictures
- Do a water audit of your centre. Look for leaking taps and any other wasteful practices
- Maintain a water theme for the week
- Learn and sing a water themed song
- Designate children as 'water inspectors' for the day, to ensure that no water wastage is occurring
- Set up a water-related display in your centre
- Display water facts and tips around the room
- Prepare a water-themed dance and perform for parents
- Choose water related books to read



Activities and Resources

Links to the Early Years Learning Framework

The Early Years Learning Framework (EYLF) is implemented in early childhood services for children from birth to five years of age. It outlines the practices and outcomes that will best support these young children's learning and transition into school.

Sensory play is integral for the development of young children so water play is a fantastic way to stimulate their senses and enhance learning. Exposing children to water education early helps them to grasp concepts that provide a basis for further learning throughout primary and secondary school. The activities provided in this book align with four of the five outcomes in the EYLF.

Learning overview

The activities listed in this booklet are grouped under six themes. These themes will help children understand the many different areas in which water impacts our lives.

	Outcome 1 Children have a strong sense of identity. Children learn to interact in relation to others with care, empathy and respect.	**Outcome 2** Children are connected with and contribute to their world. Children become socially responsible and show respect for the environment.	**Outcome 3** Children have a strong sense of wellbeing. Children take increasing responsibility for their own health and physical wellbeing.	**Outcome 4** Children are confident and involved learners. Children resource their own learning through connecting with people, place, technologies and natural and processed materials.
Water and the natural environment (page 12)	✓	✓		✓
Stormwater and waterways (page 15)	✓	✓		✓
Water and health (page 17)	✓	✓	✓	✓
Water supply (page 20)	✓	✓		✓
Water conservation (page 23)	✓	✓		
Wastewater (page 25)	✓	✓		✓

Water and the natural environment

Water is the earth's most precious resource; no plant or animal can survive without it. Water is in the air, oceans, rivers, streams and wetlands. It is constantly moving in the water cycle, supporting all life on Earth.

Videos

How's the Weather?

A video about the weather today.
youtube.com/watch?v=rD6FRDd9Hew

Seasons Song

A video describing the four seasons.
youtube.com/watch?v=8ZjpI6fgYSY

The Needs of a Plant

A video describing the five needs of a plant.
youtube.com/watch?v=dUBIQ1fTRzI

The Water Cycle Song

A song describing the water cycle.
youtube.com/watch?v=TWb4K1M2vts

The Water Song (Sesame Street)

A song all about water.
youtube.com/watch?v=CwpHMPH-WbM

The Water Song Lullaby

A relaxing and soothing song about water.
youtube.com/watch?v=tquUKGCaFZs

Books

All the water in the world

Author: George Ella Lyon
ISBN: 978 14 1697 130 6
A fun poem including facts about water and why we should conserve it.

I am water

Author: Jean Marzollo
ISBN: 978 04 3910 960 4
A colourful text that celebrates the usefulness of water.

Bear loves water

Author: Ellen Weiss
ISBN: 978 06 8982 417 3
Bear teaches readers about the many forms of water.

The drop goes plop: a first look at the water cycle

Author: Sam Godwin
ISBN: 978 14 0480 657 3
The journey of a drop of water through the water cycle.

Water

Author: Frank Asch
ISBN: 978 01 5202 348 5
A book that explains the importance of water and its many forms.

Seasons

Author: Blexbolex
ISBN: 978 15 9270 095 0
Exploring the associations people have with each season.

Activities

Will this object float or sink?

Children are connecting with their world and working as a team through water play, exploration and prediction (Outcomes 1 & 2).

Prepare a large, transparent container filled with water and gather a variety of objects that will either float or sink. Children will predict whether each object will float or sink, and why. After testing their prediction draw or write the object onto a 'float' or 'sink' chart.

What is the weather today?

Children connect with their world through use of their senses to explore the natural environment and predict the weather (Outcomes 2 & 4).

Each day have the children predict the weather outside and then, using the senses of sight, smell, touch and sound, determine if they were correct. Ask – do we need to use water on the gardens today?

The four seasons

Children connect with their world as they increase their knowledge of the four different seasons (Outcome 2).

Discuss the seasons we experience and, on a large piece of paper divided into four, draw things that match with each season (clothing, activities, and weather). Play 'I spy' as the children guess which season you are referring to. Ask the children which seasons we use the most and least amount of water in.

What can absorb water?

Children are connecting with and expanding on their world as they investigate and predict which objects will absorb water (Outcomes 1 & 2).

Using ice-block containers have children put various materials into each square (e.g. sponge, alfoil, cotton ball, paper towel or styrofoam). Predict whether it will soak up the water or not and see if their predictions are correct. Can they get the water back out?

What can water dissolve?

Children are connecting and contributing to their world as they solve problems, infer and predict what substances can be dissolved in water (Outcome 2).

Gather a variety of substances (e.g. salt, sugar, sand, jelly, detergent) and label each with a note. Have children predict whether or not the substance will dissolve in water and, after mixing it into the water, check to see if their prediction was correct. Place the note under 'yes' or 'no' headings.

What needs water to survive?

Children are showing respect for the environment as they develop an understanding of interdependence between the environment, plants and animals (Outcome 2).

Discuss with children who or what water is important for (plants, animals and people). Create colourful pictures of each and display them around the classroom.

How plants use water

Children are connecting with their world and showing respect for the environment as they explore and observe how plants respond to change (Outcomes 2 & 4).

Demonstrate how plants use water by standing a celery stick in water that is dyed with food colouring. Observe the water being carried through the veins of the celery stick.

Plants need water

Plant seeds (broad beans work well) into several recycled pots (can be created from newspaper). Vary the amount of water each bean receives and observe the difference in growth rates and appearance. Record these observations on a large chart.

Art and evaporation

Children are connecting with their world as they investigate and explore the idea of evaporation (Outcome 2).

Using duct tape create 'art frames' on the pavement which the children will draw in with chalk. They will then spray their drawing with a water-filled spray bottle and watch how the water changes the pavement. Ask the children to predict what will happen if they leave it for a while and then check later in the day if their predictions were in fact correct. What has happened and why? Relate this to what happens to puddles.

Creating clouds

Children are connecting with their world as they demonstrate an increasing knowledge of the natural environment and weather (Outcome 2).

Using glass jars (or a glass cup with small plate) fill ⅓ full with hot tap water. Place the lid on the jar and, on the lid, place some ice-blocks. Lift the lid and spray some aerosol hairspray inside before quickly covering the jar; watching as a cloud forms. After a while you can 'let the cloud out' by lifting the lid. Explain to the children the importance of clouds to the water cycle.

How can plants affect soil erosion?

Children are connecting with and making sense of their world as they demonstrate an increasing knowledge of and respect for the natural environment (Outcomes 2 & 4).

On a table set up two plates, one with soil and grass seeds (which you will water until they have grown) and one with just soil. Once the grass has grown, tilt the table and use a fan to demonstrate how the soil without plants has blown away. Do a similar demonstration using water (rain).

Our frog friendly garden

Children are becoming socially responsible and showing respect for the environment as they display a growing appreciation and care for living creatures (Outcomes 1, 2 & 4).

Make your garden frog friendly by creating a wet area/pond, good shelter and native plants. Place tadpoles into the pond and watch them grow.

Worm farming

Children are becoming socially responsible and showing respect for the environment as they display a growing appreciation and care for living creatures (Outcomes 1, 2 & 4).

With the children create a worm farm in the garden. Explain the conditions that the soil must be in for worms to thrive. Teach the children how to hold the worms without harming them, and explain how compost can be placed into the worm farm to feed them.

Stormwater and waterways

Water is continually used, reused and returned to the water cycle. A lot of this water will enter the cycle through natural means like evaporation and runoff, however stormwater is collected by the drainage system and carried to basins, rivers, wetlands and the ocean. If pollutants enter this drainage system they can cause tremendous harm.

Videos

Drip, drop rain (dance)

A dance about a raindrop.
youtube.com/watch?v=3WIF98ss2Tw

It's raining, it's pouring

Common nursery rhyme.
youtube.com/watch?v=Zx3GhruZM7w

Rain, rain go away

Nursery rhyme about the rain.
youtube.com/watch?v=Zu6o23Pu0Do

Freddy the Fish Teaches About Stormwater

Freddy the Fish talks about where rain goes.
youtube.com/watch?v=jjPfLhJbdc0

Books

All the water in the world

Author: George Ella Lyon
ISBN: 978 14 1697 130 6
A fun poem including facts about water and why we should conserve it.

Keeping water clean

Author: Helen Frost
ISBN: 978 07 3688 633 8
A book that describes water pollution and its effects on the environment.

Rain dance

Author: Cathy Applegate
ISBN: 978 18 7628 940 9
Story about the joy of smelling, seeing and feeling rain.

The little raindrop

Author: Joanna Gray
ISBN: 978 17 4352 369 8
A raindrop making its way through the water cycle.

Water: up, down and all around

Author: Natalie Rosinsky
ISBN: 978 12 8214 208 4
Describes the different states of water.

Where do puddles go?

Author: Fay Robinson
ISBN: 978 06 0622 912 8
A child discovers what happens when puddles evaporate.

What makes it rain?

Author: Katie Daynes
ISBN: 978 14 0959 881 7
Learn about the science of weather.

Activities

Where does the rain go?

Children are connecting with and contributing to their world as they investigate what happens to rain and subsequent water pollution (Outcomes 1 & 2).

Take the children for a walk to locate any drainage structures (downpipes, gutters, soak wells, grates, pipes and open drains). Discuss why we have these and where they take the water. Look to see if there are any materials collected over the grates and soak wells. Discuss what will happen if rubbish gets into the rivers and oceans.

Creating a drainage system

Children are connecting with their world, becoming socially responsible and showing respect for the environment by developing an appreciation and care for the waterways and an awareness of how human activity can impact the environment (Outcomes 1, 2 & 4).

Look for drains both inside and outside for inspiration. Then create a model of a drainage system showing how water travels from a house and how stormwater drains to a river, ocean or wetland. Use a variety of materials such as straws, PVC pipes, boxes and containers to represent homes, pipes, soak wells and water bodies.

Rainy day play

Children are connecting with and contributing to their world as they engage in play and investigation to explore the various properties of rainwater and where it goes (Outcomes 1 & 2).

On a rainy day take the children outside to observe where the rain goes. Observe how some of it soaks into the ground, some forms puddles and some goes into the drainage system. Observe the flow of water and encourage children to play in the rain and puddles outside if they have appropriate gear on.

Pollution in water

Children are connecting with and contributing to their world as they engage in play and investigation to explore the effect of pollution in water (Outcomes 1 & 2).

In a large, shallow container, combine water with things that may get into stormwater (oil, fertiliser, detergent, paint, litter, leaves, and sand). Cut some fish shapes out of plastic and place them in the container. Lift the fish shapes from the 'polluted' water and feel the oil and detergent on them. Discuss how fish and other animals might be affected by the quality of water.

What happens to fertiliser?

Children are becoming socially responsible and showing respect for the environment as they develop an awareness of the impact that fertiliser has on the environment (Outcome 2).

Discuss how over-watering and over-fertilising can cause nutrients to travel through groundwater to wetlands, rivers and oceans. Demonstrate how this happens by filling up a clear plastic cup with rocks or marbles to represent grains of sand. Pour water over the rocks to represent how rain or surface water becomes groundwater. Then sprinkle some jelly crystals over the top of the rocks to represent fertiliser. Pour some water over the crystals to show how the fertiliser dissolves and infiltrates into the groundwater.

Let's go fishing

Children are developing respect for the environment as they learn how human activity can impact the waterways (Outcomes 1 & 2).

Cut fish shapes from cardboard, and fishing poles from sticks and string, with magnets or sticky tape as hooks. Have the children play at fishing and discuss why it is important to keep waterways clean for the fish and animals that live in them.

Water and health

Our bodies need water to function properly. We use water for cooking, washing and drinking. It is able to remove waste from the body, helps us to digest food, sweat and controls our body's temperature. It is important to drink water every day, especially when exercising.

Videos

Sesame Street: healthy teeth, healthy me

A song about why you need to brush your teeth.
youtube.com/watch?v=wxMrtK-kYnE

The bath song

A song about how to take a bath.
youtube.com/watch?v=CG8F-6dZk8k

The Water Song

A fun song all about water.
youtube.com/watch?v=CwpHMPH-WbM

Wash your hands

A song about how and why you wash your hands.youtube.com/watch?v=iDe3wmOLvk0&feature

Books

Brush your teeth please

Author: Leslie McGuire
ISBN: 978 18 5724 871 5
A pop-up book that encourages children to brush their teeth.

Clean water for Elirose

Author: Ariah Fine
ISBN: 978 06 1599 353 9
Children set out to help a young girl who doesn't have access to clean drinking water.

Drinking water

Author: Mari C. Schuh
ISBN: 978 07 3686 926 3
A book that explains why your body needs water.

I don't want a bath

Author: Julie Sykes
ISBN: 978 05 9063 526 4
Little tiger learns the importance of taking a bath.

Wash your hands

Author: Tony Ross
ISBN: 978 18 4270 025 9
The little princess learns the importance of washing her hands.

You wouldn't want to live without clean water

Author: Roger Canavan
ISBN: 978 05 3121 219 6
Facts about the importance of clean water.

Activities

Why water is important

Children take increasing responsibility for their own health and wellbeing as they show an awareness of healthy lifestyles, why it is important to consume water, and use their gross and fine motor movement in role-playing (Outcomes 1 & 3).

Brainstorm a variety of occupations that use water. They will then role play these characters and through open-ended questioning, begin to understand the importance of water.

Why do we need clean water?

Children take an increasing responsibility for their health and wellbeing as they learn about water sanitation and how it can affect their health (Outcome 3).

Brainstorm the ways that children use water every day to stay clean and healthy. Ask how they think their lives may be affected if they did not have access to clean water. Take turns miming the various ways water can be used.

Water exploration through play

Children are connecting with and contributing to their world as they engage in play and investigation to explore the various properties of water (Outcomes 1, 2 & 4).

Set up a sensory water table and/or a water wall. Fill it with a variety of resources that the children can explore water with such as containers, spoons, beakers, toys and buckets. Teach the children to conserve the water they are using and, when finished, to pour the water into the garden.

Brush, brush, brush your teeth

Children develop a strong sense of wellbeing as they show increasing independence and competence in personal hygiene (Outcome 3).

Set up five containers with different liquids (two with a soft drink, one with coffee, one with tea and one with water). Place a boiled egg in each container and predict what will happen to the shell. Leave for some time and then check if the shell of the egg is stained. Use this to explain to the children that water is the best drink to have as it does not damage your teeth. The children can take turns trying to 'clean' the outer shells with toothbrushes. Explain why it is important to brush your teeth every day.

Washing away the germs

Children take increasing responsibility for their own health as they show an awareness of healthy lifestyles and competence in personal hygiene (Outcome 3).

Dampen your hands before pressing them into glitter. Explain to the children that the glitter represents germs on your hands before you wash them. Give them examples of when they need to wash their hands. Shake a child's hand, touch things and demonstrate how the germs are transferred. Allow the children to have a go. Ask why they need to wash their hands. Scrub all of the glitter off, demonstrating a correct handwashing technique.

Car wash

Children's responsibility for their health and wellbeing increases as they learn about germs and how important it is to keep things clean to prevent sickness (Outcomes 1 & 3).

Have children change into their bathers and prepare a washing day. They will wash their toys in troughs outside, learning the importance of hygiene. This can also be adapted to a 'car wash' where children can wash their bikes, tricycles and other outdoor equipment. Remember to be sunsafe with hats and sunscreen and set up all equipment in the shade.

Nutrition

Children take an increasing responsibility for their health and wellbeing as they learn how important a healthy diet is (Outcome 3).

Discuss how important water is for our body to survive. Explain that some foods are high in water content (like watermelon and lettuce). Relate this to the importance of a healthy diet.

Why we drink water

Children will take an increasing responsibility for their own health and wellbeing as they show an awareness of healthy lifestyles and nutrition (Outcomes 1 & 3).

Create an 'intestine person' where students feed them hard and dry food (e.g. marbles). The food will go down the tube and remain there (in the intestines) resulting in constipation. However, when the 'intestine person' drinks water, the food is 'flushed' through the body. A bucket (pretend toilet) catches the waste at the other end.

Water supply

Drinking water used in Western Australia comes from four major sources: surface water, groundwater, desalination and groundwater replenishment. Surface water is obtained from dams, groundwater is obtained from large natural underground storages called aquifers, desalinated water is obtained through seawater, and groundwater replenishment is recycled water treated to drinking water standards and recharged into our aquifers.

Videos

Itsy, bitsy spider

Nursery rhyme about itsy, bitsy spider.
youtube.com/watch?v=w_lCi8U49mY

The Water Cycle Song

A song describing the water cycle.
youtube.com/watch?v=TWb4KlM2vts

Water cycle – the Magic School Bus

A video about the water cycle.
youtube.com/watch?v=AQKdkponoZM

Where does the rain come from?

A video describing where rain comes from.
youtube.com/watch?v=Vm6HthxtzPw

Books

Follow the water from brook to ocean

Author: Arthur Dorros
ISBN: 978 00 6445 115 4
Find out where water comes from.

Splish, splash, splosh

Author: Mick Manning
ISBN: 978 14 4512 884 9
Great starting point for extending knowledge of water.

Types of water formations around us

Author: Baby Professor
ISBN: 978 16 8212 852 7
Learn about the different water sources and formations on Earth.

Watch over our water

Author: Lisa Bullard
ISBN: 978 07 6138 041 2
Children show readers how to reduce, reuse and recycle water.

Water is life

Author: Baby Professor
ISBN: 978 16 8212 854 1
Learn about the different sources of water.

Where does water come from?

Author: C. Vance Cast
ISBN: 978 08 1204 642 7
Learn where water comes from.

Activities

A drop of water in the water cycle

Children are connecting with their world as they engage in dramatic play and develop their awareness of interdependence (Outcomes 1 & 2).

Discuss and explain the aspects of weather. Set up the different stations representing the water cycle around the room and have children actively mime out the water cycle with you, pretending they are drops of water.

It's raining, it's pouring

Children are connecting with and contributing to their world as they use play to explore and develop an appreciation of the natural environment (Outcome 2).

To create a rain gauge, cut around the body of a plastic bottle, turn the top upside down and place it inside. Use a ruler to draw measurement lines up the body of the bottle. Place the gauge outside where it can receive rain, and check the measurement each day.

Build a catchment

Children are connecting with their world as they use play to investigate and explore new ideas (Outcomes 1, 2 & 4).

Using the sand pit and various tools allow the children to construct hills, dams, rivers and catchments. Children can add animals and props to their creation before pouring water in and watching it flow through.

How water gets to our taps

Children are connecting with their world as they investigate and explore new ideas relating to the natural and built environment (Outcome 2).

Discuss how water can come from a dam (surface water), the ground (groundwater) or from desalination. Explain to students that it must be treated before it comes through pipes to their home and is delivered through taps.

Soil and absorption

Children are connecting with their world as they investigate and explore new ideas relating to the natural environment, through play (Outcome 2).

Discuss how water soaks into the ground and becomes groundwater which may be extracted and used for drinking water. Demonstrate how different soils allow more water through than others. Obtain three different soil types (e.g. clay, loam and sand) and three glass jars. Place an old nylon stocking over the top of each and hold in place with an elastic band (let it sag slightly into the middle of the jar). Place two tablespoons of soil in each stocking. Pour the same volume of water over the soil in each jar and see which soil allows the water to flow through fastest and which jar ends up with the most water in it.

Making rain

Children are connecting with and contributing to their world as they gain an increasing awareness of processes that occur in the natural environment (Outcome 2).

Create a rain bottle by piercing some holes in a plastic soft drink bottle and filling it with water. See what happens when the rain bottle is used in certain places (e.g. on the path, the lawn, the sand, a compacted area and under a tree). Discuss where the water goes: it soaks into the ground, forms puddles on the path and dries up, plants drink it or it runs into the drains.

Sandpit play to create a dam

Children become socially responsible and show respect for the environment as they use play to investigate and explore new ideas (Outcome 2).

In the sandpit create a model of a dam using a plastic liner. Use the rain bottles to fill the dam and with pipes or plastic tubing distribute water to homes (plastic containers).

Alfoil river

Children become socially responsible and show respect for the environment as they use play to investigate and explore new ideas (Outcomes 1 & 2).

Using a roll of alfoil, create a river by rolling out the alfoil and pushing the sides up. Run water through the river, allowing children to explore with various floating objects. Use a watering can to simulate rain.

Creating an aquifer

Children become socially responsible and show respect for the environment as they use play to investigate and explore new ideas (Outcome 2).

In clear cups create an aquifer. Use sand and gravel to imitate the ground, and then pour water over it to demonstrate groundwater. Keep pouring the water until it reaches the top to show the children what surface water is.

Water conservation

Water is the planet's most precious resource. Without it no plant or animal can survive. In Australia, the world's driest inhabited continent, it is especially important that we conserve our water.

Videos

Save water to help the Earth

Two children discovering the need to conserve water.
youtube.com/watch?v=rl0YiZjTqpw&index=6&list=PLOmC1u6DvyxV8bv7MifvkFaA5qLtzn9X3

Sesame Street: Water conservation

A video about the need to save water.
youtube.com/watch?v=gtcZbN0Z08c&feature=player_embedded

The water song

A fun song all about water.
youtube.com/watch?v=CwpHMPH-WbM

Water conservation animation

An animation of water-droplets saving water.
youtube.com/watch?v=B4ZR53n0D8I

Books

Caillou – every drop counts

Author: Sarah Johnson
ISBN: 978 28 9718 075 1
At day care Caillou learns how he can save water at home.

Let's save water!

Author: Sara Nelson
ISBN: 978 07 3686 322 3
Text and pictures explaining how children can save water.

Something about water

Author: Penny Matthews
ISBN: 978 18 6291 671 5
Inspiring book on how children can save water.

Watch over our water

Author: Lisa Bullard
ISBN: 978 07 6138 041 2
Children show readers how to reduce, reuse and recycle water.

We need water

Author: Charles Ghigna
ISBN: 978 14 0487 227 1
A poem exploring the importance of keeping water clean.

Why should I save water?

Author: Jen Green and Mike Gordon
ISBN: 978 07 6413 157 8
Boys and girls learn how to avoid wasting water at home.

Activities

Raindrop display: how do we use water?

Children become socially responsible and show respect for the environment as they learn ways they can be waterwise and conserve water (Outcome 2).

On blue raindrops created from paper, have children write ways that they use water, or can conserve water. Hang these raindrops from the roof in a display.

Who uses water in our community?

Children connect with their world as they learn of professions that use water and how this would affect the environment (Outcome 2).

Discuss how water is used by different people. Which professions would use the most and the least? Why is water so important? Have children ask their parents or caregivers where they use water in their workplace.

How do I use water in my home?

Children connect with their world and develop an awareness of the impact that human activity has on the environment and, specifically, water use (Outcome 2).

Brainstorm all the ways that water is used in the home. Draw pictures to show water being used inside or outside the home and create a class mural.

Water monitors

Children become socially responsible and respect the environment as they show a growing appreciation and care for the natural environment (Outcome 2).

Appoint two children as water inspectors for the day who can check for any leaks and water wastage.

Kiddy car wash

Children become socially responsible and show respect for the environment as they learn ways they can be waterwise and conserve water (Outcome 2).

Bring the children outside and run a 'waterwise' car wash with their bikes, tricycles and plastic cars. Ensure you do this on the grass, with environmentally friendly cleaning products and a bucket instead of a hose.

Water trolley

Children become socially responsible and show respect for the environment as they learn ways they can be waterwise and conserve water (Outcomes 1 & 2).

Install a water trolley in the sand pit and explain to the children that each day it will be filled up and that will be their water allowance for the day. This activity will help children to understand that water is limited and needs to be conserved.

Water conservation sing-a-long

Children are becoming socially responsible and showing respect for their environment as they work together to create a song and dance that teaches everyone how they can conserve water (Outcomes 1, 2 & 4).

Working together as a class create a song and dance based on water conservation. Include props and role-play. Perform this as a part of National Water Week or as a show to parents/guardians.

Wastewater

Wastewater is water that has been used inside homes and by businesses and industries. Wastewater from the home mainly comes from showers, baths, sinks, washing machines and toilets. Wastewater is treated to required standards before being returned to the water cycle.

Videos

Potty song

A song about children using the toilet and then washing their hands.
youtube.com/watch?v=saKKyBZJdQE

Elmo potty time

Five fun to sing time songs.
youtube.com/watch?v=t6D-ArgwMO4

Books

Caillou: potty time

Author: Joceline Sanschagrin
ISBN: 978 28 9450 876 3

Caillou learns how to use the toilet.

Even firefighters go to the potty

Author: Wendy Wax
ISBN: 978 14 1692 720 4

Children learn that everybody goes to the toilet; even firefighters.

P is for potty

Author: Random House
ISBN: 978 03 8538 369 1

Toddlers are taught how to use the potty.

Toilet: how it works

Author: David McCaulay
ISBN: 978 16 2672 214 9

Children learn the workings behind a toilet.

Toilets

Author: Joanne Mattern
ISBN: 978 05 3121 372 8

Children learn how a toilet works.

Where's the poop?

Author: Julie Markes
ISBN: 978 00 6053 089 1

Children learn that they poop in the toilet.

Activities

What is wastewater?

Children are connected with and contribute to their world as they demonstrate an increasing knowledge of and respect for natural and constructed environments (Outcome 2).

Brainstorm where drains are located inside the home or school. Ask students what things go down these drains and where the items go. Describe how wastewater travels in pipes to pumping stations and then to treatment plants where it is cleaned before being returned to the environment.

What goes down the sink?

Children are connected with and contribute to their world as they demonstrate an increasing knowledge of and respect for natural and constructed environments (Outcomes 1 & 2).

Simulate kitchen, laundry and bathroom wastewater. In a baby bath or bucket, place water and the sorts of things that students suggest might go down into drains (e.g. tea leaves, food scraps, cooking oil, detergent, sand, cotton buds, band aids, shampoo, and tissues). Pour the mixture through a strainer into another container and see what is left behind. Discuss why those things should not be put down the drain (because they can block the system and break the machinery: they can be dangerous to workers who have to unblock them). Discuss where these items should go. Ask children to correctly dispose of the items. Discuss the problems that oil can cause in the pipes.

Oil and water

Children are connecting with and contributing to their world as their knowledge of the effect of human activity of the environment increases (Outcome 2).

Use a funnel to fill a plastic drink bottle half full of water. Fill the rest with baby oil; add blue food colouring, plastic fish and sequins. Create waves by rocking the bottle and demonstrating how oil does not dissolve in water and the effect this may have on animals and plants.

What goes down the toilet?

Children are connected with and contribute to their world as they demonstrate an increasing knowledge of and respect for natural and constructed environments (Outcomes 2 & 4).

Discuss how toilets can become blocked if they are used as a rubbish bin. Use a piece of plastic pipe with a filter (gauze, mesh, stocking) over one end to simulate a wastewater pipe. Place a variety of items in the pipe (e.g. toys, toilet rolls, tissues, cotton buds, rags, disposable nappies). Hold the pipe over a bucket and pour water into the pipe rapidly to observe how the water backs up and does not flow through the filter fast enough. Discuss: how these items clog the wastewater system and treatment plant, how machinery can break down, how people must manually clear the filters, appropriate methods of disposal and health dangers presented by blockages.

How to protect the wastewater system

Children become socially responsible and show respect for the environment by developing a growing appreciation and care for natural and constructed environments (Outcome 2).

Summarise what students have learnt about wastewater. Make a class chart of the things they remember. Discuss why it is important to look after the system and what would happen to the environment if we didn't have a wastewater system.

Other educational resources

Australian Children's Education and Care Quality Authority
National Quality Standards
acecqa.gov.au/national-quality-framework/the-national-quality-standard

Australian Water Association
Information on water in Australia
awa.asn.au

Bureau of Meteorology
Weather updates and data
bom.gov.au

Canning River Eco Education Centre
Excursions and resources
canning.wa.gov.au/places-to-learn/canning_river_eco_education_centre

Clean up Australia
Resources and information on events
cleanup.org.au/au

Cockburn Wetlands Education Centre
Excursions and resources
cockburnwetlands.org.au

Early Years Learning Framework
education.gov.au/early-years-learning-framework-0

Kings Park Education
Programs, resources and excursions
bgpa.wa.gov.au/kings-park/events/kings-park-education/programs

Little Green Steps
Early Childhood sustainability program
littlegreenstepswa.org.au

River Guardians
Resources
riverguardians.com

Scitech
Resources and excursions
scitech.org.au

Water Corporation
Further resources and information
watercorporation.com.au