

Water Supplies Department

“Cherish Water Campus”

Integrated Education Programme –
Kindergarten

Activity Book

Preface

Water Supplies Department (WSD) launched the “Cherish Water Campus” Integrated Education Programme - Kindergarten with the aim of cultivating water-saving habits and nurturing a water conservation culture among the younger generation. The teaching kit provided for kindergartens includes the storybook “*Dave’s Family*”, the *Activity Book* and the *Teacher Resource Book*.

The *Activity Book* complements the storybook, further educating kindergarten students with different types of activities to consolidate their concepts of “Cherish Water” and “Understand Water”. The activities promote water conservation and enhance knowledge about water resources. They are designed to cater to the learning progress and objectives of kindergarten students, based on the six Learning Areas of the “Kindergarten Education Curriculum Guide” (2017): Language, Nature and Living, Early Childhood Mathematics, Physical Fitness and Health, Arts and Creativity, and Self and Society.

After telling the story, teachers can enhance students’ understanding of water and help them cultivate water-saving habits by organising the activities suggested. Teachers can adjust the activities according to their curriculum and classroom setting, or even innovate other “Cherish Water” and “Understand Water” activities.

Contents

- Activity 1 Listen, Read and Act Out
- Activity 2 Wonderful Water
- Activity 3 Blow Painting
- Activity 4 What Are the Different Uses of Water?
- Activity 5 The Source of Life
- Activity 6 Saving Water: Dos and Don'ts
- Activity 7 Water Audit
- Activity 8 Learn More about Water-saving Devices
- Activity 9 Brush and Save
- Activity 10 Water Conservation Ensemble
- Activity 11 My Own Water Save Dave Logo
- Activity 12 My Water-conscientious Family
- Activity 13 Magic Water Filter
- Activity 14 Dongjiang Water
- Activity 15 Cherish Water Playground
- Save Water Pledge
- Activity Overview

Activity 1 Listen, Read and Act Out

Learning Areas

Language, Arts and Creativity, Self and Society

Objectives

- Help students understand the plot and vocabulary of the story and cultivate their interest in reading through listening, reading aloud and acting.
- Encourage parents to read the storybook with their children and share water-saving messages.

Resources

- The storybook “*Dave’s Family*”
- Paper crowns of Dave’s Family and Water Waster (from the DVD)
- Paper bag puppet of Dave (from the DVD)
- Single-sided waste paper, strips of cardboard, rubber bands
- Paper bags

Suggested Steps

Listening to the Story

1. Play the “*Dave’s Family*” eBook.
2. Invite students to identify water-wasting behaviours to stimulate thinking and discussion.

Telling the Story

1. Lead students to read the story aloud.
2. Highlight the correct ways to use water when reading the story.
3. Guide students to narrate selected plots.

Extended Activity

Acting the Story Out

1. Use the image files from the DVD to create paper crowns of Dave’s family and Water Waster or the paper bag puppet of Dave.
2. Create props for the play based on the needs.

3. Lead students to perform the story of “*Dave’s Family*” to enhance their memory and language expression skills.

Sharing the Story

Encourage parents to read the story with students to strengthen their reading skills and motivate them to share water-saving messages.

Activity 2 Wonderful Water

Learning Areas

Nature and Living, Arts and Creativity

Objectives

- Teach students about the states of water through simple experiments: Water evaporates into vapour when heated and vapour condenses into water when cooled.

Resources

- The storybook “*Dave’s Family*”
- A pot of hot water
- A cup with lid
- Paint, ice cube trays, water, wooden sticks, drawing paper

Suggested Steps

1. Read page 2 of the storybook, where Dave and many small drops live in the sky.
2. Pour hot water into a cup and ask students to observe the steam floating above the cup, demonstrating that water turns into vapour when heated.
3. Cover the cup with a lid and remove it after three minutes. Let students observe the small drops on the lid, illustrating that vapour condenses into water when cooled.
4. Let the hot water cool down after the observation and have students use it to water plants, thereby learning to utilise every drop of water.

Extended Activity

Colourful Ice Cube Painting

1. Mix paints with water to create different coloured water. Pour the coloured water into ice cube trays and insert wooden sticks. Place the trays inside the freezer.
2. Show students the ice cube trays the next day. Let them look at and touch the ice cubes, demonstrating that water freezes into ice when cold.

3. Let students hold the wooden sticks and use the coloured ice cubes to paint on paper, explaining that ice melts into liquid water when heated.

Activity 3 Blow Painting

Learning Areas

Language, Nature and Living, Physical Fitness and Health, Arts and Creativity

Objectives

- Let students observe the properties of water: fluid, odourless, and colourless.
- Cultivate students' creativity and aesthetic sense.

Resources

- Water
- Clear cups
- Single-sided waste paper/Blank drawing paper
- Watercolours
- Straws
- Ink

Suggested Steps

1. Prepare a cup of water and ask students to observe, smell and touch it, demonstrating that water is colourless and odourless.
2. Mix watercolours with water in cups. The mixture should be thin enough for blow painting.
3. Assist students in dabbing the liquid watercolours onto paper using a straw. Students blow through the straw to make the paint move along the paper, creating a unique watercolour painting.

Extended Activity

The Hidden Culprit

1. Prepare a clear cup, water and ink (or other paint).
2. Fill the clear cup with water.
3. Add a few drops of ink into the water and ask students to observe and describe the changes in the water.
4. Explain that water resources can be easily polluted, highlighting the importance of water resources protection.

Activity 4 What Are the Different Uses of Water?

Learning Areas

Language, Nature and Living, Physical Fitness and Health, Self and Society

Objectives

- Introduce students to the uses of water through questions.
- Teach students about water-related activities and tools using flashcards and match them accordingly.

Resources

- Flashcards of “Uses of Water” and “Tools” (from the DVD)

Suggested Steps

1. Ask students to list the uses of water.
2. Use images from the DVD to make flashcards.
3. Ask students to match the uses of water with suitable tools:

Uses of Water	(Tools)
Drinking	(Cup)
Taking a Shower	(Showerhead)
Cleaning	(Cloth)
Cooking	(Pot)
Tooth Brushing	(Mouthwash Cup)
Watering Plants	(Watering Can)

Extended Activity

“Make a guess”

Divide students into two groups. One member from each group mimics an action related to using water (e.g. drinking, taking a shower, cleaning, cooking, tooth brushing, watering plants) while other members guess the action. The group identifying the most actions within the time limit will win.

Activity 5 The Source of Life

Learning Areas

Language, Nature and Living

Objectives

- Enable students to understand that plants need water to grow through planting, highlighting that water is a vital resource for sustaining life and is shared by humans, animals, and plants.
- Highlight that we must cherish water resources and use water according to actual needs.

Resources

- The storybook “*Dave’s Family*”
- Clear plastic bottles (cut in half beforehand)
- Cotton
- Mung beans
- Water
- Watering can
- Images of “Healthy plant” and “Wilted plant” (from the DVD)

Suggested Steps

1. Put the cotton on the bottom of the plastic bottle.
2. Evenly place the mung beans on the cotton.
3. Water the mung beans (the first watering should soak the cotton), then place the bottle in the sun.
4. Water the mung beans daily until they sprout and grow, illustrating that water is an essential resource for life.

Extended Activity

1. Read pages 22-23 of the storybook where animals die and plants wilt without water.
2. Show the images of “Healthy plant” and “Wilted plant” (from the DVD). Ask students to observe and compare the differences.

3. Guide students to think about why plants wilt, encouraging them to use the cause-and-effect conjunction “because”.
4. Ask students to imitate the appearance of wilting plants (drooping, unhappy) and plants with sufficient water (energetic, happy).
5. Discuss with students:
 - Reasons to cherish water
 - Consequences of wasting water
 - Methods to conserve water

Activity 6 Saving Water: Dos and Don'ts

Learning Areas

Language, Physical Fitness and Health, Self and Society

Objectives

- Identify water-saving and water-wasting behaviours.
- Learn to use water for simple cleaning.
- Clean the classroom in groups to enhance collaboration and the sense of responsibility among students.

Resources

- The storybook “*Dave’s Family*”
- “Water Use Behaviour” flashcards (from the DVD)
- Whiteboard
- Box
- Water
- Cleaning cloth

Suggested Steps

1. Read pages 8-10 of the storybook, where people waste water as they are misled by Water Waster.
2. Show the “Water Use Behaviour” flashcards and put them into the “Mystery Box”.
3. Invite students to draw a card and identify whether the behaviour is water-wasting or water-saving and stick it on the whiteboard.

Water-wasting:

- Leaving the tap running while brushing teeth
- Leaving the tap running while washing fruits and vegetables
- Leaving the tap running while applying hand wash
- Taking baths
- Running the washing machine with one piece of clothing
- Splashing water around while washing hands
- Using devices of Grade 4 Water Efficiency

Water-saving:

- Turning off the tap and using a mouthwash cup while brushing teeth
- Washing fruits and vegetables in a basin filled with water
- Turning off the tap while applying hand wash
- Taking showers and reducing shower time
- Running the washing machine with a full load
- Using water for washing fruits and vegetables to water plants
- Using devices of Grade 1 Water Efficiency

Extended Activity

Cleaning Starts with You and Me

Ask students to use damp cloths to clean the classroom in groups. Explain that water can be used for cleaning and should be properly used as it is precious.

Activity 7 Water Audit

Learning Areas

Language, Physical Fitness and Health, Arts and Creativity, Self and Society

Objectives

- Educate students to promptly inform an adult for repair if they spot any leakages, thereby enhancing their sense of responsibility.

Resources

- The storybook “*Dave’s Family*”
- “Water Dripping Sound” (sound file) (from the DVD)
- “Household Setting” flashcards (from the DVD)
- “Fixing the Dripping Tap” colouring worksheet (from the DVD)

Suggested Steps

1. Read pages 26-27 of the storybook, where Dave’s Dad fixes the dripping pipes.
2. Play “Water Dripping Sound” and show the “Household Setting” flashcards from the DVD, helping students locate the sources of the sound and the causes of the leakages.
3. Teach students to promptly inform an adult to repair any leakages to avoid wasting water.
4. Walk students around the school for a “Water Audit”, guiding them to locate potential water-dripping spots.

Extended Activity

Distribute the “Fixing the Dripping Tap” worksheet to students for colouring to raise their awareness of water conservation in daily life.

Activity 8 Learn More about Water-saving Devices

Learning Areas

Language

Objectives

- Educate students about different water-saving devices and the “Water Efficiency Labelling Scheme (WELS)”.

Resources

- The storybook “*Dave’s Family*”
- “Save Water, Take Shorter Showers” video
<https://www.youtube.com/watch?v=mFd0qJktUa0>
- “Water Efficiency Labelling Scheme (WELS)” video
<https://www.facebook.com/watch/?v=1875532762615586>
- “Choose the Right Water-saving Devices” worksheet (from the DVD)

Suggested Steps

1. Read pages 30-31 of the storybook, where Dave’s Sister introduces the Water Efficiency Labelling Scheme to citizens.
2. Play the videos and introduce the Water Efficiency Labelling Scheme to students.
3. Distribute the “Choose the Right Water-saving Devices” worksheet to review and consolidate the knowledge learned.

Extended Activity

Check if the water-using devices at school (such as taps or toilets) are of Grade 1 Water Efficiency with students.

Activity 9 Brush and Save

Learning Areas

Language, Physical Fitness and Health

Objectives

- Learn not to leave the tap running while brushing teeth and to use a mouthwash cup.
- Teach students to extend the water-saving method of tooth brushing to hand washing, emphasizing the importance of turning off the tap while applying hand wash.

Resources

- The storybook “*Dave’s Family*”
- Images of “A Girl Brushing her Teeth”, “Tap”, “Toothbrush” (or the real object), “Mouthwash Cup” (or the real object) (from the DVD)

Suggested Steps

1. Read page 32 of the storybook where Dave educates people to turn off the tap while brushing teeth.
2. Use the images of “A Girl Brushing her Teeth”, “Tap”, “Toothbrush” and “Mouthwash Cup” to discuss with students how to brush teeth in a water-saving way.
3. Demonstrate the water-saving way of tooth brushing. (It is recommended to arrange this activity after snack time.):
 - a. Turn on the tap and fill the mouthwash cup without overflowing.
 - b. Turn off the tap.
 - c. After rinsing the mouth with the water in the cup, brush the teeth thoroughly.
 - d. Use the water in the cup to clean out the foam in the mouth.
 - e. Use the remaining water or a small flow of water to rinse the toothbrush.

Extended Activity

The Seven Steps of Hand Washing

1. It is recommended to arrange this activity before snack time.
2. Demonstrate the water-saving way of hand washing:
 - a. Wet hands under a small flow of running water.
 - b. Turn off the tap.
 - c. Apply hand wash.
 - d. Rub hands for at least 20 seconds.
 - e. Rinse hands thoroughly under a small flow of running water.
 - f. Dry hands thoroughly with a paper towel.
 - g. Use a paper towel to turn off the tap.

Activity 10 Water Conservation Ensemble

Learning Areas

Language, Physical Fitness and Health, Arts and Creativity, Self and Society

Objectives

- Let students listen to and appreciate the songs “It’s a Small World” (Water Conservation Version) and the theme song of “Save Water Today for a Sustainable Future” - 《點滴也是愛》 (Chinese only) to cultivate the virtue of cherishing water.
- Develop the sense of rhythm and body coordination by moving along with the music.

Resources

- Instrumental music of “It’s a Small World”
- Lyrics and Movement Notation of “It’s a Small World” (Water Conservation Version) (from the DVD)
- Theme song of “Save Water Today for a Sustainable Future” - 《點滴也是愛》 (Chinese only)
<https://www.youtube.com/watch?v=ERaxaFxZhNI>
- Props of water-saving tips lyrics (from the DVD)

Suggested Steps

Lead the children in singing “It’s a Small World” (Water Conservation Version) and making different movements to the rhythm. (Please refer to the movement notation from the DVD)

Lyrics and Movement Notation of “It’s a Small World” (Water-Conservation Version)

Lyrics:	Water is for	everyone
Movement:	Clap Clap	Swing Swing
Lyrics:	Fixing dripping	water tap
Movement:	Rain Rain	OK OK
Lyrics:	Filling up to	your need
Movement:	Step Step	Point Point
Lyrics:	We have to	conserve it
Movement:	Good	OK OK OK

Movement Notation

Clap: Clapping

Step: Marching, starting with the right leg

Swing: Swinging the body left and right

Rain: Both palms facing in, simulating rain falling with fingers

Point: Right index finger pointing to the front

Good: Right hand thumbs up

OK: Right hand giving the “OK” sign

Extended Activity

《點滴也是愛》 Ensemble

1. Play the music video of 《點滴也是愛》 (Chinese Only) and ask students to pay attention to the water-saving messages in the song.
2. Lead students in reading aloud and briefly explaining the water-saving tips in the lyrics.

Lyrics of 《點滴也是愛》 (Chinese only)

- 合唱： LET'S SAVE WATER!
一點 一滴 也要珍惜
節約 慳水 齊心協力
水資源 (多珍貴)
水資源 (同守衛)
同承諾慳水目標堅守到底
- 滴惜仔： 你是我生命泉源 對你愛惜永不倦
- B仔： 愛護生態 愛護水資源
全力阻止你受污染
- 大嘍鬼： 怎可以忍心浪費？
答應你不會變「大嘍鬼」
- 度天隊長： 哪怕惡劣天氣 我更要守護你
天空海闊你何其珍貴！
- (RAP)
- 度天隊長： 雙掣式沖廁 按大小沖走
- B仔： 沖涼用花灑 4分鐘就夠
- 大嘍鬼： 唔好浪費食水
- B仔： 咪做污染源頭
- 滴惜仔： 洗米洗菜水淋花好幫手
- 度天隊長： 多用高效益花灑水龍頭
- 大嘍鬼： 邊度漏水就要即刻維修
- 滴惜仔： 改變生活習慣 一齊慳水節流
- 合唱： 喂！樓下門水喉！
一點 一滴 也要珍惜
節約 慳水 齊心協力
水資源 (多珍貴)
水資源 (同守衛)
同承諾慳水目標堅守到底
- 滴惜仔： 從今天開始減少浪費

Activity 11 My Own Water Save Dave Logo

Learning Areas

Language, Early Childhood Mathematics, Arts and Creativity

Objectives

- Deepen students' understanding of Water Save Dave.
- Teach students the numbers 1-50.
- Encourage students to showcase their creativity by designing their water-saving signs, strengthening their connection to water conservation.

Resources

- The storybook "*Dave's Family*"
- "Connect the Dots" worksheet (from the DVD)
- Colouring pencils
- Tape

Suggested Steps

1. Read pages 2-3 of the storybook, introducing Dave to students.
2. Distribute the "Connect the Dots" worksheet. Instruct students to connect numbers from 1 to 50, then colour Dave blue and draw in the blank area to design a unique water-saving sign.
3. Invite students to present their designs.
4. Remind students to save water and practice it in their daily lives to cultivate water-saving habits.

Extended Activity

1. Invite students to suggest suitable places at school for putting up the water-saving signs.
2. Assist students in putting up the signs, if applicable.

Activity 12 My Water-conscientious Family

Learning Areas

Language, Early Childhood Mathematics, Self and Society

Objectives

- Allow students to understand the water usage habits of their family and learn how to save water at home.
- Encourage students and their family to practice water conservation in daily life through parent-child activities.

Resources

- “Water Saving Detective” worksheet (from the DVD)
- Water Footprint Calculator
<http://www.jcwise.hk/eNewsletter/eng/calculator.html>

Suggested Steps

1. Have students observe and record the water usage habits of one family member using the “Water Saving Detective” worksheet.
2. Invite students to report their findings and share how their family save water.

Extended Activity

Water-savvy Diet

1. Ask students to invite their family to record their daily dishes. Use the Water Footprint Calculator to calculate the virtual water consumed for each meal.
2. Discuss the results with their family using the information obtained. Compare the virtual water consumed by different types of food.
3. Work with their family to design a healthy menu with a low water footprint.

Activity 13 Magic Water Filter

Learning Areas

Nature and Living

Objectives

- Introduce water filtration to students - a water purification method - through a simple experiment. Students can understand that water purification requires multiple steps and hence, we must cherish the precious water resources.

Resources

- Water mixed with soil
- Clear plastic bottle (cut in half beforehand)
- Cotton wool
- Fine sand
- Coarse sand
- Water glass
- Water

Suggested Steps

1. Take out a glass of water mixed with soil and ask students how to remove the impurities in the water.
2. Flip the top half of the bottle over and put it on the bottom half. Stuff the bottleneck tightly with cotton wool to prevent any filtration materials from leaking.
3. Assist students in layering the filtration materials into the bottle in the following order: coarse sand, fine sand, and another layer of coarse sand. Lay cotton wool on top to complete the filter.
4. Slowly pour the muddy water into the filter and observe the changes as the water flows through the filter to the bottom of the bottle. Add the muddy water gently to avoid washing away the filtration materials.
5. Ask students to describe the changes in the muddy water after passing through the filter (It becomes clearer).

6. Conclusion: Water is a liquid that can slip through the spaces between the filter materials. The impurities are solid and cannot pass through spaces smaller than themselves. As water passes through the filter, sand particles block the impurities from moving downward, leaving only water to pass through. Water and impurities are thus separated, resulting in clearer water flowing out.

Extended Activity

Water Quality Contest

1. Pour the filtered water from the experiment and drinking water into two separate glasses.
2. Guide students to compare the two (Drinking water is clearer).
3. Explain that drinking water undergoes more extensive filtration and disinfection at water treatment works. Remind students not to drink the water used in the experiment.

Activity 14 Dongjiang Water

Learning Areas

Language, Arts and Creativity

Objectives

- Introduce Dongjiang Water as a vital water source for Hong Kong.
- Explain to students that Dongjiang Water is imported from Guangdong Province and emphasise the importance of protecting the safety of drinking water.

Resources

- The storybook “*Dave’s Family*”
- “Dongjiang Water” worksheet (from the DVD)
- Single-sided waste paper
- Colouring pencils

Suggested Steps

1. Read pages 11-13 of the storybook. Explain to students that Dongjiang Water is a crucial water source for Hong Kong, transported from far afield with dedicated aqueducts that prevent contaminations.
2. Guide students to think about what tools they could use to transport water from the washroom to the classroom.
3. Encourage students to think about how to keep water uncontaminated during transportation.
4. Distribute paper and colouring pencils. Ask students to express their ideas by drawing, then present their designs to their classmates.

Extended Activity

1. Introduce that Dongjiang water originates from a location over 50 kilometres away and passes through a 68-kilometre-long artificial water channel before reaching Hong Kong.
2. Distribute the “Dongjiang Water” worksheet and have students complete the maze.

Activity 15 Cherish Water Playground

Learning Areas

Early Childhood Mathematics, Arts and Creativity, Self and Society

Objectives

- Revise water-saving and water-wasting behaviours.
- Reinforce students' understanding of water conservation in an engaging way through the board game.

Resources

- The storybook "*Dave's Family*"
- "Cherish Water Playground" game board
- Die, tokens, the "Cherish Water Star" badge (from the DVD)

Suggested Steps

1. Revisit the water usage habits in the storybook.
2. Guide students to identify water-saving and water-wasting behaviours.
3. List the following examples from the board game "Cherish Water Playground" and ask students to distinguish whether they are water-saving or water-wasting.

Water-saving Behaviours:

- Turning off the tap while brushing teeth
- Taking a shower
- Fixing dripping taps promptly
- Watering plants with water used for washing vegetables and fruits

Water-wasting Behaviours:

- Washing dishes under a running tap
- Running washing machine with a small load
- Taking a bath
- Splashing water around while washing hands

Extended Activity

1. Use the image files from the DVD to create a die, tokens and the “Cherish Water Star” badge.
2. Instruct students to start the board game based on the rules listed on the chessboard.

Save Water Pledge

Paste your photo and write your name below. Let's pledge to save water!

Save Water Pledge

I pledge to save water every day and not waste it away.

I will do my best to save every drop I can.

Here is my plan!

- Do not play with water.
- Reduce shower time.
- Turn off the tap while brushing my teeth.
- Report a leaking tap to my family promptly.
- Remind my friends and family to save water.

Name: _____

Date: _____

Activity Overview

- Activity 1 Listen, Read and Act Out
Language, Arts and Creativity, Self and Society
- Activity 2 Wonderful Water
Nature and Living, Arts and Creativity
- Activity 3 Blow Painting
Language, Nature and Living, Physical Fitness and Health, Arts and Creativity
- Activity 4 What Are the Different Uses of Water?
Language, Nature and Living, Physical Fitness and Health, Self and Society
- Activity 5 The Source of Life
Language, Nature and Living
- Activity 6 Saving Water: Dos and Don'ts
Language, Physical Fitness and Health, Self and Society
- Activity 7 Water Audit
Language, Physical Fitness and Health, Arts and Creativity, Self and Society
- Activity 8 Learn More about Water-saving Devices
Language
- Activity 9 Brush and Save
Language, Physical Fitness and Health
- Activity 10 Water Conservation Ensemble
Language, Physical Fitness and Health, Arts and Creativity, Self and Society
- Activity 11 My Own Water Save Dave Logo
Language, Early Childhood Mathematics, Arts and Creativity
- Activity 12 My Water-conscientious Family
Language, Early Childhood Mathematics, Self and Society
- Activity 13 Magic Water Filter
Nature and Living
- Activity 14 Dongjiang Water
Language, Arts and Creativity
- Activity 15 Cherish Water Playground
Early Childhood Mathematics, Arts and Creativity, Self and Society

Save Water We Can

Published by Water Supplies Department of the Government of the Hong Kong SAR

First published in 2024

All rights reserved. Other than for teaching and studying purpose, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means – electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the Water Supplies Department.

Water Supplies Department

Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong

Telephone: 2824 5000

Fax: 2802 2579

Email: waterconservation@wsd.gov.hk

Website: <https://www.waterconservation.gov.hk>