

GENERATION H₂O AND MISSION H₂O

Scottish Water Generation H₂O has been created to highlight the importance of water and explore the crucial work Scottish Water does to manage and protect the water environment, through a range of exciting campaigns and activities. Scottish Water Generation H₂O is launching in the lead up to Scotland's Climate Week (25 Sept – 1 Oct 2023), starting in Primary schools with Mission H₂O.



Mission H₂O is an engaging, hands-on primary school project aimed at inspiring learners to protect Scotland's water. Learners will take part in different sustainable water practices at school (called H₂O Water Challenges), at home and in the community, recording these as they go, to complete their mission.



MISSION H₂O - PURPOSE AND AIMS

The aims of Mission H₂O are to encourage young people to:

- Become responsible water citizens, valuing and protecting the water and the wastewater network.
- Actively reduce their water consumption, using water wisely.
- Become catalysts of behaviour change and encourage their families and community to protect the water and the wastewater network.

H₂O MISSION OVERVIEW

Mission H₂O comprises of four elements centering around the water challenges that learners will complete at home and at school, in order to complete the mission.

STEP 1: Whole School Assembly Launch

An interactive whole school welcome to Mission H₂O, aimed at Primaries 1-7. Learners will be introduced to the mission being set, its purpose and how to take part.

STEP 2: Mission H₂O Water Challenges

Learners will be given further explanation of the challenge and water bucket scorecards will be distributed. Learners will carry out water challenges over one week (or another short-agreed timescale) at school and at home. If learners are unable to complete challenges at home, these can be completed at school. Regular opportunities for learners to share ideas should be provided, such as during morning class registration time. Learners will record completed challenges on scorecards by colouring in water droplets. Some challenges will be suggested but learners should also be encouraged to research and create their own sustainable water challenges and write these onto the blank water droplets on the scorecard.

At the end of the week, these should be brought into school with the total number of completed challenges written on. These can be recorded on the template found on page 7 of this guide.

STEP 3: Additional Classroom Activities

Optional water activities for the classroom that further learning about water and waterworks. (see page 3 of the Teachers' Guide for some suggested activities).

STEP 4: Celebrate!

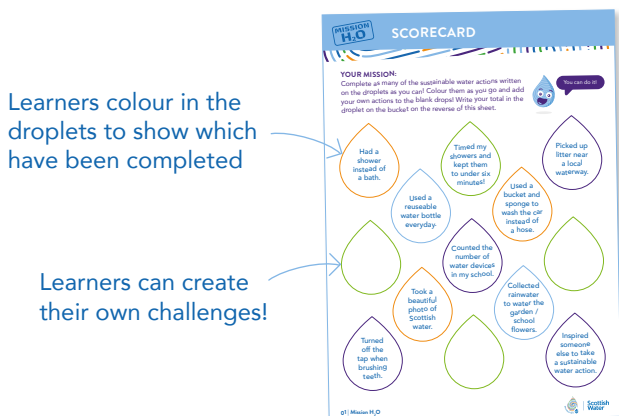
At an end of week celebration assembly, congratulate all the learners for participating in the Mission H₂O Challenge. The class with the greatest number of Mission H₂O Challenges completed will be awarded seed packets (first 50 schools to enter). To be awarded the prize, complete the separate Prize Submission Form and email it to GenH2O@nationalschoolpartnership.com. Please see [prize details and T&Cs here](#) or on the [National Schools Partnership website](#).

The Top 5 schools will also be awarded 1x water butt each.

HOW TO COMPLETE THE H₂O MISSION

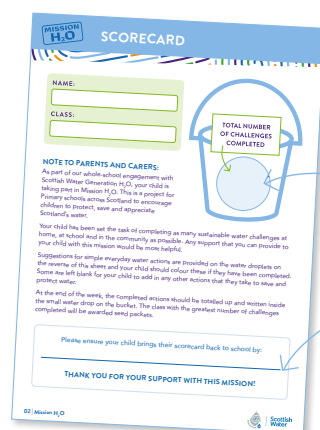
This information should be passed to learners when they are given their scorecard for recording water challenges:

1. Try to complete as many challenges as possible in the agreed time period. Write the date that your scorecard must be brought back to school on the reverse of the card, at the end of the Note to Parents/Carers.
2. Each water droplet should be coloured in to show when/if the action has been completed.
3. Blank water drops are provided to create your own water challenges.
4. Additional water drops can be drawn on if the ones provided have been completed!
5. Challenges can be completed at school, at home and in the wider community.
6. Be creative!
7. Make sure your name and class are written on the back of your scorecard and the total number of completed challenges is written inside the bucket.



Learners colour in the droplets to show which have been completed

Learners can create their own challenges!



Write the total number of challenges completed here

Write the date that the scorecard must be brought back to school

OPTIONAL WATER ACTIVITIES

SCHOOL WATER DEVICE SURVEY

Learning Intention

I can gather and present data to show the different water devices that are used in everyday life.

What you need

- Squared/lined/blank paper
- Pencils
- Clipboards



WHAT TO DO

1. Brainstorm and make a list of the different devices that are found around the school that involve water. Think of the different areas in the school (the canteen, the toilets, classrooms, outside, in an art room, water drinking fountains...) to collect as many ideas as possible.
2. Explain to learners that they are going to record the number of different water devices around the school to see all the different ways that they use water every day. Ask learners to create their own tables or charts for recording the different water devices. For younger learners, a whole class chart could be drawn or a pictogram created, where each water drop represents one water device. Older learners can record their responses using tally marks and then display these in bar or pie charts.
3. In small groups, allow time for learners to go around the school to gather their data.
4. As a class, discuss the results and draw conclusions about the most used water devices in the school. Discuss if there are ways that water could be saved when using these. For example, in the art room, could warm soapy water be put in a basin to wash all brushes and pots rather than leaving the tap running? Could rainwater be gathered instead of using a hose to water the school garden?

THIRSTY BEES!

Learning Intention

I can carry out sustainable actions which help to support biodiversity.

What you need

- A shallow dish or plate with sides
- Small stones or marbles
- Water



WHAT TO DO

1. Explain that it is not only humans that need water to survive...plants, animals and insects need it too! One type of insect requiring regular water breaks to help it do some very important jobs is the bee. Discuss the different jobs that bees do and why they need water, such as:
 - to drink – bees can travel up to five miles to find a clean water source to drink from!
 - to spread as a layer over the hive to keep it cool, like air conditioning!
 - to feed to baby bees
 - to water down honey so it doesn't become too thick or turn into crystals (bees drink their own honey!)
2. To help bees to find clean, reliable water, we can build simple water feeders. Ask what some of the problems could be and what we need to think about when we create bee feeders. Issues could be that bees can't swim, that they would need regular cleaning and that the water should be pure and treated. Discuss how to overcome these issues. For example, providing stepping-stones for the bees so they don't drown, cleaning the feeders regularly and using rainwater, not tap water, whenever possible.
3. Build the simple bee feeders by collecting small stones or marbles and placing these in the dish, and then put in water. Ask learners where they think the water feeders would be well-positioned. This activity can be carried out both at home and at school.

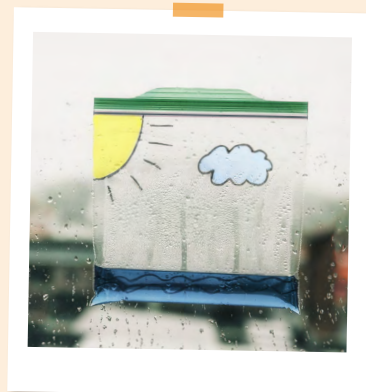
CREATE A WATER CYCLE IN A BAG

Learning Intention

I can explain the different stages in the water cycle.

What you need

- Clear sandwich bag for each pupil
- Sellotape
- Marker pens
- Water
- Blue food colouring
- Measuring jug



WHAT TO DO

1. Explain that water exists in three different forms, known as states. Ask learners to call out what they think these are (solid – ice, liquid water and gas – water vapour). Tell them that water is constantly moving between these states.
2. Show the [image of planet earth](#) and ask learners what they can see (land, water, clouds). Ask learners if they know how water moves between land, water and clouds. Take ideas. Explain that this is called the water cycle. Watch this short clip: [Geography KS1/KS2: The water cycle - BBC Teach](#).
3. Explain to learners that they are going to make their own water cycle in a plastic bag. Provide each child with a bag and some marker pens. Working through each step as a class, and with the teacher modelling the diagram on the board as you go, draw a labelled diagram of the water cycle onto one side of the bag.
4. Mix some drops of blue food colouring with some water in a measuring jug. Pour approximately 150ml into each child's bag and ask them to seal this. Additional sellotape could be put over the top to ensure a tight seal.
5. Tape the sandwich bags onto a window in a sunny spot and watch the water cycle take place over time!

Extension: This [Water Cycle Presentation and Matching Flashcards](#) includes additional information about the role of water treatment works in the water cycle.

FURTHER WATER RESOURCES AND ACTIVITIES

- Additional classroom water activities and further comprehensive sign posting to websites and resources can be found here: [Water | Eco-Schools Scotland \(keepsotlandbeautiful.org\)](https://www.keepsotlandbeautiful.org)
- A range of activities which explore different aspects of water can be found here: [All About Water - Scottish Water](#)
- Interactive games which explore water networks, water treatment and water pipelines can be found here: [Games - Scottish Water](#)

Explore and learn more!



MISSION H₂O AND THE CURRICULUM

Mission H₂O addresses the Scottish Curriculum for Excellence: Science, Social Subjects and Health and Wellbeing experiences and outcomes.

Curricular Area	Early Level	First Level	Second Level
SCIENCE	By investigating how water can change from one form to another, I can relate my findings to everyday experiences. SCN 0-05a	By investigating how water can change from one form to another, I can relate my findings to everyday experiences. SCN 1-05a	I can apply my knowledge of how water changes state to help me understand the processes involved in the water cycle in nature over time. SCN 2-05a
SOCIAL SUBJECTS	I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment. SOC 0-08a	I can consider ways of looking after my school or community and can encourage others to care for their environment. SOC 1-08a	I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally responsible way. SOC 2-08a
HEALTH AND WELLBEING	Through contributing my views, time and talents, I play a part in bringing about positive change in my school and wider community. HWB 0-13a	Through contributing my views, time and talents, I play a part in bringing about positive change in my school and wider community. HWB 1-13a	Through contributing my views, time and talents, I play a part in bringing about positive change in my school and wider community. HWB 2-13a

