

Eco-Schools Curricular Maps - Water Topic

The series of 'Outcome Maps' in this document suggest how Curriculum for Excellence (CfE) Experiences and Outcomes may be delivered through the Eco-Schools Water Topic

Eco-Schools Scotland commissioned experienced teachers to select outcomes they felt appropriate for each topic.

Please note:

- The selected outcomes for each Map are advisory – teachers may reject or add outcomes which they consider more appropriate to the context in which they plan to teach.
- Eco-Schools 'Outcome Maps' are for guidance purposes only, are not exhaustive and should not be viewed as limiting.
- The first map illustrates how closely the Seven Elements of the Eco-Schools Programme match core outcomes from CfE
- Each subsequent topic map is accompanied by a header which suggests possible 'lead curricular areas'. Again these are open to debate and amendment by teachers.
- While similar in format not all Maps are identical – topics such as Health and Wellbeing are so closely related to Eco-Schools topics that almost all outcomes are relevant.
- Each outcome is normally quoted in full along with its relevant CfE code.
- Following piloting with teachers we have added a commentary in italics to some outcomes to explain their inclusion within an outcome map or suggest a possible teaching context. Linking 'arrows' on some topic maps highlight the opportunities for interdisciplinary learning across curricular areas.



Water Topic: Early Level

Sciences (Biodiversity and Interdependence)

I have helped to grow plants and can name their basic parts. I can talk about how they grow and what I need to do to look after them. **SCN 0-03a** *Watering plants to keep them healthy*

By investigating how water can change from one form to another, I can relate my findings to everyday experiences. **SCN 0-05a** *Relate changes of state to the weather*

Sciences (Biological systems)

I have explored my senses and can discuss their reliability and limitations in responding to the environment. **SCN 1-12b** *Properties of water, touch/sound/splashing, running*

Sciences (Materials)

Through creative play, I explore different materials and can share my reasoning for selecting materials for different purposes. **SCN 0-15a** *what materials are waterproof?*

Health and Wellbeing (Food and health)

I am becoming aware of how cleanliness, hygiene and safety can affect health and wellbeing and I apply this knowledge in my everyday routines such as taking care of my teeth. **HWB 0-33a**

Social Studies (People, past events and societies)

I have explored how people lived in the past and have used imaginative play to show how their lives were different from my own and the people around me. **SOC 0-04a** *Did people always get water from a tap? Where from and how did they collect it?*

Social Studies (People, place and environment)

While learning outdoors in differing weathers, I have described and recorded the weather, its effects and how it makes me feel and can relate my recordings to the seasons. **SOC 0-12a** *Where water comes from, rain gauges from reused plastic bottles. Snow, rain, sleet, hail, clouds*

Technologies (Technological developments in society and business)

To help care for the environment, I reduce, re-use and recycle the resources I use. **TCH 0-06a** *Reduce water consumption using hippo water savers and other water saving gadgets*

Literacy (Writing)

Within real and imaginary situations, I share experiences and feelings, ideas and information in a way that communicates my message. **LIT 0-26a** *Drama about water shortages, flooding*

Expressive Arts (Participation in Performances and presentation)

I have experienced the energy and excitement of performing for audiences and being part of an audience for other people's presentations/performances. **EXA 0-01a** *Exploring water sounds – listening to water splashing, trickling, gushing*

Expressive Arts (Art and design)

I have the freedom to discover and choose ways to create images and objects using a variety of materials. **EXA 0-02a** *Create pictures using colours and water to make patterns*

Expressive Arts (Music)

I have the freedom to use my voice, musical instruments and music technology to discover and enjoy playing with sound and rhythm. **EXA 0-17a** *Making sounds with water- shaking containers and investigate pitch with recycled bottles filled with water*



Water Topic: First Level

Sciences (Biodiversity and Interdependence)

I can help to design experiments to find out what plants need in order to grow and develop. I can observe and record my findings and from what I have learned I can grow healthy plants in school. **SCN 1-03a** *Watering plants to keep them healthy*

By investigating how water can change from one form to another, I can relate my findings to everyday experiences. **SCN 1-05a** *Relate changes of state to the weather*

Sciences (Biological systems)

By researching, I can describe the position and function of the skeleton and major organs of the human body and discuss what I need to do to keep them healthy. **SCN 1-12a** *Water for health, need for clean water*

I know the symptoms of some common diseases caused by germs. I can explain how they are spread and discuss how some methods of preventing and treating disease benefit society. **SCN 1-13a** *Hand washing programmes*

Sciences (Materials)

I can make and test predictions about solids dissolving in water and can relate my findings to the world around me. **SCN 1-16a** *e.g. sand, oil, soap, salt, sugar*

Health and Wellbeing (Food and health)

I am becoming aware of how cleanliness, hygiene and safety can affect health and wellbeing and I apply this knowledge in my everyday routines such as taking care of my teeth. **HWB 1-33a**

Social Studies (People, past events and societies)

I can compare aspects of people's daily lives in the past with my own by using historical evidence or the experience of recreating an historical setting. **SOC 1-04a** *History of water supply*

Social Studies (People, place and environment)

By using a range of instruments, I can measure and record the weather and can discuss how weather affects my life. **SOC 1-12a**

By exploring climate zones around the world, I can compare and describe how climate affects living things. **SOC 1-12b** *Endangered species*

Technologies (Technological developments in society and business)

I can take appropriate action to ensure conservation of materials and resources, considering the impact of my actions on the environment. **TCH 1-06a** *Measure and reduce time taken in showers or running water when doing teeth*

Expressive Arts (Participation in performances and presentation)

I have experienced the energy and excitement of performing for audiences and being part of an audience for other people's presentations/performances. **EXA 1-01a** *Water Cycle Drama*

Expressive Arts (Art and Design)

I can create and present work using the visual elements of line, shape, form, colour, tone, pattern and texture. **EXA 1-03a** *Create pictures using colours and water to make patterns*

Expressive Arts (Music)

I can create and present work using the visual elements of line, I can use my voice, musical instruments and music technology to discover and enjoy playing with sound, rhythm, pitch and dynamics. **EXA 1-17a** *Investigate pitch with recycled bottles filled with water*

Literacy (Writing)

By considering the type of text I am creating, I can select ideas and relevant information, organise these in a logical sequence and use words which will be interesting and/or useful for others. **LIT 1-26a** *Posters on hygiene/water borne diseases*



Water Topic: Second Level

Sciences (Planet Earth)

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](#)

Sciences (Biological systems)

By investigating some body systems and potential problems which they may develop, I can make informed decisions to help me to maintain my health and wellbeing. [SCN 2-12a](#) *Link to handwashing, personal cleanliness and access to clean water*

Sciences (Materials)

have participated in practical activities to separate simple mixtures of substances and can relate my findings to my everyday experience. [SCN 2-16a](#) *Links to water purification*

By investigating common conditions that increase the amount of substance that will dissolve or the speed of dissolving, I can relate my findings to the world around me. [SCN 2-16b](#) *Relate to water pollution e.g. detergents*

I have investigated different water samples from the environment and explored methods that can be used to clean and conserve water and I am aware of the properties and uses of water. [SCN 2-18a](#)

Health and Wellbeing (Food and health)

By applying my knowledge and understanding of current healthy eating advice I can contribute to a healthy eating plan. [HWB 2-30a](#) *Importance of hydration in all aspects of health and wellbeing*

Having learned about cleanliness, hygiene and safety, I can apply these principles to my everyday routines, understanding their importance to health and wellbeing. [HWB 2-33a](#)

Social Studies (People, past events and societies)

I can compare and contrast a society in the past with my own and contribute to a discussion of the similarities and differences. [SOC 2-04a](#) *History of water supply – link to Romans*

Social Studies (People, place and environment)

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](#) *Water management*

Literacy

I can convey information, describe events or processes, share my opinions or persuade my reader in different ways. [LIT 1-28a](#)

Expressive Arts (Art and design)

I can create and present work that shows developing skill in using the visual elements and concepts. [EXA 2-03a](#)

Inspired by a range of stimuli, I can express and communicate my ideas, thoughts and feelings through activities within art and design. [EXA 2-05a](#)

Expressive Arts (Music)

I can use my voice, musical instruments and music technology to experiment with sounds, pitch, melody, rhythm, timbre and dynamics. [EXA 2-17a](#) *Investigate pitch with recycled bottles filled with water.*



Water Topic: Third Level

Sciences (Planet Earth)

By investigating renewable energy sources and taking part in practical activities to harness them, I can discuss their benefits and potential problems. **SCN 3-04b** *Water used to provide energy*

By using my knowledge of our solar system and the basic needs of living things, I can produce a reasoned argument on the likelihood of life existing elsewhere in the universe. **SCN 3-06a** *NASA's strategy to 'follow the water' in the search for life elsewhere*

Sciences (Biological systems)

I have explored the structure and function of organs and organ systems and can relate this to the basic biological processes required to sustain life. **SCN 3-12a** *Water for heal, water for brains, need for clean water*

I have explored the role of technology in monitoring health and improving the quality of life. **SCN 3-12b** *Water filtration systems, modern wells, water test kits for bacteria, pesticides, lead*

I have explored how the body defends itself against disease and can describe how vaccines can provide protection. **SCN 3-13c** *Consider water borne diseases such as cholera and polio*

Sciences (Materials)

I can differentiate between pure substances and mixtures in common use and can select appropriate physical methods for separating mixtures into their components. **SCN 3-16a** *Water purification*

I can participate in practical activities to extract useful substances from natural resources. **SCN 3-17b** *Survival skills challenge to desalinate sea water*

Health and Wellbeing (Food and health)

Through practical activities using different foods and drinks, I can identify keynutrients, their sources and functions, and demonstrate the links between energy, nutrients and health.

HWB 3-31a *Water as a key nutrient and importance of hydration in all aspects of health and wellbeing*

Social Studies (People, past events and societies)

I can describe the factors contributing to a major social, political or economic change in the past and can assess the impact on people's lives. **SOC 3-05a** *Events leading to a clean water supply including John Snow's investigations into the source of cholera*

Social Studies (People, place and environment)

I can identify the possible consequences of an environmental issue and make informed suggestions about ways to manage the impact. **SOC 3-08a** *Water management*

I can investigate the relationship between climate and weather to be able to understand the causes of weather patterns within a selected climate zone. **SOC 3-12a** *Water cycle*

By comparing settlement and economic activity in two contrasting landscapes, I can reach conclusions about how landscapes influence human activity. I can explain my findings clearly to others. **SOC 3-13a** *Comparison between Developing World drought landscape and area of the UK*

Social Studies (People in society, economy and business)

I can describe how the interdependence of countries affects levels of development, considering the effects on people's lives. **SOC 3-19a** *Water conflict*

Religious and moral education (Christianity)

I can demonstrate my developing understanding of moral values through participating in events and projects which make a positive difference to others. **RME 3-02b** *Consider Toilet twinning, WaterAid*

Literacy (Writing)

I can use notes and other types of writing to generate and develop ideas, retain and recall information, explore problems, make decisions, generate and develop ideas or create original text. **LIT 3-25a** *Water as the source and sustenance of life can provide inspiration for writing in a number of genres.*



Water Topic: Fourth Level

Sciences (Planet Earth)

I have propagated and grown plants using a variety of different methods. I can compare these methods and develop my understanding of their commercial use. **SCN 4-02a** *Large volumes of water required for some crops, contention over water sources for avocados*

By contributing to an investigation on different ways of meeting society's energy needs, I can express an informed view on the risks and benefits of different energy sources, including those produced from plants. **SCN 4-04a** *Large volumes of water required for plant stock for biofuels, investigate the extraction of hydrogen from water as a new power source*

Sciences (Materials)

I can monitor the environment by collecting and analysing samples. I can interpret the results to inform others about levels of pollution and express a considered opinion on how science can help to protect our environment. **SCN 4-18a**

Sciences (Topical Science)

I have researched new developments in science and can explain how their current or future applications might impact on modern life. **SCN 4-20a** *Methods of providing fresh water e.g. desalination*

Social Studies (People, place and environment)

I can discuss the sustainability of key natural resources and analyse the possible implications for human activity. **SOC 4-08a** *Sustainability issues over bottled water, water pollution, America's endangered rivers*

I can explain how the distribution and control of important natural resources affects the international power and influences of states. **SOC 4-11b** *Water conflict*

Religious and moral education (Christianity)

I can apply my developing understanding of morality to consider a range of moral dilemmas in order to find ways which could promote a more just and compassionate society. **RME 4-02b** *Lack of justice in water conflict, climate justice, using other peoples water*

Technologies (Technological developments in society and business)

I can analyse products taking into consideration sustainability, scientific and technological developments. **TCH 4-05a** *Water use in mass production,*

Health and Wellbeing (Mental, emotional, social and physical wellbeing)

I am developing my understanding of the human body and can use this knowledge to maintain and improve my wellbeing and health. **HWB 4-15a** *Pupils may learn about the essential need for clean water to keep the body healthy.*