

## Eco-Schools Curricular Maps - Litter & Waste 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 Litter & Waste 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.



## Litter & Waste Topic: Early Level



### 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** *Shopping in the past, packaging*

### Social studies (People, place and environment)

- I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment. **SOC 0-08a** *Litter in the past and now – differences- Packaging. Litter spoils our environment. Where does our rubbish go?*
- By exploring my local community, I have discovered the different roles people play and how they can help. **SOC 0-16a** *People who help us: street cleaners, binmen, litter wardens*

### Social studies (People in society, economy and business)

- I make decisions and take responsibility in my everyday experiences and play, showing consideration for others. **SOC 0-17a** *Litter monitors*
- Within my everyday experiences and play, I make choices about where I work, how I work and who I work with. **SOC 0-18a** *If I am messy I must clear up.*

### Health and Wellbeing (Mental, emotional, social and physical 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** *Litter spoils our surroundings it. We clear it up safely*
- I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible. **HWB 0-16a** *Dangerous litter- used needles, broken glass etc; danger to wildlife*

### Health and Wellbeing (Food and health)

- I explore and discover where foods come from as I choose, prepare and taste different foods. **HWB 0-35a** *Fairtrade, food miles, packaging*

### 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** *Why we recycle and what happens to it. Reuse paper, reduce water consumption, reduce energy usage by switching lights and TVs off*

### Literacy (Reading)

- I enjoy exploring and choosing stories and other texts to watch, read or listen to, and can share my likes and dislikes. **LIT 0-11b** *There are many books with Eco-themes*

### Literacy (Listening and Talking)

- I listen or watch for useful or interesting information and I use this to make choices or learn new things. **LIT 0-04a**



## Litter & Waste Topic: Early Level



### Literacy (Writing)

- I enjoy *exploring* and playing with the patterns and sounds of language and can use what I learn. **LIT 0-11a**

### Expressive Arts (Art and design)

- I can create a range of visual information through observing and recording from my experiences across the curriculum. **EXA 0-04a** *Creating litter campaign and information posters*
- I have the freedom to discover and choose ways to create images and objects using a variety of materials. **EXA 0-02a** *Junk modelling/collage, best type of packaging, waste collage, art from litter*

### Numeracy and Mathematics (Information handling)

- I can match objects, and sort using my own and others' criteria, sharing my ideas with others. **MNU 0-20b** *Litter survey – tally marks, pictorial graphs*
- I can use the signs and charts around me for information, helping me plan and make choices and decisions in my daily life. **MNU 0-20c** *Recycling – where it goes. How much we produce?*

### Sciences (Materials)

- Through creative play, I explore different materials and can share my reasoning for selecting materials for different purposes. **SCN 0-15a** *Sorting what can be recycled or not*
- 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*



## Litter & Waste Topic: First Level



### 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** *Pupils may investigate e.g. 'make do and mend' rather than throw away.*
- I can consider ways of looking after my school or community and can encourage others to care for their environment. **SOC 1-08a** *Waste surveys, recycling, litter prevention, Expand on the 3 'R's*

### Social Studies (People in society, economy and business)

- By exploring the ways in which we use and need rules, I can consider the meaning of rights and responsibilities and discuss those relevant to me. **SOC 1-17a**
- I have participated in decision making and have considered the different options available in order to make decisions. **SOC-18a** *Membership of Eco Committee*
- I can contribute to a discussion of the difference between my needs and wants and those of others around me. **SOC 1-16a** *Rich world/poor world, children living on landfill sites*
- I have developed an understanding of the importance of local organisations in providing for the needs of my local community. **SOC 1-20a** *Waste management*

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

- 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**
- I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible. **HWB 1-16a** *Dangerous litter- used needles, broken glass etc; danger to wildlife*

### Health and Wellbeing (Food and Health)

- I am discovering the different ways that advertising and the media can affect my choices. **HWB 1-37a** *Packaging used as encouragement to children to want unsuitable food can result in more litter*
- When preparing and cooking a variety of foods, I am becoming aware of the journeys which foods make from source to consumer, their seasonality, their local availability and their sustainability. **HWB 1-35a** *Food miles, energy consumption*

### 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, weigh and reduce school hall food waste*

### Literacy (Reading)

- I regularly select and read, listen to or watch texts which I enjoy and find interesting, and I can explain why I prefer certain texts and authors. **LIT 1-11a** *There are many books with Eco-themes e.g. The Litter Queen by Roderick Hunt; Spud Goes Green by Giles Thaxton*



## Litter & Waste Topic: First Level



### Literacy (Writing)

- I enjoy creating texts of my choice and I regularly select subject, purpose, format and resources to suit the needs of my audience. **LIT 1-20a** *Litter Posters/Campaigns*

### Numeracy and Mathematics (Information handling)

- I have used a range of ways to collect information and can sort it in a logical, organised and imaginative way using my own and others' criteria. **MNU 1-20b** *Litter Survey*
- Using technology and other methods, I can display data simply, clearly and accurately by creating tables, charts and diagrams, using simple labelling and scale. **MTH 1-21a** *Recycling & litter statistics, weighing waste addresses many numeracy and maths topics. Evaluating success by drawing graphs of amounts of recycled waste etc*

### Numeracy and Mathematics (Number, money and measure)

- I can estimate how long or heavy an object is, or what amount it holds, using everyday things as a guide, then measure or weigh it using appropriate instruments and units. **MNU 1-11a** *Weighing and counting recycled waste – paper, phones.*

### Expressive Arts (Art and design)

- I can create a range of visual information through observing and recording from my experiences across the curriculum. **EXA 1-04a** *Creating litter campaign posters*
- I have the opportunity to choose and explore a range of media and technologies to create images and objects, discovering their effects and suitability for specific tasks. **EXA 1-02a** *Junk modelling, trash fashion, waste collage, art from litter*

### Sciences (Materials)

- Through exploring properties and sources of materials, I can choose appropriate materials to solve practical challenges. **SCN 1-15a** *Plastics as packaging*



## Litter & Waste Topic: Second Level



### 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** *Comparison of food packaging 'now and then', zero waste lifestyles*

### 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** *Dangers of litter to people and animals, The 3'R's or 7'R's! Recycling, composting, issues with landfill, waste in the ocean*
- I can consider the advantages and disadvantages of a proposed land use development and discuss the impact this may have on the community. **SOC 2-08b** *Debate on the proposed location of a new landfill or recycling facility*

### Social Studies (People in society, economy and business)

- I can describe the main features of a democracy and discuss the rights and responsibilities of citizens in Scotland. **SOC 2-17a** *Personal decision: bin litter or drop litter, recycle or not. Litter rules and fines*

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

- 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** *Community litter picks*
- I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible. **HWB 2-16a** *Dangerous litter - used needles, broken glass etc.*

### Health and Wellbeing (Food and Health)

- I can understand how advertising and the media are used to influence consumers. **HWB 2-37a** *Packaging adverts can encourage unhealthy choice/excess packaging*
- When preparing and cooking a variety of foods, I am becoming aware of the journeys which foods make from source to consumer, their seasonality, their local availability and their sustainability. **HWB 2-35a** *Packaging, food miles, Fairtrade*

### Technologies (Technological developments in society and business)

- I can analyse how lifestyles can impact on the environment and Earth's resources and can make suggestions about how to live in a more sustainable way. **TCH 2-06a** *Reducing litter is a real context to study this outcome, designing/adapting litter bins, durability of materials, zero waste lifestyles,*

### Literacy (Reading)

- I regularly select and read, listen to or watch texts which I enjoy and find interesting, and I can explain why I prefer certain texts and authors. **LIT 2-11a** *There are many books with Eco-themes which can be used as a basis for discussion on litter issues*



## Litter & Waste Topic: Second Level



### Expressive Arts (Art and Design)

- I have the opportunity to choose and explore an extended range of media and technologies to create images and objects, comparing and combining them for specific tasks. **EXA 2-02a** *Re-using materials as art resources, 'trash' fashion, litter collages*
- 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** *Junk modelling/collage/information posters*

### Numeracy and Mathematics (Number, money and measure)

- I can use my knowledge of the sizes of familiar objects or places to assist me when making an estimate of measure. **MNU 2-11a** *Once recycled materials have been collected then these can be used as a 'guess, check and improve' exercise before weighing.*

### Numeracy and Mathematics (Information handling)

- I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way. **MNU 2-20b** *Litter Survey: sorting and categorizing, Recycling & litter statistics, weighing waste etc covers many maths outcomes. Data for MNU 2-11a can be collated and recorded as tables, charts etc, for use by the whole school community*

### Sciences (Materials)

- 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** *Conservation of water as waste minimisation*



## Litter & Waste Topic: Third Level



### Social studies (People, past events and societies)

- I can explain the similarities and differences between the lifestyles, values and attitudes of people in the past by comparing Scotland with a society in Europe or elsewhere. **SOC 3-04a** *Recycling systems*

### Social Studies (People, place and environment)

- Having investigated processes which form and shape landscapes, I can explain their impact on selected landscapes in Scotland, Europe and beyond. **SOC 3-07a**
- I can identify the possible consequences of an environmental issue and make informed suggestions about ways to manage the impact. **SOC 3-08a** *Litter monitors, campaigns etc*

### Social Studies (People in society, economy and business)

- I have compared the rights and responsibilities of citizens in Scotland with a contrasting society and can describe and begin to understand reasons for differences. **SOC 3-17a** *Internet-Global interviews/ views*
- I can discuss the extent to which my choices and decisions are influenced by the ways in which I am informed. **SOC 3-17b** *Media reports-bias & advertising*
- When participating in an enterprise activity, I can explore ethical issues relating to business practice and gain an understanding of how businesses help to satisfy needs. **SOC 3-20a** *Fair Trade principles*

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

- I recognise that each individual has a unique blend of abilities and needs. I contribute to making my school community one which values individuals equally and is a welcoming place for all. **HWB 3-10a**
- Through contributing my views, time and talents, I play a part in bringing about positive change in my school and wider community. **HWB 3-13a** *Litter campaign*
- I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible. **HWB 3-16a** *Dangerous litter- (used needles, broken glass etc; danger to wildlife)*

### Health and Wellbeing (Physical education, physical activity and sport)

- I am experiencing enjoyment and achievement on a daily basis by taking part in different kinds of energetic physical activities of my choosing, including sport and opportunities for outdoor learning, available at my place of learning and in the wider community. **HWB 3-25a** *Membership of After- school clubs, drama, sports etc.*

### Technologies (Technological developments in society and business)

- I can evaluate the implications for individuals and societies of the ethical issues arising from technological developments. **TCH 3-06a** *Recycling systems – effectiveness/cost/how they work*

### Technologies (Craft, design, engineering and graphics)

- I can create solutions in 3D and 2D and can justify the construction/graphic methods and the design features. **TCH 3-09a** *helping to create outdoor seating, play equipment and illustrate*
- I can explore the properties and performance of materials before justifying the most appropriate material for a task. **TCH 3-10a** *helping to create outdoor seating, play equipment and illustrate*



## Litter & Waste Topic: Third Level



- I can apply a range of graphic techniques and standards when producing images using sketching, drawing and software. **TCH 3-11a** *helping to create outdoor seating, play equipment and illustrate*

### Literacy (Reading)

- I regularly select and read, listen to or watch texts for enjoyment and interest, and I can express how well they meet my needs and expectations and give reasons, with evidence, for my personal response. I can identify sources<sup>1</sup> to develop the range of my reading. **LIT 3-11a**

### Literacy (Writing)

- I enjoy creating texts of my choice and I am developing my own style. I can regularly select subject, purpose, format and resources to suit the needs of my audience. **LIT 3-20a** *Posters, letters, Reports*

### Expressive Arts (Art and design)

- I have experimented with a range of media and technologies to create images and objects, using my understanding of their properties. **EXA 3-02a** *Junk work*
- I can use and combine the visual elements and concepts to convey ideas, thoughts and feelings in expressive and design work. **EXA3-03a** *Collage of litter, trash fashion*
- While working through a design process in response to a design brief, I can develop and communicate imaginative design solutions. **EXA 3-06a**

### Numeracy and Mathematics (Information Handling)

- I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading. **MNU 3-20a**
- When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can affect precision, to ensure that the data allows for fair conclusions to be drawn. **MTH 3-20b** *Analysis of litter surveys/surveys of opinion on the litter problem*

### Numeracy and Mathematics (Number, money and measure)

- I can solve practical problems by applying my knowledge of measure, choosing the appropriate units and degree of accuracy for the task and using a formula to calculate area or volume when required. **MNU 3-11a** *planning school gardens, raised flower beds etc.*

### Expressive Arts (Music)

- I can use my voice, musical instruments or music technology to improvise or compose with melody, rhythm, harmony, timbre and structure. **EXA 3-17a**

### Numeracy and Mathematics (Shape, position and movement)

- Having investigated a range of methods, I can accurately draw 2D shapes using appropriate mathematical instruments and methods. **MTH 3-16a** *planning school gardens, raised flower beds etc.*

### Science (Planet Earth)

- I can sample and identify living things from different habitats to compare their biodiversity and can suggest reasons for their distribution. **SCN 3-01a** *Field study and internet to research*



## Litter & Waste Topic: Fourth Level



### 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 of primary industries currently and in future. Can complement science lessons*
- I can develop my understanding of the interaction between humans and the environment by describing and assessing the impact of human activity on an area. **SOC 4-10a** *This outcome can serve as a focus for experiences related to the minimisation of litter - 'waste in the wrong place' – and could link with chemistry lessons on carbon compounds and packaging-related litter.*

### Health and Wellbeing (Food and Health)

- I have examined and evaluated food packaging and can understand the legal requirements for manufacturers. **HWB 4-36a** *Studies into minimising wasteful packaging can support the Litter topic by demonstrating that unnecessary packaging often ends up as litter. Consider requirements for recycling labels.*

### Technologies (Technological developments in society and business)

- I can analyse products taking into consideration sustainability, scientific and technological developments. **TCH 4-05a** *Consider structure and components of ICT equipment, recycling requirements of the WEEE directive and inherent dangers of some component materials*

### Numeracy and Mathematics (Information handling)

- I can select appropriately from a wide range of tables, charts, diagrams and graphs when displaying discrete, continuous or grouped data, clearly communicating the significant features of the data. **MTH 4-21a**
- I can evaluate and interpret raw and graphical data using a variety of methods, comment on relationships I observe within the data and communicate my findings to others. **MNU 4-20a** *Litter surveys of school grounds and the local community provide real-life data for graphical display and analysis*

### Numeracy and Mathematics (Number, money and measure)

- Through investigating real life problems involving the surface area of simple 3D shapes, I can explore ways to make the most efficient use of materials and carry out the necessary calculations to solve related problems. **MTH 4-11b** *Pupils may investigate the mathematics of food packaging and suggest ways of minimising the amount of packaging required for a particular product.*

### Sciences (Materials)

- I have explored how different materials can be derived from crude oil and their uses. I can explain the importance of carbon compounds in our lives. **SCN 4-17a** *Pupils may examine the decomposition rates of plastics and other carbon compounds and how these contribute to problems of waste storage (landfill) and the permanence of some forms of litter.*



## Litter & Waste Topic:



- 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** *Surveys and analysis of litter within the school grounds or local community can lead to an awareness of local pollution levels and elicit suggested approaches to minimising the problem from pupils.*
- I understand how animal and plant species depend on each other and how living things are adapted for survival. I can predict the impact of population growth and natural hazards on biodiversity. **SCN 4-01a** *Litter can be one of the biggest dangers to wildlife and domestic animals. An examination of this kind of impact from litter may influence pupil behaviour.*

### 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** *The use of enzymes for decomposition of plastics*