

OPAL Tree Health Survey

Teaching Guide for Scotland Appendix: Curriculum Links



Curriculum Links

Included in this appendix are links to Curriculum for Excellence Experiences and Outcomes starting from level 2, as well as National 4s and 5s, SQA Highers and Advanced Highers.

Curriculum for Excellence

Health and wellbeing

In this area of the curriculum, the project offers the opportunity to explore what makes us healthy, specifically planning safe trips:

I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible.

2-16a / HWB 3-16a / HWB 4-16a

I know and can demonstrate how to keep myself and others safe and how to respond in a range of emergency situations.

HWB 2-17a / HWB 3-17a / HWB 4-17a

I know and can demonstrate how to travel safely.

HWB 2-18a / HWB 3-18a / HWB 4-18a

Literacy / languages

The survey presents the chance to speak to people in the local community, and to explore the importance of trees and woods in the imagination through different texts:

I have worked with others, using ICT and other media where appropriate, and can contribute successfully to a presentation in English, supported by Gaelic vocabulary, on an aspect of Gaelic culture and tradition.

LGL 2-06b

I have contributed successfully to a group to plan and prepare a short talk in Gaelic. Using ICT where appropriate, I can deliver an individual presentation in Gaelic:

on an area of personal interest or a topic relating to Gaelic culture or history

LGL 3-06a

Using ICT where appropriate, I can plan, prepare and deliver an individual presentation in Gaelic:

on an area of personal interest or a topic relating to Gaelic culture or history

LGL 4-06a

To show my understanding across different areas of learning, I can identify and consider the purpose and main ideas of a text and use supporting detail.

LIT 2-16a

To show my understanding across different areas of learning, I can:

- identify and consider the purpose, main concerns or concepts and use supporting detail
- make inferences from key statements
- identify and discuss similarities and differences between different types of text.

LIT 3-16a

To show my understanding across different areas of learning, I can:

- clearly state the purpose, main concerns, concepts or arguments and use supporting detail
- make inferences from key statements and state these accurately in my own words
- compare and contrast different types of text.

LIT 4-16a

Numeracy / mathematics

The survey is an opportunity to use mathematical techniques in service of a goal, to see how maths can be applied to everyday situations:

Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others.

MNU 2-03a

I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions.

MNU 3-03a

Having recognised similarities between new problems and problems I have solved before, I can carry out the necessary calculations to solve problems set in unfamiliar contexts.

MNU 4-03a

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

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

I can apply my knowledge and understanding of measure to everyday problems and tasks and appreciate the practical importance of accuracy when making calculations.

MNU 4-11a

I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.

MNU 2-07a

I can show how quantities that are related can be increased or decreased proportionally and apply this to solve problems in everyday contexts.

MNU 3-08a

Using proportion, I can calculate the change in one quantity caused by a change in a related quantity and solve real-life problems.

MNU 4-08a

Expressive arts

The survey can support the use of a variety of creative techniques inspired directly by experiences in the outdoors:

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

I have experimented with a range of media and technologies to create images and objects, using my understanding of their properties.

EXA 3-02a

I have continued to experiment with a range of media and technologies, handling them with control and assurance to create images and objects. I can apply my understanding of the properties of media and of techniques to specific tasks.

EXA 4-02a

Inspired by a range of stimuli, I can express my ideas, thoughts and feelings through creative work in dance.

EXA 2-09a

I have created and taken part in dance from a range of styles and cultures.

EXA 3-08a

I can select ideas from a range of stimuli to choreograph dance motifs in creative ways.

EXA 4-09a

Religious and Moral Education

The survey can lead to exploring the significance and value of trees in a variety of cultures including our own:

Through investigating and reflecting upon stories of world religions, I can show my understanding of these stories.

RME 2-04a

Having reflected upon sources from world religions, I can explain some key beliefs about deity, the human condition and the natural world, and how these beliefs lead to actions for followers of those religions.

RME 3-04a

Having considered the key beliefs of world religions, I can express reasoned views on these and discuss how putting them into practice might affect individuals and society. I can confidently support my own responses to these issues of belief.

RME 4-04a

Sciences

The tree health survey is an opportunity to engage in a live national scientific study and put scientific skills to practice in the local area:

I can identify and classify examples of living things, past and present, to help me appreciate their diversity. I can relate physical and behavioural characteristics to their survival or extinction.

SCN 2-01a

I can sample and identify living things from different habitats to compare their biodiversity and can suggest reasons for their distribution.

SCN 3-01a

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

Through exploring the carbon cycle, I can describe the processes involved in maintaining the balance of gases in the air, considering causes and implications of changes in the balance.

SCN 4-05b

With relevance to citizen science:

Through research and discussion I have an appreciation of the contribution that individuals are making to scientific discovery and invention and the impact this has made on society.

SCN 2-20a

I have collaborated with others to find and present information on how scientists from Scotland and beyond have contributed to innovative research and development.

SCN 3-20a

I have researched new developments in science and can explain how their current or future applications might impact on modern life.

SCN 4-20a

Social studies

The survey can be used to learn first hand about human impact and relationship with the natural world:

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

I can identify the possible consequences of an environmental issue and make informed suggestions about ways to manage the impact.

SOC 3-08a

I can discuss the sustainability of key natural resources and analyse the possible implications for human activity.

SOC 4-08a

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

Technologies

The survey presents an opportunity to explore the use and sustainability of trees and woodland products:

Having analysed how lifestyle can impact on the environment and Earth's resources, I can make suggestions about how to live in a more sustainable way.

TCH 2-02a

From my studies of sustainable development, I can reflect on the implications and ethical issues arising from technological developments for individuals and societies.

TCH 3-02a

I can examine a range of materials, processes or designs in my local community to consider and discuss their environmental, social and economic impact, discussing the possible lifetime cost to the environment in Scotland or beyond.

TCH 4-02a

SQA Qualifications

The OPAL Tree Health Survey can be undertaken as the experiment or practical investigation for a variety of SQA qualifications. The survey gives an opportunity for a practical scientific study, including: first hand experience of ecosystems and fieldwork, development of a variety of skills needed to successfully undertake a study, and use of ICT in reporting findings.

In all of these subjects and levels the survey can prompt learning about the links between greater movement of people and increased environmental problems. This could include looking at tree diseases and invasive species. Further questions include: what different types of diseases and non-native species are in the UK, and are in your local area? Where have these come from? What problems are there in other countries? In what ways do humans contribute to diseases and species moving between countries? What is being done to combat these issues at ports, airports, waterways and other areas?

Links:

<http://www.nonnativespecies.org/>

<http://www.anglingtrust.net/page.asp?section=649>

<http://www.snh.gov.uk/land-and-sea/managing-coasts-and-sea/marine-nonnatives/>

http://www.sepa.org.uk/science_and_research/what_we_do/biodiversity/invasive_non-native_species.aspx

Subjects and relevant units and key areas:

National 4 Biology / National 5 Biology

Unit: *Life on Earth*

Key areas: *Biodiversity and the Distribution of Life, and Human Impact on the Environment.*

Higher Biology

Unit: *Sustainability and Interdependence*

Key areas: *Crop Protection (plant disease), Biodiversity (invasive species)*

National 4 Environmental Science

Unit: *Living Environment*

Key area: *Impact of population growth and natural hazards on biodiversity*

National 5 Environmental Science / Higher Environmental Science

Unit: *Living Environment*

Key area: *Human Influences on Biodiversity*

National 4 / National 5 Geography

Unit: *Global Issues*

Topic: *The Impact of Human Activity on the Natural Environment*

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