

Muinín Catalyst STEAM Education for Sustainable Development and Futures Literacy

SDG15 Seeding Sustainability



Programme Phase 1: Research and Development

Micro-Module 3: Examining Edible / Medicinal Plants

SUBJECT AREAS: English, Geography, Home Economics, Irish, Science, SHPE



SDG15 Seeding Sustainability

Micro-Module 3: Examining Edible / Medicinal Plants



Micro-Module (MM) 3: Examining Edible / Medicinal Plants

Research and Development

Subjects: English, Geography,
Home Economics, Irish,
Science, SHPE

Micro-module Summary: Examining Edible/ Medicinal Plants

This micro-module contains eight lessons that introduce learners to the various habitats and in Ireland and the flora they support. Learners build on this knowledge to identify edible/medicinal plants that are widely available in the wild yet often overlooked and develop simple and safe applications.

Vocabulary: Application, Balm, Collection, Directory, Edible, Flora, Habitat, Harvest, Medicinal, Salve, Tea, Tincture, Tisane

In this lesson, the learner will:

- understand the connection between habitat and plant growth
- become aware of the wide ranging edible/medicinal Irish wild plants
- begin to develop the skills to safely identify and collect wild herbs / plants
- identify the mechanisms and policies of food production and distribution
- develop simple and safe application skills using wild plants

Materials

- Eight lesson plans
- Learners Activity and worksheets
- Internet Access required

2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



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Micro-Module 3: Examining Edible / Medicinal Plants



Seeding Sustainability: Examining Edible/ Medicinal Plants

Lesson 1: Biota, Flora and Fauna

Flora and Fauna also contribute significantly to the ecosystem of the Earth. This lesson will build and consolidate key vocabulary that learners will use throughout the micro-module. It encourages the development of research skills to develop an awareness of the different types of edible plants that can be found growing in Ireland.

Resources: Worksheet: Wild Irish Edibles, Flipped Classroom Task: Biota, Flora and Fauna

Lesson 2: Habitats

Over 100 habitat types have been classified in Ireland, boasting a rich array of flora and fauna. This lesson asks learners to use independent and collaborative research skills to discover information about habitats in Ireland and the different types of flora and fauna that can be found in each.

Resources: Worksheet: Habitats, Flora and Species Webquest, Support: C.R.A.A.P Test

Lesson 3: Local Flora/ Fauna Scavenger Hunt

Flora and fauna is linked with the air we breathe and the food we eat and are interdependent. This lesson connects learners with their local, natural place as they are tasked with identification, information-gathering and evaluation of local flora and fauna.

Resources: Worksheet: Local Flora/ Fauna Scavenger Hunt, Optional Extra Worksheet: Web Quest 1 Wild Irish Edibles (Lesson 1)

Lesson 4: Creating a directory

Foraging is becoming a hobby of increasing interest for many people. It gives us the opportunity to use what nature has provided, and encourages growing plants in our own backyards that can be used for a range of purposes, such as in cooking and for medical remedies. In this lesson, learners will begin to compile the information they have gathered and evaluated to form an online directory.

Resources: Worksheet: Creating a Directory of Local Edible Flora

Lesson 5: Sacred Trees of Ireland

Many types of trees found in the Celtic nations are considered sacred, whether as symbols, for their medicinal properties, or consideration as the abode of particular nature spirits. This lesson supports learners' understanding of sacred trees in Ireland by developing their own research questions.

Resources: Supporting Skills Worksheet: C.R.A.A.P Test

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Lesson 6: Plant learnings and synthesising information

This lesson builds on lesson 5 and the learners' research on Ireland's sacred trees. This lesson will enable learners to develop their visual communication skills. They will take the research they conducted in the previous lesson and develop a research poster to share their knowledge to a wider audience.

Resources: Worksheet: Plant Learnings (Recording Information) Linked Learning Media Communication 2 - Design a Poster

Lesson 7: Teas, Tinctures and Tisanes

Teas and tinctures are natural remedies for a variety of complaints dating back to Ancient Egypt and Ancient China when our ancestors added herbs to hot water and began distilling alcohol and adding herbs to make tinctures. This lesson will develop the understanding and awareness of natural remedies (teas, tinctures and tisanes) that support individual health and wellness.

Resources: None required

Lesson 8: Topical Applications

Topical applications are applied to the skin to reduce pain and inflammation, but also for mental health benefits. Potential risks of side-effects from pharmaceutical applications lead a lot of people to turn to natural remedies. This lesson will demonstrate how local plants can be used to promote health and well being, topically. Learners can make a number of options, e.g. a balm, a sugar scrub or a shower scrub using wildflowers.

Resources: None required

This is a making session and requires at least 90 mins, it is recommended this is undertaken in the Home Economics classroom or Science lab although it could be completed using camping equipment however this would be more of a demonstration approach.

External Expertise: Bianca Peel

Module Development and Expertise: Rebecca White and Anita McKeown

Using the Resources:

If you wish to use these resources, we can offer an induction and online support throughout the module to help you plan integration into your projects and timetable. To register for this option, please contact us e:hello@futurefocus21c.com For more information on the resources please visit www.muinincatalyst.com

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Micro-Module 3: Examining Edible / Medicinal Plants



Seeding Sustainability: Examining Edible/ Medicinal Plants

Setting up an online learning environment for the lessons on this module:

Our lessons integrate the use of virtual learning environments. To ensure seamless use of our lessons, a module should be setup on your school's virtual learning environment such as Teams, Google Classroom, etc. Learners are encouraged to upload documents to share with their peers. If your virtual learning environment does not support document sharing, we recommend OneDrive or Google Drive.

You can also use Google Sites or Microsoft Sway to encourage learners to present their work over the year - this can easily be set up to reflect the aims of TY and provide a showcase for their work as well as assessment tool.

Setting up a Canva Education account:

As our lessons integrate design, our lessons also refer to Canva. Educators and schools are able to open a free Canva for Education account by registering here: <https://www.canva.com/education/> Canva for Education provides primary and secondary school teachers and students with premium features and templates. You can then also set up lessons and invite your learners to the class.

Examining Edible Medicinal Plants References

Articles

- Benedictine University Library (2024) Research guides: Evaluating sources: the CRAAP Test. Available at: <https://researchguides.ben.edu/source-evaluation> (Accessed 9 March 2024).
- Berry, Jan (2021) Wildflower shower scrub bars. Available at: <https://thenerdyfarmwife.com/wildflower-shower-scrub-bar> (Accessed 9 March 2024).
- Chappell, S. (2019) A beginner's guide to making herbal salves and lotions. Available at: <https://www.healthline.com/health/diy-herbal-salves> (Accessed 9 March 2024).
- Cirino, E. (2023) What you need to know about herbal tinctures. Available at: <https://www.healthline.com/health/what-is-a-tincture> (Accessed 9 March 2024).
- Cole, Becky (2021) Daisy Bruise Balm Recipe - Becky Cole Folk Herbalist. Available at: <https://www.beckyocole.com/daisy-bruise-balm-recipe/> (Accessed 9 March 2024).
- D'Souza, Diana (2023) Easy DIY sugar scrub recipes for soft, smooth skin. Available at: <https://aromatherapyanywhere.com/sugar-scrub-recipes> (Accessed 9 March 2024).
- Ferment, G.F.C. (2023) 50+ Dandelion recipes: drinks, sweets, soap, remedies + more! Available at: <https://www.growforagecookferment.com/dandelion-recipes> (Accessed 9 March 2024).
- GIY Ireland Ltd (2024) Veg Directory - GIY Ireland Ltd. Available at: <https://giy.ie/veg-directory> (Accessed 9 March 2024)

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Articles

- Hare, L. (2022) Wild foraging in Ireland. Available at: <https://www.wildernessireland.com/blog/wild-foraging-ireland> (Accessed 9 March 2024).
- Harford, R. (2024) Daisy. Available at: <https://www.eatweeds.co.uk/daisy-bellis-perennis> (Accessed 9 March 2024).
- Keen, P. (2023) Herbal teas: Know the risks so you can enjoy the benefits - Tea Journey. Available at: <https://teajourney.pub/herbal-teas-know-the-risks-so-you-can-enjoy-the-benefits> (Accessed 9 March 2024).
- McLeod, J. (2024) Irish herb lore. Available at: <https://www.farmersalmanac.com/irish-herb-lore> (Accessed 9 March 2024).
- National Museum of Ireland (2024) Irish Fauna Available at: <https://www.museum.ie/en-IE/Museums/Natural-History/Exhibitions/Irish-Fauna> (Accessed 9 March 2024).
- Patowary, K. (2017) Clotie Wells: The Celtic Wishing Trees. Available at: <https://www.amusingplanet.com/2015/05/clotie-wells-celtic-wishing-trees.html> (Accessed 9 March 2024).
- Pfeifer, A. (2013) Sacred and Magical trees - forestry focus. Available at: <https://www.forestryfocus.ie/social-environmental-aspects/cultural-heritage/trees-and-folklore/sacred-and-magical-trees> (Accessed 9 March 2024).
- Rd, T.J. (2023) 10 healthy herbal teas you should try. Available at: <https://www.healthline.com/nutrition/10-herbal-teas> (Accessed 9 March 2024).
- Robinson, M. (2022) Outdoor Lessons | Parts of a Plant | Learning through Landscapes. Available at: <https://ltl.org.uk/resources/parts-of-a-plant> (Accessed 9 March 2024).
- Ruth, T. (2023) How to make herbal salves. Available at: <https://learningherbs.com/herbal-training/how-to-make-herbal-salves> (Accessed 9 March 2024).
- Scott, S.J. (2021) 30 types of herbal teas (and their benefits). Available at: <https://www.developgoodhabits.com/herbal-tea> (Accessed 9 March 2024).
- Siggins, L. (2015) Irish scientists discover new coral habitat off Kerry coast. Available at: <https://www.irishtimes.com/news/ireland/irish-news/irish-scientists-discover-new-coral-habitat-off-kerry-coast-1.2260381> (Accessed 9 March 2024).
- The Epicentre (2024) Harvesting and drying herbs - the epicentre (2020). Available at: <https://theepicentre.com/harvesting-and-drying-herbs> (Accessed 9 March 2024).
- The Wildlife Trust (2024) Coastal. Available at: <https://www.wildlifetrusts.org/habitats/coastal> (Accessed 9 March 2024).
- The Wildlife Trusts (2024) Habitats. Available at: <https://www.wildlifetrusts.org/habitats> (Accessed 9 March 2024).
- Von Frank, A. (2022) Beginner's guide to foraging: 12 rules to follow. Available at: <https://www.tyranfarm.com/beginners-guide-to-foraging-rules-to-follow> (Accessed 9 March 2024).

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- Waddington, E. (2022) 30 edible flowers you can eat right out of your garden. Available at: <https://www.ruralsprout.com/edible-flowers> (Accessed 9 March 2024).

Documents

- Codesres (2024) Media Communication. Available at: https://www.codesres.ie/_files/ugd/92a067_a8f108ce0a6448e9851a5b03dd2e8d40.pdf (Accessed 9 March 2024).

Webpages

- Canva (2024) Booklet Templates. Available at: <https://www.canva.com/booklets/templates/> (Accessed 9 March 2024).
- Canva (2024) Posters. Available at: <https://www.canva.com/create/posters/> (Accessed 9 March 2024).
- Kilkelly, James (2006) Native Irish Trees --- List of trees native to Ireland. Available at: <https://web.archive.org/web/20211030100814/http://www.gardenplansireland.com/forum/about69.html> (Accessed 9 March 2024).
- LearningHerbs (2024) LearningHerbs: free home remedies & learning experiences. Available at: <https://learningherbs.com> (Accessed 9 March 2024).
- Logainm (2024) Placenames Database of Ireland Available at: <https://www.logainm.ie/en/> (Accessed 9 March 2024).

Videos

- Home Is Where Our Heart Is (2021) Yarrow - An Ancient Edible & Medicinal Herb 🌿 Facts, Uses & Mythology (*Achillea millefolium*). Available at: <https://www.youtube.com/watch?v=dzTH-lcptfA> (Accessed 9 March 2024).
- Instading (2021) Foraging for Beginners 🍄. Available at: <https://www.youtube.com/watch?v=g9Ey7POtEeY> (Accessed 9 March 2024).
- Learn To Grow (2013) How to dry herbs: Harvesting, drying and storing herbs. Available at: https://www.youtube.com/watch?v=G46eH8PWY_s (Accessed 9 March 2024).
- Lovely Greens (2020) Make Homemade Chamomile Lotion (step-by-step from fresh flowers to natural skincare). Available at: <https://www.youtube.com/watch?v=YTQiFv01jLY> (Accessed 9 March 2024).
- Our Oily House (2019a) DIY Aftershave recipe | RAZOR BURN REMEDY. Available at: <https://www.youtube.com/watch?v=p7hb5FmpKhY> (Accessed 9 March 2024).
- Our Oily House (2019b) DIY Shaving Cream | All-Natural Shaving Cream | Simple 3-Ingredient recipe. Available at: <https://www.youtube.com/watch?v=O9Z3gdL8KYo> (Accessed 9 March 2024).

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- Science UX Design (2020) How to create a better research poster in less time (#betterposter Generation 2). Available at: <https://www.youtube.com/watch?v=SYk29tnxASs> (Accessed 9 March 2024).
- Scribbr (2020) How to develop a STRONG research question | Scribbr 🎓. Available at: <https://www.youtube.com/watch?v=71-GucBaM8U> (Accessed 9 March 2024).
- Smith, April (2017) How to write driving Questions for Project-Based Learning (Free Professional Development). Available at: <https://www.youtube.com/watch?v=u0Eojnkb3Gs> (Accessed 9 March 2024).
- SSEHeritageFarm (2020) Making Herbal Teas, Tinctures, and Salves with Bevin Cohen. Available at: https://www.youtube.com/watch?v=y_JHPcuU9VY (Accessed 9 March 2024).
- The Botanical Mind (2015a) Irish Herbs, plant medicines growing in Dublin, Ireland. Available at: <https://www.youtube.com/watch?v=cLfcvi2i3x4> (Accessed 9 March 2024).
- Trinity College Dublin (2020) 5 in FIVE: Native Trees. Available at: <https://www.youtube.com/watch?v=e1Zqc1roBA4> (Accessed 9 March 2024).
- UK Wildcrafts (2021) New to foraging? Start here! 5 plants for absolute beginners. Available at: <https://www.youtube.com/watch?v=VdgP8ui9gr4> (Accessed 9 March 2024).
- Western University (2012) Evaluating sources. Available at: <https://www.youtube.com/watch?v=EyMT08mD7Ds> (Accessed 9 March 2024).
- Wilderness Ireland (2020a) Episode 3: Foraging with Lucianne for Dandelion Coffee. Available at: <https://www.youtube.com/watch?v=P3n2iyAJAI> (Accessed 9 March 2024).
- Wilderness Ireland (2020b) Episode 12: Seaweed foraging in Ireland. Available at: <https://www.youtube.com/watch?v=cZeieNZopxk> (Accessed 9 March 2024).
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MM3: Examining Edible / Medicinal Plants



MM3: Examining Edible / Medicinal Plants

Research and Development

Lesson 1: Biota, Flora and Fauna

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Biota, Flora and Fauna

Biota is the term used for complete forms of life like bacteria, for example. Flora and Fauna are scientific words. In general, we use the term plants and animals life. The ecosystem is the biological community where the living beings interact with each other, from microorganisms to human beings. Flora and Fauna also contribute significantly to the ecosystem of the Earth. This lesson will build and consolidate key vocabulary that learners will use throughout the module. It encourages the development of research skills to develop an awareness of the different types of edible plants that can be found growing in Ireland.

Vocabulary: Biota, Edible, Flora, Fauna, Inedible, Medicinal, Perennial, Pollinators

In this lesson, the learner will:

- develop recording, analysis and evaluation skills
- explore and discover the meaning of biota, flora and fauna
- summarise information to create definitions
- create a digital vocabulary reference document
- match examples of wild Irish edible flora commonly foraged to their possible uses in food preparation and confirm ideas by accessing online information
- consider uses and create recipes
- develop collaboration and communication skills

Materials

- Flipped Classroom Task: Biota, Flora and Fauna
- Worksheet: Wild Irish Edibles
- Internet access



MM3: Examining Edible / Medicinal Plants

L1: Biota, Flora and Fauna



ACTIVITY INSTRUCTIONS

Activity 1: Vocabulary Consolidation- Biota, Flora, Fauna Flipped Classroom Task (15 mins)

Learners need to complete the *FLIPPED CLASSROOM TASK* (Biota, Flora, Fauna) before this activity.

- 1) Divide learners into groups of 4.
- 2) Compare digital vocabulary guides (*FLIPPED CLASSROOM TASK*) in small groups and add new ideas and examples.
- 3) Play a 3-4 minute game of taboo to review vocabulary. This can be played as a whole class, or in groups of 4.

TABOO

1. Select a word from the list (Flipped Classroom Task).
2. Describe the word, without using it!
3. Other players need to guess which word is being described.

Activity 2: Wild Irish Edibles (35 mins)

- 1) Divide learners into groups of 4 and direct them to the Wild Irish Edibles Worksheet. Go through the instructions and check understanding. Assign 4 words per group.
- 2) Instruct learners to look at the images and common names of some Irish edible flora, and match them to what they think the plants could be used to make.
- 3) Ask learners to check their ideas by accessing the [Wilderness Ireland Website](#) - see Media Box.
- 4) Use the discussion questions on the worksheet to share ideas in pairs.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM3: Examining Edible / Medicinal Plants

L1: Biota, Flora and Fauna



EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter lesson, complete Activity 1 only. Increase the length of time to play TABOO and work in groups to add new words to the vocabulary guide. A new column could be added to the guide- synonyms. Activity 2 can be completed in the next lesson.

Extension: For a longer lesson, spend more time on Activity 2; identifying possible edible uses for the wild flora (e.g., in ice-cream) and create a recipe of their own to later make.

MEDIA BOX (materials, online video links, extra resources, case studies etc)

Wilderness Ireland - Wild Foraging in Ireland <https://www.wildernessireland.com/blog/wild-foraging-ireland/>

12 Rules to follow when Foraging <https://www.tyrantfarms.com/beginners-guide-to-foraging-rules-to-follow/>

'Foraging Seaweed Spaghetti' (2:03 min) <https://youtu.be/cZeieNZopxk>

'Dandelion Coffee' (4:04 min) <https://youtu.be/P3n2iymAjAI>

'Irish Herbs, plant medicines growing in Dublin, Ireland' (14:00 min)
<https://www.youtube.com/watch?v=cLfcvi2i3x4>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Look around the school to discover how many overlooked edible / medicinal species there are.

Visit a local herb garden and take a tour from a member of Tidy Towns or local botanist.

Take a trip to the coast to forage for sea spaghetti, sea kale or sea lettuce to prepare in Home Economics class.

Interview a local farmer/ garden centre and find out the vegetables and herbs that are grown.

MM3 L1 WS: BIOTA, FLORA AND FAUNA



FLIPPED CLASSROOM TASK (BIOTA, FLORA AND FAUNA)

Task:

Create a digital vocabulary guide on the theme of “Biota, Flora and Fauna”. This could be in the form of a Word or Excel document, a Google Jamboard, or a Mind Map.

Using a dictionary look up the following words.

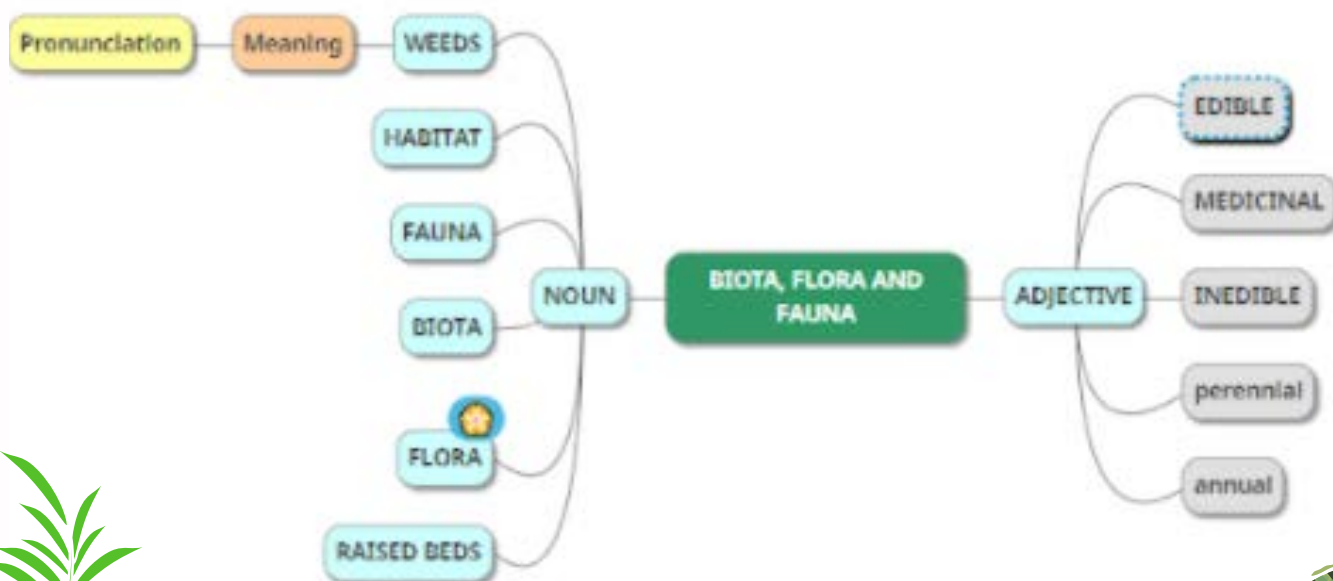
- Identify the part of speech (action/state word - verb, describing word - adjective etc.)
- In your own words define the meaning and give an example in context

VOCABULARY

biota	perennial	herbs
flora	annual	edible/inedible
fauna	raised plant beds	medicinal
habitat	weeds	pollinator

Here is a Word table and Mind Map example of how you could create your digital vocabulary guide.

WORD	PART OF SPEECH	MEANING	CONTEXT
biota	noun	The animal and plant life of a particular region, habitat, or geological period.	We still have a lot of the Earth’s biota to save.





WILD IRISH EDIBLE FLORA WORKSHEET

NB: You should only harvest and consume plants if you are 100% certain that it is okay to do so.

Ireland has an array of delightful edibles.

1. Look at the following images of Irish edibles and match them to what you think they could be used to make.

SALADS	SOUPS	PESTOS	COFFEE/TEA
 <p>Dandelions</p>	 <p>Sea Spaghetti</p>	 <p>Stinging Nettles</p>	
 <p>Curly Dock Leaves</p>	 <p>Wild garlic</p>	 <p>Hawthorn Leaves/Flowers</p>	
 <p>Wood Sorrell</p>	 <p>Bramble Leaf</p>	 <p>Wild Mint</p>	

2. Now access the following Website and check your ideas. Were you correct?

<https://www.wildernessireland.com/blog/wild-foraging-ireland/>

3. Paired Discussion:

- What did you learn that was interesting or surprising?
- Which would you like to try?
- Have you tried any of these before?
- How do you think you could use these ingredients to make a new drink or snack?
- Would any of these edibles work well in ice cream? What kind of flavours would they add?





WILD IRISH EDIBLE FLORA WORKSHEET: ANSWER SHEET

Salads

Dandelions
Fresh Hawthorn Leaves and flowers
Wild garlic
Curly Dock Leaves

Soups

Wild Garlic
Stinging nettles
Sea spaghetti

Pestos

(base of greens or leaves, some kind of nut (pine nuts, walnuts, almonds, whatever you like), and olive oil. Cheese is optional but generally preferred.)

Wood Sorrell
Wild Garlic

Tea/Coffee

Wild Mint
Stinging Nettles
Bramble leaf tea
Roasted Dandelion Root

Encourage learners to make / taste an edible recipe from the list ensuring that the core ingredient is the correct species.



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MM3: Examining Edible / Medicinal Plants



MM3: Examining Edible / Medicinal Plants

Research and Development

Lesson 2: Webquest - Habitats, Flora and Species

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Webquest - Habitats, Flora And Species

Ireland hosts a range of habitats, from blanket bogs to wetland systems, rivers and estuaries, native woodland and marine. Over 100 habitat types have been classified in Ireland, boasting a rich array of flora and fauna. This lesson asks learners to use independent and collaborative research skills to discover information about habitats in Ireland and the different types of flora and fauna that can be found in each.

Vocabulary: Biota, Coastal habitat, Directory, Edible, Flora, Fauna, Habitat, Medicinal, Open Water Habitat

In this lesson, the learner will:

- develop recording, analysis and evaluation skills
- conduct research into habitats of Ireland
- practice note taking and recording information
- reconnect with food, nature and community
- identify local edible flora

Materials

- Worksheet: Habitats, Flora and Species Web Quest
- Supporting Skills Worksheet: C.R.A.A.P Test
- Notes and worksheets from Lesson 1
- Internet Access



MM3: Examining Edible / Medicinal Plants

L2: Webquest - Habitats, Flora and Species



ACTIVITY INSTRUCTIONS

In order for learners to show evidence of evaluating their sources, it is advisable that they complete the SDG 4 Support Skills: C.R.A.A.P Test before doing this lesson. This worksheet can be set as a flipped classroom task, or used as the basis of its own lesson.

Activity 1 Habitats, Flora and Species webquest (50 mins)

1) Direct learners to the Habitats, Flora and Species worksheet. Go through the instructions and check understanding.

2) Instruct learners to work in pairs to complete the tasks on the worksheet. They can use the worksheets from Lesson 1 to support their research. Give 30-35 minutes. The information they are to find out is as follows:

1. What are the 2 major habitats of Ireland?
2. Identify one edible flora from each major habitat.
3. What is an "open water" habitat?

- a. What does it include?
- b. What species of flora is found here that is edible?

4. What is a "coastal" habitat?
 - a. What does it include?
 - b. What species of flora is found here that is edible?

3) Assign pairs into small groups of 6 (3 x pairs per group). Each pair has time to present their findings.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM3: Examining Edible / Medicinal Plants

L2: Webquest - Habitats, Flora and Species



EXTENSION / REDUCTION ACTIVITIES:

Reduction (40 min lesson): For a shorter lesson, spend less time on the share and compare findings in Step 3.

Extension (80 min lesson): For a longer lesson, spend more time guiding learners through evaluating online sources. Learners could upload findings to a whole class, shared document to begin the initial pages of a directory.

Flipped Classroom or standalone lesson for evaluating sources use supporting skills: C.R.A.A.P. test worksheet

- Evaluating Sources C.R.A.A.P <https://researchguides.ben.edu/source-evaluation>
- Youtube directions for evaluating sources (2:16 mins) <https://youtu.be/EyMT08mD7Ds>

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

Grow it Yourself 'Veg Directory' <https://gijy.ie/get-growing/veg-directory/>

Habitats <https://www.wildlifetrusts.org/habitats>

Coastal habitats

<https://www.wildlifetrusts.org/habitats/coastal#:~:text=Coastal%20habitats%20are%20found%20wherever%20the%20land%20meets%20the%20sea.&text=The%20coast%20is%20home%20to,%2C%20mudflats%2C%20saltmarshes%20and%20machair.>

Coral habitat <https://www.irishtimes.com/news/ireland/irish-news/irish-scientists-discover-new-coral-habitat-off-kerry-coast-1.2260381>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

- Visit the local library to search existing for examples of directories.
- Interview staff at a garden centre.
- Ask / interview grandparents for local edible / medicinals



WEBQUEST

You are going to conduct some investigation and research. You will do this in pairs. You will use the internet and/or library to source information and you must show evidence of evaluating your sources (C.R.A.A.P. Test).

STEP 1

There are 5 questions to research. BEFORE you begin, read through the questions and highlight the key words in each. These are the words you will use to help narrow down your search for information.

1. What are the 2 examples of major habitats of Ireland?
2. Identify one edible flora from each major habitat.
3. What is an “open water” habitat?
 - a. What does it include?
 - b. What species of flora is found here?
 - c. Which species found here are edible?(If any)
4. What is a “coastal” habitat?
 - a. What does it include?
 - b. What species of flora is found here?
 - c. Which species found here are edible?(If any)
5. Draw or make a list to show where these habitats are in your local area/county/country.

STEP 2

Organise your notes into a short presentation of your findings. Remember to show evidence of your CRAAP Test in the sources you referenced.

STEP 3

Present your findings to a small group. Compare your information and add to your notes if there are any interesting or relevant points from other group members.





WEBQUEST

ANSWER SHEET

1. What are the 2 examples of major habitats of Ireland? Grassland, Heath, Bog
2. Identify one edible flora from each major habitat.
 - Learners' own answers - must provide proof of research that plant is edible
3. What is an “open water” habitat?
 - What does it include? “Open water” habitat rivers, canals, lakes, reservoirs, ponds and, uniquely, turloughs
 - What species of flora is found here that is edible? Students own answers - must provide proof of research that plant is edible
4. What is a “coastal” habitat?
 - What does it include? “Coastal” muddy shores, rocky shores, sandy shores, shingle beaches, brackish water bodies, saltmarsh, maritime flushes and streams, sea cliffs and sand dunes and machair
 - What species of flora is found here that is edible? Learners' own answers - must provide proof of research that plant is edible



SDG15 Seeding Sustainability

MM3: Examining Edible / Medicinal Plants



MM3: Examining Edible / Medicinal Plants

Research and Development

Lesson 3: Local Flora/Fauna Scavenger Hunt

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Local Flora/ Fauna Scavenger Hunt

Flora and fauna is linked with the air we breathe and the food we eat and are interdependent. This lesson connects learners with their local, natural place as they are tasked with identification, information-gathering and evaluation of local flora and fauna.

Vocabulary: Annual, Biota, Edible, Flora, Fauna, Inedible, Medicinal, Perennial, Pollinators

In this lesson, the learner will:

- explore and find different flowers/plants (flora) of varying colours
- observe and note what insects/birds and other wildlife (fauna) are attracted to the variety of flowers/plants
- develop recording, analysis and evaluation skills
- explore and discover local flora
- investigate and observe the patterns of colour of flora
- investigate and observe the attraction of colour to fauna
- reconnect with food, nature and community
- explore the local environment, connections between flora colour and fauna

Materials

- Worksheet: Local Flora/ Fauna Scavenger Hunt
- Optional Extra Worksheet: Web Quest 1
- Worksheet: Wild Irish Edibles (Lesson 1)
- Materials for recording: pens, notebooks, digital devices



MM3: Examining Edible / Medicinal Plants

L3: Local Flora/Fauna Scavenger Hunt



ACTIVITY INSTRUCTIONS

Activity 1 Local flora and fauna scavenger hunt (50 mins)

This is an outdoor class activity. Follow usual safety procedures for outdoor lessons. Learners will explore and find different flowers/plants (flora) of varying colours. Learners will observe and note what insects/birds and other wildlife (fauna) is attracted to the variety of flowers/plants.

1. Direct learners to the Local Flora and Fauna Scavenger Hunt worksheet. Go through instructions and check understanding. Instruct learners that they will walk around the outdoor areas of the school or the local neighbourhood in pairs (this could be a plotted area, park or garden) to make observations and note findings. Following this, they will share and discuss their findings with their peers. (10 mins)
2. Divide learners into pairs for the scavenger hunt. Confirm the time they have and location for return meet up. (30 mins)
3. Join pairs to make groups of 4. Give groups 2 mins per rotation to discuss and share their findings. Rotate groups until all groups have met and compared findings. (10 mins)

Alternative: Complete a scavenger hunt online, using the Optional Extra Worksheet: Web Quest 1.

Teacher's Reference:

FLORA VERSUS FAUNA

Flora refers to the plant life that can be found in a specific area or time.	Fauna refers to the animal life that can be found in a specific area or time.
Flora remains in one place.	Fauna can move from one place to another.
Flora can typically prepare their own food.	Fauna depends on flora for food.
Flora is studied in botany.	Fauna is studied in zoology.

Pediaa.com

MM3: Examining Edible / Medicinal Plants

L3: Local Flora/Fauna Scavenger Hunt



REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

EXTENSION / REDUCTION ACTIVITIES:

Reduction (40 min lesson): For a shorter lesson, skip the group share and discussion.

Extension (80 min lesson): For a longer lesson, spend more time on the scavenger hunt and on the group sharing and discussion phase.

Optional Extras: Link to Scavenger Hunt

- learners can try to find samples/take photos of pictured edible flowers on the worksheets in the local area.
- learners can discuss possible tastes and gastronomy uses of the flowers.
- learners can look up the information on tastes and uses via a web quest

Also ask learners to watch one of of the videos e.g. 'New to Foraging' or 'Foraging for Beginners'

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

'New to Foraging - 5 Plants for Absolute Beginners (13:37 min) <https://youtu.be/VdgP8ui9gr4>

'Foraging For Beginners' (18:35 min) <https://www.youtube.com/watch?v=g9Ey7POtEeY>

Article: Edible Flowers <https://www.ruralsprout.com/edible-flowers/>

Foraging <https://www.wildernessireland.com/blog/wild-foraging-ireland/>

Irish Herbs, Plant medicines (14:00 min) <https://www.youtube.com/watch?v=cLfcvi2i3x4>

Irish Fauna <https://www.museum.ie/en-IE/Museums/Natural-History/Exhibitions/Irish-Fauna>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Visit a local herb garden/ park to complete the scavenger hunt.

Invite a local botanist, ecologist or interested citizen scientists to take part in the scavenger hunt.



SCAVENGER HUNT

Colours are very important in the natural world. They attract different living creatures for different reasons.

Walk around the assigned area and see what you can find.

- Can you find different examples of flowers/plants (FLORA) with the following colours? (see example below)
- Take a photograph and/or make a sketch of what you find.
- Note shapes, size and scents.
- Observe what insects/birds and other wildlife (FAUNA) is attracted to them.



A white flower
Often attractive to beetles, moths, butterflies and flies



A pink flower
Often attractive to butterflies and moths



A red flower
Often attractive to birds



An orange flower
Often attractive to birds and some butterflies



A yellow flower
Often attractive to bees, butterflies, hoverflies and wasps



A blue flower
Often attractive to bees



A purple flower
Often attractive to bees, wasps and butterflies



A green flower
Thought to be the first flower colour



A multicoloured flower

Image for this [Flower Scavenger Hunt](#) from Chelsea Physic Garden, 2020

As part of the scavenger hunt, try to find 3 of the edibles you matched on the **WILD IRISH EDIBLE FLORA WORKSHEET**.

- What did you find?
- Where did you find them?
- What did you observe?
- Would any of them work as an ice-cream ingredient? Why/why not?



MM3 L3 WS: LOCAL FLORA & FAUNA

15 LIFE ON LAND



Optional Extra Worksheet: Edible Flora (Web Quest 1)

Can you find these flowers online and gather some information about their edible / medicinal uses?



Top row - left to right: Apple blossom, Borage, Dianthus, Chives, Cornflower.

Bottom row - left to right: Courgette, Dill, Forget-me-not, Lavender, Marigold



Top row - left to right: Bergamot, Nasturtium, Nigella, Oregano, Pansy

Bottom row - left to right: Roses, Sage, Strawberry, Sunflower, Tulip



Use the Chelsea Physic Garden plant collection website to find their scientific names <https://cpg.gardenexplorer.org/>

Discussion: What do you think they taste like? How do you think they could be used for eating and drinking?



After your discussion visit this website and compare your ideas from the discussion to the information on the site. You can also use this information to help create the directory.

SDG15 Seeding Sustainability

MM3: Examining Edible / Medicinal Plants



MM3: Examining Edible / Medicinal Plants

Research and Development

Lesson 4: Creating a Directory of Local Edible / Medicinal Flora

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Creating A Directory Of Local Edible / Medicinal Flora

Foraging is becoming a hobby of increasing interest for many people. It gives us the opportunity to use what nature has provided, and encourages growing plants in our own backyards that can be used for a range of purposes such as in cooking and for medical remedies. In this lessons, learners will begin to compile the information they have gathered and evaluated to form an online directory.

Vocabulary: Directory, Flora, Edible, Inedible, Medicinal,

In this lesson, the learner will:

- develop recording, analysis and evaluation skills
- begin to create a directory of local edible flora
- reconnect with food, nature and community
- identify local edible flora and how they are used in food preparation

Materials

- Worksheet: Creating a Directory of Local Edible Flora
- Notes and worksheets from lesson 1, 2 & 3
- Internet Access



MM3: Examining Edible / Medicinal Plants

L4: Creating a Directory of Local Edible/Medicinal Flora



ACTIVITY INSTRUCTIONS

1 Activity: Creating A Directory Of Local Edible / Medicinal Flora (50 mins)

Learners are going to work together within a team to create part of the class' Local Edible Flora Directory / Catalogue. Prior to the lesson the teacher will need to create a working document or online folder for learners to upload their work to.

1.) Take approx. 10 - 15 mins to divide the class into groups of 2 or 3. Elicit ideas of what is included in a directory. Invite ideas for pictorial reference, ideas for sourcing information and ideas for suitable layouts for recording and displaying information. Prompt learners to consider the following:

- Name, Genus
- Is it a bush, shrub, tree, etc.
- Where does it grow naturally?
- Is it native to the region you live in?
- Can it be grown indoors?
- What kind of climate is best suited for the plant/tree.
- What time of the year does it flower or fruit?

2.) Use the Worksheet: Creating a directory of local edible / medicinal wild flora. Go through the instructions and check understanding. At this point learners can choose to provide the 3x edibles for the learners to search (excluding vegetables as this will be done in another lesson) or offer the freedom to investigate and search for themselves. Set learners to tasks and confirm timing to complete tasks, providing assistance and guidance where needed.

- Gather your required information as per the worksheet for 3x edibles.
- Discuss and decide on your directory pages design. Use the information below as guidance on section headings. Learners can complete this using Canva once the information is gathered.
- Upload your completed pages to the class directory.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM3: Examining Edible / Medicinal Plants

L4: Creating a Directory of Local Edible/Medicinal Flora



EXTENSION / REDUCTION ACTIVITIES:

Reduction (40 min lesson): For a shorter lesson, reduce the number of edibles to research to 1 per group.

Extension (80 min lesson): For a longer lesson, give more time to research and upload and allow time for small group debrief. Establish roles for editorial copy teams for editing and finalising the directory.

Option B: Select some of the videos in the media box to watch for ideas for their directory, e.g. Yarrow or Daisy.

Option C: Have learners complete their directory with visuals using Canva - www.canva.com is a useful online design and publishing tool. It is free to use although some additional designs and professional graphics need a pro account - however there is a option for teachers and educators also. This could be undertaken over a number of weeks and used for assessment.

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

Creating a booklet in Canva <https://www.canva.com/booklets/templates/>

Grow it yourself 'Veg Directory' <https://giy.ie/get-growing/veg-directory/>

Irish Herb lore <https://www.farmersalmanac.com/irish-herb-lore-11968>

Yarrow and Ancient and Medicinal Herb (16:10 min) <https://www.youtube.com/watch?v=dzTH-lcptfA>

Daisy a Foraging guide foods and medicine (<https://www.eatweeds.co.uk/daisy-bellis-perennis>)

C.R.A.A.P. Test Evaluating Sources <https://youtu.be/EyMT08mD7Ds>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Use the library to search existing local flora directories. Also ask the librarian about any plant lore or other publications related to local flora.

Visit a garden centre to interview staff.

Linked learning: Use Media Communication Unit Micro-Module 1 - 4 - to create a number of media outputs, e.g. video, presentation, poster / booklet or podcast that could be housed in the library.

MM3 L4 WS: CREATING A DIRECTORY

15 LIFE ON LAND



CREATING A DIRECTORY LOCAL EDIBLE/ MEDICINAL FLORA (FLOWERS /PLANTS / TREES)

You are going to work together within a team to create part of the class' Local Edible/ Medicinal Flora Directory which your teacher will give you access to.

Your teacher will divide you into groups. You are going to search for 3 edible/medicinal flowers/weeds/plants (other than vegetables) which are found in Ireland.

Step 1: Gather your required information.

Step 2: Discuss and decide on your directory page's design. Use the information below as guidance on section headings

Step 3: Upload your completed pages to the class directory teams folder - your teacher will send you the link

The following information should be included in the pages you create:

- What can you find?
 - Common name - include English and As Gaelige
 - Scientific name
 - Botanical Family
 - Botanical Species

- How do they look? - Photographs and descriptions.
- How do they smell? - Descriptions with comparisons to other commonly known smells.
- How do they taste? Descriptions with comparisons to other commonly known tastes.
- Photographs and drawings of edible parts of seedlings, early leaf identifying characteristics and mature plant identifiers.
- Parts of the plant that are used for eating/ medical purposes. What and How?
- Processing techniques.
- Food preparation suggestions and recipes (including use in ice-cream).
- Range maps of locations and habitats in which they are found/grown.
- Folklore that is attributed to the plant.

Step 4: Be prepared to share your findings with the class.

Step 5: The long-term aim is for the class to create / agree a template for everyone to copy their content into and create a booklet for your library and the local library



SDG15 Seeding Sustainability

MM3: Examining Edible / Medicinal Plants



MM3: Examining Edible / Medicinal Plants

Research and Development

Lesson 5: Sacred Trees of Ireland

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Sacred trees of Ireland

Many types of trees found in the Celtic nations are considered to be sacred, whether as symbols, or due to medicinal properties, or because they are seen as the abode of particular nature spirits. This lesson will support learners' understanding of sacred trees in Ireland by developing their own research questions. They will practice dividing up tasks and sharing workload, as well as assessing the reliability of the sources they choose to use in their research.

Vocabulary: Driving Question, Sacred Trees, Ash (Fuinseog), Elder (Trom), Hawthorn (Sceach Gheal), Hazel (Coll), Oak (Dair), Rowan (Caorthann), Sacred

In this lesson, the learner will:

- identify native Irish trees
- develop an awareness of sacred trees in Ireland
- practise developing questions to drive research
- work individually and in groups to answer questions
- skim and scan sources for information
- assess source credibility
- organise time and work roles within a group

Materials

- Access to the Internet
- Supporting Skills Worksheet: C.R.A.A.P Test

2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



MM3: Examining Edible / Medicinal Plants

L5: Sacred Trees of Ireland



ACTIVITY INSTRUCTIONS

Activity 1 What can we learn from the sacred trees of Ireland? (15 mins)

1) Think-Pair-Share (5 mins)

- Spend 30 seconds individually writing down the names of any native trees in Ireland.
- Share ideas with a partner.
- As a whole class, share the names of native trees in Ireland in a brainstorm on the board.
- What do you know about these trees?

2) What can we learn from the sacred trees of Ireland? (10 mins)

- Tell the learners they are going to focus on 6 native-Irish trees: Oak (Dair) - Hazel (Coll) - Rowan (Caorthann) - Ash (Fuinseog) - Hawthorn (Sceach Gheal) - Elder (Trom).
- As a whole class, develop 5 driving questions to discover what we can learn from these trees. List the questions on the board. Write down any and all ideas first and then narrow them down.

NOTE: Driving questions are open-ended questions we use to investigate something. They have multiple correct answers, look at different viewpoints and require research of more than one source before we definitely answer. For example, as we are focusing on edible-medicinal plants in this micro-module, a driving question could be 'how can these trees support our health?'.

Activity 2: Research Time (35 mins)

1) Divide learners into 6 groups and assign each group a tree from the list in Activity 1.

2) Each group needs to find answers to the 5 driving questions about their assigned tree. They can divide the workload, however they wish (e.g., each learner could focus on one question or they could work in pairs within their group to answer all the questions and compare information at the end).

- It is important that the learners are aware of credible research sources. Use SDG4 Supporting Skills Worksheet: C.R.A.A.P to help support learners with this.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM3: Examining Edible / Medicinal Plants

L5: Sacred Trees of Ireland



EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter lesson, focus on Activity 1. At the end of the lesson, assign each learner a tree to focus on and ask them to complete Activity 2 at home, before the next lesson.

Extension: For a longer lesson, spend more time on Activity 2. Learners can look at more of the supporting references in the media box.

Option B: Spend more time exploring driving questions - see Media box resource.

MEDIA BOX (materials, online video links, extra resources, case studies etc)

Forestry Focus (Sacred and Magical Trees):

<https://www.forestryfocus.ie/social-environmental-aspects/cultural-heritage/trees-and-folklore/sacred-and-magical-trees/>

Bitesize Botany, '5 in FIVE Native Trees' Trinity College Dublin (7:07min):

<https://www.youtube.com/watch?v=e1Zqc1roBA4>

Native Irish Trees:

<https://web.archive.org/web/20211030100814/http://www.gardenplansireland.com/forum/about69.html>

How to write driving questions for project-based learning (15:08min):

<https://www.youtube.com/watch?v=u0Eojnkb3Gs>

How to develop a STRONG research question (4:18min): <https://www.youtube.com/watch?v=71-GucBaM8U&t=224s>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Invite a Seanchaí (storyteller) to tell stories about sacred trees.

Map the school or local area to identify if and where the 'sacred' trees grow. Look at the names in English and Irish and see if there's any clues in your local place names, Visit the Irish place names database <https://www.logainm.ie/en/> Learners can also research local lore about trees.

Invite a local herbalist or botanist to the class to support learners in answering the driving questions they developed in Activity 1.



FLIPPED CLASSROOM WORKSHEET

This is C.R.A.A.P.

When conducting research it is important to find quality information and avoid misinformation or “fake” information. Therefore critically evaluating your sources is a necessary part of research.



What do you think is meant by the following terms when critically evaluating your sources?
Write your ideas below.

1. Currency:
2. Relevance:
3. Authority:
4. Accuracy:
5. Purpose:

Now WATCH :

<https://youtu.be/EyMT08mD7Ds>

Take notes about the C.R.A.A.P. Test and what you should be looking for when critically evaluating sources to discuss later in class.

C	R	A	A	P



This is C.R.A.A.P. -EVALUATING SOURCES WORKSHEET

When critically evaluating sources it's important to consider the 5W's:

- Who wrote this?
- What is the purpose of the resource?
- When was the resource published?
- Where is the information from?
- Why is this resource reliable?



TASK:

You are going to evaluate a source as directed by your teacher.

Try to answer the questions on the following pages relating to:

CURRENCY
RELEVANCE
AUTHORITY
ACCURACY
PURPOSE

After evaluating this source, decide if you think you would use it for your assigned task? Why or why not? If you are not sure, explain why.



This is C.R.A.A.P. - Evaluating Sources Questions

Cite the source you are evaluating:

Currency: the timeliness of the information

- When was the information published or posted?
- Has the information been revised or updated?
- Is the information current or out-of date for your topic?
- Are the links functional?

Relevance: the importance of the information for your needs

- Does the information relate to your topic or answer your question?
- Who is the intended audience?
- Is the information at an appropriate level (i.e. not too elementary or advanced for your needs)?
- Have you looked at a variety of sources before determining this is one you will use?
- Would you be comfortable using this source for a research paper?

Authority: the source of the information

- Who is the author/publisher/source/sponsor?
- Are the author's credentials or organizational affiliations given?
- What are the author's credentials or organizational affiliations given?
- What are the author's qualifications to write on the topic?
- Is there contact information, such as a publisher or e-mail address?
- Does the URL reveal anything about the source?

- .com (commercial),
- .edu (educational),
- .gov (government),
- .org (nonprofit organization),
- or .net (network)

.com	.net	.es
.org	.eu	.biz
.us	.info	.fr



This is C.R.A.A.P. - Evaluating Sources Questions

Cite the source you are evaluating:

Accuracy: the reliability, truthfulness, and correctness of the content

- Where does the information come from?
- Is the information supported by evidence?
- Has the information been reviewed or refereed?
- Can you verify any of the information in another source or from personal knowledge?
- Does the language or tone seem biased and free of emotion?
- Are there spelling, grammar, or other typographical errors?

Purpose: the reason the information exists

- What is the purpose of the information? to inform? teach? sell? entertain? persuade?
- Do the authors/sponsors make their intentions or purpose clear?
- Is the information fact? opinion? propaganda?
- Does the point of view appear objective and impartial?
- Are there political, ideological, cultural, religious, institutional, or personal biases?

SDG15 Seeding Sustainability

MM3: Examining Edible / Medicinal Plants



MM3: Examining Edible / Medicinal Plants

Research and Development

Lesson 6: Plant Learnings - Synthesising Information

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Plant learnings-synthesising information

This lesson builds on lesson 5 and the learners' research on Ireland's sacred trees. This lesson will enable learners to develop their visual communication skills. They will take the research they conducted in the previous lesson and develop a poster to share their knowledge to a wider audience. This lesson can be extended over a number of sessions to complete the poster in class. Alternatively, learners can complete the poster in their own time and present it at a later date as an assessment activity.

Vocabulary: Ash (Fuinseog), Elder (Trom), Hawthorn (Sceach Gheal), Hazel (Coll), Oak (Dair), Rowan (Caorthann), Sacred

In this lesson, the learner will:

- review and consolidate research from a previous session, looking for gaps in information
- synthesise information in order to communicate to a wider audience
- decide how to best visually communicate information to a wider audience
- work as part of a group on a task
- skim and scan to find and record information

Materials

- Research/notes from previous lesson (Lesson 4)
- Worksheet: Plant Learnings (Recording Information)
- Linked Learning Media Communication 2
- Poster paper
- Markers
- Blue tac/tape



MM3: Examining Edible / Medicinal Plants

L6: Plant Learnings - Synthesising Information



ACTIVITY INSTRUCTIONS

Activity 1 Consolidating group research (15 mins)

- 1) Put learners back into their groups from the previous lesson.
- 2) Give groups time to review their research on assigned tree (oak, hazel, rowan, ash, hawthorn, elder) and to look for gaps in knowledge and make extra notes.

Activity 2: Synthesising & displaying information (35 mins)

- 1) Each group needs to summarise their information to answer the five driving questions in a research poster. Their poster should include:
 - a sketch of the tree
 - a title
 - answers to the five driving research questions

Each group can decide how to design their poster, how to lay out the information and present it in a way that is clear to understand to their peers. The aim of the poster is to answer the overarching question- 'what can we learn from sacred trees in Ireland?' through the five driving questions developed and researched in the previous lesson.

SDG 8's Media Communication micro-module 2 - Poster Design, three lesson plans and worksheets that leads learners through the basic steps of poster production.

Extra time: Recording information (15-20 mins)

- 1) When the groups have finished designing their posters, hang them on walls around the classroom.
- 2) Give each learner a copy of the Plant Learnings (Recording Information) worksheet. Ask learners to use the posters to record information using the worksheet on the five driving research questions.

Optional assignment: create a school affirmation tree - see Media Box.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM3: Examining Edible / Medicinal Plants

L6: Plant Learnings - Synthesising Information



EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter lesson, move directly into Activity 2 and encourage learners to use their time concurrently on designing their poster and identifying gaps in knowledge and finding more answers. They can divide tasks up among their group to complete the task efficiently.

Extension: For a longer lesson, complete the extension worksheet - Plant Learnings activity to record information on all of the trees. Form new groups of 6 after this task to review and share information.

The poster activity can be used as an introduction to SDG 8's Media Communication micro-module 2 - Poster Design - see media box.

The micro-modules includes planning, researching and developing designs and addressing audience, message, layout introducing and developing skills that are transferable to presenting information, pitching ideas and marketing.

MEDIA BOX (materials, online video links, extra resources, case studies etc)

How to draw a tree, step-by-step in 8 minutes (for beginners) (8:08 min):

https://www.youtube.com/watch?v=_3i6H8URaYI

Canva poster maker: <https://www.canva.com/create/posters/>

Creating a better research / scientific poster (20:53 min) <https://www.youtube.com/watch?v=SYk29tnxASs>

SDG 8 Media Communication - 2 Design a Poster

https://www.codesres.ie/_files/ugd/92a067_a8f108ce0a6448e9851a5b03dd2e8d40.pdf

Cloutie Wells (Affirmation Tree): <https://www.amusingplanet.com/2015/05/cloutie-wells-celtic-wishing-trees.html>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Invite a Seanchaí (storyteller) to tell stories about sacred trees.

Map the school or local area to identify if and where the 'sacred' trees grow. Look at the names in English and Irish and see if there's any clues in your local place names - <https://www.logainm.ie/en/>

Invite a local herbalist or botanist to the class to support learners in answering the driving questions they developed in Activity 1.

MM3 L6 WS: PLANT LEARNINGS (RECORDING INFORMATION)

15
LIFE
ON LAND



RECORDING INFORMATION) WORKSHEET

Use the table below to make notes on each of the sacred trees of Ireland that your class has researched. You only need to write down the main ideas for each category, or question, in bullet point form.

TREE	ASH	ELDER	HAWTHORN
1			
2			
3			

MM3 L6 WS: PLANT LEARNINGS (RECORDING INFORMATION)

15

LIFE
ON LAND



RECORDING INFORMATION) WORKSHEET

Use the table below to make notes on each of the sacred trees of Ireland that your class has researched. You only need to write down the main ideas for each category, or question, in bullet point form.

TREE	HAZEL	OAK	ROWAN
4			
5			
6			

SDG15 Seeding Sustainability

MM3: Examining Edible / Medicinal Plants



MM3: Examining Edible / Medicinal Plants

Research and Development

Lesson 7: Teas, Tinctures and Tissanes

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Teas, Tinctures and Tissanes

Teas and tinctures are natural remedies for a variety of complaints dating back to Ancient Egypt and Ancient China when our ancestors added herbs to hot water and began distilling alcohol and adding herbs to make tinctures. This lesson will develop the understanding and awareness of natural remedies (teas, tinctures and tissanes) that support individual health and wellness.

Vocabulary: Teas; Tinctures; Tissanes

In this lesson, the learner will:

- define key vocabulary around natural remedies
- brainstorm to share and mind mapping to focus key ideas
- skim and scan for information
- work as part of a group
- organise information into key ideas
- begin to engage with benefits and risks

Materials

- Access to the Internet

2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



MM3: Examining Edible / Medicinal Plants

L7: Teas, Tinctures and Tisanes



ACTIVITY INSTRUCTIONS

Activity 1: Brainstorming (15 mins)

- 1) Explain the concept of a 'tincture' - typically an extract of plant or animal material dissolved in ethanol / distilled alcohol.
- 2) As a whole class, brainstorm reasons that people might drink a herbal / fruit tea or take a tincture. Consider health and well-being, e.g. colds, tiredness, headaches. If learners are stuck ask them to think about herbal or fruit teas they or family have drunk or seen in the shops.
- 3) Map ideas into categories: autumn/winter/spring and summer.

Activity 2: Researching remedies (35 mins)

- 1) Gives learners 10 mins to find and define the following words:
 - tea - infusion - powder - pastille - tincture - topical - tisane

- 2) Divide learners into 4 groups - autumn, winter, spring and summer,

Each group needs to research and collate teas and tincture remedies to their seasonal concerns (i.e., hay fever in the spring, sore throats, or colds in winter). Consider:

- What is the remedy?
- Why do people take it?
- How do they take it?
- What is the local availability like?

Share the links in the media box with learners to support this activity.

- 3) End the activity by drawing attention to the risks as well as benefits using the link in the media box. See media box - 'Herbal Teas: Know the Risks So You Can Enjoy the Benefits'.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

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EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter lesson, spend less time on brainstorming/mapping and move to Activity 2.

Extension: For a longer lesson, create new groups at the end of the research session to share their remedies across the seasons. Extend the discussion on risks and benefits, this could be as a walking debate or working in pairs to consider what the risks and benefits are.

Option B: Have a tea tasting session, select one common seasonal complaint and a tea or tincture that can be made using local ingredients. Make samples of the teas/tincture as a class or from the lists in the media box. See media box for instructional video.

For a longer term project learners could develop a physic garden - see SS_MM4 Growing and Foraging, lesson.

MEDIA (materials, online video links, extra resources, case studies etc)

30 types of herbal teas and their health benefits: <https://www.developgoodhabits.com/herbal-tea/>

Article: 10 herbal teas you can try: <https://www.healthline.com/nutrition/10-herbal-teas>

Article: 50+ Dandelion recipes: <https://www.growforagecookferment.com/dandelion-recipes/>

Article: What you need to know about tinctures <https://www.healthline.com/health/what-is-a-tincture>

Herbal Teas: Know the Risks So You Can Enjoy the Benefits

<https://teajourney.pub/herbal-teas-know-the-risks-so-you-can-enjoy-the-benefits/>

Harvesting and Drying herbs: (7:41 min) https://www.youtube.com/watch?v=G46eH8PWY_s

Article: Harvesting and drying herbs: <https://theepicentre.com/harvesting-and-drying-herbs/>

Making Herbal Teas, Tinctures, Salves: (30 min) https://www.youtube.com/watch?v=y_JHPcuU9VY

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Map the areas in the local community where possible tea and tincture remedy ingredients are growing. Consider the environment and the possibility of creating a physic or tea garden

Invite a local herbalist or botanist to the class to support learners researching remedies. They could also do a making demonstration.

SDG15 Seeding Sustainability

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Research and Development

Lesson 8: Topical Applications

Subjects: English, Geography, Home Economics, Irish, Science, SHPE

Lesson Title and Summary: Topical applications

Topical applications are applied to the skin to reduce pain and inflammation, but also for mental health benefits. Potential risks of side-effects from pharmaceutical applications lead a lot of people to turn to natural remedies. This lesson will demonstrate how local plants can be used to promote health and well being, topically. Learners can make a number of options, e.g. a balm, a sugar scrub or a shower scrub using wildflowers.

Vocabulary: Salve, Topical

In this lesson, the learner will:

- develop an understanding of how natural ingredients link to the relief of certain health conditions
- practice following instructions (recipe) in small groups
- make a topical application using natural ingredients
- reflect on the recipe-making process and effectiveness of the application
- develop their lab and experiment observation and data recording skills

Materials

- Access to preparation equipment (Science lab or Home Economics room)
- Locally-sourced ingredients for application (see Activity box)



MM3: Examining Edible / Medicinal Plants

L8: Topical Applications



ACTIVITY INSTRUCTIONS

This is a making lesson, which requires at least 90 minutes.

In this lesson, learners will make a topical application using locally foraged or sourced ingredients. They will select one of the options or they can use.

Activity 1 Create a topical application

- 1 Have learners form small groups to prepare an application.
2. Learners should have selected one of the options below or found another example in the Media Box in advance. The option you select may depend on the time of the year.
 - Option #1 (extensive preparation) Daisy Bruise Balm
<https://www.beckyocole.com/daisy-bruise-balm-recipe/>
 - Option # 2 (moderate preparation) Shower Scrub Bar (using dried wildflowers)
<https://thenerdyfarmwife.com/wildflower-shower-scrub-bar/>
 - Option # 3 (light preparation) Sugar Scrub
<https://aromatherapyanywhere.com/sugar-scrub-recipes/>
3. Encourage learners to document the process and make notes on their recipe (pre-printed or loaded onto electronic device) as they are working through it.
4. Class discussion - learners report back on their process noting the following,
 - Were there any difficulties?
 - Did they make any changes to the recipe? Why?
 - What worked well? What didn't?

This process is good preparation for lab work and experiments.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM3: Examining Edible / Medicinal Plants

L8: Topical Applications



EXTENSION / REDUCTION ACTIVITIES:

You will need a minimum of 90 minutes for the lesson in addition to preparation time of your chosen option.

Extension: Encourage learners to use their application for a week. Host a reflective session where they share their opinions on the product. You could invite a local cosmetic maker to come in and give feedback on each group's product.

MEDIA (materials, online video links, extra resources, case studies etc)

Plant Identification: <https://www.itl.org.uk/resources/parts-of-a-plant/>

Learning Herbs: <https://learningherbs.com/>

- <https://learningherbs.com/herbal-training/how-to-make-herbal-salves/> includes a video also further down the page

Make a Chamomile lotion: (13.35 min) Start at 2:03 min <https://www.youtube.com/watch?v=YTQiFv01jLY>

Article: Beginners Guide to making herbs and salves: <https://www.healthline.com/health/diy-herbal-salves>

Simple Aftershave: (3:39 min) <https://www.youtube.com/watch?v=p7hb5FmpKhY>

Shaving Cream: (5:13 min) <https://www.youtube.com/watch?v=O9Z3gdL8KYo>

Article: Dandelion Recipes: <https://www.growforagecookferment.com/dandelion-recipes/>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Invite a local herbalist or cosmetic maker, e.g. Modern Botany, Shcull for a possible visit to learners in the preparation of their topical application <https://modernbotany.com/>

Forage local ingredients for experimentation with the body scrubs, e.g. yarrow, daisy, wild rose, fuschia.