



Scottish Government, Nature Restoration Fund 2021-22
EARTHWORMS - EAC LOST Context for Progression in STEM
Resource Summary



Nature Restoration Fund 2021-22

Earthworms Context for Progression in STEM

General Teacher Support				
CfE	Organiser	Level	Activity	Resource
LfS	n/a	Teacher, Early, Primary, Secondary	Misc – including CLPL	Ed Scotland Summary for LfS Resources https://education.gov.scot/improvement/learning-resources/a-summary-of-learning-for-sustainability-resources
STEM	n/a	Teacher, Early, Primary, Secondary	Misc -including CLPL	Ed Scotland Summary of STEM Resources https://education.gov.scot/improvement/learning-resources/a-summary-of-stem-resources/#:~:text=In%202017%2C%20the%20Scottish%20Government%20published%20the%20STEM,the%20fast-paced%2C%20changing%20world%20and%20economy%20around%20us.
STEM	n/a	Teacher, Early, Primary, Secondary +	Misc	https://www.stem.org.uk/
IDL	n/a	Teacher, Early, Primary, Secondary +	Misc	EAC LOST blog Greening the School Estate in EAC https://blogs.glowscotland.org.uk/ea/learningoutdoorssupportteam/greening-the-school-estate-in-east-ayrshire/
Sciences	n/a	Teacher	Misc	TCV Citizen Science – resources for schools https://www.tcv.org.uk/scotland/discover/citizen-science/get-involved-citizen-science/citizen-science-resources/
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Sciences and Numeracy and Maths	Biodiversity and Interdependence Information Handling	Teacher/First/Second/Third	Survey Repeat seasonally/annually	Nature's Calendar – misc topics in Citizen Science https://naturescalendar.woodlandtrust.org.uk/
IDL	n/a	Teacher	Misc	Book – <i>Gardening for Wildlife</i> , RSPB (in equipment box)
LfS	n/a	Teacher, Early, First, Second	Misc	Book – <i>How to Help a Hedgehog and Save a Polar Bear, 70 Simple Things you Can do for our Planet!</i> , by Dr Jess French (in equipment box)
Sciences	Biodiversity and Interdependence	Teacher	Misc	Wild About Gardens collaboration between RHS and Wildlife Trusts, tips on how to make your space more wildlife friendly and biodiverse https://www.wildaboutgardens.org.uk/

Context Specific Resources for Teachers				
CfE	Organiser	Level	Activity	Resource
Sciences	Biodiversity and Interdependence	Teacher	General information on earthworms, identification tools included	Earthworm Society of Britain https://www.earthwormsoc.org.uk/
IDL	n/a	Teacher/Second Level	Make your outdoor space earthworm friendly	Wild About Gardens https://www.wildaboutgardens.org.uk/ Go Wild for Worms pdf https://www.wildaboutgardens.org.uk/sites/default/files/2022-03/19357%20WAG%202018%20-%20Booklet%20AW_%20new%20logo%20web_0.pdf
IDL	n/a	Teacher/Early/First/Second +	Activities to explore soils and their importance	Earth Beneath Our Feet https://www.owlscotland.org/images/uploads/resources/files/World_beneath.3May16web.pdf
Sciences MNU	Biodiversity and Interdependence Information Handling	Teacher/First/Second/Third	Survey An introduction to Citizen Science Repeat seasonally/annually	OPAL Earthworm Survey https://www.imperial.ac.uk/opal/surveys/soilsurvey/ This was a Citizen Science initiative. Now closed to new data but resources available and possible to use in your own surveys. Scientific methods demonstrated. Repeat surveys to develop skills – questioning and developing hypotheses.
STEM/Social Studies	n/a	Teacher, Early, Primary, Secondary	Misc – visits, downloadable resources, equipment loan	Royal Highland Educational Trust https://www.rhet.org.uk/
IDL	n/a	Teacher, Early, Primary, Secondary	Misc – Information sheets, activity sheets, growing topics planners (including <i>Earth Matters</i> and <i>Wildlife Wonders</i>), how to guides.	RHS Campaign for School Gardening https://schoolgardening.rhs.org.uk/home

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Suggestions for Progression in Learning and Teaching				
CfE	Organiser	Level	Activity	Resources
IDL	n/a	Early/First	Misc	<p><i>Superworm</i> STEM Trail based on the book by Julia Donaldson and Axel Schaefer</p> <p>See pdf resource from Emma Brown, North Ayrshire Council. Activity cards can be used to create an outdoor trail of STEM investigations (see equipment box and shared pdf)</p>
IDL	n/a	Early/First/Second	Activities to develop biodiverse spaces in garden/school grounds.	<p>Suggestions for making spaces wildlife friendly and spaces to help prevent decline of common garden species – including earthworms. https://www.wildaboutgardens.org.uk/</p>
Sciences -	Skills: Develop the skills of scientific inquiry and investigation using practical techniques	Early/First/Second	Worm charming – investigate one method of worm charming, create questions, collaborate with others to create questions, make suggestions for other methods	<p>Learning Through Landscapes Scotland resource download https://www.ltl.org.uk/resources/worm-charming/</p> <p>RHS Hunt for Worms Information Sheet https://schoolgardening.rhs.org.uk/resources/info-sheet/hunt-for-worms</p> <p>Great British Science Share – question maker resources https://www.greatscienceshare.org/</p>
Sciences MNU	Biodiversity and Interdependence Information Handling	First/Second +	Earthworm Survey – repeat seasonally/annually	<p>OPAL Earthworm Survey https://www.imperial.ac.uk/opal/surveys/soilsurvey/</p> <p>This was a Citizen Science initiative. Now closed to new data but resources available and possible to use in your own surveys. Scientific methods demonstrated.</p>

CfE	Organiser	Level	Activity	Resources
Technology Sciences	Craft, Design, Engineering: Application of Engineering Biodiversity and Interdependence	Second +	Make a compost wormery	<p>Make a compost wormery in a raised bed EAC LOST/TCV Green Gym</p> <p>https://blogs.glowscotland.org.uk/ea/learningoutdoorssupportteam/sustainable-food-growing/tcv-green-gym-make-a-compost-wormery-in-a-raised-bed/</p> <p>Make a mini wormery RHS Earth Matters Topic</p> <p>https://schoolgardening.rhs.org.uk/Resources/Activity/Mini-wormery</p> <p>Free worms from the Urban Worm – Spring 2022</p> <p>The Urban Worm would like to give you Free worms! Build your own worm farm and The Urban Worm will send you the worms https://www.facebook.com/theurbanwormUK/posts/2533192123480991</p>

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Sciences Experiences and Outcomes – Extract from CfE introduction

The sciences framework provides a range of different contexts for learning which draw on important aspects of everyday life and work.

Learning in the sciences will enable me to:

- develop curiosity and understanding of the environment and my place in the living, material and physical world
- demonstrate a secure knowledge and understanding of the big ideas and concepts of the sciences
- develop skills for learning, life and work
- develop the skills of scientific inquiry and investigation using practical techniques
- develop skills in the accurate use of scientific language, formulae and equations
- apply safety measures and take necessary actions to control risk and hazards
- recognise the impact the sciences make on my life, the lives of others, the environment and on society
- recognise the role of creativity and inventiveness in the development of the sciences
- develop an understanding of the Earth's resources and the need for responsible use of them
- express opinions and make decisions on social, moral, ethical, economic and environmental issues based upon sound understanding
- develop as a scientifically-literate citizen with a lifelong interest in the sciences
- establish the foundation for more advanced learning and future careers in the sciences and the technologies.

SUSTAINABLE DEVELOPMENT GOALS



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