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COASTS IN THE CURRICULUM

ENVIRONMENTAL EDUCATION FORUM

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Welcome to the wonderful world of Northern Ireland's coasts. This education supplement from the Environmental Education Forum is designed to help teachers and leaders discover all about our unique coastline. It is designed to give you ideas on places to visit for school trips and ways in which the coasts and seashores can be used in a range of curriculum subjects across all four key stages. Please feel free to photocopy this resource and pass it on to a colleague who may be able to make use of it.

Even though Northern Ireland's coastline is a relatively short 650km in length, it contains an exceptional diversity of marine wildlife habitats. There are many wonderful places to visit around our coastline and a surprising number of ways in which the coasts and the seashore can be incorporated into a variety of curriculum subjects. A trip to one of the many sites featured below can have direct links with a number of components from the programmes of study for the Geography, History, English, Science, Art and Technology Curriculum areas, amongst others.

IDEAS ON PLACES TO VISIT

1. Lough Foyle is a shallow inlet with significant estuarine influences from the Rivers Foyle, Faughan and Roe. Extensive sand and mudflats and limited areas of saltmarsh can be found here. It supports an internationally important population of over-wintering wildfowl.

2. Magilligan contains one of the largest sand dune systems in the British Isles and the only well-developed dune slacks in Northern Ireland.

3. The Causeway Coast stretches from Portstewart to Ballycastle and includes sections of basalt rock such as the Giant's Causeway and associated chalk cliffs. A range of well-developed intertidal communities exist here.

4. Rathlin Island is well known for its exceptionally well-developed marine communities especially on the island's north coast where steep cliffs descend offshore and kelp beds reach their greatest depths in Northern Ireland. The cliffs support a major seabird colony.

5. Larne Lough This sea lough, which is mostly filled with sediment, still has some good examples of saltmarsh and saline lagoons.

6. Belfast Lough is the most heavily influenced by human activity of all of Northern Ireland's marine areas. Large-scale land reclamation has left only a remnant of the once extensive mudflats that occurred in the inner Lough and the Lough exhibits signs of eutrophication.

7. The Ards Peninsula contains a mixture of shore types including rock, shingle and sand. Coastal grassland, heath and sand dunes mostly occur as small remnants.

8. Strangford Lough is a large diverse inlet which contains many islands and a narrow connection to the Irish Sea. It is recognised as one of the richest marine areas in Europe.

9. The extensive Murlough dune system in **Dundrum Bay** contains the best example of dune heath in Ireland. Intertidal and sub-tidal habitats are similarly dominated by sand.

10. The Mourne Coast includes a mixture of hard and soft cliffs and intertidal and sub-tidal sediments. The area is notable for the development of shingle vegetation and reefs formed by the polychaete worm *Sabellaria alveolata*.

11. Carlingford Lough has an exceptional range of intertidal and sub-tidal habitats found on rock and a range of sediment types. Several marine habitats and species found here are not present elsewhere in Northern Ireland



COASTAL HOMES ESTATE AGENT

REPRODUCED WITH KIND PERMISSION FROM ENGLISH HERITAGE

This series of lessons is based on the idea of an 'estate agent for coastal wildlife'. It will encourage children to find out more about Northern Ireland's rich and diverse coastal areas and the animals that live there. The activity is designed to be of use at all levels of the curriculum, progressing through from Key Stage one to Key Stage four.

ACTIVITY 1

LEARNING OBJECTIVE

- To learn about some of the different habitats and coastal regions and the types of animals that may live there

RESOURCES

- House for sale leaflets from estate agent
- Books / Posters / Pictures of coastal habitats and species
- Map of Northern Ireland coast



ACTIVITY

- Children should be asked about how coastal animals could use an estate agent to find a home, just like people do. The children are introduced to the *COASTAL HOMES* estate agent and their offices all over Northern Ireland. Through learning about where their offices are, they learn about a range of different coastal sites, habitats and wildlife.
 - Discuss with the children what they think a coast is, and allow them to use maps to find any coastal areas they may have visited. Ask the children to talk about the coastal site using descriptive language.
 - Explain the factors that help create the variety of habitats that occur within a coastal region. *COASTAL HOMES* estate agents will deal with these habitats: rock pools, sandy beaches, shoreline, sand dunes and cliffs.
 - Allow the children to investigate these habitats and find out which coastal creatures might live there.
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ACTIVITY 2

LEARNING OBJECTIVES

- To investigate the conditions that are provided by a habitat, and how this influences the animals that would want to live there.
- To create an advertisement for a coastal home.

RESOURCES

- House for sale leaflets from estate agent
- Books / Posters / Pictures of coastal habitats and species
- Map of Northern Ireland's coast
- Template for advertisement



ACTIVITY

- Ask the children to share the information they have collected about coastal habitats with the rest of the class.
- Record information given by each group on large sheets of paper and list the conditions children found would be present in each habitat and the animal life they discovered would be located there. The class should end up with habitat summaries for each of the five areas.
- Allow the children to browse through a range of house sale details from a local estate agent. Discuss a list of adjectives used to describe properties, and list the different types of accommodation (flat, apartment, detached, terraced, semi-detached). Discuss how to lay out an advert.
- Encourage the children to design their own advert to advertise a property from their chosen habitat. They must aim their advert at an animal that would want to live in that habitat.

ACTIVITY 3

LEARNING OBJECTIVE

- To understand that a habitat must offer what an animals needs: food, water, shelter and a place to breed.

RESOURCES

- Books / Posters / Pictures of coastal habitats and species
- Species list of coastal creatures



ACTIVITY

- The children will have created their own adverts for a variety of properties. They are now going to imagine that they are a particular coastal creature looking for a home. Encourage the children to choose a creature that is not from the home they have just advertised.
- The aim is that children find out about this creature through research. They will need to find out what their animal eats and what conditions it needs to live in. They will then create an information fact file about their animal.
- All the information sheets will be swapped between children so that no-one has their own sheet. They must read the information sheet and then imagine they are that new animal and are looking for somewhere new to live. The children can visit the *COASTAL HOMES* estate agent and see if there are any properties available that meet their habitat needs.

EXAMPLES OF SOME COASTAL CREATURES

BIRDS

Herring Gull
Kittiwake
Fulmar
Puffin
Gullimot
Razorbill
Cormorant
Tern
Oystercatcher

FISH

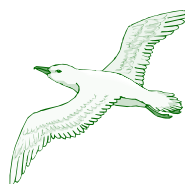
Goby
Blenny
Butterfish
Sea Scorpion
Sand Eels

MOLLUSCS

Common Limpet
Periwinkle
Mussels
Dog Whelk

OTHER INVERTEBRATES

Barnacle
Starfish
Sea Urchin
Shrimp / Prawn
Sand Hopper
Shore Crab
Hermit Crab
Ragworm / Lugworm



Websites and further reading.

Web address

http://www.ehsni.gov.uk/education/Seashore_Resources.shtml

<http://www.bbc.co.uk/schools/teachers/>

<http://www.geointeractive.co.uk/contribution/conse-archfiles/cphycoasts.htm>

http://www.englishnature.org.uk/Science/nature_for_schools/default.asp

http://www.ebc-indevelopment.co.uk/sealife/resource_lib.html

http://www.geographyinaction.co.uk/Magilligan/Mag_intro.html

<http://www.ehsni.gov.uk/natural/coast/coast.shtml>

Content

The Environment & Heritage website contains sea-shore educational resources and downloadable worksheets for use in key stages one to three.

A great online resource which gives links to worksheets and activities for all subjects at all four key stages. Some good coasts and rivers linked material.

This site provides some excellent resources to help students explore a range of coastal issues at key stages three and four.

This English Nature site contains great resources for Primary and Secondary schools. The full version of the **COASTAL HOMES ESTATE AGENT** can be found here

This Sea Life website contains educational topics designed to support key content areas of Key Stages 1 and 2. Online activities can be used in the Science, Geography, ICT, Art and Design, and Citizenship curriculum, and can be downloaded in PDF format.

For information on the Magilligan Dunes system visit the Geography in action website.

The EHS site gives a whole range of information on Northern Ireland's coastline including coastal and marine habitats and species.

Grants and Awards for environmental projects

Greenfingers Challenge.

The Greenfingers challenge is one of the UK's biggest horticultural competitions aimed at young people up to the age of 18. Prize money up to the value of £1500 is offered for gardening projects which can demonstrate a range of horticultural and organic practices, sustainable development and environmental awareness. For further details contact (01942) 612639.

NB: Follows school year therefore starts each September until June.

Teaching Ecology Grants.

The British Ecological Society is offering a range of grants to enable teachers to make the teaching of ecology more innovative, interesting and exciting. Grants are available for undertaking research into effectively communicating the teaching of ecology; There are seven categories available ranging from £200 - £1,000, Deadline dates are Sept 30th, Jan 31st and April 30th. For more information on the awards visit www.britishecologicalsociety.org/articles/grants/education/EEG/

Big Lottery Fund.

Available in Northern Ireland through the Young People's Fund and Change UR Future Programme. Closing date for medium applications (£40,000 to £150,000) is 29th August 2006. Details are available from www.biglotteryfund.org.uk.



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