

Leaving Certificate *Ecological Investigation: A study of a rocky shore ecosystem*



The outdoor classroom and real world learning are used throughout this course to 'make Science real' and enhance student's personal and social development. Students investigate the awe inspiring environments and habitats to aid their learning about the world around them, other people and themselves.

FSC

BRINGING
ENVIRONMENTAL
UNDERSTANDING TO ALL

Please visit

www.field-studies-council.org/outdoorclassroom/ireland/leavingcertificatebiology.aspx
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OVERVIEW

This course prepares students for **Sub-Unit 1.4: An introduction to the general principles of ecology** and **Sub-unit 1.5: A study of an ecosystem** of the syllabus.

During this day students will follow a route to enquiry to investigate biotic and abiotic factors on a rocky shore. Students will be introduced to a range of quantitative observational techniques which will develop the skills of data collection, identification of organisms and data analysis and presentation. The day visit includes a study of an ecosystem and all five mandatory experiments.

This course of study takes place at Creevy Pier, Co. Donegal. The rocky shore is on the west coast of Ireland and is semi-exposed. Clear zonation characteristics can be measured and observed from the lichen dominated upper shore to the mussel and kelp beds on the lower shore. Rock pools are diverse and easily accessible for sampling. Journey time is approximately 35 minutes from the centre.

Equipment and booking sheets will be supplied to measure abiotic and biotic factors from low water to splash zone. There will be sufficient stations sampled to enable the data to be presented using kite diagrams and to construct pyramids of number and food chains/webs. Methodology and techniques will be studied in relation to the investigation. Conclusions and evaluations will be drawn and the day summarised.

COURSE LENGTH

Sessions from 9.30am-4.00pm

9:30am- 1:00pm	1:00pm -1:30pm	1:30pm-4:00pm	4:00pm
Morning session	Lunch	Afternoon session	Depart

Extensions can be arranged, including evening meals and an overnight stay. This makes more time available for follow up discussions and analysis; ensuring students make the most of this outdoor learning opportunity.



External Recognition of Quality

All our centres have been awarded the Quality Badge by The Council for Learning Outside the Classroom. The badge is awarded to organisations that have demonstrated that they consistently deliver high quality teaching and learning experiences and manage risk effectively. This means that you will have to complete less paperwork when visiting our centres.

COURSE CONTENT

- Ecosystem
- Biotic, Abiotic
- Flora, fauna
- Zonation
- Tides
- Adaptation
- Niche habitat
- Biosphere
- Climatic factors
- Edaphic factors
- Aquatic environmental factors
- Pollution
- Conservation

Optional higher level extension:

- *Competition*
- *Predation*
- *Parasitism*
- *Symbiosis*

LEARNING OUTCOMES

Learning Objectives	Learning Outcomes
<ul style="list-style-type: none"> • Provide students with the opportunity to observe, identify and measure a range of abiotic and biotic characteristics • Provide students with an understanding of the zonation of the rocky shore 	<p>By the end of a course we expect all students to:</p> <ul style="list-style-type: none"> • Use and be able to recall several techniques to measure rocky shore habitats • Identify and recognise several different types of flora and fauna and understand their adaptations to the habitat • Identify rocky shore zonation <p>We also hope that students will:</p> <ul style="list-style-type: none"> • Be able to evaluate several techniques to measure rocky shore habitats • Identify and recognise several different types of flora and fauna and understand their adaptations to the rocky shore zones • Recognise and understand the processes that lead to rocky shore zonation

Protecting fieldwork opportunities for everybody

Growing pressures on outdoor learning has led the FSC to take on an important role; championing the rights and opportunities for people of all ages to experience the environment at first hand.

The FSC has led in campaigns to reverse the continuing decline in fieldwork within secondary schools and to build opportunities for out-of-classroom learning.

As a registered charity, the FSC receives no statutory funding. It relies solely on fees charged for courses and membership. Therefore, by visiting an FSC Centre not only are you receiving a high quality educational experience for your students, you are also helping to protect fieldwork opportunities for everybody.

NATIONAL CURRICULUM LINKS:

- 1.4.1 Ecology
- 1.4.2 Ecosystem
- 1.4.3 Biosphere
- 1.4.4 Habitat
- 1.4.5 Environmental factors
- 1.4.6 Energy flow
- 1.4.7 Niche
- 1.4.8 Nutrient recycling
- 1.4.9 Human impact on an ecosystem
- 1.5.1 Overview of an ecosystem
- 1.5.2 Observation and scientific study of an ecosystem
- 1.5.3 Organism distribution
- 1.5.4 Choice of habitat
- 1.5.5 Organism adaptations
- 1.5.6 Organism role in energy transfer
- 1.5.7 Analysis

*Optional higher level extension:**H.1.4.10 Pyramid of numbers**H1.4.11 Ecological relationships**H.1.4.12 Population Dynamics***High Quality teaching**

The teacher delivering the content plays a vital role in ensuring successful learning outcomes are achieved.

This is why every FSC Centre has taken great care in developing a qualified team of highly trained and CRB checked field teachers working full time, all year round.

Not only are they experts, they are gifted teachers with a real passion for the subject being taught. FSC field teachers are the reason why many schools return year after year.

FSC DERRYGONNELLY

Located in the unspoilt West Fermanagh countryside, FSC Derrygonnelly is 10 miles from Enniskillen, 20 miles from Ballyshannon and only 15 miles from the Donegal coast. The River Sillees runs through the Centre grounds and an excellent variety of habitats including rocky shores, freshwater, sand dunes, rivers, bog and heathland are within easy reach.

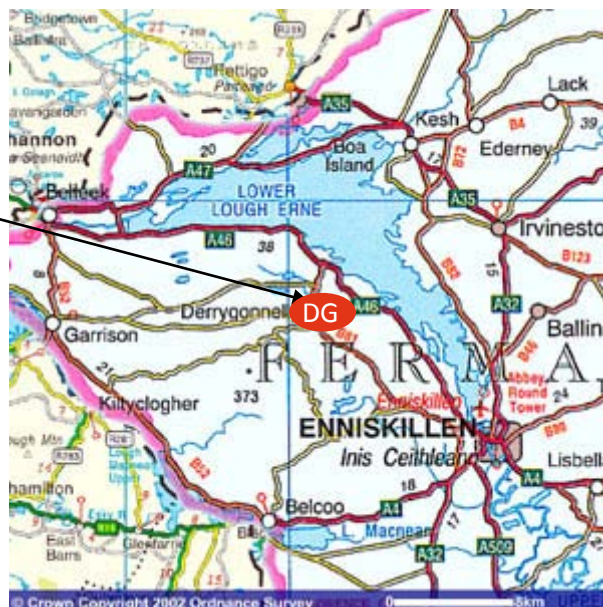


DG

Derrygonnelly

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NI Tel: 028 686 41673

Email: enquiries.dg@field-studies-council.org

PRICES

Prices start at €21/£17 per student. For more information please contact the centre directly.

TO BOOK THIS COURSE, SIMPLY:

1. Choose the time of the year you would like to attend
2. [Check availability online](#) or contact FSC Derrygonnelly

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The FSC prides itself on being flexible; the course content can be tailored to meet your needs. Alternatively, we can work with you to create a fully bespoke course to meet your exact requirements.

FSC offers a number of courses covering [biology field trips](#), [biology fieldwork](#), [Leaving Certificate biology](#), as well as [geography fieldwork](#). Please visit our website for further information.