



Innovative financing
in Europe's Northern
Periphery and island
regions



European Union
European Regional Development Fund



NORTHERN ENVIRONMENTAL
EDUCATION DEVELOPMENT

NEED Project

WP4 Inspiring environments for education

Action 19

Report of the pilot learning environments

Designing and producing the learning environment in
the Cliffs of Moher Visitor Centre

Cliffs of Moher

1. General information about the learning environment

The **Cliffs of Moher Visitor Experience** is one of the premier tourist destinations in Ireland. The visitor centre is home to a highly interactive exhibition on the geological history of the region. A range of cliff landforms may be observed in the territory. The 200 metre high Cliffs of Moher are undoubtedly the most famous cliffs in Ireland. The Atlantic Edge exhibition centre provides highly innovative information on the geology, landscape, caves and culture of the region around the Cliffs.. It may be argued that the Cliffs of Moher are one of the most internationally renowned sea cliffs, attracting over 750,000 annual visitors, having featured in several famous Hollywood movies, and being among the top 28 contenders for the being awarded the accolade of New 7 Wonders of Nature.

2. Development work done in NEED

The team

The development of educational resources and the training programme at the **Cliffs of Moher Visitor Experience** involved:

Dr. Maria McNamara – Burren Connect Project

Dr. Ronan Hennessy - Burren Connect Project

Katherine Webster – Cliffs of Moher
Cormac McGinley – Cliffs of Moher Education Officer
Pheobe Larkin – Cliffs of Moher

Planning parameters

The educational resources and training programme at the **Cliffs of Moher Visitor Experience** was designed to:

- Provide training to the staff and rangers at the centre to enable the staff to understand and communicate the story of the landscape to visiting school and tourists, as well as gaining an appreciation and awareness of the origins of the cliffs
- Provide activities for visiting schools to engage with and learn about the cliffs and other aspects of Earth Science that are presented in the exhibition.

Implementation

Two short staff-training courses were provided by the Geopark Geologist for the Burren region in Spring 2009 and 2010.



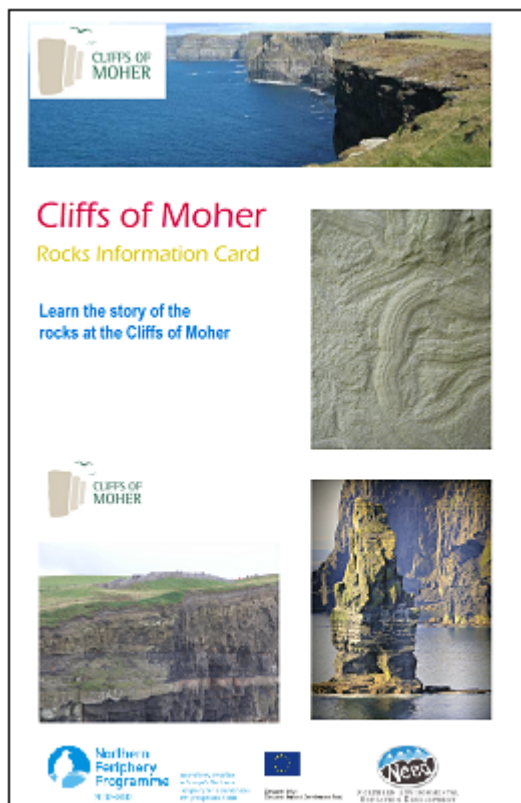
Staff training course at the Cliffs of Moher

Education activities developed for visiting schools were created with the help of the Cliffs Education Officer, ensuring a sustainable life-span for the programme activities at the cliffs centre.

The activities are designed to encourage students/visitors to use the Atlantic Edge exhibits to understand the origin of the Cliffs of Moher. Other activities include identifying fossils in the building stones at the centre; and understanding natural hazards such as Earthquakes and Tsunamis, and how these events occur.

Additional value achieved by NEED project in the learning environment

A geology booklet to accompany an existing Birds of the Cliffs of Moher was developed by Ronán Hennessy and Cormac McGinley. This book introduces simple concepts of geological history and how the cliffs formed. The booklet provided photographs, maps and illustrations of features to be observed at the cliffs.



Draft cover of the Rocks and Geology of the Cliffs of Moher

TSUNAMI ALERT! 1

So far we've looked at earthquakes on land. But what if an earthquake happens at sea?
A TSUNAMI !

A

B

Q1. These diagrams show how tsunamis form. Can you describe what happens?

Q2. In what direction(s) do you think the wave will travel? _____

Q3. We've already seen that Ireland is 1300 km from the nearest earthquake zone. Is this zone on land or underwater? _____ How likely is it that Ireland could be hit by a tsunami? Why? _____

Q4. The picture below shows what tsunami waves look like out at sea, compared to normal waves.

normal waves:

tsunami waves:

True or false: Tsunami waves are the same length as normal waves _____
 Tsunami waves are many times higher than normal waves _____
 A tsunami is made of only one wave _____

Example of education activity sheet for schools visiting the Cliffs of Moher

WHERE DOES THE EARTH QUAKE?

You have already seen this map of the plates of the Earth's crust. The yellow dots show where earthquakes have happened over the last 40 years.



- Q1. What do you notice about where earthquakes happen? _____
- Q2. Why do you think this is? _____
- Q3. How far is Ireland from the nearest earthquake zone? _____
- Q4. Do you think there are more earthquakes in areas where the Earth's plates are moving towards each other, or where the plates are moving apart? Why do you think this is? _____
- Q5. Arrange these places in order of how safe they are to live in (safest first): Japan, Spain, Ireland, Australia, Iceland. _____



Example of education activity sheet for schools visiting the Cliffs of Moher