



Date	Class 5th and 6th	Subject Geography
Strand Human Environments		Strand Unit People and places
Title Marine explorers and scientists		
Objective(s) The lesson provides students with an opportunity to learn about people and places in Ireland. With a focus on marine science, the students will learn about the type of work marine scientists are involved with and the environments they work in. By using the famous VENTure expedition where the Moytirra hydrothermal vents field were discovered in the Mid-Atlantic, the students will investigate, record and communicate their findings about scientists such as Dr Andy Wheeler, the chief scientist of this survey. Students can also learn about the people he works with on the research vessel, the RV <i>Celtic Explorer</i> .		
Skills Required Listening, observation, questioning, reading, analysing, interpreting		
Learning Objectives The students will be able to: <ul style="list-style-type: none"> • Observe some of the different working environments of marine scientists • Learn about some of the marine science community and investigate who works in this environment • Become familiar with the work of a marine scientist on a research mission. 	Learning Activities Preparation Smart devices Weblinks See the recommended lesson plan schedule that supports the module: Build Your Own Unknown. Explorers Teachers' PowerPoint Presentation Geography: The Deep Unknown - Discover the Mid Atlantic Ridge and Hydrothermal Vents Activity 1: Class Discussion Watch the VENTure Cruise Expedition Log film. This is silent footage documenting the research mission. Generate a class conversation by prompting the following questions: <ul style="list-style-type: none"> • Describe what is happening in the film • Observe the actions of some of the people in the film. What do you think they are doing and what might their job be? • What does the film tell you about the type of discoveries made? • Do you think Dr Andy Wheeler features in the film? Can you identify who he might be? Activity 2: Observing and Recording Watch and listen to Dr Andy Wheeler discuss the	

	<p>VENTure Mission on YouTube video called <i>UCC Scientists involved in Major Discovery in the Atlantic</i> at https://youtu.be/wF_a9hiqt0g</p> <p>Complete the activity worksheet provided with the students.</p> <p>Development Activity Students can read the VENTure mission blog posts from 2011 online through the Scientist At Sea Blogspot at http://scientistsatsea.blogspot.com/2011/</p> <p>This gives a day by day account of the research mission and describes life at sea as a marine explorer.</p> <p>Take an online virtual tour of The Celtic Explorer via the Marine Institute website.</p> <p>Follow one of the Marine Institute research vessels via the Track A Vessel weblink via the Marine Institute website.</p> <p>Imagine you are on this expedition and write a blog post of a day at sea.</p> <hr/> <p>Resources VENTure cruise expedition log video: https://youtu.be/g0O-KmFwKHc</p> <p>Online link to YouTube video of Dr Wheeler talking about the expedition: <i>UCC Scientists involved in Major Discovery in the Atlantic</i>: https://www.youtube.com/watch?v=wF_a9hiqt0g&feature=youtu.be</p> <p>VENTure mission blog posts from 2011: Scientist At Sea Blogspot: http://scientistsatsea.blogspot.ie/2011/.</p> <p>Track one of the Marine Institute research vessels via the Track A Vessel weblink: https://www.marine.ie/Home/site-area/infrastructure-facilities/research-vessels/track-vessel?language=en</p> <p>Imagine what life is like on a research vessel by exploring the online virtual tour of The Celtic Explorer via the Marine Institute website: https://www.marine.ie/Home/sites/default/files/Virt</p>
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Differentiation	Higher and lower order questioning, ability oriented tasks.
Assessment	Teacher Observation and Questioning
Linkage and Integration	English - Writing - Emotional and imaginative development through language; Competence and confidence in using language, etc English - Reading - Receptiveness to language; SPHE - Myself and the wider world - Media Education ICT- To develop and use ICT skills in the attainment of curriculum learning objectives.



Activity 2: Worksheet - Marine explorers and scientists

1. Where does Dr Andrew Wheeler work?
2. What was his role on the expedition as a scientist?
3. How far from Irish shores was Dr Wheeler and his team when they made the discovery of the Moytirra Hydrothermal vents in the Atlantic?
4. What was the name of the research vessel used for the expedition?
5. What was the clue in the water that led Dr Andy Wheeler and his team to believe hydrothermal vents existed in this location under the sea in 2008?
6. What equipment did Dr Andy Wheeler and his team use to make the discovery of the hydrothermal metres below the ocean?
7. How long did it take Dr Andy Wheeler and his team to discover the hydrothermal vents?
8. What did he do once he discovered the hydrothermal vents?
9. How far down can the Remotely Operated Vehicle travel underwater?
10. How big is the area of the discovered vent field?