

SDG14 Future of the Ocean

MM3: Offshore Renewable Energy



Micro-Module 3: Offshore Renewable Energy

Research and Development

Lesson 4: Protecting our Ocean Friends

Subjects: Climate Action and Sustainable Development, Design, English, Engineering Science

7 AFFORDABLE AND CLEAN ENERGY



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



13 CLIMATE ACTION



Lesson Title and Summary: Protecting our Ocean Friends

In this lesson, the topic of offshore wind's impact on marine life is explored. The lesson begins with a 12-minute video clip featuring insights from Patrice McCarron of the Maine Lobstermen's Association and lobsterman Jason Joyce, highlighting potential harms caused by offshore wind. Learners then engage in a 20-minute questionnaire based on the video, enhancing their media literacy skills. A 15-minute whole-class discussion follows, encouraging learners to share their viewpoints on offshore wind, influenced by the video, and debate its pros and cons. The discussion aims to foster critical thinking while capturing the exchange on a visual platform.

Vocabulary: Marine Life, Media Literacy, Environmental Impact

In this lesson, the learner will:

- Analyze Offshore Wind Impact
- Develop Media Literacy
- Participate in Group Discussion
- Formulate Informed Opinions

Materials

- Worksheet: Offshore Wind Farms and Animal Life
- Internet access
- Notepad and pen
- Flipchart or whiteboard and markers

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ACTIVITY INSTRUCTIONS

Activity 1: Introduction (15 mins)

1. Watch the video Will Offshore Wind Harm Marine Life? [12:02 mins] on how offshore wind has the potential to harm marine life, which is a scene taken from Episode 2 of The Maine Reset.

Activity 2: Video Questions (20 mins)

1. After watching the video, invite learners to complete the questions in the worksheet: Offshore Wind Farms and Animal Life.

Activity 3: In-class discussion (15 mins)

1. Invite learners to participate in a whole-class discussion on their reaction to this video.
2. Poll learners on whether they are in favour of offshore wind, or against and whether this video might have influenced their thinking.
3. Moderate a discussion on the advantages and disadvantages of offshore wind, and whether one out-weighs the other. These questions can be discussed in small groups before moderating a whole-class discussion. Consider recording the discussion on a whiteboard or flip chart. Some questions to consider are:
 - a. What are the advantages of offshore wind?
 - b. How can offshore wind farms benefit communities economically?
 - c. How can offshore wind farms impact climate change beyond providing renewable energy?
 - d. What are the disadvantages of offshore wind?
 - e. How do you think offshore wind will affect fishermen and tourism which relies on the ocean (e.g. whale watching, deep sea fishing, boat tours of landmarks, parasailing, etc.)?
 - f. For each disadvantage, can you think of solutions?

REFLECTIVE EXERCISE: 3-2-1

- Three things they feel they have learnt from the exercise
- Two things they found most interesting and would like to explore more
- One – their opinion they have about the site / exercises

Use Post-its or a Mentimeter survey - [mentimeter.com](https://www.mentimeter.com) to gather reflections

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EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter class, reduce the amount of time you spend on activity 3.

Extension: For a longer class, invite learners to read Bottom-Dwelling Marine Animals Thriving on Offshore Wind Farm Foundations by Ecowatch (see media box) on how some marine animals are thriving on offshore wind farm foundations. Use the Marine Atlas to lead a discussion on how learners think offshore wind farms would affect Irish Marine Life. Contrast this with the information provided in the video.

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

Will Offshore Wind Harm Marine Life? [12:02 mins] https://www.youtube.com/watch?v=6Y-oDszbFmQ&ab_channel=TheMaineReset

Article: Bottom-Dwelling Marine Animals Thriving on Offshore Wind Farm Foundations: <https://www.ecowatch.com/marine-animals-offshore-wind-farm-habitats.html#:~:text=There%20can%20be%20negative%20effects,change%20can%20benefit%20marine%20life.>

Ireland's interactive Marine Atlas: <https://atlas.marine.ie/#?c=54.0916:-8.3716:6>

Local Trip / Expertise / Additional Work and Assessments

Make a trip to your local aquarium to learn more about marine life.

Consider inviting a marine expert to talk to the class about the potential impact of infrastructure on the marine environment.

See SDG14 MM1 for WebQuest and Pledges related to marine life and ocean health.



OFFSHORE WIND FARMS AND ANIMAL LIFE

Answer the following questions:

Overall, do you think Patrice McCarron and Jason Joyce are in favour or against offshore wind farms?

Where do they say companies want to install offshore wind farms? Why do they think that?

Where do companies want to mount the wind turbines? Why is this significant?

What are they most concerned about in relation to offshore wind farms?

What animals do they think wind farms will affect?

What problems do they say wind farms cause for marine life?

What problems do they say wind farms cause for birds?



OFFSHORE WIND FARMS AND ANIMAL LIFE

What Island do they refer to? What birds live there? Why are they concerned?

How do they say the offshore wind farms will affect fishermen?

Why is the physical structure of wind turbines a concern?

What do they think is motivating the construction of offshore wind farms? Why do they say this is a problem?

What kinds of solutions do you think would be better?



OFFSHORE WIND FARMS AND ANIMAL LIFE

What evidence do they give to support their point of view?

Remember, evidence is based on data, scientific studies, statistics, observation, historical records, published peer-reviewed scientific papers, etc.

Do you think this video represents a fair reflection of the challenge, or is there some bias? Give reasons for your opinion.

Note: A biased argument is a type of argument that presents information, evidence, or reasoning in a partial, prejudiced, or one-sided manner, typically to support a particular viewpoint, perspective, or agenda while neglecting or downplaying opposing viewpoints or evidence. Biased arguments often lack objectivity and fairness and can be used to manipulate or persuade people without providing a balanced or complete picture of the topic under discussion.

In a biased argument, the presenter may selectively choose evidence that supports their position while ignoring contradictory evidence, use emotionally charged language to sway opinion, or rely on fallacious reasoning to make their case appear stronger than it is. These arguments can be misleading and are not conducive to open, rational, and constructive discourse.
