

LET'S TALK ENERGY

Research Activity Lesson Outline 1

Lesson Objectives:

To build knowledge and activate critical thinking around the topics of Net Zero and renewables.



<p>Learning Intention:</p> <p>To understand what 'Net Zero' refers to and the ways that it could be achieved.</p> <p>To consider future energy sources, and whether they meet the criteria of secure, affordable and sustainable.</p>	<p>Resources</p> <p>Computers with internet access Lesson Slides Worksheet 1 – Renewable Technologies Suggested Information Sources</p> <p>Video Interview – Fraser Anderson (4:41) Video Interview – Mandy Gloyer (4:29) Video Interview – Glen Chesney (3:33)</p>
<p>Video Interviews</p>	<p>Show pupils each of the Video Interviews. The videos contain short interviews with professionals at ScottishPower Renewables on their career and their opinions on climate change and renewables.</p>
<p>Activity</p>	<p>Using the Lesson Slides, introduce pupils to the Let's Talk Energy programme.</p> <p>Slide 2: Facilitate a class discussion to find out what pupils already know about Net Zero. Draw out as many answers as possible and collate them for pupils to see. Accept all answers at this stage e.g. greenhouse gases, melting ice caps, carbon dioxide, renewable energy, transport, fossil fuels etc. Collate these answers on the slide.</p> <p>Slide 3: Facilitate a class discussion to find out what pupils already know about renewable technologies, collating their answers on the slide. Possible answers could be: wind turbines, solar panels, hydroelectric, hydrogen, biomass, they take a lot of money to build, they are clean, they are sustainable, Scotland uses a lot of them etc.</p> <p>Slide 4: Introduce pupils to the concepts of Accessibility, Affordability and Sustainability in relation to renewables.</p> <p>Slide 5: From this point on, the focus will be on 4 technologies:</p> <ul style="list-style-type: none"> • onshore wind • offshore wind • solar power • green hydrogen <p>Facilitate a discussion on what pupils want to know about these renewables before they can make policy decisions regarding them. Draw out as many answers as possible and collate them on the slide. Answers may include: 'How much energy do we already generate using this technology?', 'Would this technology generate affordable energy?', 'Is Scotland a good place for this technology?', 'Is there anything about this technology that isn't sustainable?', 'Would this technology generate enough energy on its own or do we need a mix?' etc.</p> <p>Slide 6: Refine the list of pupil questions to create 3 or 4 'Big Questions' that pupils will set out to answer e.g. 'How can renewable energy help us to reach Net Zero?', 'What are the pros and cons of these technologies?', 'What are the best renewable technologies for Scotland?', 'What does the future look like for renewables?', 'Will we be able to rely on renewables by 2045?', 'What other benefits do renewable technologies bring?', 'How are renewable projects being paid for?' etc. Record these on the slide.</p> <p>Give pupils Worksheet – Renewable Technologies. Using the template provided, pupils will carry out independent research to answer the Big Questions in relation to onshore wind, offshore wind, solar power and green hydrogen. Trusted sources for this research are listed in the Suggested Information Sources document.</p>
<p>Plenary</p>	<p>Refer to the Lesson Slide that was populated with the Big Questions. Facilitate a discussion about what pupils discovered during their research and populate slides 7, 8 and 9 with answers to these questions. Address any gaps in their knowledge using resources suggested above.</p> <p>Remind pupils that they will use this learning to inform their decisions during the Let's Talk Energy Discussion Activity.</p>