

	Eco-Schools Topic Energy	Age Range Lower KS2	Subject Area Geography
<p>Lesson Objectives</p> <p>Pupils should be taught to:</p> <p>Human and physical geography:</p> <ul style="list-style-type: none"> describe and understand key aspects of: physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water <p>Geographical skills and fieldwork:</p> <ul style="list-style-type: none"> use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world 			
<p>Slides 2-4</p> <p>Create a list of things (inside and out of the classroom) that require a source of energy to make them work. You could use Stand up, Pair up, Share up or similar.</p>			
<p>Slide 5</p> <p>Discuss different types of energy eg oil fired radiators, mains electricity, battery. Some children may have gas cookers at home.</p>			
<p>Slides 6-24</p> <p>Pictures of various energy sources to see if the children recognise and can name will appear, each one followed by a name and short snippet of information about that source.</p>			
<p>Slide 25</p> <p>Discuss what is meant by renewable and non-renewable sources of energy, the children may need information about the formation of oil, coal etc to give them an idea of how long it takes to form.</p>			
<p>Slide 26</p> <p>Sorting Activity - worksheets below</p> <p><i>NB Nuclear energy is generally not considered renewable because it relies on finite resources like uranium, which can be depleted. However, it is a low-carbon energy source, meaning it doesn't produce greenhouse gases during operation, making it environmentally friendly in terms of emissions.</i></p> <p><i>Some people argue that with advancements in technology, such as using thorium, nuclear energy could become more sustainable. But as of now, it doesn't fit the traditional definition of renewable energy, which includes sources like solar, wind, and hydro that are naturally replenished.</i></p>			
<p>Slide 27-29</p> <p>The children may wonder why renewable energy hasn't completely taken over everywhere, these slides help to answer that question and see how far the UK has moved towards achieving this goal. You might also want to discuss where the children think we should be when they reach adulthood.</p>			
<p>Slide 30-31</p> <p>Look at bing maps which give a good OS option. Find a wind farm such as the one at Carland Cross and identify the OS wind farm symbol. Find other wind farms locally. If the children have access to ipads they can use the QR codes to do this in pairs, otherwise, follow the link to do it on the board. You could also look at renewable energy maps on the Cornwall Council website.</p>			

Name

Renewable and Non-Renewable Sources of Energy

Match the labels to the pictures and then sort the sources of energy into renewable and non-renewable sources.



Nuclear Energy	Biomass Energy	Oil Energy
Gas Energy	Hydropower Energy	Solar Energy
Coal Energy	Geothermal Energy	Wind Energy

Renewable Sources of Energy	Non-Renewable Sources of Energy