


# Environmental Issues





A Programme of Study for Year 9 Geography  
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## Environmental Issues

This Scheme of Work has been written by Humanities teachers at Quintin Kynaston School with an emphasis on achieving understanding of the subject rather than simply a drive to complete a syllabus. It is designed for our multi-cultural student body spanning a range of abilities. Wherever practicable we prepare **Differentiated Resources** (indicated by a ) for students with Special Needs, those who are early English learners and for gifted and talented students. Further work is in hand on

these. We also take into account National Strategies: specific tasks are indicated by  for **Literacy**,  for **Numeracy** and  for **Information Technology**. Topics supporting **Citizenship** are marked . This Scheme of Work will be reviewed and revised in due course.

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Key Question	Learning Objectives	Key Vocabulary	Suggested Activities	Resources	Homework
What is a National Park and what are its characteristics?	<ul style="list-style-type: none"> <li>To define a National Park</li> <li>To state characteristics and users of a National Park</li> <li>To suggest which National Park in England and Wales is most at risk given accessibility, surrounding population and characteristics</li> </ul>	Accessibility National Park Population Density	Correlation of highlands and National Parks. Construct pie-chart showing activities. Journey to National Park, measuring distance and calculating time. Accessibility of National Parks. Essay on which National Park is most vulnerable .	Compass Protractor Colouring Pencils Worksheet	What is conflict? How might it arise in the context of a National Park?
How can conflict arise from the use of National Parks? (2 lessons)	<ul style="list-style-type: none"> <li>To identify National Park users</li> <li>To say how each uses the National Parks</li> <li>To identify conflict between these users and uses</li> </ul>	Conflict Conservationist Entrepreneur Reservoir Quarry	Identify problems of tourism in the countryside. Identify conflict between tourists, farmers and ramblers. Identify National Park users from descriptions. Identify ways in which people spoil the countryside. Complete conflict matrix. Respond to comments from users.	Key Geography Interactions	Write a dialogue between two users of National Parks with a conflict of interest, each defending their right to use it as they do. (2x A4)
			Write a play between users of a National Park with arguments and counterarguments, each defending their use of it.	Information sheets on each user.	Research the main threat facing one National Park in England or Wales.

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What are the attractions of the Yorkshire Dales? How successful have management strategies been in protecting it?	<ul style="list-style-type: none"> <li>To state the attractions of Yorkshire Dales National Park.</li> <li>To identify the sources of conflict in the Park</li> <li>To evaluate the management strategies that have been attempted</li> </ul>	Conflict Conservation Diversification Environmental Management Honey Pot Site Quarry	Fill in video question sheet. Then write 100 word summary on main conflict in the Yorkshire Dales National Park. Students list management strategies attempted in the Dales and say how successful each has been.	Video: 'National Parks (Yorkshire Dales)'	For one other National Park in England or Wales do an exercise similar to today's lesson.
As previous lesson but for Lake District.	As previous lesson but for Lake District.		As previous lesson but for Lake District.	Video: 'Too Much Tourism?'	For another National Park, do a similar exercise .
What is acid rain and what causes it?	<ul style="list-style-type: none"> <li>To define acid rain</li> <li>To state the causes of acid rain</li> <li>To rank the causes as to severity.</li> </ul>	Acidity Alkaline Choropleth Map Flow Line map Nitrous Oxides (NO <sub>x</sub> ) Prevailing Winds Sulphur Dioxide (SO <sub>2</sub> )	Match pH readings to everyday items. Construct choropleth map of % of trees defoliated by acid rain. Draw flowchart showing sulphur deposition falling on Sweden. Draw pie-charts showing sources of SO <sub>2</sub> and NO <sub>x</sub> in the UK, ranking causes as to severity.	Video: 'Acid rain the invisible threat' Key Geography Places Outline map of Sweden	Can you suggest solutions to the acid rain problem? (Preparation for next lesson)

## Environmental Issues

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How can the acid rain problem be solved?	<ul style="list-style-type: none"> <li>To list the effects of acid rain</li> <li>To suggest solutions to the problem</li> <li>To evaluate the solutions that have been attempted: which have been, or are to be, successful?</li> </ul>	Anthracite Catalytic Converter Desulphurisation Flue Gas Fuel Efficiency Lignite	List effects of acid rain. Suggest solutions to the acid rain problem. Suggest difficulties associated with each solution.	Worksheet	Find out what global warming is (preparation for next lesson)
What is global warming and what causes it?	<ul style="list-style-type: none"> <li>To define global warming</li> <li>To state its causes</li> <li>To rank the causes as to severity</li> </ul>	Atmosphere Carbon Dioxide Chlorofluorocarbons Global Warming Greenhouse Effect Greenhouse Gases	Annotate diagram of carbon cycle. Construct pie-chart of causes of global warming by greenhouse gas. Construct pie-chart of causes of global warming by industrial sector. Label diagram of how a greenhouse works. True/False statements about the causes of global warming. Ranking causes as to severity.	Video: 'The Greenhouse Effect' Key Geography Interactions	Suggest solutions to the global warming problem. (preparation for next lesson)
How can the global warming problem be solved?	<ul style="list-style-type: none"> <li>To list the effects of global warming</li> <li>To suggest solutions to the problem</li> <li>To evaluate the solutions that have been attempted</li> </ul>		List effects of global warming. Suggest solutions to the global warming problem Suggest difficulties associated with each solution.	Worksheet	What is ozone layer depletion? (preparation for next lesson)

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What is ozone layer depletion and what is causing the problem?	<ul style="list-style-type: none"> <li>To define ozone layer depletion</li> <li>To state its causes</li> <li>To rank the causes as to severity</li> </ul>	Ozone Stratosphere Tropopause Troposphere Ultra-Violet Radiation	Fill in video sheet. Annotate diagram of sun's rays as they approach the atmosphere. Construct pie-chart of causes of ozone layer depletion by continent.	Video: 'Air Pollution: A first film'	Suggest solutions to the ozone layer depletion problem? (preparation for next lesson)
How can the ozone layer problem be solved?	<ul style="list-style-type: none"> <li>To list the effects of ozone layer depletion</li> <li>To suggest solutions to the ozone layer depletion problem</li> <li>To evaluate the solutions that have been attempted</li> </ul>		List effects of ozone layer depletion. Suggest solutions and difficulties associated with each.	Worksheet	What are the different sources of energy available to us? (preparation for next lesson)
Should we use fossil fuels?	<ul style="list-style-type: none"> <li>To state how fossil fuels are exploited and used</li> <li>To explain the advantages and disadvantages of fossil fuels</li> <li>To evaluate whether the advantages outweigh the disadvantages</li> </ul>	Collieries Fossil Fuel Non-renewable	Fill in video sheet. List how coal, oil and gas are exploited. Fill in blanks about their exploitation, use, advantages and disadvantages. In 100 words on A4 paper, say whether the advantages outweigh the disadvantages, and why.	Video: 'Geographical Eye: Disasters Programme 4: Oil Spills' Information sheet Key Geography Connections	What are the common characteristics of the renewable sources of energy? (preparation for next lesson)

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How can we make renewable energies more appealing?	<ul style="list-style-type: none"> <li>To state how renewable energies are exploited and used</li> <li>To explain their advantages and disadvantages.</li> <li>To suggest strategies to make renewable energies more widely used</li> </ul>	Ecology Hemisphere Off-shore Turbine Renewable Reservoir Visual Pollution	List how one of the renewables is exploited and used. Fill in blanks about the exploitation, use, advantages and disadvantages of one of the renewables. In 100 words on A4 paper, say what strategies you would implement to make renewable energy sources more appealing to the public.	Videos: 'Energy and the environment' and 'Alternative energy: fuels of the future'. Information sheet	What is nuclear energy and how is it exploited? (preparation for next lesson)
Should we use nuclear energy?	<ul style="list-style-type: none"> <li>To state how nuclear energy is exploited and used</li> <li>To explain the advantages and disadvantages</li> <li>To put the case for or against nuclear energy.</li> </ul>	Fission Fusion Power density Radioactive Reactor Reprocessing	List how nuclear energy is exploited and used. Fill in blanks about the exploitation, use, advantages and disadvantages of nuclear energy. In 200 words on A4 paper, say whether or not you support the continued use of nuclear energy and why.	Video: 'Nuclear Wasteland' Information sheet	Having studied fossil fuels, renewable energies and nuclear energy, what do you see the future of energy use as being?