



Climate change in the curriculum

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The activities provided in the 'Cool It!' resource pack have been designed in accordance with the National Curriculum, The Primary Framework for Literacy and SEAL; Social & Emotional Aspects of Learning, in order to compliment and enhance the existing schemes of work used in schools. With this in mind, each activity included in this pack links directly to one or more aspects of the curriculum, as well as other government documentation such as SEAL and The Primary Framework for Literacy.

It is important to note that, although 'climate change' itself is not a direct requirement within the current curriculum, under the broader theme of sustainable development, there are areas in which energy and climate change can certainly be investigated.

The following chart seeks to identify how each activity and task can be used as a basis on which to combine learning across the curriculum whilst simultaneously identifying and exploring how and why climate change has become such an integral part of education.

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SUBJECT	QCA SCHEMES OF WORK	ACTIVITY/TASK
<p>Science</p>	<p>Unit 6D - Reversible and irreversible changes</p> <p>Current approach: develops ideas about changes of state or material, e.g. on heating and cooling, dissolving, reacting, and asks children to classify these as reversible or irreversible. Emphasises that burning is an irreversible reaction. Asks them to consider what new products (e.g. gases) might be produced.</p> <p>Suggested SD enhancement: extend ideas to include the fact that many modern materials are complex or irreversible in the sense that they are not easily returned to simple or original materials and are therefore difficult to use again (and potentially harmful to the environment). Introduce concepts of reuse or recycling. Build on idea that burning is an irreversible reaction. Refer to burning of fossil fuels as such a process; since these materials are a finite resource, and cannot be replaced, they can be exhausted. Introduce idea of non-renewable and renewable resources and relate these broadly to ideas about reversibility of processes. Refer to examples of renewable processes such as obtaining energy from wind and waves and of using materials that can be reused.</p> <p>Unit 5- 6H: Enquiry in environmental and technological contexts This unit is designed to extend children's investigative work. It focuses on finding the answer to: an environmental question and a technological question.</p> <p>Both investigations require children to:</p> <ul style="list-style-type: none"> • plan a suitable approach • collect and record evidence in an appropriate manner • explain their results using scientific knowledge and understanding • evaluate the evidence collected and consider its limitations. <p>Unit 4C: Keeping warm Through this unit children build on their ideas about temperature as a measure of how hot or cold objects are and learn about thermal insulators as materials which can help to keep things warm or cool.</p>	<p>Charts 1- 4:</p> <ul style="list-style-type: none"> • What is Climate Change? • How have we contributed? • The future of climate change • What can I do to fix global warming? • 5 day diary <p>In order to encourage your students to become more conscious about the amount of energy they use and, subsequently, waste, each day, they are to keep a '5 day diary', recording each time they use a piece of equipment/appliance or do an activity that uses energy. They may like to note down the time that they started and finished using the energy source.</p> <ul style="list-style-type: none"> • What's in my house? <p>Students are asked to draw a floor plan of their house, or just one room in their house. They should draw in all the things that use energy in that room, or in their house, as well as write these in the chart. Once they have completed the chart, they must add up how many different things they have drawn and listed that use energy. This information is then collated in order to analyse how much energy is used by just those on one table, for example.</p> <ul style="list-style-type: none"> • Draft - excluders <p>By following a series of easy to follow step by step instructions students can spend time creating a simple yet effective method of conserving heat without resorting to utilising excessive energy sources and releasing harmful CO2 emissions.</p>

<p>History</p>	<p>Unit 13: How has life in Britain changed since 1948?</p> <ul style="list-style-type: none"> • Focus on change, similarity and difference, rather than on the reasons for the changes • Focus on change between two decades, e.g. the 1950s and 1990s • Use fewer sources of information to identify changes between the two decades in one topic area <p>Unit 18: What was it like to live here in the past?</p> <p>Students should learn to</p> <ul style="list-style-type: none"> • to synthesise what they have found out about the local area • to put their findings into chronological context • to contribute and cooperate as part of a group • to organise information and communicate it in a variety of ways appropriate to the audience 	<ul style="list-style-type: none"> • 'Then and Now' The best way for students to comprehend how our use of energy dependent appliances has increased dramatically throughout the 20th and 21st Century, is to compare our everyday lives now with those who lived 50-60 years ago. <p>Discuss the findings as a class, reflecting on the similarities and difference between then and now, and analysing how and why the amount of CO2 released into the atmosphere has increased in just this short space of time.</p> <ul style="list-style-type: none"> • Climate through the ages Using the information on the 'climate through the ages' worksheet, students are encouraged to begin to develop an understanding of the changing climate patterns earth has experienced in the past. Students will undergo research in order to discover a number of interesting facts about climate conditions both in this century and many years ago, as well as in England and across the world. • Spot the difference Using information they have gained previously, students are asked to think about Britain's climate in the past, today, and in the future.
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<p>Geography</p>	<p>Unit 7: Weather around the world This unit helps children to develop ideas about weather conditions around the world. The focus is the relationship between weather and tourism, but it could be extended to include other forms of human activity, e.g. occupations, settlement, transport, or amended to make another human activity the main focus.</p> <p>Unit 8: Improving the environment In this unit children use the school buildings, grounds and immediate locality to investigate environmental issues and improvements. It encourages children to become actively involved in improving their local environment.</p>	<ul style="list-style-type: none"> • Climate around the world Students are required to estimate what they think the climate region of the countries listed should be. They should write next to each country whether they think it is: Polar & Tundra, Cool Temperate, Warm Temperate, Tropical, Desert or Mountain. • Climate through the ages Using the information on the 'climate through the ages' worksheet, students are encouraged to begin to develop an understanding of the changing climate patterns earth has experienced in the past. Students will undergo research in order to discover a number of interesting facts about climate conditions in this century and in centuries past, in the UK and across the world. • Poster Students will create a poster that they can display around the school which advises people about what they can do to make a difference to climate change.
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<p>Art & Design</p>	<p>Unit 4C: Journeys</p> <p>In this unit children explore how signs, symbols and metaphors can be used to communicate ideas and meanings about a journey. They produce a mixed-media work, combining drawing, painting, collage and print-making techniques. They learn about artists, craftspeople and designers who communicate their ideas through signs and symbols.</p> <p>Unit 1B: Investigating materials</p> <p>In this unit children investigate the qualities of a variety of natural and made - materials. They learn skills for weaving and gain sensory experience of materials and an understanding of colour and texture. They learn about how textiles are used in their own and others' lives.</p>	<ul style="list-style-type: none"> • Creating Symbols Students complete the flow chart diagram for 'What is climate change' again, but this time thinking about representing exactly the same information using pictures and symbols, rather than words. • Poster Students are to create a poster that they can display around the school which advises people about what they can do to make a difference to climate change. • Draft excluders By following a series of easy to follow step by step instructions students can spend time creating a simple yet effective method of conserving heat without relying on excessive energy sources which result in harmful CO2 emissions.
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<p>Citizenship/ PSHE</p>	<p>Unit 11: In the media - what's the news? Through a range of activities, children have opportunities to develop skills of enquiry and communication as they discuss and analyse a variety of media. They discuss issues of topical and personal interest/ and explore a range of different values and attitudes. They draw on their learning about the media and use their decision-making skills when they take part in making a news sheet, newspaper or news programme or website that is made available to the school and wider community.</p> <p>Unit 02: Choices</p> <p>Students develop decision-making skills, explore the influences on the choices they make, and practise resisting peer influence. They consider rights and responsibilities when making decisions. The unit highlights the use of knowledge and skills to make informed and responsible personal choices and to consider the effect of those choices on other people and the environment.</p>	<ul style="list-style-type: none"> • News Report Using the information shown in 'Chart 1: What is Climate Change?', as well as any additional research, students are required to create a professional news report team. Their task is to educate others about what exactly climate change is. • Quiz In order to fully appreciate exactly what impact a changing climate will have on our world in generations to come, students should complete a quiz answering each question about the future of climate change with a TRUE or FALSE response. • Poster Students are to create a poster that they can display around the school which advises people about what they can do to make a difference to climate change. • Have your Say In small groups, and as a class, students are asked to discuss some ideas about ways they could make changes in their school to help address climate change.
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ICT	<p>Unit 6C - Control and monitoring - what happens when...?</p> <p>Current approach: looks at cause and effect devices such as heating and lighting controls.</p> <p>Suggested SD enhancement: relate control mechanisms specifically to ways in which environmental monitoring systems can be used to conserve energy, e.g. by preventing overheating of buildings. Introduce concept of environmentally controlled buildings such as those being developed by Greater London Authority.</p>	<ul style="list-style-type: none"> • Have your Say In small groups and as a class, students are asked to discuss some ideas about ways they could make changes in their school to help address climate change. • Draft excluders By following a series of easy to follow step by step instructions students can spend time creating a simple yet effective method of conserving heat without relying on excessive energy sources which result in harmful CO2 emissions.
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