

Science topics	Section layout	Accompanying worksheets	Lesson considerations
<ul style="list-style-type: none"> ● Payback time. ● Domestic energy saving modifications. ● Lifestyle modifications to save energy. ● Family energy diary. 	<p>This section includes a virtual tour of a typical family home with the Green family telling us about their lives. The first page introduces us to the family; the second looks at the modifications the family have made to their home to save energy and the third page looks at some lifestyle changes the family has made to save energy and money. There is brief explanation of why certain home modifications and behaviour changes save energy. A fourth page contains a quiz for students to test what they have learned and to suggest how the Green family can make further energy changes.</p>	<p>'Fortunes' board game This board game aims to show students that making energy-saving modifications costs money initially, but over time this money is paid back and money is saved. Teachers should familiarise themselves with the rules before explaining them clearly to students. Students should play the game, ideally, in groups of 4 and should make 4 journeys round the board. This should take 20-25 minutes. Give each student a tabulated record sheet (provided) to record their purchases and rewards. As the exercise is quite mathematical, less able students will need to be supported to complete the game e.g. by having mixed-ability groups. Other learning points from the game are that large energy savings can be made by considering travel options and making lifestyle changes such as growing vegetables at home.</p>	<p>This section should be studied once students are familiar with the concept of power ratings of appliances and energy use in the home. To get the maximum benefit from the Fortunes board game students should be familiar with the concept of a carbon footprint and measuring fossil fuel/energy use in terms of carbon dioxide emissions. Ideally students should be left to explore this section on their own in a computer based session before playing the board game. However, the section could be presented as a teacher-led activity using an interactive whiteboard.</p>

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		<p>Pay-back time research In order to complete this worksheet, pupils will need to have access to the internet and be familiar with how to search for information. Students may even need to approach companies for quotes. It is meant for able students and would take some time to complete so could be set as a number of homeworks or as project work for a holiday period.</p> <p>Save Energy, Save Money This worksheet sets out a fairly detailed and extensive energy diary for students to keep. The exercise is set up for students to log their family's energy use for a week, but you may prefer to set the task for less time (e.g. 2 days or a weekend) as recording information in the energy log can become quite onerous. Students should complete the task with 5 ways to save energy.</p>	