

Your climate your life -Teachers notes

Green Designs

Energy efficiency

Learning objectives:

- To understand energy use in the home
- To develop an awareness of the ways in which energy can be saved in houses
- To explore energy efficiency features in the development of new buildings

	Activity	Learning	Resources
Starter	What a waste Wasting energy	The pie chart can be used to discuss where most energy is used in the home. The graphic of a house can be used to ask students the ways they use energy in the home. The follow-up activity requires students to develop questions to quiz each other or family members on energy use.	Pie-chart Image of house

<p>Main Activity</p>	<p>Sustainable solutions</p> <p>Design a house</p>	<p>The first activity can be used on an interactive whiteboard where students think about the how buildings are designed for the climate. These ‘traditional’ houses from around the world have been built using local materials and the design reflects the local climate. The descriptions of the houses are:</p> <ol style="list-style-type: none"> 1. Inuit house in Kulusuk, Greenland made from wood. Traditional Inuit winter houses often made with whale bone frames 2. Stone cottage with green roof in Connemara, Ireland 3. Traditional house in the Tyrol, Austria mostly from timber 4. Pueblo house in New Mexico made from sand and clay 5. Villa in Ibiza, Spain made from concrete and brick 6. Traditional house in Mli, Mali made from mud <p>This activity leads on to designing a house which has to adapt to the changing climate of hotter summers, wetter winters and greater incidence of extreme weather events. The focus is on three key tasks – energy efficiency in the design, sustainable building materials and sources of energy for the building. Students may need to refer to the section on Tomorrow’s Energy for further information and the download on Adaptations in Architecture before they begin their design.</p>	<p>Interactive activity</p> <p>Download design features</p>
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<p>Plenary</p>	<p>Sell it</p> <p>Key features in a leaflet</p>	<p>The students need to persuade builders to develop their house so they need to plan a leaflet to try and pitch it to a company. Who wins the pitch?</p> <p>Find out more on how architects are building new green homes and adapting office buildings.</p>	<p>Download Adaptations to Architecture and the CIS Tower in Manchester.</p>
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