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| **What will we be learning?**Electric car with solid fill**Energy Costs** | **Why this? Why now?**Previous Learning Key stage 2 ScienceSpeed, Gravity, Current, Voltage and Resistance, Energy transfers and Energy costsFuture Learning Year 8 Course – Light, sound, contact forces, Pressure, Magnetism, Wave effects, electromagnetismEnquiry ProcessesIdentify variables, Collect data, Present data, Analyse Patterns, Draw conclusions, Justify opinions and conclusions | **Key Words:**EfficiencyDispersionConvectionConductionInsulatorsConductorsEnergyKilowattPowerSpecific heat capacityRenewableNon-renewableDependencyDemand |
| **What will we learn?**Renewable and non-renewable methods of obtaining energyThe advantages and disadvantages of renewable and non-renewable energy sourceHow to use data to evaluate the social, economic and environmental consequences of using a resource to generate electricityThe actions a government or communities could take in response to rising energy demandHow to define the term kWh and understand that this represents one unit of electricityHow to calculate the cost of home energy usage using the formula: cost = power × timeHow to compare the energy usage and cost of running different home devicesHow to use data to suggest ways to reduce energy costsHow to safely conduct an experiment to show energy transfer from food to a beaker of waterPlot a bar graph showing the energy content of different foodsHow to use the specific heat capacity equation to calculate energy transfer from burning food to waterTo evaluate an experiment to show the energy values of different foods**Misconceptions in this topic**Energy can be lost or gainedThings use up energyAn object at rest has no energy |
| **What opportunities are there for wider study?**Careers - Engineer, Environmental ScientistSTE(A)M – For details of courses and opportunities look at:<https://highcliffe.sharepoint.com/sites/LearnSTEM> |
| **How will I be assessed?****End of topic assessment** |