Year: 7	Topic: Energy

Knowledge and Understanding to be developed:

Pupils will develop their knowledge and understanding by investigating the science involved in a range of contemporary devices/machines and evaluate different energy resources and possibilities.

Homework:
Work through homework booklet

lessons	Practicals/skills
1 Learning Objectives and Outcomes: Energy in food	
Consider the energy usage by the body and why we need to store energy from food Name the units for measuring energy Describe why different people different amounts of food Explain the limitations in the experimental procedure and how this compares to calculating calories in industry.	Levelled task: Specified practical: Energy in food
Present answers to a given number of decimal places 7N15a Estimate and visualise size when measuring and use the correct units ks3.7 Draw conclusion from data and recognise that some may be misleading KS3.19 Construct a wide range of graphs and diagrams to represent data and reflect the importance of scale 7D4a Record temperatures in appropriate scales 7.M8 Interpret mathematical information, draw inferences from graphs, diagrams and data, including discussions and limitations of data KSS.21 Interpret diagrams and graphs 7D3 Measure to complete a task ks3.5 Read and interpret scales 7M1	Collate summarise relevant information response and analysis 7RA3 distiguish between facts, opinions, theories and evidence response and analysis 7RA4 Plan writing making choices about the best way to present content. meaning purposes readers 7WM3 adapt structures in writing for different contexts Structure and organisation 7WS1 Select and organise ideas and information to give a clear and full account Structure and organisation 7WS2 Use varied and appropriate vocabulary accurately including subject specific words and phrases Language 7WL2
2 Learning Objectives and Outcomes: Energy stores Name some different types of energies Describe how energy can be stored into different forms Discuss and consider the different amounts of energy stored.	Class Demo: Custard bomb
3 Learning Objectives and Outcomes: Energy Transfers Give examples of energy transfers Construct simple Sankey diagrams showing energy transfers and energy lost Calculate the energy efficiency of different appliances	Class Practical: Energy Circus
4 Learning Objectives and Outcomes: Fuels	

To name different energy sources Decide whether the energy sources are renewable or non renewable Escribe how electricity can be generated from different sources	
5/6 Learning Objectives and Outcomes: Renewable energy sources and Energy from the sun Name non renewable sources Describe the advantages and disadvantages of different non renewable sources To measure the voltage in solar cells when the light source moves	Class practical Solar power survey
7 Learning Objectives and Outcomes: Reducing energy consumption Name ways we can use our energy needs Evaluate methods of reducing energy consumption	
8 Learning Objectives and Outcomes: Energy Island Describe the renewable energy resources available on Joule Island Explain how you would provide the energy to complete tasks	