Ravens Wood School

KS3 Curriculum Plan

Subject: Year 8 Energy Costs

KS2 Prior Learning			
None			
Overarching Topic: Energy Costs			
Why is this topic being studied at this time? How does it fit into the wider subject curriculum?	• All students at some point in their lives will face an electricity bill. Being able to identify which devices use more electricity and how Energy bills are calculated is an essential life skill. • This comes after the energy resources topic and explains how we pay for electricity.		
	Essential	**Core**	**Ambitious**
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	Can I explain why we pay for electricity? Can I identify why some devices use more electricity than others?	Can I explain how we pay for our domestic electricity usage based on the amount of energy transferred? Can I calculate the cost of home energy usage, using the formula: cost = power (kW) x time (hours) x price (per kWh)? Can I compare the energy usage and cost of running different home devices?	Energy is important to our economy and our diet. Suggest ways we can improve the supply and use of any energy form you are interested in.
The Key Skills/ Techniques	**The sophistication and application of skills will become more advanced as students' progress through the essential, core and ambitious knowledge**		
	Skill/Technique	**How will this skill be developed?**	
	1. Graphing & Drawing	Draw graphs with suitable scales, axes and units. Correct line of best fit. Appreciation of anomalies and processed data. Scientific drawing of cells, concepts and scientific equipment.	
	2. Variables	Identify independent, dependent and control variables and devise experiments to include these to ensure valid results. Appreciation of uncertainty.	
	3. Data Analysis	Describe, explain and predict trends. Graph and table data interpretation. Identify links and patters within and between topics. Statistical analysis of data to include mode/median/mean/range determination. Drawing justified conclusions from presented data.	
	4. Application	Apply known and taught theory in unfamiliar contexts. Making links to taught theory and extracting key ideas. Communicating using correct scientific terminology.	
	5. Working Scientifically	Identify hazards and planning to limit risk. Describe how to improve accuracy/precision/repeatability/reproducibility/validity. Evaluate reliability of methods and investigations, taking in to account data analysis.	