Energy

Threshold Concepts
Classification and Identifying
Observing and Pattern Finding
Describing and Explaining
Analyse and Evaluate

Summary: In this physics unit we will be exploring energy and its transfer to other forms. The forms of energy we will be studying are potential, stored, electrical, light, kinetic and sound energy. For some students we will be building on prior knowledge for light and electrical energy. We will also be building on the previous unit of "forces" by introducing "gravitational energy" and revisiting various forces.

Knowledge Areas

Questioning & Predicting	Grouping & Classifying	Identifying	Observing	Recording	Describing	Explaining	Finding Patterns	Analyse	Evaluate	Apply

Questioning & Predicting

This topic provides ample opportunity for the students to develop their questioning and predicting skills. There are many demonstrations where class discussions will lead to informed predictions and enhance their scientific curiosity.

Describing

To describe the transfer of energy from one form to another.

Describing observed phenomena from evidence collected in experiments.

Analyse

Analysing graphical data and describing correlations. Using experimental data to make conclusions.

Apply

Use the knowledge that energy cannot be lost, only changed to propose what forms it had transferred to, e.g. combustion converts stored energy into light, heat and sound energy.

Recording

The children's investigations require collecting and presenting quantitative data in various forms, such as tables, bar charts and scatter graphs. Excel may be used to produce various graph types for comparison.

Finding Patterns

Using experimental data to find patterns and trends in the way sound energy behaves. For example exploring the patterns in soundwaves relating to amplitude and pitch.