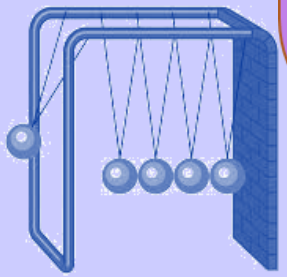
Eskdale

Subject Information

# Year 10 Physics



**Overview**

Students will build of their knowledge gained in year 7-9 to develop and deepen their understanding of Physics concepts. These include energy resources, electricity and its use in circuits, nuclear power and the life cycle of stars.

**Term 1**

Students will start by revisiting the concepts covered in year 9 about energy. They will develop their understanding and apply it to new situations involving the calculation or energy involved in heating substances and state change. They will use their knowledge to explain new situations such as why can the cheese on a pizza burn your mouth yet the crust doesn't. They will then look at electricity and understand the fundamental concepts of current, resistance and potential difference and use these to explain the behaviour of components in a circuit. They will look at the generation of electricity from renewable and non-renewable sources.

**Term 2.**

Students will continue to build on the knowledge they have gained so far about particles and the atom to explain the behaviour of solids, liquids and gases. They will explain why things cool when evaporation happens. They will apply their knowledge of atoms to explain the formation of radioactive particles. They will learn about radioactivity, explain the uses of radioactive particles and the advantages and disadvantages of using this as an energy source. Students will learn about half life and apply their knowledge to real life situations such as the detection of problems in the body and the long term storage of radioactive waste.

**Term 3**

Students will revisit key stage 3 knowledge and apply what they know about waves to compare the differences between longitudinal and transverse waves. They will study the processes of reflection and refraction and apply their knowledge to everyday uses such as SONAR and the production of seismic waves. From looking at physics on the ground, students will move on to looking at space. Students will develop their knowledge of space from key stage 2 and 3 and learn about the life cycle of stars and everyday uses of satellites.