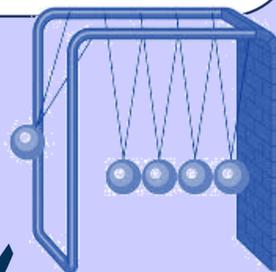


Overview

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

Year 10

Physics



Term 3

Students will revise for the paper 1 mock exam. They will then study waves, looking at longitudinal and transverse waves and their differences. They will study the processes of reflection and refraction. They will study the use of SONAR, and look at the production of seismic waves. Students will gain a deeper understanding of the Greenhouse effect and global warming. Finally, we will study space. From the organisation of the universe to life cycle of stars and an introduction to neutron stars and black holes.

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 of 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 apply their knowledge of radioactivity explaining the uses of the radioactive particles. They will apply their knowledge of half life to real life situations such as the detection of problems in the body and the long term storage of radioactive waste.

