Nobel

Year: 8

Subject: Physics

Vision **The purpose of KS3 is to embed the building blocks of scientific knowledge and enquiry, and to inspire a sense of wonder and awe at the world around us.**

Year 8 topics in physics build on what they were taught in year 7. For example thermal energy and work builds on the energy topic in year 7, and Pressure and moments leads on from the forces topic in year 7. Th curriculum introduces waves and more specifically light and sound waves focusing on how we see and hear, how waves travel and how they interact with other objects. Finally a new topic of electricity and fields is taught.

As well the assessments detailed below there will be 2 cumulative tests which will include Biology, Chemistry and Physics topics and an end of year exam.

	Foci	Assessment	Knowledge Organiser
Unit 1	**Thermal energy & work** Students study the laws of thermodynamics which are essential to our understanding of energy in the universe. The relevant ones are – energy cannot be created or destroyed, heat energy moves from hotter to colder places and there is always some wasted energy. This first exposure allows students to understand more complex concepts like black body radiation and global warming by infrared radiation at KS4.	Formative assessments throughout the topic including multiple choice questions, extended writing, and practical work End of topic Test	**Thermal Energy & Work**
Unit 2	**Waves** This topic encompasses waves of all types focussing on sound and light. It is important that students have an understanding of how we hear and see and what can damage hearing. The topic comes up again at KS4 (and KS5) and so students need to know the fundamentals about waves in order to be successful in higher year groups.	Formative assessments throughout the topic including multiple choice questions, extended writing, and practical work End of topic Test	**Waves**
Unit 3	**Pressure & moments** This topic encompasses pressure of all types. Students are familiar with the word but not what causes pressure in the "physics" sense of the word. The topic comes up again at KS4 (and KS5) and so students need to know the fundamentals about pressure, particularly in gases, in order to be successful in higher year groups.	Formative assessments throughout the topic including multiple choice questions, extended writing, and practical work End of topic Test .	**Pressure & moments**
Unit4	**Electricity & fields** This topic is one of the least well understood topic in Physics and it comes into everyday life. It is also a huge part of the KS4 curriculum so making sure that students have a good basic knowledge of electricity is very important.	Formative assessments throughout the topic including multiple choice questions, extended writing, and practical work End of topic Test	**Electricity & fields**