



Year 10 Physics Curriculum Overview

- ✓ Each lesson will start with a series of questions linked to both the previous lesson and topics studied previously.
- ✓ Formative assessment of skills linked to practical work will enable students to demonstrate their acquisition of new skills.
- ✓ Students are encouraged to consolidate learning at least once a week and seek tutor help if unsure on any topics.
- ✓ Within each unit, time will be allocated for consolidation and recall before assessment, this includes for mock exams.
- ✓ The following questions will be explored within the units
- ✓ **Content in blue is only taught to the A pathway (students on the triple science route)**

| Half Term 1 | |
|-------------|---|
| Date | Topic: Particle model of matter |
| WC 29/08 | Introduction to science (expectations, standards, health and safety, introduction of key skills and assessing prior knowledge). |
| WC 05/09 | How are particles arranged? How do we calculate density? |
| WC 12/09 | How do we measure the density of a regular shapes, irregular shapes and liquids? Required practical: Density. |
| WC 19/09 | What is internal energy? |
| WC 26/09 | What is specific latent heat? |
| WC 03/10 | How do particles behave in a gas? |
| WC 10/10 | What happens to pressure when volume is changed? How does temperature affect the pressure in a gas? |
| Half Term 2 | |
| Date | Topic: Electricity |
| WC 31/10 | How do we draw electrical components? What is current? |
| WC 07/11 | What's the relationship between current, resistance and potential resistance? |
| WC 14/11 | How does the length of a wire affect resistance? |
| WC 21/11 | How does resistance change in series and parallel circuits? Required practical: Series and parallel resistors |
| WC 28/11 | How does resistance change with different components? Required practical: I-V characteristics |
| WC 05/12 | What's the difference between series and parallel circuits? |
| WC 12/12 | How is electricity supplied in our homes? How do I wire a plug? |
| Half Term 3 | |
| Date | Topic: Electricity & Forces |
| WC 02/01 | How do we calculate the power of our electrical devices? |
| WC 09/01 | How is energy transferred in our domestic appliances? |
| WC 16/01 | How does electrical power get to our homes? |
| WC 23/01 | How do static charges build-up? What are electric fields? |
| WC 30/01 | What can I remember from year 7? What is Newton's 3rd Law of motion? |
| WC 06/02 | What is a resultant force? How do we calculate work done? |
| Half Term 4 | |
| Date | Topic: Forces |
| WC 20/02 | What is the relationship between force and extension? Required practical: Force and extension |
| WC 27/02 | How can I lift an elephant using the principle of moments? How do I calculate pressure? |
| WC 06/03 | What is atmospheric pressure? How are displacement and distance different? |
| WC 13/03 | What's the difference between speed and velocity? How do we represent speed, distance and time? |
| WC 20/03 | What happens when objects speed up/slow down? What is terminal velocity? |
| WC 27/03 | What is Newton's 1st Law of motion? What is Newton's 2nd Law of motion? |
| Half Term 5 | |
| Date | Topic: Forces |
| WC 17/04 | How do force and mass affect acceleration? Required Practical: Investigating force and acceleration |
| WC 24/04 | How quickly can a vehicle stop? How fast can you react? |
| WC 01/05 | Which factors affect braking distance? |
| WC 08/05 | How does energy transfer during braking? |
| WC 15/05 | What is momentum and how do we calculate it? |
| WC 22/05 | How does the change of momentum affect the force on an object? |
| Half Term 6 | |
| Date | Topic: Waves |
| WC 05/06 | What types of waves are there? |
| WC 12/06 | How do we represent waves? |
| WC 19/06 | How suitable is apparatus to measure the frequency, wavelength and speed of waves? Required practical: Waves |
| WC 26/06 | What happens when waves hit a surface? Required practical: Reflection |
| WC 03/07 | How do we use waves? |
| WC 10/07 | What is the electromagnetic spectrum? |
| WC 17/07 | |