

Year 11 Physics Curriculum - Term 2

Welcome to the Year 11 Physics curriculum overview. In Term 2, Combined Science students will focus on **Unit 7: Electromagnetism**, while Triple Science students will study both **Unit 8: Space Physics** and **Unit 7: Electromagnetism**. This term will also involve revision to prepare for the upcoming Physics GCSE exams.

Topic Overviews

Students will explore **Unit 7: Electromagnetism**, covering:

1. **Magnetic Fields:** Understanding the magnetic fields produced by permanent magnets and current-carrying conductors. Students will learn how to use field lines to represent the strength and direction of magnetic fields.
2. **Electromagnets:** Students will study how electromagnets work and how their strength can be affected by factors such as the number of coils, the current, and the material of the core.
3. **Electromagnetic Induction:** The principle of electromagnetic induction will be introduced, including how moving a magnet through a coil can induce an electric current and how this is used in generators.
4. **Applications of Electromagnetism:** Students will investigate how electromagnets are used in everyday applications, such as electric motors, transformers, and MRI machines.

Triple Science students will also study **Unit 8: Space Physics**, which includes:

1. **The Solar System:** Students will explore the structure and characteristics of our solar system, including the Sun, planets, moons, and other objects such as asteroids and comets.
2. **The Life Cycle of Stars:** The processes that take place in stars, from their formation in nebulae to their eventual death as white dwarfs, neutron stars, or black holes, will be studied in detail.
3. **Orbital Motion:** Students will learn about the orbits of planets and satellites, how gravitational forces work to keep objects in orbit, and the effects of changing distance on gravitational force.
4. **The Expanding Universe:** The evidence for the expanding universe, including redshift and the Big Bang theory, will be examined.

This term's focus is on strengthening understanding of **Electromagnetism** for both Combined and Triple Science students, and for Triple Science, exploring the fascinating world of **Space Physics**. We will also ensure students are fully prepared for their upcoming Physics GCSE exams through intensive revision and exam practice.