

Physics - YEAR 12 Physics - Curriculum Plan – 2025-26

		Term 1							Term 2								Term 3						Term 4						Term 5						Term 6						
		AUTUMN 1							AUTUMN 2								SPRING 1						SPRING 2						SUMMER 1						SUMMER 2						
		1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	7
7	Unit description	<p>Foundations of physics Introduces the important ideas and conventions that permeate the fabric of physics</p> <p>Motion You will learn how to mathematically model the motion of objects and understand how forces affect them</p> <p>Charge and current Introduces the fundamental ideas of charge and current</p> <p>Forces in action Develops ideas about the effects of forces on objects</p>							<p>Energy, power, and resistance Develops the use of electrical symbols, along with ideas around electromotive force, potential difference and resistivity</p> <p>Work, energy, and power Explores the link between work done, power, energy and the conservation of energy</p> <p>Electric current material Brings together and explores the ideas of electrical circuits and the use of power dividers</p>								<p>Waves 1/2 Explores waves and their properties, applying knowledge to explain earthquakes and ideas around musical instruments</p> <p>Laws of motion and momentum Combines ideas learnt previously, focusing on Newton's laws and the international space station</p>						<p>Quantum physics Introduces truly amazing concepts on the behaviour of waves and particles, with a focus on electrons</p> <p>Laws of motion and momentum Continues and consolidates on the ideas learnt previously in Spring 1</p>						<p>Subject specific catch up Review and catch up on any subject content</p> <p>Practical skills Review of key practical skills for the practical endorsement</p> <p>PAG presentation Consolidate and review year 12 PAG – catch up on missed practicals</p> <p>Year 13 transition content Introduction to the ideas of the Newtonian world, astrophysics, particles and medical physics</p>						<p>Year 13 transition content Introduction to the ideas of the Newtonian world, astrophysics, particles and medical physics</p>						
	Assessment	End of Chapter tests/Kerboodle Folder check PAG 1.1, 1.2							End of Chapter tests/Kerboodle Assessment week Folder check PAG 3.1, 4.1								End of Chapter tests/Kerboodle Folder check PAG 5.1, 2.1						End of Chapter tests/Kerboodle Folder check						End of Chapter tests/Kerboodle Mock week Folder check												

Assessment types .

Internal tests questions

Practical assessments (PAG)

Whole class Folder check

Formal assessment

Physics - YEAR 13 Curriculum Plan – 2025-26

		Term 1							Term 2								Term 3						Term 4						Term 5						Term 6												
		AUTUMN 1							AUTUMN 2								SPRING 1						SPRING 2						SUMMER 1						SUMMER 2												
		1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	7
7	Unit description	<p>Circular motion Builds on the mathematics of motion in circular paths for objects such as planets</p> <p>Thermal physics Introduces ideas around temperature, matter, specific heat capacity and specific latent heat</p> <p>Gravitational fields Develops ideas in circular motion, relating them to planetary motion and gravitational potential energy</p>							<p>Stars Covers the life cycle of stars, looking in detail at the Sun, black holes and neutron stars</p> <p>Cosmology Explores ideas of the expansion of the Universe describes by Hubble's law , the big bang and dark matter/energy</p> <p>Radioactivity Explores the impact of unstable nuclei, the randomness of radioactivity and predictive mathematical models</p>								<p>Capacitance Covers important concepts on the properties of capacitors and how they are used in electrical circuits</p> <p>Electric fields Develops the important concepts of Coulombs law, uniform electrical fields, electric potential and energy</p> <p>Nuclear physics Explores the meaning and consequences of Einsteins famous equation, nuclear fission and nuclear reactors</p>						<p>Magnetic fields Explores magnetic fields, the motion of charged particles in magnetic fields, Lenz's law and Faraday's law</p> <p>Medical imaging Introduces the variety of techniques used in modern diagnostic testing, including X-rays, CAT scans , PET scans and ultrasound scans</p>						<p>Specific courses catch up</p> <p>Practical skills focus</p> <p>Revision and past papers</p>						Finished course.												
	Assessment	<p>End of Chapter tests/Kerboodle</p> <p>Folder check</p> <p>PAG 8.1, 10.1 and 11.2</p>							<p>End of Chapter tests/Kerboodle</p> <p>Assessment week</p> <p>Folder check</p> <p>PAG 7.1, 7.2</p>								<p>End of Chapter tests/Kerboodle</p> <p>Folder check</p> <p>Mock week</p> <p>PAG 9.1</p>						<p>End of Chapter tests/Kerboodle</p> <p>Folder check</p>						<p>Folder check</p>																		

Assessment types .

Internal tests questions

Practical assessments (PAG)

Whole class Folder check

Formal assessment

>Something More? KS5 Science

Curriculums at BSS are designed to nurture not only intellectual and physical development but also the spiritual growth of students. This will be through:

Encouraging students to reflect on experiences, beliefs and purpose and to contemplate big Questions of Who am I? Why am I here? What is my purpose?

Highlighting extraordinary people, events, and discoveries that inspire awe or investigating how a sense of awe has led to breakthroughs and creativity.

Using art, music, literature, and nature to inspire awe, wonder, and spiritual insight.

Encouraging creative expression to connect with the inner self and the transcendent.

Fostering a sense of belonging and interconnectedness with others, nature, and the universe.

Encouraging self-awareness, emotional intelligence, and moral reasoning.

Promoting open-ended investigations rather than just seeking right answers.

Using hands-on activities, field trips and experiments to immerse students in learning and evoke wonder.

How does our curriculum do >Something More?

- 1) Highlighting extraordinary people, events, and discoveries that inspire awe or investigating how a sense of awe has led to breakthroughs/creativity.
Celebrating individuals within all sciences, through the development of atomic, structure, evolution, DNA/genetics, electricity. Electromagnetism and climate change
- 2) Promoting open-ended discussions rather than just seeking right answers.
Ethical discussions around assisted reproduction, climate change and genetics. Encourages our students to consider other sides and opinions and how science can be used ethically to allow informed discussions to be made
- 3) Using hands-on activities, field trips and experiments to immerse students in learning and evoke wonder.
Trips to Lectures on Science in our society, exploring how science is relevant and important to our understanding of the world and how societies are interdependent and have an equal role and impact
- 4) Encouraging self-awareness, emotional intelligence, and moral reasoning.
Evaluating and debating the use of scientific developments, such as IVF, from many different points of view. Students are encouraged to seek the true through a range of medias, view different sides and consider our own bias