

Science Year 7 Curriculum Overview

What is the Year 7 Science curriculum aiming to achieve?

What do we want our Year 7 Scientists to be like?	How are we building on prior learning?	How can parents/carers support their child's learning?
<ul style="list-style-type: none"> • Be excited and enthusiastic about the scientific world around us • Be safe and competent practical scientists • Be able to make links between observations and scientific theory • Be good verbal and written communicators using key terms • Have furthered their understanding of key concepts in all three Sciences disciplines 	<ul style="list-style-type: none"> • We will make links to and build on the Biology, Chemistry and Physics topics from KS2 • We will build on our working scientifically skills in the areas of analysis, communication, enquiry and problem solving 	<ul style="list-style-type: none"> • Talk to the pupils about what they are learning about in lesson • Be curious about the world around you and discuss with your child • Support your child with homework tasks • Help your child consolidate their school learning e.g. using BBC Bitesize or watching scientific documentaries

How are we organising the Year 7 Science curriculum?

	Autumn Term	Spring Term	Summer Term
Topics	Biology: Cells and Movement Chemistry: Particle model and Separating Mixtures Physics: Energy Transfers and Energy Costs	Biology: Variation and Human Reproduction Chemistry: Metals and Non-Metals Physics: Voltage, Resistance and Current	Biology: Interdependence and Plant Reproduction Chemistry: Earth Structure and Universe Physics: Light and Sound
Threshold Concepts	Understand how movement is achieved by the muscles and skeleton. The cell is the basic unit of all living organisms. Materials are either solids, liquids or gases. Mixtures can be separated. Energy can be stored and transferred. Energy used is charged for.	Members of the same species show variety. Animals can reproduce sexually. Three quarters of the elements are metals: some are reactive, some are not. Metals and non-metals have different properties. Electrons can flow around wires in a circuit.	Organisms within an ecosystem depend on one another. The flower is the organ of reproduction in the plant. The Earth is made from rocks. Earth is part of the solar system, within which planets orbit the Sun. The Earth is made from rocks. Earth is part of the solar system, within which planets orbit the Sun. Light and Sound travel as waves.
Skills	Analyse patterns Communicate ideas Plan variables Collect data Interrogate sources	Draw conclusions Construct explanations Devise questions and test a hypothesis Estimate risks and examine consequences	Discuss limitations Critique claims and justify opinions Test hypothesis Review theories
Enrichment within the curriculum	British Science Week lesson activities and competitions Year 7 Science Trip or guest lectures		
Cross curricular links	<ul style="list-style-type: none"> • Movement: using muscles to achieve movement (PE) • Human reproduction (Child Development) • Mathematical calculations in Physics (Mathematics) • Working scientifically literacy skills (English) • The Earth (humanities) • Ecosystems (Humanities) 		
Extra-curricular opportunities	Pershore Science Club will run after school providing opportunities for students to make real life links between science in lessons and the outside world		

What are the intended outcomes of the Year 7 Science curriculum?

	Autumn Assessment	Spring Assessment	Summer Assessment

Opportunities to show progress (Assessments)	Biology: Cells and Movement test Chemistry: Particle model and Separating Mixtures test Physics: Energy Transfers and Energy Costs test	Biology: Variation and Human Reproduction test Chemistry: Metals and Non-Metals, Physics: Voltage, Resistance and Current test	Biology: Interdependence and Plant Reproduction test Chemistry: Earth Structure and Universe test Physics: Light and Sound test
Impact on personal development (SMSC)	Spiritual understanding – science is the study of nature and the curriculum aims to bring about the awe and wonder of the natural world. Social – working together in groups to investigate science practically and understand how science affects society.		
Preparation for the next stage of education	The topics studied in Year 7 are the foundation for GCSE and A Level Biology, Chemistry, Physics and Combined Sciences which prepare students to be able to follow careers in medicine, engineering, health care, sports science, computer science and the world of finance to name but a few of the pathways available to scientists		