



Year 7 Science Curriculum

	Autumn Term	Spring Term	Summer Term
Topic	Biology: Organisms, Movement and Cells Chemistry: Particle model & Separating mixtures Physics: Energy Costs and Transfers	Biology: Ecosystems, Interdependence and plant reproduction Chemistry: Metals and Non-metals, Acids and Alkalis Physics: Sound and Light	Biology: Genes, Variation and human reproduction Chemistry: Earth Structure & universe Physics: Forces, Speed and Gravity
Knowledge Covered	Students will be learning: <ul style="list-style-type: none"> • The human skeleton • The muscular system • Cell structure, specialised cells and multicellular organisms • Properties of solids, liquids and gases • Pure and impure substances • Separating mixtures • Methods of producing electricity • Calculating the cost of electricity • Energy transfers, the law of conservation of energy and dissipated energy 	Students will be learning: <ul style="list-style-type: none"> • Food webs • Populations & Competition • Plant adaptations • Reactions of metals and non-metals with Oxygen and acids • Reactivity series of metals • How acids and alkalis react together • The nature of sound waves • The ray model of light • Reflection and Refraction • Splitting light into the spectrum using prisms 	Students will be learning: <ul style="list-style-type: none"> • Variation; inherited and environmental • The menstrual cycle • The developing foetus • The rock cycle • The solar system • Day, night and the seasons • Scale within the universe • Forces and resultant forces • Mass and weight • Gravitational force
Online Resources	Oak Academy online resources: https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science BBC bitesize: https://www.bbc.co.uk/bitesize/subjects/zng4d2p	Oak Academy online resources: https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science BBC bitesize: https://www.bbc.co.uk/bitesize/subjects/zng4d2p	Oak Academy online resources: https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science BBC bitesize: https://www.bbc.co.uk/bitesize/subjects/zng4d2p



Year 8 Science Curriculum

	Autumn Term	Spring Term	Summer Term
Topic	Biology: Breathing and digestion Chemistry: Climate & Resources Physics: Contact and Pressure	Biology: Respiration and photosynthesis Chemistry: Periodic table & Elements Physics: PD and Current, Magnetism and Electromagnetism	Biology: Evolution and Inheritance Chemistry: Chemical energy & Types of reaction Physics: Work, Heating and cooling Wave effects and properties
Knowledge Covered	Students will be learning: <ul style="list-style-type: none"> • Gas exchange within the lungs • Breathing • Balanced diets • The Digestive system • The Carbon cycle • Global warning & climate change • Recycling and finite resources • The reactivity series and extraction of metals • Resultant forces • Elastic deformation • Pressure & Buoyancy • Calculating fluid pressure 	Students will be learning: <ul style="list-style-type: none"> • Aerobic respiration • Anaerobic respiration • Photosynthesis • The periodic table • Elements, group 1 and group 7 • Elements, compounds and mixtures • Naming simple compounds • Voltage, Current and charge • Series and Parallel circuits • Calculating electrical resistance • Electrostatic charge • Magnetism and Electromagnetism 	Students will be learning: <ul style="list-style-type: none"> • Natural selection • Biodiversity and variation • Competition • DNA and Inherited characteristics • Chemical reactions • Endothermic & exothermic reactions • Mechanical work, pullies and levers • Conduction, Convection and Radiation • Longitudinal and transverse waves
Online Resources	Oak Academy online resources: https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science BBC bitesize: https://www.bbc.co.uk/bitesize/subjects/zng4d2p	Oak Academy online resources: https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science BBC bitesize: https://www.bbc.co.uk/bitesize/subjects/zng4d2p	Oak Academy online resources: https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science BBC bitesize: https://www.bbc.co.uk/bitesize/subjects/zng4d2p



	Autumn Term	Spring Term	Summer Term
Topic	Biology: Cell Biology Core Concepts Infection & response Core Concepts Chemistry: Chemical Changes Core Concepts Physics: Energy Core Concepts	Biology: Organisation in Animals and Plants – CORE concepts; Keeping Healthy Chemistry: The periodic table Physics: Atomic Structure Core Concepts	Intervention and Science in Action [CREST AWARD] Chemistry: Structure and Bonding Physics: Particle Model of Matter
Knowledge Covered	Students will be learning: <ul style="list-style-type: none"> • Plant and Animal cells • Cell transport • DNA • Microscopy • Health and communicable diseases • The Immune system • Chemical reactions and scientific method • Extraction of metals • Energy stores and transfers • Energy Dissipation and conservation • Mechanical work done • Energy transfer and Power 	Students will be learning: <ul style="list-style-type: none"> • Cell organisation • The circulatory system • Risk factors of Communicable diseases • Healthy lifestyles • Pathogens and microorganisms • The periodic table • Atomic structure • Development of atomic structure theories 	Students will be learning: <ul style="list-style-type: none"> • Chemical properties • Structure and Bonding • Giant structures • Internal energy; specific latent heat • Specific heat capacity • Particle model • Density • Gas laws <p>Students will also cover a series of lessons that resolve misconceptions of KS3 science. Students will also be given the opportunity to investigate 'Science in Action' through the CREST award scheme</p>
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