

Data							
Year 7 (please note the order of topics may vary when classes have more than one teacher)							
Half term	Unit title with hyperlink to scheme of work	Unit summary	Skills & content covered	Skills & content revisited	Links to GCSE skills and content	Summary of formative marking, feedback and student response	Summative assessment schedule, including assessment criteria
Autumn 1	Transition unit	A short introduction to the lab.	Lab rules, safety in the lab and lab equipment, including gaining a bunsen burner licence	N/A	N/A	N/A	N/A
	Particles	CHEMISTRY/PHYSICS: Particles that make up matter and how they behave in different states	CONTENT: A simple (Dalton) atomic model describing matter as made from 'particles'. The states of matter and their properties in terms of the particle model. Changes of state (melting, freezing, condensation, evaporation). Conservation of mass in state changes. Brownian motion & diffusion.	KS2: Everyday materials, states of matter, properties and changes in materials	P3: Particulate model of matter	Homework task - states of matter modelling	end of topic test
	Working scientifically	learn and practise the skills required for scientific investigation	CONTENT: writing a hypothesis, identifying variables, writing a method, drawing graphs, drawing tables and collecting data, graphs, writing conclusions, making evaluations. SKILLS: investigation 'insulating cans' draws together learning from Particles and uses skills learnt in Working Scientifically	KS2: working scientifically.	GCSE Working scientifically	Working scientifically write up	continuously assessed through working scientifically write ups and tests
Autumn 2	Cells	BIOLOGY: Unit about the smallest building blocks of life, organisation in multicellular organisms and the gas exchange system	CONTENT: Intro to cells and the development of the microscope, Observing plant and animal cells, The structure and function of the cell organelles, Adaptations of specialised cells, Adaptations of unicellular organisms, Diffusion moves materials in and between cells, Gas exchange system in humans (structure, function & adaptations of the gas exchange system, ventilation, effects of exercise, asthma and smoking on the gas exchange system), Gas exchange system in plants (leaf stomata). SKILLS: using a light microscope, scientific drawings, investigation - diffusion	KS2: Animals including humans, All living things and their habitats; Year 7: working scientifically	B1: Cell biology; B2: Organisation	Working scientifically write up	end of topic test
Spring 1	Forces	PHYSICS: contact and non-contact forces, their causes and effects	CONTENT: Recall how to draw graphs, What are forces? Friction & drag, air resistance & parachutes, Gravity, Squashing & stretching, balanced & unbalanced forces. SKILLS: investigation: Hook's Law (focus on drawing and interpreting graphs)	KS2: Forces. Year 7 Working scientifically	P5: Forces	Working scientifically write up	end of topic test
Spring 2	Elements, Compounds & Mixtures	CHEMISTRY: the concept of pure substances and impure mixtures, and how to separate mixtures	CONTENT: elements, compounds and mixtures. Solutions and solubility. Separating mixtures by filtration, evaporation, distillation and chromatography. SKILLS: selecting, planning and carrying out the most appropriate type of scientific enquiries, using appropriate techniques and apparatus. Writing risk assessments.	KS2: properties and changes in materials	C1: Atomic Structure and the Periodic Table	Classwork tasks	end of topic test
Summer 1	Diet & Digestion	BIOLOGY: A literacy based topic about the human diet and digestive system	CONTENT: Nutrients for a healthy diet and what they are needed for. Balanced energy requirements, Unhealthy diets and their consequences. Tissues and organs of the human digestive system and their adaptations. Bacteria in digestions. SKILLS: reading and assimilating scientific information and scientific writing skills.	KS2: Animals including humans	B2: Organisation	Classwork tasks	end of topic essay assessment
	Energy	PHYSICS: energy, how it is stored & transferred.	CONTENT: How energy is stored in systems and transferred between systems. Energy transfer by heating (conduction and radiation) and insulation. Conservation of energy. Work done by energy transfer. Fuels and energy resources. SKILLS: Using standard units and converting units such as kilo and mega. Using equations to carry out calculations. Investigation - energy in foods	KS2: sound, light, electricity	P1: Energy	Working scientifically write up	end of topic test
Summer 2	Human Reproduction	Biology: Reproduction in humans and in plants.	CONTENT: structure and function of male and female reproductive systems, the menstrual cycle, gametes, fertilisation, gestation and birth (including the effect of maternal lifestyle on the foetus). SKILLS: data analysis - turning data into a graph.	KS2: Animals (including humans) Year 7: Cells, working scientifically,	B1 - cells; B5 - hormones in reproduction; B6 - reproduction;	Booklet tasks	end of topic test
	Solar System	PHYSICS: our place in the solar system and the universe	CONTENT: The scale of the solar system, Planets, the scale of the universe, Seasons and cycles, the earth - composition, structure and rock cycle. SKILLS: investigation - investigations	Year 7: working scientifically	P8: Space Physics (triple science only)	Working scientifically write up	completion of booklet