Science	Autumn term 1	Autumn term 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	Energy and sound	Organisms and light	Earth	Genes	Ecosystems	Forces
	Waves	waves			-	
Knowledge	Energy: doing work,making work easier,thermal energy,heating, insulators, energy and temperature. Waves: sound waves and sounds, hearing sounds, how sound travels through materials, reflection and absorption of sounds	Organisms:how we breathe, measuring breathing, gas exchange in humans, disease and lifestyle, healthy diet, unbalanced diet and effects, human digestive system and its organs. Waves: The eye, nature of light, reflection, refraction, seeing clearly, coloured light.	Earth: The rock cycle, the effects of millions of years of weathering, sedimentation, erosion,heating and cooling. Types of volcano, magma and rock formation. Formation of mountain ranges. Earth in Space: Distances in space are vast,light years are used to measure such distances e.g.the size of our galaxy. What this means in terms of light travelling through space.	Genes: Investigating variation, causes of variation, importance of variation, selective breeding, fertility, male and female reproductive systems,foetal development, smoking during pregnancy.	Ecosystems: Aerobic respiration, respiration in sport, anaerobic respiration, fermentation, aerobic and anaerobic respiration, how plants make food, leaf structure, movement of water through plants, investigating the importance of minerals to plants, investigating photosynthesis.	Forces: Analysing equilibrium, friction and drag, stretch and compression, Hooke's Law, Pressure in solids, Pressure in fluids, pressure calculations, sinking and floating
Skills	Safe laboratory practice. Using the bunsen burner Designing investigations. Identifying and controlling variables Making hypotheses. Testing hypotheses. Numeracy skills - graphs/using formulae	Collecting data. Analysing data. Evaluating methods and procedures. Working cooperatively in groups Develop awareness of science in the news Numeracy skills - graphs/using formulae	Reading and understanding science in the news Developing communication skills Safe laboratory practice. Using the bunsen burner Developing models Working cooperatively in groups Numeracy skills - operations/using formulae	Developing communication skills Designing and conducting surveys Analysing family pedigree diagrams. Evaluating methods and procedures. Working cooperatively in groups Numeracy skills - operations/using formulae	Using lab software Identifying and controlling variables Developing communication skills Testing hypotheses. Collecting data. Analysing data. Evaluating models. Working cooperatively in groups Numeracy skills - operations/graphs)	Design investigations Test hypotheses Collect data. Analyse data. Evaluate methods and procedures. Safe laboratory practice Work cooperatively in groups Develop awareness of science in the news Numeracy skills - graphs/using formulae
Assessment	Live assessment & feedback 1 x Formative assessment (skills) 1 x Formative assessment (knowledge) 1 x Summative skills and knowledge assessment	Live assessment & feedback 1 x Formative assessment (skills) 1 x Formative assessment (knowledge) 1 x Summative skills and knowledge assessment	Live assessment & feedback 1 x Formative assessment (skills) 1 x Formative assessment (knowledge) 1 x Summative skills and knowledge assessment	Live assessment & feedback 1 x Formative assessment (skills) 1 x Formative assessment (knowledge) 1 x Summative skills and knowledge assessment	Live assessment & feedback 1 x Formative assessment (skills) 1 x Formative assessment (knowledge) 1 x Summative skills and knowledge assessment	Live assessment & feedback 1 x Formative assessment (skills) 1 x Formative assessment (knowledge) 1 x Summative skills and knowledge assessment