



Year Group	8	Subject	Science	Taught in	Autumn
Title	Variation				
Summary	Classification of organisms. Adaptation of organisms to habitats including seasonal changes and how they are at risk due to changes in the environment and their inability to adapt. To understand how organisms affect, and are affected by, their environment, including interpreting food webs and pyramids and effects on the nutrient cycle. To identify environmental and inherited features. To recognise how chromosomes, genes and DNA control our inherited features, including Selective breeding natural selection and GM.				
Key Skills	Sampling techniques, measuring, recording and presenting data in a variety of formations, observation, drawing and labelling diagrams, modelling concepts, data analysis, research and reporting.				

Year Group	8	Subject	Science	Taught in	Autumn
Title	Electromagnetism				
Summary	To understand magnetic poles, attraction and repulsion. Describe the shape and direction of magnetic fields when repelling or attracting. Identify factors affecting the strength of electromagnets. Give examples of the use of magnets and electromagnets.				
Key Skills	Planning, measuring, recording, data collection, data presentation, observation, drawing and labelling diagrams, data analysis and reporting. Research, reporting, written tasks modelling concepts and diagrammatical representation.				

Year Group	8	Subject	Science	Taught in	Autumn
Title	Plants and photosynthesis				
Summary	To know the word equation and process of photosynthesis and what effects the production of oxygen. To describe the structure, function and the adaptation of leaves. Describe the relationship between photosynthesis and respiration in plants. Investigate the effect of light on storage of starch.				
Key Skills	Sampling techniques, measuring, recording and presenting data in a variety of formations, observation, drawing and labelling diagrams, modelling concepts, data analysis, research and reporting, identify most hazards and suggest control measures, select appropriate equipment. Research, reporting, written tasks modelling concepts and diagrammatical representation.				



Year Group	8	Subject	Science	Taught in	Spring
Title	Rocks				
Summary	Identify rocks and their properties. Identify the Structure of the earth. Relate the process of formation to the properties of the different rock types. Describe the processes involved in the rock cycle. Describe the physical and chemical processes by which rocks are weathered relate these to features of the environment.				
Key Skills	Compare information from different sources for relevance, follow a method logically, use formulae eg density, interpret data, including identifying patterns and using measurements and data to draw conclusions, present data in a variety of formations, model concepts, research and reporting, identify most hazards and suggest control measures, modelling concepts and diagrammatical representation.				

Year Group	8	Subject	Science	Taught in	Spring
Title	Heating and cooling				
Summary	Understand the difference between temperature and heat and know some common temperatures. To investigate methods of transferring heat, conduction, convection, radiation and evaporation and explain these using the particle model. Describe the role of density in heat transfer. Explain the process of diffusion using the particle model.				
Key Skills	Make predictions and conclusions using previous experiences and use scientific knowledge, examples and models to give reasons, identify most hazards and suggest control measures, select appropriate equipment, identifying independent, dependent and control variables, interpret data, including identifying patterns and using measurements and data to draw conclusions, present data in a variety of formations, model concepts and use diagrammatical representation.				

Year Group	8	Subject	Science	Taught in	Summer
Title	Patterns in Chemistry				
Summary	Identify differences between atoms, elements and compounds and learn some symbols. Create word equations and use formulae. Identify patterns in the periodic table and group metals and non-metals. Investigate the properties of metals, including the reactivity series. Identify different types of chemical reactions and the rearrangement of atoms. To understand conservation of mass. To compare pure and impure substances.				
Key Skills	Identify most hazards and suggest control measures, select appropriate equipment, Use and create balanced equations, use formulae, make and record observations and measurements using a range of methods and evaluate the reliability of methods and suggest possible improvements, identify independent, dependent and control variables, interpret observations and data, identify patterns, model concepts and use diagrammatical representation.				



Year Group	8	Subject	Science	Taught in	Summer
Title	Gravity and space				
Summary	Explain how gravitational force is affected by the size of an object and how gravitation affects weight. To know our Sun as a star and there are other stars in our galaxy. Describe and explain a phenomenon of the solar system, eg solar eclipse. Describe the relative positions of the planets and their conditions compared to Earth.				
Key Skills	Compare information from different sources for relevance, interpret data, identify patterns, use formula, select the most appropriate ways to present evidence, model concepts and use diagrammatical representation.				