

Scheme of Work - Progression

Science

Year 8 / Cinquième

Period 1	<p>Light and vision</p> <ul style="list-style-type: none"> What is light : Introduction of the module Heated materials produce light White light is made of many colors Subtractive and additive color <p>From light source to eye</p> <ul style="list-style-type: none"> Light, a traveling wave : linear propagation of light and shadow Reflection, refraction Mirages and optical illusions <p>The eye, a sensor of radiation</p> <ul style="list-style-type: none"> Structure and parts of an eye Retina, blind spot and pupillary reflex Optical illusions
Autumn – Mid-Term Holiday	
Period 2	<p>Matter and Materials</p> <p>Mixtures</p> <ul style="list-style-type: none"> States of matter Changing states of matter Solubility and miscibility Factors influencing solubility <p>Foams and Emulsions</p> <ul style="list-style-type: none"> Mixing 2 non-miscible liquids Microscopic study of an emulsion Microscopic study of colloids <p>Mechanical properties of Matter</p> <ul style="list-style-type: none"> Materials and properties Elasticity and plasticity Allotropy/nanoscope structure Natural and artificial polymers
Winter Holiday	
Period 3	<p>Matter and Materials</p> <p>Bridge Design and Building</p> <ul style="list-style-type: none"> Bridges and the external mechanical forces and deformation on them Forces, materials, loads and shapes Research various construction materials to determine their strengths, weaknesses and applications <p>Designing and building a bridge</p> <ul style="list-style-type: none"> Students experience the engineering design process : identify, investigate, imagine, plan, create, test, improve and communicate <p>Discovering Electricity</p> <ul style="list-style-type: none"> Static electricity Setting charges in motion : current Detecting the presence and magnitude of electric charge <p>The basics of electrical circuits</p> <ul style="list-style-type: none"> Handling electricity safely Drawing diagrams Electrical circuits : series and parallel
Winter – Mid-Term Holiday	
Period 4	<p>Evolution of Earth and Life</p> <p>If these rocks could speak</p> <ul style="list-style-type: none"> If possible : Field trip Planning the field trip : What can we find there ? How do we identify clues from the past ? Collecting samples in the field Geological work Learning about key processes : Identifying, researching and interpreting samples using various techniques and keys, making observations and inferences Creating a visual display/presentation including the analysis and deductions of geological processes: weathering, erosion and sedimentation Fossil and sand formation Rock types and formation <p>Active Earth</p> <ul style="list-style-type: none"> Theorise on how geological features were formed, such as folded faults, folds and unconformities Mapping earthquake zones and volcanic activity to find patterns and make inferences about plate boundaries
Spring Holiday	
Period 5	<p>Active Earth</p> <ul style="list-style-type: none"> Identify continental boundaries puzzle and fossil evidence as evidence for continental drift Modelling convection currents and the layers of the spherical earth <p>Linking Life and Earth</p> <ul style="list-style-type: none"> Research and visual display : key Earth and Life events to encompass the scale and visualization of deep time and how Earth affects life and vice versa Research and describe environmental adaptations in camelids to recognise the evidence of divergent evolution in camels Speciation Observation of skulls to create a dichotomous key and identify links between species The story of Darwin the explorer : evidence for his theory of evolution Conflicting theories in science