

		KS 2 UNITY WITHIN DIVERSITY, CREATIONAL ROLES, INTERDEPENDENCE, CREATIVITY			KS3 ECOSYSTEMS, ROLE OF A SCIENTIST, MAINTENANCE OF LIFE		
		LOWER SCHOOL	MIDDLE SCHOOL				
		Y3L	Y4M	Y5M	Y6M	Y7M	Y8M
Term 1	<p>Caring for God-given Materials</p> <p>Natural materials in context of creational roles of rocks, plants, animals Man made materials. Effect of Fall and ongoing sin on human use of materials Design of solids, liquids and gases Light and Materials Biodegradable materials – recycling</p> <p style="text-align: right;"><i>Earth</i></p> <p>Joint Sc- Geog topic</p> <p>Creational roles of atmosphere Respiration – Air for Life (Sc) Weather/Climate, water cycle, change of state <i>Air & Water</i></p>	<p>God's Blue planet – Why oceans?</p> <p>Oceans – creational role Different habitats in the ocean Visit to Hilbre Island Variety, design, & purpose of ocean life. Regulation of temperature. Supply of fresh water – revise water cycle. Coastal communities. Cultural mandate and oceans Experiments on the uniqueness of water (fair testing) relevant to oceans</p> <p style="text-align: right;"><i>Water</i></p> <hr/> <p>Summary of Atmosphere, Earth, Plants, Energy & Forces done in LS. Use circles diagram for creational roles</p>	<p>Light and Shadows</p> <p>Creational roles of light (started in Y3) Revise sources of light. Light travels in straight lines (Laws & Ppls) done in Y1. Experiment – pinhole camera. Eye. Filters Shadows – making a shadow theatre (fair testing). Measurement of time – sundials – Gen 1:14 Refraction</p> <p>Declaring the Glory of God</p> <p>Solar System (Gravity) Sun, Moon, Earth system. Time measurement. Seasons (creational roles of sun, moon, stars) Phases of the Moon (observation records) Planetarium trip, Science museum trip – M/C – to summarise light topic <i>Energy & Forces</i></p>	<p>Marvellous Mammals</p> <p>Characteristics of living things – variety and groupings. Creational roles of Mammals and effect of the Fall. Chester Zoo visit Reproduction in mammals – cows & bulls</p> <p>God loves Bats</p> <p>British wild mammals, their habitats and how they are designed to live there – special study of bats (<i>animals & plants – animals & land/soil</i>) Food chains and webs Conservation of mammals, e.g. IFAW, hedgehog. Stewardship project. Introduction to the Theory of Evolution. Dinosaurs & Fossils (Biblical and Evolutionary perspectives). <i>Animals</i></p>	<p>Soil and Rocks</p> <p>Science skills taught in the context of scientists as stewards of creation to fulfil the mandate given by God Gen 1:28 Use of the following skills to investigate the constituents, structure and properties of soil (one of the four ecosystems) Measuring volume, mass, temperature and time Bunsen burner (fair testing) Solubility and separation techniques Microscopes pH and indicators. Acids Structure of the Earth and soil formation Soil as the world's richest habitat Creational roles of soil animals & project. Wormery Structure of a seed. Growing broad bean in soil (revise conditions for seed germination) Creational role of plants in preventing soil erosion and in production of food Food chains and webs Bad stewardship affects food webs <i>Earth & Animals</i></p> <p>People</p> <p>Human digestive system – related to Food energy. Stewardship – related to Food Production <i>Humans</i></p>	<p>Water – Rivers</p> <p>Relationship between water and land / river formation. Revision of design features of water. Change of state. Water as a solvent. River as a habitat – microscopic life. Turbidity of water. Sand /gravel filters. Use of alum. Evaporation and distillation. Waterborne diseases. Pollution. Cleaning up oil. Sewage and water treatment</p> <p>Electricity & Magnetism</p> <p>Revise sources of energy. Static electricity and function in creation. Electricity as an aspect of Man's creativity and in context of stewardship. Electrical circuits Measuring current & p.d. in series and parallel circuits. Resistance. Fuses and plugs. Heating effect of a current (fair testing). Magnetism. Electromagnets (fair testing)</p>	
	<p>God's wonderful world of sound & music</p> <p>Sound (i.e. Creational role of Air) Communication. Ear Music has laws. Noise Worship gives sense of community Make musical instrument (<i>creativity & technology</i>) <i>Humans & Air</i></p> <p>God's colourful World</p> <p>Nature of light Creational role of light – photosynthesis (<i>light & plants</i>) Revise Light and Materials - Shadows – time measurement. Colour (<i>light & water</i>). Mirrors and reflection. Gift of sight <i>Energy & Forces</i></p>	<p>God puts People in Communities</p> <p>Families + family trees Nations (Gen10) & cultural identity of families Community – people interrelationships Scientists as role models e.g. Ronald Ross (cure for malaria)</p> <p>Wonderfully created – Health</p> <p>Stewardship of one's own body 7 major systems and organs – vocabulary Interesting facts – see video "Distinctively Human" Special study of Teeth /Dentist / Careers <i>Humans</i></p>	<p>Atmosphere and Air – roles & Design Measuring the weather – Air Pollution</p> <p>Creational roles of air (revise summary of Y3 and extend) Weather – Air pressure Acid Rain – difference between it and normal rain – effect of ongoing sin – pollution.</p> <p>Bird Flight</p> <p>Birds (<i>animals and plants/trees</i>) Thermals (Laws and Ppls) Flight Air Resistance <i>Air</i></p>	<p>Stewardship of our bodies</p> <p>Differences between people and mammals – stewardship Gen 1:28 Study of some scientists who were Christians – good stewardship – cultural mandate Stewardship of own body; knowing how it functions. (Revise Y4 work on 7 major systems and organs) Use parts of video "Distinctively Human". Heart and blood circulation, lungs Skeleton and Movement Skin – nervous system Diet and Nutrition <i>Humans</i></p>	<p>Energy & Forces</p> <p>God is the source of all energy Summary of the creational roles of energy Sources of energy Forms of energy; energy changing devices Conservation of energy. Entropy Energy flows in and out of the Sun, Earth, Moon system Responsible stewardship of energy Creational role of forces Springs – Hooke's law Balance – moments Measuring forces – Newton meter Friction Relationship between energy and force – pulley experiment Sound Proposed trip to CAT / Fiddlers Ferry</p>	<p>Microbes</p> <p>Overview of the Theory of Evolution. Creational role of microbes in maintenance of planet – agents of recycling and decay (compost heap, sewage) and food production. Structure of plant and animal cell. Characteristics of living things. Agar plates to grow microbes. Conditions for microbe reproduction (milk expt – fair testing). Growth graph. Preservation of food. Bread making (fair testing). Fermentation & distillation.. As a result of the Fall, some microbes cause disease. Microbes and health. How the body fights disease. Vaccination</p> <p>Light and Eye</p> <p>Sources of light. Laws of reflection. Curved mirrors. Lenses. Colour. Eye</p>	
<p>Protecting unique tropical rain forests</p> <p>Tropical rain forests (links with English) Revise creational roles of trees (Y2 work) Situation, climate, structure of rain forests Tropical rain forests as the 2nd richest habitat in the world (<i>plants, soil, animals & water</i>) and home to people groups. Destruction of rain forests as a result of Man's sin and greed. Extinct animals and endangered species – conservation. Stewardship</p> <p>God loves movement – playground forces</p> <p>Forces creating, controlling and stopping movement. Playground forces or use of toys – gravity, friction, Pushes (Newton's 3rd law) and pulls <i>Energy & Forces</i></p>	<p>Interesting insects; beautiful butterflies are BIG in God's plan</p> <p>Revision of Y1 work on creational roles, recycling of decayed materials – pollination (<i>animals & soil – plants & animals</i>). Variety of minibeasts – classification – design features of each group. Creational roles of insects. Revise life cycle of frog. Life cycle of insects – two types Library project on Insects. Butterflies (<i>animals & plants</i>) Spiders and spider thread Ants(social order) Conservation of minibeasts Visit to National wildflower centre <i>Animals</i></p>	<p>The Story of Rocks</p> <p>Creational roles of rocks Rocks – 3 types – flow chart to identify rocks Scratch tests (Sedimentary rocks – link to 6M fossils) Rock formation. Minerals and ores Stewardship (Library research project) Rocks / soil formation</p> <p>Not just a pretty flower – plants are providers</p> <p>Creational role of plants (revise Y3) Systems and organs of plants Food (<i>plants & animals</i>) types and functions (<i>plants & humans</i>) Plant cycle <i>insects & plants</i>) Seed Dispersal (<i>plants & animals</i>) Fibres, Dyes, Medicines. <i>Earth & Plants</i></p>	<p>Wetlands – a God given home for wild fowl</p> <p>Ponds, wetlands as habitats Trip to Martin Mere – pond dipping Design features of water – surface tension experiments and pond skaters + ice floating on water + high SHC Experiments on uniqueness of water related to ponds Design features of water / plants (<i>water & plants</i>) Water food chains (+ pesticide pollution) Water birds – design features Pollution of ponds / wetlands <i>Water</i></p>	<p>Plants</p> <p>Creational role as food producers. Systems, organs, tissues and functions. Classification of plants. Plant cell Photosynthesis – testing leaf for starch and pondweed expt. Structure of the flower – fuchsia. Pollination, seed production and dispersal. Food chains and webs. Conservation. Stewardship – Bees /Merseyside Biobank project. Farming – poor stewardship causing water pollution and wildlife. Poor stewardship of resources – pollution of environment.</p> <p>People</p> <p>Review "Distinctively Human" video. Puberty and Reproduction.</p>			
	<p>Links with technology – water transport</p>	<p>Links with technology – Flight Parachutes, Aeroplanes, Making paper – Textiles Design (Velcro – plants). Farming - Geography</p>	<p>Links with technology – Waterwheels. Hydraulics Design (animals – hedgehog) Sonar – Bats Reservoirs 'copy' ponds.</p>	<p>Links with Geography – climate in Britain Weather – make barometer (Link with Technology)</p>	<p>Links with Geography – Landscape formation River Alt trip</p>		