Working Scientifically				
Planning:	Observing/obtaining	Recording:	Concluding:	Evaluating:
• Planning different types of	evidence:	• Recording data and results	• Reporting and presenting	• Using test results to make
scientific enquiries to answer	• Taking measurements,	of increasing complexity	findings from enquiries,	predictions to set up further
questions, including	using a range of scientific	using scientific diagrams and	including conclusions, causal	comparative and fair tests.
recognising and controlling	equipment, with increasing	labels, classification keys,	relationships and	Identifying scientific
variables where necessary	accuracy and precision,	tables, scatter graphs, bar	explanations of and degree	evidence that has been used
	taking repeat readings where	and line graphs	of trust in results, in oral and	to support or refute ideas or
	appropriate		written forms such as	arguments
			displays and other	
			presentations.	
Language Enrichment	First Hand Experiences	Purpose / Life Skills	Previous Knowledge	
Discussion of planning and fair			(Y5)	
test	Heart beat and pulse	Maths skills	Planning:	
Use of Explorify website to	investigation	Scientists/careers link	 Planning different types of scient 	ntific enquiries to answer
initiate discussion and different			questions, including recognising a	and controlling variables where
concepts	Heart dissection		necessary	
Concernational	Material filteration during any inclusion		Observing/obtaining evidence:	
Concept cartoons	day	How to clean water	 Taking measurements, using a with increasing accuracy and pro- 	range of scientific equipment,
Plan variables	uay		where appropriate	Lision, taking repeat readings
Plati, variables,	Moth investigations	Maths skills	Recording.	
measurements, accuracy,	Woth investigations		 Recording data and results of it 	acreasing complexity using
precision, repeat lindings,			scientific diagrams and labels. cla	ssification keys, tables, scatter
scientific diagrams, labels,			graphs, bar and line graphs	······································
classification keys, tables,			Concluding:	
scatter graphs, bar graphs,			J J J J J J J J J J J J J J J J J J J	

line graphs, predictions,		 Reporting and presenting findings from enquiries, including
further comparative, fair		conclusions, causal relationships and explanations of and degree
test, report, present		of trust in results, in oral and written forms such as displays and
conclusions, causal		other presentations.
relationships, explanations,		Evaluating:
degree of trust, oral and		• Using test results to make predictions to set up further
written display and		comparative and fair tests.
presentation, support or		• Identifying scientific evidence that has been used to support or
refute ideas or arguments,		
identify, classify and describe		
patterns, systematic,		
quantitative, measurements,		
enquiry, comparative testing,		
identifying, classifying,		
grouping, observing over		
time, pattern seeking,		
research using secondary		
sources		

Biology					
Animals including Humans:Livin• Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood• Describe chara• Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • Describe the ways in which nutrients and water are transported within animals, including humans• Livin • Description • Description • Description		Living Th • Describ broad gro character differenc animals • Give re based on	 Living Things and their habitats: Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics 		 Evolution and Inheritance: Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
Language Enrichment First Hand Experi		iences	Purpose / Life Skills	Previou	ıs Knowledge
Animals including Humans Key vocabulary: Discussion of subject material Use of Explorify website to initiate discussion and different concepts Concept cartoons	Heart beat and pulse investigation Heart dissection		Scientists/careers link Understand how to be healthy	Animals • Describ right and • Identify types of their own • Describ digestive • Identify simple fu	including Humans : be the importance for humans of exercise, eating the ounts of different types of food and hygiene (Yr2) y that animals, including humans, need the right amount of nutrition, and that they cannot make n food; they get nutrition from what they eat (Yr3) be the simple functions of the basic parts of the e system in humans (Yr4) y the different types of teeth in humans and their unctions (Yr4)

Heart, pulse, rate, pumps,			Living Things and their habitats:
blood, blood vessels,	Cheetah – making masks out	To help understand	• Recognise that living things can be grouped in a variety of
transported, lungs, oxygen,	of Modroc	adaptations	ways (Yr4)
carbon dioxide, nutrients,			• Explore and use classification keys to help group, identify
water, muscles, cycle,			and name a variety of living things in their local and wider
circulatory system, diet,			environment (Yr4)
exercise, drugs, lifestyle			• Describe the differences in the life cycles of a mammal,
			amphibian, insect and bird (Yr5)
			• Describe the life processes of reproduction in some plants
Living things and their			and animals (Yr5)
habitats Key vocabulary:			
			Evolution and inheritance:
Discussion of subject material	Best beak investigation	To help understand evolution	• Identify that most living things live in habitats to which
	-	and adaptations	they are suited and describe how different habitats provide
Use of Explorify website to			for the basic needs of different kinds of animals and plants
initiate discussion and different			and how they depend on each other (Yr2)
concepts			• Notice that animals, including humans, have offspring
Concernational			which grow into adults (Yr2)
Concept cartoons			• Explore the part that flowers play in the life cycle of
Vertebrates fish			flowering plants, including pollination, seed formation and
vertebrates, fish,			seed dispersal (Yr3)
amphibians, reptiles, birds,			• Describe in simple terms how fossils are formed when
mammals, invertebrates,			things that have lived are trapped within rock (Yr3)
warm-blooded, cold-			• Recognise that environments can change and that this can
blooded, insects, spiders,			sometimes pose dangers to living things (Yr4)
snails, worms, flowering,			

non-flowering, mosses, ferns,	• Describe the life processes of reproduction in some plants
conifers	and animals (Yr5)
Evolution and inheritance	
Key vocabulary:	
Discussion of subject material	
Use of Explorify website to	
initiate discussion and different	
concepts	
Concept cartoons	
Offspring, sexual	
reproduction, vary,	
characteristics, suited,	
adapted, environment,	
inherited, species, fossils,	
evolve, evolution	

Physics				
 Light: Recognise that light appears to travel in straight lines Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 			 Electricity Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram. 	
Language Enrichment	First Hand Experiences	Purpose / Life Skills		Previous Knowledge
Light Key vocabulary: Discussion of subject material Use of Explorify website to initiate discussion and different concepts Concept cartoons Yr3: Light, light source, Sun, sunlight, dangerous New vocab: Light, straight lines, light rays	3D Hologram Drawing around shadows Light exploration in class using torches Eyes Bristlebot creation Creating circuits	Scientists/careers link Understanding light and refraction Create and design a purposeful circuit		 Light: Recognise that they need light in order to see things and that dark is the absence of light (Yr3) Notice that light is reflected from surfaces (Yr3) Recognise that light from the sun can be dangerous and that there are ways to protect their eyes (Yr3) Recognise that shadows are formed when the light from a light source is blocked by an opaque object (Yr3) Find patterns in the way that the size of shadows change (Yr3) Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets (Yr5)

Electricity Key vocabulary:		
Discussion of subject material		 Electricity: Identify common appliances that run on electricity (Yr4) Construct a simple series electrical circuit, identifying and
Use of Explorify website to initiate discussion and different concents		naming its basic parts, including cells, wires, bulbs, switches and buzzers (Yr4)
Concept cartoons		 Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery (Yr4)
Circuit, complete circuit, circuit diagram, circuit		 Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit (Yr4)
buzzer, motor, switch, voltage		• Recognise some common conductors and insulators and associate metals with being good conductors (Yr4)