

Science Unit Overviews Crumpsall Lane

Year	Unit	1	2	3	4	5	
1	Animals, including Humans	Can I identify, name and label different body parts?	Can I say which body part we see with and carry out observations and with our eyes?	Can I say which body part we hear with and carry out observations with our ears?	Can I say which body part we smell with and carry out a smell test with our nose?	Can I say which body part we taste with and carry out a taste test with our tongue?	
		6	7	8	9	10	11
	Everyday Materials	Can I say which body part we feel with and carry out a touch test?	Can I identify, group and classify a range of common animals including birds, fish, amphibians, reptiles and mammals?	Can I compare the structure of a variety of common animals through grouping and classifying?	Can I research , group and classify animals into carnivores, omnivores and herbivores?	Can I compare the body of a real fish with a human using observation skills?	Can I compare the body of a woodlouse with a human being using observation skills?
		Unit	1	2	3	4	5
	Everyday Materials	Can I identify and name different materials?	Can I tell the difference between an object and the materials it is made from by grouping objects?	Can I observe the properties of everyday materials using my senses?	Can I carry out a test to find out which gloves are the warmest?	Can I record our finding in a simple way and make a conclusion ?	
		6	7	8			
		Can I carry out a test to find out which material would make the best umbrella?	Can I come with a question about a dolls house roof?	Can I group objects into their properties?			

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Year	Unit	1	2	3	4	5	6
1	Plants	Can I observe over time the growth of a sunflower seed?	Can I observe over time the growth of a runner bean?	Can I observe , identify and record plants in my school grounds?	Can I observe , draw and identify two different plants, saying how they are different and the same?	Can I observe , identify and record trees in my school grounds? Can I identify if they are deciduous or evergreen?	Can I identify the parts of the tree?
	Unit	1	2	3	4	5	
	Seasonal Change (Year-long Coverage)	Can I, with help, observe and record the number of light hours in a day?	Can I, with help, collect data on weekly rainfall?	Can I, with help, collect data on daily temperature?	Can I record daily weather using observations over time?	Can I go on a walk and observe seasonal features focussing on trees, plants, animals, and weather?	
		6	7				
		Can I notice patterns in seasonal changes over a year?	Can I apply my learning by grouping pictures into the season they belong in?				

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Year	Unit	1	2	3	4	5	
2	Animals, including Humans	Can I notice that animals, including humans, have offspring which grow into adults?	Can I research and communicate what basic things humans need to survive?	Can I research and communicate what a balanced diet consists of?	Can I group and classify foods into what each food group does for the body?	Can I research and communicate why exercise is important for the body?	
		6	7	8	9	10	
2	Uses of Everyday Materials	Can I test and observe what happens to the body when we exercise?	Can I test and measure how far germs can travel? <i>(Includes data collection and conclusion)</i>	Can I test how germs are spread?	Can I research and communicate how and why it is important to keep our bodies and teeth clean?	Can I apply our knowledge by responding to a concept cartoon on what we need to stay healthy?	
		6	7	8	4	5	
		Can I group and classify materials into their uses?	Can I record data on an environmental walk to help answer questions on what the material is?	Can I group and classify more than one material into the objects that they can be used for and conclude why?	Can I record data on whether objects can be squashed, bent, twisted and or stretched?	Can I research using secondary sources to help answer our questions about what and how rubbish is recycled in Manchester?	
		6	7	8			
		Can I group and classify rubbish in the correct Manchester recycling bins?	Can I carry out a test to find out which shopping bag is the strongest?	Can I ask my own question about which material is most suitable for a purpose?			
		6	7	8			

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Year	Unit	1	2	3	4	5	
2	Plants	Can we predict, ask simple questions and plan how to answer what a plant needs to germinate?	Can we observe our seeds and bulbs growing overtime and make simple measurements?	Can we collect data and record our observations in a weekly diary?	Can we draw conclusions from our germination tests?	Can we test per group how a different condition affects plant growth and collect data to evidence the question?	
	Unit	1	2	3	4	5	6
	Living Things and their Habitats	Can I group and classify things into living, dead, and things that have never been alive?	Can I research which animals live in which world habitats and why?	Can I observe and collect data on plants and animals that live in the pond?	Can I predict, collect data and observe with a microscope what lives in micro habitats around school?	Can I draw conclusions to why living things were found in particular places?	Can I research food chains and create a three-part food chain?

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Year	Unit	1	2	3	4	5	
3	Light	Can I observe and explore how light is reflected from mirrors?	Can I group materials into good and poor reflectors of light?	Can I group materials into those that do and do not make shadows?	Can I plan and conduct a fair test to find a pattern in how the size of shadows change? <i>(Includes prediction and conclusion)</i>	Can I research and create a sun dial which uses shadows?	
	Unit	1	2	3	4	5	6
	Rocks	Can I compare and group together different kinds of rocks on the basis of their appearance?	Can I test rocks for properties and group them by these?	Can I explain how igneous, sedimentary and metamorphic rock is formed?	Can I research how fossils are formed?	Can I research the types of animals found as fossils?	Can I classify different soil types and explain what soil is made from?
	Unit	1	2	3	4	5	
	Forces and Magnets	Can I plan (including coming up with a question) and conduct an investigation into how things move on different surfaces?	Can I observe how magnets attract or repel each other and attract some materials and not others?	Can I compare and group together materials based on whether they are attracted to magnets?	Can I plan and conduct a test into the strength of magnets? <i>(Includes prediction and conclusion)</i>	Can I describe magnets as having poles and predict their behaviour?	
	Unit	1	2	3	4	5	
	Animals, including Humans	Can I name and research the 5 key food groups and what each provides?	Can I compare and group animals based on their diet?	Can I name the main muscle and skeleton body parts and their functions?	Can I build a model of a muscle to demonstrate how it works? <i>(Evaluate muscle effectiveness)</i>	Can I group animals which have a skeleton, exoskeleton or no skeleton?	
	Unit	1	2	3	4	5	
	Plants	Can I describe the function of the parts of a plant?	Can I plan and conduct a fair test on	Can I plan and conduct a test into	Can I explore the part that flowers play in the life cycle of	Can I investigate the ways seeds are dispersed?	

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			what plants need to grow? <i>(Includes prediction and conclusion)</i>	how water is transported in plants? <i>(Includes prediction and conclusion)</i>	flowering plants, including pollination and seed formation?		
Year	Unit	1	2	3	4	5	6
4	Animals, including Humans	Can I name and describe the simple functions of the basic parts of the digestive system in humans?	Can I identify the different types of teeth in carnivores and herbivores?	Can I explain the functions of the different types of teeth?	Can I plan and conduct an investigation to explain what damages teeth and how to keep them healthy? <i>(Includes prediction and conclusion)</i>	Can I research and construct food chains?	Can I group animals as producers, predators and prey?
	Unit	1	2	3	4	5	6
	States of Matter	Can I group materials as solids, liquids and gases?	Can I observe materials changing state and use the correct scientific vocabulary to describe these changes?	Can I research and test the temperature at which some changes of state occur in degrees Celsius?	Can I explain the role of evaporation and condensation in the water cycle?	Can I plan and conduct a test to find a pattern between temperature and evaporation? <i>(Includes prediction and conclusion)</i>	
5	Unit	1	2	3	4	5	
	Sound	Can I explain how sounds are made from a variety of instruments from around the world?	Can I explain how we hear sounds? <i>(Includes how pitch and volume change)</i>	Can I plan and conduct an investigation to find how sounds are produced? <i>(Includes prediction and conclusion)</i>	Can I plan and conduct an investigation to find patterns between the volume of a sound and the strength of the vibrations that produced it? <i>(Includes prediction and conclusion)</i>	Can I plan and conduct a pattern seeking investigation into how sounds change the further you are away from them?	

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4	Electricity	Can I identify common appliances that run on electricity and recognise potential dangers of electricity in the home?	Can I construct and draw a simple series circuit? <i>(Includes identifying its basic parts)</i>	Can I identify when a lamp will light in a circuit?	Can I group and classify materials as either conductors or insulators?	Can I find a pattern in which materials are typically good conductors?	Can I make a switch for my circuit?
	Unit	1	2	3	4	5	
	Living Things and their Habitats	Can we name some common invertebrates?	Can we describe what an invertebrate is and some of its features?	Can we make detailed observations of invertebrates?	Can we use a simple key to identify a living thing?	Can we suggest how a habitat has been altered by humans?	
		6	7				
		Can we suggest how we can improve or protect a habitat?	Can we sort living things into groups ? <i>(Includes invertebrates)</i>				

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5	Forces	Can I build the winning marble run using the force of gravity?	Can I learn about Isaac Newton through research?	Can I plan an investigation into the effects of friction? <i>(Including prediction)</i>	Can I plan and conduct a fair test investigation into the effect of air resistance? <i>(Including prediction, data collection and conclusion)</i>	Can I plan and conduct a fair test investigation into the effect of water resistance? <i>(Including prediction, data collection and conclusion)</i>	Can I explore the use of levers by making predictions about how levers and pulleys change the force required to move or lift things?
	Unit	1	2	3	4	5	6
	Properties and Changes of Materials	Can I test materials for a range of properties?	Can I plan and conduct a fair test investigation into which material will make the best black out curtain? <i>(Includes prediction, data collection and conclusion)</i>	Can I plan and conduct a fair test investigation into what affects the rate at which sugar dissolves? <i>(Includes prediction, data collection and conclusion)</i>	Can I research and apply learning to separate different mixtures?	Can I group reactions into reversible and irreversible?	Can I research and communicate my findings about Graphene?
	Unit	1	2	3	4	5	
	Animals, including Humans	Can I identify changes between babies, toddlers, young adults, adults and the elderly?	Can I draw a timeline with key stages of human development?	Can I communicate the effects of old age?	Can I explain the changes which occur in puberty?		
	Unit	1	2	3	4	5	
	Earth and Space	Can I name the 8 planets in the solar system?	Can I explain from research how models of the solar system have changed over time?	Can I explain why we get day and night? <i>(Includes prediction)</i>	Can I explain why we only see one side of the moon?	Can I research my own questions about space?	
	Unit	1	2	3	4	5	
	Living Things and their Habitats	Can I dissect a flower to observe and identify the key parts of flowering plant reproduction?	Can I research and communicate how some plants reproduce asexually?	Can I research the life cycle of insects and amphibians?	Can I research mammalian and bird life cycles for two local species?	Can I compare life cycles of plants from different parts of the world?	Can I research David Attenborough?

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6	Light	Can I make observations to prove light travels in straight lines?	Can I explain why shadows have the same shape as the objects which cast them?	Can I observe how light reflects? <i>(Includes prediction, data collection and conclusion)</i>	Can I apply my understanding of how light travels to build a periscope?	Can I observe and discuss phenomena caused by refraction?	
	Unit	1	2	3	4	5	6
	Animals, including Humans	Can I explain the heart's role in the circulatory system?	Can I explain the lungs' role in the circulatory systems?	Can I explain how the heart and lungs work together in the circulatory system?	Can I research how to keep my body healthy?	Can I describe the ways in which nutrients and water are transported within animals, including humans?	
	Unit	1	2	3	4	5	
	Electricity	Can I create a simple series circuit and test a variety of components? <i>(Including prediction)</i>	Can I plan a fair test investigation into how the number and voltage of cells in a circuit affects the brightness of a bulb? <i>(Including prediction)</i>	Can I conduct a fair test investigation into how the number and voltage of cells in a circuit affects the brightness of a bulb? <i>(Includes data collection and conclusion)</i>	Can I use recognised symbols when representing a simple circuit in a diagram?	Can I plan and create a burglar alarm?	

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6	Evolution and Inheritance	Can I research Charles Darwin and Alfred Wallace?	Can I research a species of dinosaur and a famous palaeontologist?	Can I explain how offspring are both the same and different to their parents and how these differences might make some better able to survive?	Can I research and carry out a test on how animals have adapted to survive in their environment?	Can I explain the timescales of evolution?	
	Unit	1	2	3	4	5	
	Living Things and their Habitats	Can I research and communicate what I know about the work of Carl Linnaeus?	Can I create my own classification system?	Can I classify invertebrates?	Can I classify vertebrates?	Can I research unfamiliar animals and learn how they are classified?	