

Planning Opportunities for Scientific Enquiry

YEAR 1 Woodpeckers

		Type of enquiry			
Area of science	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing
Animals including humans		Classifying animals Sorting fruit and vegetables (senses)	Do children with the largest hands have the largest feet?		
Plants	How does my bean plant change each week?			What are the most common British plants and where can we find them?	
Everyday Materials		Which materials will float and which will sink?			Which material would be best for the roof of the little pig's house? (DT link)
Seasonal Changes	Changes noticed in each season. Walks in local area. Rain Hours of sunlight Temperature	How would you group these things based on which season you are most likely to see them in?		World weather patterns (Topic link)	In which season does it rain the most?

Planning Opportunities for Scientific Enquiry

YEAR 1 Kingfishers

	Type of enquiry				
<u>Area of science</u>	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing
Animals including humans		Classifying animals	Do children with the largest hands have the largest feet?		
Plants	How does my bean plant change each week?			What are the most common British plants and where can we find them?	Which tree has the biggest leaves?
Everyday Materials		Which materials will float and which will sink?			Which materials are the most absorbent?
Seasonal Changes	How does the apple tree in the garden change over the year?	How would you group these things based on which season you are most likely to see them in?		Are there plants that are in flower in every season? What are they?	In which season does it rain the most?

Planning Opportunities for Scientific Enquiry

YEAR 2 Kingfishers

		Type of enquiry			
Area of science	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing
Animals including humans	How much food and drink do I have over a week? (food diary)			What food do you need in a healthy diet and why?	
Plants		How can we identify trees observed during a tree hunt?	Do plants with larger seeds grow faster?		Do cress seeds grow quicker inside or outside?
Living things and their habitats	How does a butterfly change over time?	How would you group things to show which are living, dead, or have never been alive?			
Uses of everyday materials				Which materials can be recycled?	Which material would be the best for a boat? (Topic link)

Planning Opportunities for Scientific Enquiry

YEAR 2 Swallows

Area of science	Type of enquiry				
	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing
Animals including humans	How much food and drink do I have over a week? (food diary)			What food do you need in a healthy diet and why?	Does eating a banana make you run faster?
Plants		How can we identify trees observed during a tree hunt?	Do plants with larger seeds grow faster/taller?		
Living things and their habitats	How does a butterfly change over time?	How would you group things to show which are living, dead, or have never been alive?		How does the habitat of the Arctic compare with the habitat of the Rainforest?	
Uses of everyday materials	Would a paper boat float forever?			Research bug houses (DT link)	Which material is most appropriate for Traction Man's swimming costume?

Planning Opportunities for Scientific Enquiry

YEAR 3

Type of enquiry					
Area of science	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing
Animals including humans		How can we group the food that we eat? What are the names of the bones in a human skeleton?	Can people with longer legs run faster?	Why do different types of vitamins keep us healthy and which foods can we find them in?	
Plants	What happens to celery when it is left in a glass of coloured water?		Do all flowers have the same number of petals?	What are all the different ways that seeds disperse?	
Rocks		Can you use the identification key to find out the name of each of the rocks in your collection?		Who was Mary Anning and what did she discover?	How does adding different amounts of sand to soil affect how quickly water drains through it?
Light	Is our shadow the same length all day?			How does the Sun affect our skin?	How does the number of layers of transparent plastic affect how much light can pass through?
Forces and magnets		Which materials are magnetic?	Does the size and shape of a magnet affect how strong it is?		Which surface is best to stop you slipping?

Planning Opportunities for Scientific Enquiry

YEAR 4

Type of enquiry					
Area of science	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing

Animals including humans	How does an egg shell change when it is left in cola?	What are the names for all the organs involved in the digestive system?			
Living Things and their Habitats		Can we use the classification keys to identify all the animals that we caught pond dipping?	Do all invertebrates in the local environment have the same diet?	Why are people cutting down the rainforests and what effect does that have?	
States of Matter	Which material is best for keeping hot chocolate warm?	Can you group these materials and objects into solids, liquids, and gases?			What temperatures do solids change into liquids?
Sound				Do all animals have the same hearing range?	How does the length of a guitar string/tuning fork affect the pitch of the sound?
Electricity	How long does a battery light a torch for?			How does a light bulb work?	Which metal is the best conductor of electricity?

Planning Opportunities for Scientific Enquiry

YEAR 5

	Type of enquiry				
<u>Area of science</u>	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing

Animals including humans			Is there a relationship between an animal's size and its gestation period?	Why do people get grey/white hair as they get older?	
Living Things and their Habitats					
Properties & Changes of Materials	How does a nail in salt water change over time?			What are microplastics and why are they harming our planet?	Which type of sugar dissolves the fastest?
Earth and Space		Can you observe and identify all the phases in the cycle of the moon?			How does the length of daylight hours change in each season?
Forces				How do submarines sink if they are full of air?	Which shape parachute takes the longest to fall?

Planning Opportunities for Scientific Enquiry

YEAR 6

	Type of enquiry				
Area of science	Observing over time	Identifying & Classifying	Pattern Seeking	Research	Comparative & Fair testing
Animals including humans		Identifying the parts of a heart using an Ox heart	Do all children in year 6 have the same lung capacity?	How does the heart pump blood around the body?	Which type of exercise has the greatest

					effect on heart rate?
Living Things and their Habitats	What happens to a piece of bread if it is left for 3 weeks? (observing mould growth)	How would you make a classification key for vertebrates/invertebrates or microorganisms?		What are the five main classification areas?	
Evolution & Inheritance	How are fossils formed? (year 3 revisit)		Is there a pattern between the size and shape of a bird's beak and the food it eats?	What happened when Charles Darwin visited the Galapagos Islands?	Does the colour and habitat of an animal affect how well it survives?
Light	How does my shadow change over a day?	Can you identify all the colours of light that make white light when mixed together? What colours do you get if you mix different colours of light together?			
Electricity			Does the brightness of a bulb increase if more batteries are used?		Which type of fruit makes the best fruity battery?