



<https://www.hamilton-trust.org.uk/science/>

<https://www.stem.org.uk/primary-science>

<https://www.bbc.co.uk/teach/terrific-scientific>

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically – Planning recording and evaluating					
<p>Can you ask scientific questions?</p> <p>Can they answer simple scientific questions?</p> <p>Can they carry out a simple scientific investigation?</p>	<p>Can they perform a simple test?</p> <p>Can they use their observations and ideas to suggest answers?</p> <p>Can they ask simple questions by recognising they can be answered in different ways?</p>	<p>Can they ask scientific questions?</p> <p>Can they start to think about how to set up a scientific enquiry?</p> <p>Can they make simple observations?</p> <p>Can they gather data appropriately?</p> <p>Can they present their findings?</p> <p>Can they draw simple conclusions from their investigation?</p>	<p>Can you use scientific evidence to answer questions?</p> <p>Can they draw simple conclusions from a scientific enquiry?</p> <p>Can they report on their findings both orally and written?</p> <p>Can they record using suitable methods?</p>	<p>Can they plan a scientific enquiry?</p> <p>Can they use results to draw simple conclusions?</p> <p>Can they take measurements using a range of equipment?</p> <p>Can they report and present their findings from an explanation.</p>	<p>Can they plan a scientific enquiry?</p> <p>Can they report on your findings using tables, graphs, conclusions and evaluations?</p> <p>Can they record accurate data based on their investigation.</p>
Materials					
<p>Can they distinguish between an object and the material from which it is made?</p> <p>Can they identify and name a variety of everyday materials, including wood, plastic glass, metal, water and rock?</p> <p>Can they describe the simple physical properties of a variety of everyday materials?</p> <p>Can they compare and group together a variety of everyday materials on the basis of their simple physical properties?</p> <p>https://www.hamilton-trust.org.uk/science/year-1-science/everyday-materials-lets-build/</p> <p>https://www.hamilton-trust.org.uk/science/year-1-science/everyday-materials-marvellous-materials/</p>	<p>Can they identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses?</p> <p>Can they find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching?</p> <p>https://www.hamilton-trust.org.uk/science/year-2-science/everyday-materials-materials-matter/</p> <p>https://www.hamilton-trust.org.uk/science/year-2-science/everyday-materials-squash-bend-twist-stretch/</p>	<p>Can they compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic material?</p>		<p>Can they 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?</p> <p>Can they give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic?</p> <p>https://www.hamilton-trust.org.uk/science/year-5-science/properties-materials-music-festival-materials/</p>	
Animals including humans					
<p>Can they identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals?</p> <p>Can they identify and name a variety of common animals that are carnivores, herbivores and omnivores?</p> <p>Can they describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)?</p> <p>Can they identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense?</p> <p>https://www.hamilton-trust.org.uk/science/year-1-science/animals-including-humans-ourselves/</p> <p>https://www.hamilton-trust.org.uk/science/year-1-science/animals-including-humans-our-pets/</p>	<p>Can they explore and compare the differences between things that are living, dead, and things that have never been alive?</p> <p>Can they identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other?</p> <p>Can they identify and name a variety of plants and animals in their habitats including microhabitats (eg woodlice under stones, logs or leaf litter)?</p> <p>Can they describe how animals obtain their food from plants and other animals using the idea of a simple food chain and identify and name different sources of food?</p> <p>Can they notice that animals including humans have offspring which grow into adults?</p> <p>Can they describe the basic needs of animals, including humans, for survival?</p>	<p>Can they identify that animals, including humans, need the right types and amount of nutrition, and they cannot make their own food: they get nutrition from what they eat?</p> <p>Can they identify that humans and some other animals have skeletons and muscles for support, protection and movement?</p> <p>https://www.hamilton-trust.org.uk/science/year-3-science/animals-including-humans-keeping-healthy/</p>	<p>Can they recognise that living things can be grouped in a variety of ways (including grasses and non-flowering plants)?</p> <p>Can they use a classification key to help group, identify and name a variety of living things in their local wider environment?</p> <p>Can they recognise that environments can change and that this can sometimes pose dangers to living things?</p> <p>Can they construct and interpret a variety of food chains, identifying producers, predators and prey?</p> <p>Can they describe the simple functions of the basic parts of the digestive system in humans?</p> <p>Can they identify different types of teeth in humans and their simple functions?</p> <p>https://www.hamilton-trust.org.uk/science/year-4-science/animals-including-humans-excuse-me-are-these-your-teeth/</p>	<p>Can they describe the difference in the life cycles of a mammal, an amphibian, an insect and a bird?</p> <p>Can they describe the life process of reproduction in some plants and animals?</p> <p>Can they describe the changes as humans develop to old age?</p> <p>https://www.hamilton-trust.org.uk/science/year-5-science/living-things-and-their-habitats-art-living/</p> <p>https://www.hamilton-trust.org.uk/science/year-5-science/animals-including-humans-life-explorers/</p>	<p>Can they 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?</p> <p>Can they give reasons for classifying plants and animals based on specific characteristics?</p> <p>Can they identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood?</p> <p>Can they describe the ways in which nutrients and water are transported within animals and humans?</p> <p>https://www.hamilton-trust.org.uk/science/year-6-science/classification-connoisseurs/</p> <p>https://www.hamilton-trust.org.uk/science/year-6-science/art-being-human/</p>

	<p>Can they describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene?</p> <p>https://www.hamilton-trust.org.uk/science/year-2-science/animals-including-humans-healthy-animals/</p> <p>https://www.hamilton-trust.org.uk/science/year-2-science/living-things-and-their-habitats-habitats/</p> <p>https://www.hamilton-trust.org.uk/science/year-2-science/living-things-and-their-habitats-gardens-and-allotments/</p>		<p>https://www.hamilton-trust.org.uk/science/year-4-science/living-things-and-their-habitats-name-living-thing/</p> <p>https://www.hamilton-trust.org.uk/science/year-4-science/living-things-and-their-habitats-help-our-habitats/</p>		
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Plants

<p>Can they identify and describe the basic structure of a variety of common flowering plants?</p> <p>Can they name a variety of common wild and garden plants?</p> <p>Can they identify the characteristics of a deciduous and evergreen tree?</p> <p>https://www.hamilton-trust.org.uk/science/year-1-science/plants-whats-growing-our-gardens/</p> <p>https://www.stem.org.uk/resources/community/collection/12534/year-1-plants</p>	<p>Do they understand how seeds and bulbs grow into maturing plants?</p> <p>Can they explain that plants need water, light and suitable temperate to grow and stay healthy?</p> <p>https://www.hamilton-trust.org.uk/science/year-2-science/plants-ready-steady-grow/</p> <p>https://www.stem.org.uk/resources/community/collection/13299/year-2-plants</p>	<p>Can they identify and describe the functions of different parts of a flowering plant (roots, stem/trunk and flowers)?</p> <p>Can they describe the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary from plant to plant?</p> <p>Can they investigate how water is transported within plants?</p> <p>Can they identify the part that flowers play in the life cycle of flowering plants, including pollination, see formation and seed dispersal?</p> <p>https://www.hamilton-trust.org.uk/science/year-3-science/plants-roots-and-shoots/</p> <p>https://www.hamilton-trust.org.uk/science/year-3-science/plants-artful-flowers-fruits-and-seeds/</p> <p>https://www.stem.org.uk/resources/community/collection/12535/year-3-plants</p>			
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States of matter

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Rocks

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		https://www.hamilton-trust.org.uk/science/year-3-science/rocks-rocks-and-fossils/ https://www.stem.org.uk/resources/community/collection/12367/year-3-rocks			
Forces and Magnets					
		<p>Can they compare how items move on different surfaces?</p> <p>Can they identify that some forces need contact between two objects, but magnetic forces act at a distance?</p> <p>Can they observe how magnets attract or repel each other, but can attract some materials and not others?</p> <p>Can they identify and describe magnets as having two poles?</p> <p>Can they predict whether two magnets will attract or repel each other depending on the poles they are facing?</p> <p>https://www.hamilton-trust.org.uk/science/year-3-science/forces-and-magnets-amazing-magnets/</p>		<p>Can they recognise the some mechanisms, including levers, pulleys and gears allow a smaller force to have a greater effect?</p> <p>Can they identify the effects of air resistance, water resistance and friction that act between moving surfaces?</p> <p>Can they explain that unsupported objects fall between the Earth and the falling object?</p> <p>https://www.hamilton-trust.org.uk/science/year-5-science/forces-may-forces-be-you/</p>	
Light + Sound					
		<p>Can they recognise that they need light in order to see things and that dark is the absence of light?</p> <p>Can they notice that light is reflected from surfaces?</p> <p>Can they recognise that light from the sun can be dangerous and that there are ways to protect their eyes?</p> <p>Can they recognise that shadows are formed when the light from a light source is blocked by an opaque object?</p> <p>Can they find patterns in the way that the size of shadows change?</p> <p>https://www.hamilton-trust.org.uk/science/year-3-science/light-light-and-shadows/</p>	<p>Can they identify how sounds are made, associating some of them with something vibrating?</p> <p>Can they recognise that vibrations from sounds travel through a medium to the ear?</p> <p>Can they find patterns between the pitch of a sound and features of the object that produced it?</p> <p>Can they find patterns between the volume of a sound and the strength of the vibrations that produced it?</p> <p>Can they recognise that sounds get fainter as the distance from the sound source increases?</p> <p>https://www.hamilton-trust.org.uk/science/year-4-science/sound-listen/</p>		<p>Can they recognise that light appears to travel in straight lines?</p> <p>Can they 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?</p> <p>Can they 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?</p> <p>Can they explain why shadows have the same shape as the objects that cast them.</p> <p>https://www.hamilton-trust.org.uk/science/year-6-science/crime-lab-investigation/</p>
Electricity					
			<p>Can they identify common appliances that run of electricity?</p> <p>Can they construct a simple series electrical circuit, identifying and naming its basic parts: cells, wires, bulbs, switches and buzzers?</p> <p>Can they 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?</p> <p>Can they recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit?</p> <p>Can they recognise some common conductors and insulators, and associate metals with being good conductors?</p> <p>https://www.hamilton-trust.org.uk/science/year-4-science/electricity-its-electric/</p>		<p>Can they associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit?</p> <p>Can they 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?</p> <p>Can they use recognised symbols when representing a simple circuit in a diagram?</p> <p>https://www.hamilton-trust.org.uk/science/year-6-science/electric-celebrations/</p>
Earth and space					
					<p>Can they describe the movement of the Earth and other planets relative to the sun and solar system?</p> <p>Can they describe the movement of the moon in relation to the Earth?</p>

					<p>Can they describe the Sun, Earth and Moon as approximately spherical bodies?</p> <p>Can they use the idea of the Earth's rotation to explain day and night and the apparent movement across the sky?</p> <p>https://www.hamilton-trust.org.uk/science/year-5-science/earth-and-space-space-presenters/</p>
Evolution and Inheritance					
				<p>Can they recognise that living things have changed overtime?</p> <p>Can they recognise that fossils provide information about living things that inhabited the Earth millions of years ago?</p> <p>Can they recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents?</p> <p>Can they identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution?</p> <p>https://www.hamilton-trust.org.uk/science/year-6-science/game-survival/</p>	
Seasonal Change					
<p>Can they observe and describe weather associated with the seasons and how day length varies?</p> <p>Can they observe changes across the four seasons?</p> <p>https://www.hamilton-trust.org.uk/science/year-1-science/seasonal-changes-wonderful-weather/</p>					
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