

Science coverage overview

Mad Science (working scientifically) will be conducted on the last Friday of every month, in addition to within individual units.

	A1	A2	Spr1	Spr2	Su1	Su2
Class 1 – cycle 1	Forces and magnets *Compare how things move on different surfaces. *Notice that some forces need contact between two objects, but magnetic forces can act at a distance. *Observe how magnets attract or repel each other and attract some	Living things and their habitats *Recognise that living things can be grouped. *Explore and use classification in the wider environment.	States of matter *Compare and group materials together, according to whether they are solids, liquids or gases. *Observe that some materials change state when they are heated or cooled, and measure or research the	Animals including humans *Identify that animals including humans need the right nutrition. *Construct and interpret a variety of food chains.	Plants *Identify and describe the functions of different parts of flowering plants. *Explore the requirements of plants for life & growth.	Sounds *Identify how sounds are made, associating some of them with something vibrating. *Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and

	<p>materials and not others.</p> <p>*Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.</p> <p>*Describe magnets as having two poles.</p> <p>*Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>		<p>temperature at which this happens in degrees Celsius (°C)</p> <p>*Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>			<p>features of the object that produced it.</p> <p>*Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>*Recognise that sounds get fainter as the distance from the sound source increases.</p>
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<p>Class 1 – cycle 2</p>	<p>Rocks</p> <ul style="list-style-type: none"> *compare and group together different kinds of rocks on the basis of their appearance and simple physical properties *describe in simple terms. how fossils are formed when things that have lived are trapped within rock. *recognise that soils are made from rocks and organic matter. 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> *Recognise that environments can change and that this can pose dangers to living things. 	<p>Animals including humans</p> <ul style="list-style-type: none"> *Describe the simple functions of the basic parts of the digestive system in humans. *Teeth – types and functions. 	<p>Light</p> <ul style="list-style-type: none"> *Recognise that they need light in order to see things and that dark is the absence of light. *Notice that light is reflected from surfaces. *Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. *Recognise that shadows are formed when the light from a light source is blocked by an opaque object. *Find patterns in the way that the 	<p>Plants</p> <ul style="list-style-type: none"> *Investigate the way water is transported within plants. *Explore the part that flowers play in the life cycle of a flowering plant. 	<p>Electricity</p> <ul style="list-style-type: none"> *Identify common appliances that run on electricity. *Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. *Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a
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				size of shadows change.		complete loop with a battery. *Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. *Recognise some common conductors and insulators, and associate metals with being good conductors.
Class 2 – cycle 1	Living things and their habitats *Describe the differences in life cycles.	Forces *Explain that unsupported objects fall towards the Earth because	Electricity *Associate the brightness of a lamp or the volume of a buzzer with the	Properties of materials *Know that some materials will dissolve in liquid to form a	Evolution and inheritance *recognise that living things produce offspring of the	Animals Including Humans *Describe the changes as humans

	<p>*Life process of reproduction in plants and animals.</p>	<p>of the force of gravity acting between the Earth and the falling object. *Identify the effects of air resistance, water resistance and friction that act between moving surfaces. *Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	<p>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.</p>	<p>solution, and describe how to recover a substance from a solution. *Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. *Demonstrate that dissolving, mixing and changes of state are reversible changes. *Explain that some changes result in the formation of new materials,</p>	<p>same kind, but normally offspring vary and are not identical to their parents.</p>	<p>develop from birth to old age.</p>
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				and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.		
Class 2 – cycle 2	Living things and their habitats *microorganisms *describe how things are classified and give reasons for classification.	Animals including humans *Identify and name the main parts of the human circulatory system. *Recognise the impact of diet, exercise, drugs and lifestyle.	Evolution and inheritance *Recognise that that fossils provide information about living things that inhabited the Earth millions of years ago *identify how animals and plants are adapted to suit	Earth and space *Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. *Describe the movement of the Moon relative to the Earth. *Describe the Sun, Earth and	Properties of materials *Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and	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

			<p>their environment in different ways and that adaptation may lead to evolution.</p>	<p>Moon as approximately spherical bodies. *Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</p>	<p>thermal), and response to magnets *Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p>	<p>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.</p>
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