

Year 6 Key Knowledge				
<i>Living things &amp; their habitats (6 lessons)</i> What is classification?	<i>Evolution (6 lessons)</i> What is evolution?	<i>Electricity (5 lessons)</i> What is electricity?	<i>Animals including humans (6 lessons)</i> How do animal's living systems work together to maintain a healthy body?	<i>Light (6 lessons)</i> What is light?
*sort animals into groups using different criteria; e.g. nutrition (omnivore, carnivore or herbivore; animal group (fish, amphibian etc); vertebrate/ invertebrate	*explain what adaptation means and explain how some plants adapt to their environment	*know the symbols used to represent simple items in an electrical circuit	*name the main parts of the human circulatory system and explain how the system works	*recognise that light appears to travel in straight lines
*use a classification key to identify animals and create a key using yes/no questions to identify animals	*explain how specific animals are adapted to suit their environment (skin/fur, type of foot, type of teeth etc)	*know that the greater the voltage, the brighter the bulb	*name the main parts of the heart and explain how the heart pumps blood *calculate their heart know different activities which increase heart rate	*be able to explain why some materials made good reflectors and some absorb the light
*select criteria to use to sort plants into groups, based on their characteristics	*understand how adaptation of the Peppered Moth over time has led to the species changing over time to suit its environment *understand about Darwin's beaks	*be able to state the outcome of changing variable in an electric circuit	*explain how the blood plays a role in transporting nutrients and water around the body	*explain how the eye works
*explain that microorganisms are living things & know that yeast respire and is therefore a living microorganism *name the five main groups scientist use to classify microorganisms	*living things produce offspring but these offspring will vary in characteristics from their parents. List inheritable characteristics	*be able to collect relevant data and interpret what it shows	*describe how we can keep healthy by exercising, eating a healthy diet and taking care of our hygiene	*explain why shadows have the same shape as the objects that cast them *explain how shadows change during the day
*explain who Carolus Linnaeus was and why he is an important scientist	*recognise that living things have changed over time and fossils provide us with information about things that inhabited the Earth millions of years ago	*name renewable and no renewable energy sources & give examples of each	* identify different things that people do that can lead to them being unhealthy	*we can see objects because they give out or reflect light into the eye.
Key Vocabulary & Definitions				
<p><b>classify</b> – to arrange a group of people or things in classes or categories according to shared qualities or characteristics</p> <p><b>vertebrate</b> – an animal that has a backbone</p> <p><b>invertebrate</b> – an animal without a backbone</p> <p><b>exoskeleton</b> – a rigid external covering for the body in some invertebrate animals</p> <p><b>vascular</b> – plants that use roots and stems to take in water and nutrients</p> <p><b>non-vascular</b> – plants that do not use roots and stems to take in water and nutrients</p> <p><b>taxonomy</b> – the scientific process of grouping or classifying living organisms Also explain the terms; herbivore, carnivore, omnivore; the five main animal classification groups (mammals, birds, fish, reptiles and amphibians) and the five main microorganism groups (bacteria, viruses, protozoa, algae and fungi).</p>	<p><b>adaptation:</b> When a plant or animal has changed in some way, usually over a long period of time, to be better suited to the environment in which they live.</p> <p><b>environment:</b> the conditions that surround an organism.</p> <p><b>evolution:</b> the process by which different kinds of living organisms are believed to have developed from earlier forms during the history of the Earth.</p> <p><b>gene:</b> A unit of heredity which is transferred from a parent to offspring and is held to determine some characteristics of the offspring.</p> <p><b>natural selection:</b> When the fittest, most adapted organisms survive and multiply whilst the least adapted die out.</p> <p><b>inheritance:</b> the reception of genetic qualities by transmission from parent to offspring.</p> <p><b>organism:</b> an individual animal, plant or single-celled life form.</p>	<p><b>appliance</b> – a device or piece of equipment that has been made to perform a specific task</p> <p><b>battery</b> – a small item used to power small appliances</p> <p><b>circuit</b> – a route through which electricity flows</p> <p><b>components</b> – the parts of a circuit</p> <p><b>conductor</b> – allows electricity to flow through it</p> <p><b>insulator</b> – doesn't allow electricity to flow through it</p> <p><b>mains power</b> – electricity provided by power stations</p> <p><b>pylon</b> – a tower used for keeping electrical wires above the ground</p> <p><b>renewable energy</b> – energy from a source that is not depleted when used, such as wind or solar power</p> <p><b>non-renewable energy</b> – energy from a source that is depleted when used, such as coal, gas &amp; oil</p>	<p><b>heart</b> – a muscle that pumps blood around the body</p> <p><b>lungs</b> – spongy air filled organs that provide oxygen to the blood</p> <p><b>blood</b> – a liquid that carries oxygen, water and nutrients around the body</p> <p><b>veins</b> – carry deoxygenated blood to the heart</p> <p><b>arteries</b> – carry oxygenated blood away from the heart</p> <p><b>heart rate</b> – the number of times our heart beats per minute</p> <p><b>Circulatory system</b> – heart, blood, veins, arteries, pulse, clotting</p> <p><b>Diet</b> – balanced, vitamins, minerals, proteins, carbohydrates, sugars, fats</p> <p><b>Drugs</b> – caffeine, nicotine, alcohol, cannabis, cocaine, heroine</p> <p><b>Lifestyle</b> – healthy</p>	<p><b>dark</b> – the absence of light</p> <p><b>reflect</b> – a surface (or body) that throws back light without absorbing it</p> <p><b>shadow</b> – an area where direct light from a light source cannot reach due to obstruction by an object</p> <p><b>opaque</b> – opaque materials do not let any light pass through them. They block the light.</p> <p><b>translucent</b> – translucent materials let some light through, but scatter the light in all directions so that they cannot see clearly through them</p> <p><b>transparent</b> – transparent materials let light pass through them in straight lines so that you can see clearly through them</p> <p><b>luminous</b> – giving off light, bright or shining</p> <p><b>scattering</b> – when light is returned from a surface</p> <p><b>absorption</b> – when light strikes a surface and is retained within it.</p> <p><b>refraction</b> – the “bending” of light when it passes from one transparent material to another.</p>

	<b>species:</b> a group of similar organisms that are able to reproduce.			
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