

# SCIENCE YEARLY PLANNER

Year group: Year 6

Term	Topic	Statutory requirements	Time	Content
<b>Autumn</b>	Living things and their habitats	<p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>	6 weeks	<p>Look at the classification system in more detail to build on the learning from year 4. Focus on broad groupings such as microorganisms, plants and animals. Through observation work classify animals into common invertebrates, insects, spiders, snails and worms and vertebrates, fish, amphibians, reptiles, birds and mammals. Activities based around assigning animals to the correct group and explanation of why.</p> <p>Look into the work of Carl Linnaeus- a pioneer of classification.</p> <p>Pupils to use classification systems and keys to identify some animals and plants in the environment. Research unfamiliar animals and plants and decide on their classification.</p> <p>Link to ICT using keys and databases.</p>

	Animals including humans	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p>	6 weeks	<p>Develop learning from years 3 and 4 about the main body parts and internal organs (skeletal, muscular, and digestive system) to explore and answer questions that help them to understand how the circulatory system enables the body to function.</p> <p>Focus on the circulatory system and how it works.</p> <p>Focus on how to keep bodies healthy and how bodies can be harmed, including how some drugs and other substances can be harmful to the human body. Discuss the effects of smoking on the body the impact of an unhealthy diet. Focus on the relationship between diet, exercise, drugs, lifestyle and health.</p>
<b>Spring</b>	Light	<p>Recognise that light appears to travel in straight lines.</p> <p>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>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>	6 weeks	<p>Pupils to build on the work on year 3, exploring the way light behaves, including light sources, reflection and shadows. Discuss what happens and make predictions.</p> <p>Investigate use and making of periscopes. Investigate the relationship between light sources, objects and shadows through using shadow puppets.</p> <p>Further extend by looking at rainbows, colours on soap bubbles, objects bent in water.</p>

	Electricity	<p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p> <p>Associate the brightness of a lamp or the volume of a buzzer with the number of voltage of cells used in a circuit.</p> <p>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>Use recognised symbols when representing a simple circuit in a diagram.</p>	5 weeks	<p>Building on the work in year 4 pupils to construct series circuits, to help them answer questions about what happens when they try different components, e.g. switches, bulbs, buzzers and motors.</p> <p>Teach pupils symbols to represent components in a simple circuit.</p>
<b>Summer</b>	Evolution and inheritance	<p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Identify how animals and plants are adapted to suit their environment in</p>	6 weeks	<p>Building on what they have learned about fossils in the rock topic in year 3 pupils should find out more about living things on earth and how they have changed over time. Discuss how characteristics are passed from parents to their offspring- consider dog breeding, what happens when different breeds are crossed?</p> <p>Discuss variation in offspring over time can make animals more or less able to survive in particular environments- e.g. discuss how the</p>

		different ways and that adaptation may lead to evolution	<p>giraffes neck has become longer, or the fur of the artic fox has become thicker. Focus on work of Mary Anning, Charles Darwin and Alfred Wallace and their ideas on evolution.</p> <p>Look at adaptations of animals and plants in the local environment. Compare how livings things are adapted to live in extreme conditions e.g. cactuses, penguins and camels. Analyse the advantages and disadvantages of specific adaptations such as being on two feet instead of four, having a long or short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers.</p>
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