

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Spider & Fly –	Christmas Carol	Ali Baba & the 40 Thieves – 1001 nights	How to live forever by Colin Thompson	Sci Fi (SATS)	Macbeth
Learning Objective (from DC Pro)	<p style="text-align: center;">Working Scientifically</p> <p>1. I can use appropriate scientific language to explain, evaluate and communicate my methods and findings 2. I can ask questions about the scientific topics I study, and select and plan the most appropriate way to answer these questions 3. I can report and present my findings in oral and written forms such as displays and other presentations (e.g. explaining and concluding my findings, and explaining the degree of trust in my results) 4. I can recognise scientific evidence that can be used to support or refute ideas and arguments</p>					
	<p>Living Things and habitats</p> <p>1. I can use my research of animals unknown to me in order to classify them 2. I can describe the main features of particular groups such as vertebrates and invertebrates 3. I can explain why living things can be in one group and not another 4. I can explain why living things can be classified into different groups</p>	<p>Electricity</p> <p>1. I can investigate and describe the variations in how components function e.g. the brightness of bulbs, loudness of buzzers and on/off position of switches 2. I can investigate the impact the number and voltage of cells has on the volume of a buzzer 3. I can investigate the impact the number and voltage of cells has on the brightness of a lamp 4. I can construct simple series circuit diagram using recognised symbols</p>	<p>Animals incl Humans</p> <p>5. I can describe how blood is pumped around the body 6. I can describe how water and nutrients are transported around the body 7. I can describe the functions of the heart, blood vessels and blood 8. I can identify and name the main parts of the human circulatory system</p>	<p>Animals incl Humans</p> <p>1. I can recognise the impact of drugs, alcohol and smoking on the human body 2. I can describe how to keep my body healthy 3. I can recognise the impact of drugs, alcohol and smoking on the human body 4. I can recognise the impact of an unhealthy diet</p>	<p>Evolution and inheritance (aspects of this will be covered during INTO University in Autumn 1)</p> <p>1. I can describe how adaptation can lead to evolution 2. I can research and identify how animals and plants are adapted to suit their environment in different ways 3. I can describe how variations occur between individuals of the same species 4. I can use evidence from my observations to describe how offspring vary and are not identical to their parents 5. I can describe how fossils provide information about living things that inhabited the Earth millions of years ago 6. I can recognise that living things have changed over time</p>	<p>Light</p> <p>1. I can use my knowledge of the way light travels to describe how shadows are formed 2. I can discuss how objects are seen using scientific vocabulary e.g. light source and reflection 3. I can demonstrate that light travels in straight lines to explain how objects are seen 4. I can use examples to show that light appears to travel in straight lines</p>

Science Progression Map – Year 6

Skills	<ul style="list-style-type: none"> •Begin to recognise scientific ideas change and develop over time. •Use and develop keys and other information records to identify, classify and describe living things and materials. •Recognise which secondary sources will be most useful to research their ideas. •Can explain the positive and negative effects of scientific development. •Can see how science is useful in everyday life. <p>Can say which parts of our lives rely on science</p> <ul style="list-style-type: none"> •Read, spell and pronounce scientific vocabulary correctly. •Use relevant scientific language. <p>And illustrations to discuss, communicate and justify scientific ideas.</p> <ul style="list-style-type: none"> •Can confidently use a range of scientific vocabulary. 	<ul style="list-style-type: none"> •Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. •Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. •Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. •Use test results to make predictions to set up further comparative and fair tests. •Draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings. •Can use scientific ideas when describing simple processes. <p>Can use the correct science vocabulary</p> <ul style="list-style-type: none"> •Use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas. •Can see how science is useful in everyday life. •Can say which parts of our lives rely on science. 	<ul style="list-style-type: none"> •Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. •Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. •Read, spell and pronounce scientific vocabulary correctly. •Use relevant scientific language. <p>And illustrations to discuss, communicate and justify scientific ideas.</p> <ul style="list-style-type: none"> •Can confidently use a range of scientific vocabulary. •Can use scientific ideas when describing simple processes. Can use the correct science vocabulary •Can see how science is useful in everyday life. •Can say which parts of our lives rely on science. 	<ul style="list-style-type: none"> •Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate. •Make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. •Choose the most appropriate equipment and explain how to use it accurately. •Can interpret data and find patterns. •Select equipment on my own. •Can make a set of observations and say what the interval and range are. •Accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm²V, km/h, m per sec, m/ sec •Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. •Report and present findings from enquiries. •Decide how to record data from a choice of familiar approaches. •Can choose how best to present data •Look for different causal relationships in their data and identify evidence that refutes or supports their ideas. •Can draw conclusions and identify scientific evidence. •Can see how science is useful in everyday life. •Can say which parts of our lives rely on science. 	<ul style="list-style-type: none"> •Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. •Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. •Begin to recognise scientific ideas change and develop over time. •Identify patterns that might be found in the natural environment. •Identify scientific evidence that has been used to support or refute ideas or arguments. •Separate opinion from fact. •Can talk about how scientific ideas have changed over time. •Can explain the positive and negative effects of scientific development. •Can see how science is useful in everyday life. 	<ul style="list-style-type: none"> •Explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. •Begin to recognise more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. •Can use simple models. •Can use scientific ideas when describing simple processes. Can use the correct science vocabulary •Read, spell and pronounce scientific vocabulary correctly. •Use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas. •Can confidently use a range of scientific vocabulary. •Can use scientific ideas when describing simple processes. •Can see how science is useful in everyday life. •Can say which parts of our lives rely on science. <p>Select the most appropriate ways to answer science questions using different types of scientific enquiry</p>
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Science Progression Map – Year 6

Sticky Knowledge	<ul style="list-style-type: none"> -To know that living things can be classified using a system called the Linnaeus System. -Know that Carl Linnaeus invented the system. -To know how to use a sorting Key. -To know how to make their own sorting Key. -To know that classifying living things into categories is Taxonomy. -The scientists that do this are taxonomists. - Describe what a microorganism is. - Name 3 microorganisms. - Name a helpful microbe and explain how it is helpful. - Name an unhelpful bacteria and explain why it is unhelpful. 	<ul style="list-style-type: none"> -Know that a circuit must be unbroken for the electricity to flow. -Know that the circuit creates a path for the electrons to flow around. -Know that the flow of electrons is the current. -Know how to create a circuit that will light a bulb or sound a buzzer. - Know that increasing the power/voltage will make a bulb brighter. - Know that shortening the wires will make a bulb brighter and that this because of the reduced resistance. (Link back to air and wind resistance in Year 5) - Know that increasing the number of bulbs and buzzers will decrease the brightness because the power is shared with more components. - Know that a Series circuit is a circuit with just one route for the current. - Know how to draw a simple circuit diagram with a cell, bulb and a switch. 	<p>To know that the heart is a pump that pumps your blood around the circulatory system.</p> <p>Know that the heart pumps blood to the lungs where it is oxygenated. The heart then pumps oxygenated blood around the body to the muscles and organs.</p> <p>Oxygenated blood travels through arteries.</p> <p>Deoxygenated blood travels through veins.</p> <p>Name the three types of blood vessel.</p> <p>Plasma is the liquid in your blood.</p> <p>Name the 3 cells that are found in blood and their role. (platelets help stop bleeding, white blood cells fight infection, red blood cells carry oxygen.)</p>	<ul style="list-style-type: none"> -To know that drugs can have positive and negative effects on the body. -To be able to name the negative effects of alcohol on the body and the mind. - To describe the negative effects that smoking has on your respiratory and circulatory system. -To describe 5 benefits on your body of eating healthily and exercising. -To name the main food groups and how they affect your body. e.g. carbohydrates provide energy, protein help to build muscle and help the body to repair itself. - To show the effect of exercise on the circulatory system by carrying out an investigation to measure pulse and heart rate. 	<ul style="list-style-type: none"> -know that organisms adapt to their environment so that they survive and produce more offspring. - Know that fossils tell us about how organisms have evolved. - Identify how three organisms have adapted over time to their environment. e.g.Polar Bears – White fur, Giraffe – long neck, cactus – storing water. - know that animals and plants produce offspring that are not identical and have variation. -Know that some traits are inherited e.g.hair and eye colour. - Name and describe 3 environments and name an animal that is adapted to that environment. - Know that Charles Darwin wrote the theory of natural selection. 	<ul style="list-style-type: none"> -Know that light waves travel in straight lines from the source. - Know that light is reflected off objects in straight lines. - Light can travel through a vacuum e.g. Space. - Know that light is refracted (bent) as it moves from one medium to another. e.g.air to water. - A shadow is an area where the light rays have been blocked by an opaque object. - The length of shadows depends on the angle of the light source. - White light is made up of all of the colours of the spectrum. - Isaac Newton discovered that if you shine white light through a prism it will separate into all the colours of the spectrum. - A transparent object lets light shine through it easily. - A translucent object scatters lights so that we can't see through it clearly.
Vocabulary	<p>characteristics, categories, classify, classification, taxonomy, taxonomist, key, bacteria, microorganism, microbes, microscope, species. Linnaeus System, Class, Order, Family, Genus, Species.</p>	<p>circuit, symbol, cell, battery, current, amps, voltage, resistance, electrons, bulb, wire, motor, buzzer, switch, circuit diagram, components, Series Circuit.</p>	<p>circulatory system, heart, lungs, blood vessels, oxygenated blood, deoxygenated blood, chambers, arteries, capillaries, veins, oxygen, carbon dioxide, plasma, platelets, red blood cells, white blood cells, protein, nutrients.</p>	<p>drug, alcohol, nutrients, chemicals, nicotine, lungs, heart, exercise, protein, carbohydrates, fat, fruit and vegetables..</p>	<p>offspring, inheritance, variation, characteristics, adaptation, habitat, environment, evolution, natural selection, fossil, adaptive traits, inherited traits. Charles Darwin.</p>	<p>light waves, light source, reflection, rays, beams, incident ray, reflected ray, Law of Reflection, angle of reflection, refraction, visible spectrum, prism, shadow, transparent, translucent, opaque, Isaac Newton.</p>