BOTLEY SCHOOL ***WHOLE SCHOOL SCIENCE CURRICULUM OVERVIEW 2026/27***			
	AUTUMN	**SPRING**	**SUMMER**
EYFS	**Marvellous me** SC2 Biology: Animals including humans Sc4 Physics: Earth and space	**Our world** SC3 Chemistry: Materials Sc4 Physics: Motion and forces	**Animals** SC2 Biology: Animals including humans SC2 Biology: Living things and their habitats
	Celebrations SC4 Physics: Earth and space	**Once upon a time** SC2 Biology: Plants SC3 Chemistry: Materials Sc4 Physics: Motion and forces Sc4 Physics: Earth and space	**It's a bug's life** SC2 Biology: Living things and their habitats Sc4 Physics: Earth and space
YEAR 1	**Seasonal changes** (Rolling throughout the year)	**Seasonal changes** (Rolling throughout the year)	**Animals, including humans**
	Big Question: How do the seasons change the world around us? **Scientist:** Christopher Wren & Robert Hooke **Scientific inquiry:** How do seasons change? Go for walk and draw/label what they see.	**Big Question:** How do the seasons change the world around us? **Scientist:** Christopher Wren & Robert Hooke **Scientific inquiry:** How do seasons change? Go for walk and draw/label what they see.	**Big Question:** How do animals, including humans, grow and survive? **Scientist:** Mya-Rose Craig **Scientific inquiry:** play doh 'poo' with grass/small bones. Children to decide what the animals have eaten to survive .
	Pupils should be taught to: ▪ Observe changes across the four seasons. ▪ Observe and describe weather associated with the seasons and how day length varies.	Pupils should be taught to: ▪ Observe changes across the four seasons. ▪ Observe and describe weather associated with the seasons and how day length varies.	Pupils should be taught to: ▪ Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals ▪ Identify and name a variety of common animals that are carnivores, herbivores and omnivores ▪ Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) ▪ Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense
	Working Scientifically	**Everyday materials**	**Plants**
	Big Question: How can we use our senses to explore the world around us? **Focus*:*** Observing closely, using simple equipment, asking questions, and gathering information. (Observations) **Scientific inquiry:**	**Big Question:** Why do we use different materials for different things? **Scientist:** Milly Hennayake **Scientific inquiry:** Frozen toys. Children have variety of materials. Which material keeps the toy	**Big Question:** What do you think is the most important part of a plant. **Scientist:** Linda Brown Buck **Scientific inquiry:** What are the key parts of a flower? Dissecting and labelling flowers.
	Pupils should be taught to: ▪ Asking simple questions and recognising that they can be answered in different ways ▪ Observing closely, using simple equipment ▪ Performing simple tests I ▪ Identifying and classifying ▪ Using their observations and ideas to suggest answers to questions ▪ Gathering and recording data to help in answering questions.	Pupils should be taught to: ▪ Distinguish between an object and the material from which it is made ▪ Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock ▪ Describe the simple physical properties of a variety of everyday materials ▪ Compare and group together a variety of everyday materials on the basis of their simple physical properties.	Pupils should be taught to: ▪ Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. ▪ Identify and describe the basic structure of a variety of common flowering plants, including trees/

	Animals, including humans	**Uses of everyday materials**	SATs
	Big Question: What do animals, including humans, need to stay healthy? **Scientist:** Florence Nightingale **Scientific inquiry:** The impact of exercise on your heart rate	**Big Question:** How can we change the shape and purpose of materials? **Scientist:** Charles Macintosh **Scientific inquiry:** Waterproof and water absorbency + Making a structure using different materials, by manipulating them	
	Pupils should be taught to: ▪ Notice that animals, including humans, have offspring which grow into adults ▪ Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) ▪ Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Pupils should be taught to: ▪ Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses ▪ Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	
	Working Scientifically	**Plants**	**Living things and their habitats**
YEAR 2	**Big Question:** How do scientists find out about the world? **Focus:** Observing patterns, conducting simple tests, and recording results in different ways. (Hypotheses) **Scientific inquiry:**	**Big Question:** How do plants grow and why are they important? **Scientist:** Jane Colden **Scientific inquiry:** What environment does a plant need to grow? Cress	**Big Question:** How do different habitats meet the needs of living things? **Scientist:** Adam Hart **Scientific inquiry: What do animals need to survive (adaptation)**
	Pupils should be taught to: ▪ Asking simple questions and recognising that they can be answered in different ways ▪ Observing closely, using simple equipment ▪ Performing simple tests I ▪ Identifying and classifying ▪ Using their observations and ideas to suggest answers to questions ▪ Gathering and recording data to help in answering questions.	Pupils should be taught to: ▪ Observe and describe how seeds and bulbs grow into mature plants ▪ Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Pupils should be taught to: ▪ Explore and compare the differences between things that are living, dead, and things that have never been alive. ▪ 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. ▪ Identify and name a variety of plants and animals in their habitats, including microhabitats. ▪ 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.

LKS2 2027	**Animals Including Humans**	**Rocks & Soils**	**Plants**
	Big Question: Why do animals, including humans, need the right nutrition to survive? **Scientist:** Elsie Widdowson **Scientific inquiry:** Observation bug hunt, identifying what bugs have in their habitat to survive.	**Big Question:** What do rocks tell us about the past? **Scientist:** Mary Anning **Scientific inquiry:** Magnets: Starburst sweets forming rocks + fossil box from the museum to examine	**Big Question:** How do plants transport water and make new plants? **Scientist:** Kiara Nirghin **Scientific inquiry:** Hydroponics – Growing broad beans in a bag. (Plant's needs)
	Pupils should be taught to: ▪ Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. ▪ Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	Pupils should be taught to: ▪ 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.	Pupils should be taught to: ▪ Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. ▪ Explore 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. ▪ Investigate the way in which water is transported within plants. ▪ Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
	Light	**Forces & Magnets**	**Working Scientifically**
	Big Question: How do we see and why do shadows change? **Scientist:** Diocles **Scientific inquiry:** Shadows – Changing lengths of shadows.	**Big Question:** How do magnets and forces help us in everyday life? **Scientist:** William Sturgeon **Scientific inquiry:** Looking at magnetic materials in the classroom, and if all metals are magnetic.	**Big Question:** How do we carry out a fair test in science? **Focus:** Making predictions, using scientific evidence, and setting up simple comparative tests. (Fair Test) **Scientific inquiry:**
	Pupils should be taught to: ▪ 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 a solid object. ▪ Find patterns in the way that the size of shadows change.	Pupils should be taught to: ▪ 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 materials and not others. ▪ 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. ▪ Describe magnets as having two poles. ▪ Predict whether two magnets will attract or repel each other, depending on which poles are facing.	During years 3 and 4, pupils should be taught : ▪ Asking relevant questions and using different types of scientific enquiries to answer them. ▪ Setting up simple practical enquiries, comparative and fair tests. ▪ Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ▪ Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. ▪ Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. ▪ Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. ▪ Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. ▪ Identifying differences, similarities or changes related to simple scientific ideas and processes. ▪ Using straightforward scientific evidence to answer questions or to support their findings

LKS2 2026	**Sound**	**Animals Including Humans**	**States Of Matter**
	Big Question: How do we hear sounds and how do they change? **Scientist:** Alexander Graham Bell **Scientific inquiry:** Fun with bands and stones. Identify how sound waves travel. Looking for patterns in pitch and source. Using instruments create vibrations that can be seen to identify frequency of sound wave.	**Big Question:** How does the digestive system work? **Scientist:** Maria Sibylla Merian **Scientific inquiry:** Egg shell experiment to identify the effect of substances on our teeth. Create own digestive systems using tights to show what happens when we eat.	**Big Question:** How does water change state and why is this important? **Scientist:** Antoine Lavoisier & Joseph Priestley **Scientific inquiry:** Evaporation Observing a puddle on the playground over time. Chocolate and ice investigation. Observing how materials melt and then solidify.
	Pupils should be taught to: ▪ 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 features of the object that produced it. ▪ Find patterns between the volume of a sound and the strength of the vibrations that produced it. ▪ Recognise that sounds get fainter as the distance from the sound source increases.	Pupils should be taught to: ▪ Describe the simple functions of the basic parts of the digestive system in humans. ▪ Identify the different types of teeth in humans and their simple functions. ▪ Construct and interpret a variety of food chains, identifying producers, predators and prey.	Pupils should be taught to: ▪ 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 temperature at which this happens in degrees Celsius (°c). ▪ Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
	WORKING SCIENTIFICALLY	**ELECTRICITY**	**Living Things & Their Habitats**
	Big Question: How do we collect and use evidence to answer scientific questions? **Focus:** Measuring accurately, drawing conclusions, and using different types of scientific inquiry. (Method/Recording) **Scientific inquiry:**	**Big Question:** How does electricity power our world? **Scientist:** Chi Onwurah **Scientific inquiry:** Investigating circuits - which diagrams will create a complete circuit and light the bulb	**Big Question:** How are living things grouped and classified? **Scientist:** David Attenborough **Scientific inquiry:** Sorting experiment that is carried out and the beginning and end of the topic so that children can classify a range of living creatures into different classifications with justification.
	During years 3 and 4, pupils should be taught: ▪ Asking relevant questions and using different types of scientific enquiries to answer them. ▪ Setting up simple practical enquiries, comparative and fair tests. ▪ Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ▪ Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. ▪ Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. ▪ Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. ▪ Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. ▪ Identifying differences, similarities or changes related to simple scientific ideas and processes. ▪ Using straightforward scientific evidence to answer questions or to support their findings.	Pupils should be taught to: ▪ 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 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.	Pupils should be taught to: ▪ Recognise that living things can be grouped in a variety of ways. ▪ Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. ▪ Recognise that environments can change and that this can sometimes pose dangers to living things.

Year 5	**Living Things**	**Forces**	**Animals including Humans**
	Big Question: How do life cycles differ between animals and plants? **Scientist:** Jane Goodall **Scientific inquiry:** Animals and their habitats At what part of their life cycle are the animals in the school grounds?	**Big Question:** How do different forces affect movement? **Scientist:** Galileo **Scientific inquiry:** Testing different grips going down a ramp.	**Big Question:** How do humans change as they grow older? **Scientist:** Leonardo Da Vinci **Scientific inquiry:** How does the mass and length of a baby change? Children look at charts for the weight of babies Ensure that children have a real sense of what the different masses feel like. Allot them to hold different amounts of mass; starting around 2Kg and going up to 10kg so that they get a realisation of how quick babies can grow.
	Pupils should be taught to: ▪ Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. ▪ Describe the life process of reproduction in some plants and animals.	Pupils should be taught to: ▪ Explain that unsupported objects fall towards the Earth because 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.	Pupils should be taught to: ▪ Describe the changes as humans develop to old age.
	Properties of materials	**Earth & Space**	**Working Scientifically**
	Big Question: How can we change materials, and are these changes reversible? **Scientist:** Marie Curie **Scientific inquiry:** How can we separate mixtures of different solids? Resources: Sieves of various sizes · Funnels · Filter paper · A range of different papers Explore separating through filtering. Explore through evaporation.	**Big Question:** How does the Earth move in space, and why do we have day and night? **Scientist:** Maggie Aderin-Pocock **Scientific inquiry:** Children will mark how the shadows change throughout the day because the earth is constantly moving – explain that even though it looks like the sun is moving across the sky, it is actually the earth that is moving and the sun stays still	**Big Question:** How do we prove or disprove a scientific idea? **Focus:** Planning fair tests, recording data systematically, and identifying patterns in results. (interpret data/graphs) **Scientific inquiry:**
	Pupils should be taught to: ▪ 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. ▪ Know that some materials will dissolve in liquid to form a 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. ▪ Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. ▪ Demonstrate that dissolving, mixing and changes of state are reversible changes. ▪ Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	Pupils should be taught to: ▪ 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 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.	During years 5 and 6, pupils should be taught: ▪ Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ▪ Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ▪ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ▪ Using test results to make predictions to set up further comparative and fair tests. ▪ Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ▪ Identifying scientific evidence that has been used to support or refute ideas or arguments.

YEAR 6	**Light**	**Living Things**	**Electricity**
	Big Question: How does light travel and how do we see objects? **Scientist:** Stephen Hawkins **Scientific inquiry:** predicting what happens to light under different conditions	**Big Question:** How do we classify and compare living things? **Scientist:** Michael Sulu **Scientific inquiry:** changing variable to create mouldy bread	**Big Question:** How do circuits work and how can we control electricity? **Scientist:** Haydn Francis **Scientific inquiry:** build electricity wire games.
	Pupils should be taught to: ▪ 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 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	Pupils should be taught to: ▪ 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. ▪ Give reasons for classifying plants and animals based on specific characteristics.	Pupils should be taught to: ▪ Associate the brightness of a lamp or the volume of a buzzer with the 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.
	Animals including Humans	**Evolution & Inheritance**	**Working Scientifically**
	Big Question: How does the human body function and stay healthy? **Scientist:** Alexander Fleming **Scientific inquiry:** To produce a report on Alexander Fleming & his work on penicillin.	**Big Question:** How do living things adapt and change over time? **Scientist:** Darwin **Scientific inquiry:** Finches with different beaks collecting food sources	**Big Question:** How do scientists use evidence to explain the world around us? **Focus:** Designing investigations, evaluating findings, and explaining results using scientific reasoning. (Scientific conclusions) **Scientific inquiry:**
	Pupils should be taught to: Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans.	Pupils should be taught to: ▪ 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. ▪ Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	During years 5 and 6, pupils should be taught: ▪ Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ▪ Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ▪ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ▪ Using test results to make predictions to set up further comparative and fair tests. ▪ Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ▪ Identifying scientific evidence that has been used to support or refute ideas or arguments.