

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Animals including Humans – Ourselves	Animals including Humans – Our Pets	Everyday Materials 1	Wonderful Weather	Everyday Materials 2	What's growing in our garden?
Year 2	Everyday Materials 1	Living Things and their Habitats 1	Animals including Humans	Plants	Living Things and their Habitats 2	Everyday Materials 2
Year 3	Rocks and Fossils	Plants 1	Forces and Magnets	Light	Animals including Humans	Plants 2
Year 4	Electricity	Sound	Animals Including Humans	Living Things and their Habitats 1	States of Matter	Living Things and their Habitats 2
Year 5	Changes of Materials	Earth and Space	Forces	Living Things and their Habitats 1	Animals including Humans	Evolution and Inheritance Living Things and their Habitats 2
Year 6	Light	Properties of Materials	Electricity	Animals including Humans		Science of Sport

EYFS		
UNDERSTANDING THE WORLD – THE WORLD	What adults do	What adults provide
<p>Early Learning Goal: Children know about similarities and differences in relation to places, objects, materials and living things.</p> <p>They talk about the features of their own immediate environment and how environments might vary from one another.</p> <p>They make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<ul style="list-style-type: none"> • Introduce vocabulary to enable children to talk about their observations and to ask questions. • Use correct terms so that, eg, children will enjoy naming a chrysalis if the practitioner uses the word. • Help children to notice and discuss patterns around them eg rubbings from grates, covers or bricks. • Examine change over time, for example, growing plants, and change that may be reversed, eg, melting ice. • Pose carefully framed, open-ended questions, such as, How can we...? or What would happen if...? 	<ul style="list-style-type: none"> • Make use of outdoor areas to give opportunities for investigations of the natural world, for example, provide chimes, streamers, windmills and bubbles to investigate the effects of wind. • Provide opportunities to observe things closely through a variety of means, including magnifiers and photographs. • Teach skills and knowledge in the context of practical activities, eg, learning about the characteristics of liquids and solids by involving children in melting chocolate and cooking eggs. • Give opportunities to record findings by, eg, drawing, writing or making a model.
UNDERSTANDING THE WORLD – TECHNOLOGY	What adults do	What adults provide
<p>Early Learning Goal: Children recognise that a range of technology is used in places such as homes and schools.</p> <p>They select and use technology for a range of purposes.</p>	<ul style="list-style-type: none"> • Support and extend the skills children develop as they become familiar with simple equipment, such as twisting or turning a knob. • Encourage children to speculate on the reasons why things happen or how things work. • Support children to coordinate actions to use technology. 	<ul style="list-style-type: none"> • Provide safe equipment to play with, eg, torches, transistor radios or karaoke machines. • Provide a range of materials and objects to play with that work in different ways for different purposes, for example, egg whisk, torch, other household implements, pulleys, construction kits and tape recorder.

Year 1						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Animals including Humans – Ourselves	Animals including Humans – Our Pets	Everyday Materials 1	Wonderful Weather	Everyday Materials 2	What's growing in our garden?
Overview	Learn all about your bodies and senses in this exploratory block. Observe changes over time and think about how we change as we get older. Collect data, look for patterns and carry out investigations.	Look carefully at the behaviour and habitats of creatures you find in the school grounds. Learn about animals close to and in the home, with a particular focus on the pets we keep and how we keep them happy and healthy.	Explore different materials and sort them into groups before writing songs based on their properties! Consider what it would be like if the tables were made of jelly or the chairs were chocolate! Then recreate the story of the three little pigs and predict what will happen to their houses.	Think about what you already know about weather, look at weather forecasts and video your own school weather forecasts. Do weather observations and make collages about the seasons. Have fun with shadows. Organise a class weather station that can measure rainfall, wind direction and temperature.	In this block, explore a range of materials suitable for fixing a broken umbrella and test them using pipettes to simulate raindrops. Working with play figures frozen in ice, devise an investigation to release them. Explore puddles and observe how they change. Think carefully about what is happening: can you explain why a puddle changes?!	Explore the outdoor area of school and look at plants that are growing. Talk about what they are and what they will look like when they are fully grown. Map out the school allotment area and decorate with sketches, facts and labels. Examine a flower, do leaf rubbings and then create a large collaborative piece of art .
Key Vocabulary	adult baby brain hearing heart lungs organ sense sight smell taste touch	animal breathing diet exercise growth habitat hygiene mammal reproduction	cotton glass materials metal paper plastic properties rock strong weak wood wool	equinox light season shadow solstice source sun sunrise sunset weather	impermeable permeable resistant water	leaf petal plant deciduous evergreen root stem
Working Scientifically Vocabulary	change compare conclusion describe discover	equipment explain factor graph group		investigate measure observe pattern plan	prediction results review scientist table	

Year 2						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Everyday Materials 1	Living Things and their Habitats 1	Animals including Humans	Plants	Living Things and their Habitats 2	Everyday Materials 2
Overview	Recap different materials with a treasure hunt, then explore the useful properties of materials with a range of investigations involving absorbency and flexibility. Discover which type of kitchen towel or cloth is most effective at mopping up spills. Consider why building materials must be absorbent and which ones fit the bill. Create artwork by exploring the textures of materials and learn all about wax and how to re-mould it.	How can we work out what's alive and what's not? Collect specimens and sort them into categories. Investigate habitats and food chains. Explore and improve our bug hotel in the forest that contains a variety of micro habitats to encourage a range of creatures.	Understand that exercise makes the heart work harder and is an essential part of a healthy lifestyle. Find out about healthy lunch box foods then ask and answer questions about looking after babies and animals.	Explore the world of seeds in this unit: learn why plants disperse their seeds and the various clever ways in which they do this. Plant cress seeds and grow a bean using hydroponics – watch and record what happens to them. Dissect a plant and identify its parts.	Have you ever wondered what home-grown foods might taste like? In this block, you will discuss and observe allotments, including caring for the school's own, understand how food chains work and learn that energy from the Sun is passed through each link in a food chain.	In this block, consider a range of materials through investigations and explorations. Work on ways to test materials for elasticity and flexibility and find out which paper is the strongest. Work in small groups to design and make a paper bridge to hold a toy car.
Key Vocabulary	man-made properties materials absorbent malleable water resistant natural	food chain habitat carnivore herbivore omnivore	amphibian animal bird diet exercise fish heart insect life cycle mammal reptile	leaf plant root seed seed dispersal stem petal	energy transfer producer consumer food chain	durable elastic flexible opaque pull push rigid translucent transparent twist
Working Scientifically Vocabulary	change compare conclusion describe discover	equipment explain factor graph group	investigate measure observe pattern plan	prediction results review scientist table		

Year 3						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Rocks and Fossils	Plants 1	Forces and Magnets	Light	Animals including Humans	Plants 2
Overview	Learn all about how rocks and fossils were formed billions of years ago, and how fossils were discovered by accident. Showcase your knowledge of the different features and classifications of rocks.	Imagine your teacher is an alien from another world. They want to open a hotel for humans on their planet but they have a problem. It's too far away to have deliveries of fresh food from Earth so they need to build a space farm for Earth food plants. The problem is, they have no idea what these plants need to grow. Can you help by becoming their Earth Plant Researchers?	Learn all about the magic of magnets! Have magnet races, learn "magic" tricks, and even make your own compass. Sort magnetic from non-magnetic materials through practical enquiry, then explore how friction affects the way things move on different surfaces as you develop your working scientifically skills.	Why can't we see in the dark? How do we actually see things during the day, anyway? These and other questions answered as you investigate how light reflects off surfaces and into the eye, and how shadows vary in length and shape depending on the object and position of the light source.	Become a team of personal trainers for clients in need of expert health, dietary and training advice. Develop specialised knowledge, skills and understanding in nutrition, muscles, bones and joints and conduct your own research in order to answer clients' questions.	Step into the amazing, secret world of flowers. Discover their relationship with bees and other insects. Learn how flowers transform into fruits and seeds to perpetuate the cycle of life and use the inspiration to create some beautiful works of art. Stage your own stunning art exhibition of paintings, sculpture and collage on the theme of Artful Flowers, Fruits and Seeds.
Key Vocabulary	organic matter thermal porous soil water cycle	carbon dioxide nutrients capillary photosynthesis oxygen	attract contact force friction gravity iron magnetic north poles pull push repel south surface	opaque reflection transparent translucent shadow	fat fibre joint minerals carbohydrates movement muscle protection nutrition protein skeleton support vitamins	anther fertilization germination pollination seed dispersal stamen stigma
Working Scientifically Vocabulary	average bar chart evaluate	evidence fair test justify		line graph reading record	repeat variable	

Year 4						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Electricity	Sound	Animals Including Humans	Living Things and their Habitats 1	States of Matter	Living Things and their Habitats 2
Overview	Learn all about electrical circuits and test materials' ability to conduct electricity. Put your knowledge of circuits on display by building your own circuit to create a maze game. Then, use your game to try to defeat a challenger. You will need to impress with your electrical knowhow.	The rock stars of the world need your help! They want their children to come to their concerts and rock-out, but they want to protect their precious ears! Find out all you can about sound; how it travels, pitch and volume. Then investigate materials to see which will provide the best insulation against sound.	Excuse me, are these your teeth? Am I a predator?....Find the answers to these and other peculiar questions about digestion and food chains.	Discover a Habitat at Hazard! Learn about an environment at risk from climate change, and how we can all help lessen the effects of modern society on that habitat.	Become experts in States of Matter! Develop and showcase an understanding of all areas of states of matter, including how materials can change from one state to another, through a large range of simple practical enquiries.	Become experts in the use of classification keys to help group, identify and name a variety of living things. Learn about the 7 characteristics of a living thing (MRS GREN). Sort living things in a number of ways and make a dichotomous classification key to identify local invertebrates. Finally, demonstrate your knowledge of classification keys to a young invited audience.
Key Vocabulary	battery buzzer circuit conductor electricity electrocute insulator lamp mains negative positive switch wire	insulator pitch sound vibration volume conductor wave	canine carnivore digestive herbivore incisor intestines molar omnivore predator prey stomach system	climate change deforestation environment habitat interdependence	Celsius condense degrees evaporate freeze gas liquid melt solid temperature thermometer	excretion growth reproduction key movement nutrition respiration sensitivity
Working Scientifically Vocabulary	average bar chart evaluate evidence fair test justify line graph reading record repeat variable					

Year 5						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Changes of Materials	Earth and Space	Forces	Living Things and their Habitats 1	Animals including Humans	Evolution and Inheritance Living Things and their Habitats 2
Overview	Carry out a range of investigations into the changes that occur to some materials when they are heated, cooled and mixed. Learn what is reversible and irreversible, and what new materials might be created. Launch film-case rockets, make slime, prevent rust, do some baking and play around with eggs! Get your lab coats on - it's going to get messy!	Write, rehearse and film a documentary for younger children. We need three episodes that cover the planets and solar system; night and day; and the lunar month. You will need to include clear, practical explanations and demonstrations of the science behind each process. Do you have what it takes to be a Space Presenter?	Explore the powerful world of forces – gravity, friction, magnetism, upthrust and air resistance – and how all movement can be explained using these terms. Investigate parachutes, levers, pulleys and the grip on your shoes! Learn how to use Newton meters and about the famous man himself, while building your enquiry skills step by step.	Investigate and compare a wide variety of plant and animal life cycles, focussing on reproduction. Compose poems for a chosen few and produce some detailed observational drawings as illustrations. Refine your knowledge of the characteristics of different species and the differences between them.	As a group, compile a children's non-fiction book about the human lifecycle. Can you research and collate information on growth, development, puberty and old age, and present it in a sensitive and logical way that is suited to children aged 8-12? Are you up for the challenge of creating an informative and appealing book within a 6 week deadline?	All about variation and adaptation! Explore how both Charles Darwin and Alfred Wallace separately developed their theories of evolution. Examine the scientific evidence from plants and animals that has been gathered to support the theory of evolution. Undertake a competitive investigation into the specialisation of birds' beaks. Find out about the standard system of classification first developed by Carl Linnaeus, choosing an animal, researching its classification, then practising with Lego! Design your own 'curious creature' and classify it based on its characteristics. Learn about micro-organisms, and conduct an investigation into the growth of mould on bread. Use play dough to create a new single-celled micro-organism and explain how it is classified and why.
Key Vocabulary	dissolve filter irreversible mixture particles	asteroid axis comet constellation Earth	air resistance balanced unbalanced lever direction	Review all Plants from KS1 and Y3 Review life cycle Review mammal, insect, reptile etc.	birth death puberty gestation	adaptation evolution inherit trait

	reaction reversible sieve soluble solution	galaxy lunar phases moon orbit planet rotate satellite solar system spherical vacuum	gears pulley size surface area upthrust		pregnancy foetus hormone juvenile mature	Review MRS GREN classification kingdom family micro-organism species
Working Scientifically Vocabulary	apparatus data diagram			experiment hypothesis method		

Year 6						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Light	Properties of Materials	Electricity	Animals including Humans		Science of Sport
Overview	Learn how light travels and how this enables us to see objects. Make a functioning periscope, finding out about mirrors and the angle of reflection and incidence. Work scientifically and collaboratively to investigate refraction, carrying out investigations into the effects of bending light. Explore how light creates the colours we see, designing coded messages. Finally learn about Isaac Newton and his theory of light & colour.	It's party time! Do you know your thermal insulators from your thermal conductors? Can you find the best materials for takeout bags and drinks bottles? You will need to carry out an impressive array of tests to identify which materials are up to the job for a variety of party needs.	This unit builds from the Year 4 Electricity unit. Represent circuits using symbols in a diagram. Learn about two of the most important scientific inventors in the field of electricity – Thomas Edison and Nikola Tesla. Develop your understanding of what electricity is and how to measure it. Conduct your own investigation, and create your own torch!	Extend your knowledge and understanding of different systems within the body. Research the parts and functions of the circulatory system, focussing on how nutrients are transported around the human body. Explore how a healthy lifestyle supports the body to function and how different types of drugs affect the body.		See below
Key Vocabulary	absorb reflect straight line spectrum	Review all chemistry words from KS1 and LKS2	bulb cell circuit component current diagram parallel series symbol voltage	blood vessel chamber circulation pulse hormone kidney liver oxygen		
Working Scientifically Vocabulary	apparatus data diagram experiment hypothesis method					

Year 6						
Summer 2						
Science of Sport						
Overview	Tantalising Turf (classification) All sorts of pitches need good quality, durable and well looked after grass. Can you explore and classify a range of grasses and suggest the best for the job? Have a go at maintaining your own section of grass and investigate the best conditions to tantalising turf.	Sports Kit & Equipment Enquiry (materials) Explore the science of sports kit materials and why some fabrics are better than others. Carry out an investigation and compare the materials different sports balls are made from. Examine the properties of Paralympian biomechanical materials and how they impact on disability sport.	Harnessing Sports Forces (air resistance & friction) Can you identify the invisible impact of forces on a sport? Explore how friction and air resistance can be used to improve performance and have a go at creating exact sizes of impact forces needed to score goals.	Human Body and Sports (exercise, nutrition & injury) Explore the ways that nutrition, exercise and injury prevention impact on sports performance. Design an eating and exercise plan as well as your own warm up and warm down routine.	Sports Talent (inheritance) Are you born with sports talent or can training alone get you to the top? Explore the science behind biological and environmental characteristics in the sports arena.	Lighting up Sports Stadiums (electricity) Can you ensure the stadium lights are positioned correctly to avoid distracting shadows? Can you make sure that the flood lights are bright enough and can be switched on and off manually and by timer? Can you make the case for alternative forms of energy to run sports stadiums? The game is afoot!
	Key Vocabulary air resistance Angiosperm battery bright bulb cardiac capacity cell Circuit Classification comparison conclusions conditions for growth		Diet dim environmental factors exercise fair test fair test fitness fitness for purpose force friction genetic Grass		Growth heart rate heart rate Inheritance injury investigate key variables lifestyle light meter lung capacity materials	