

Evaluation should ensure that our curriculum is:

- is broad and balanced, complies with legislation and provides a wide range of subjects, preparing pupils for the opportunities, responsibilities and experiences of later life in modern Britain; inspectors should not expect to see a particular range of subjects but should be alert to any unexplained narrowness in the breadth of curriculum being offered by the school
- actively promotes the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs
- focuses on the necessary priorities for ensuring that all pupils make excellent progress in reading, writing and mathematics
- promotes high levels of achievement and good behaviour
- links to the school's system of assessment and that together they set out what pupils are expected to know, understand and do, and when
- information about what is taught in the curriculum each year is shared with parents and carers, including by meeting the statutory requirement to make curriculum information available on the school's website
- promotes tolerance of and respect for people of all faiths (or those of no faith), races, genders, ages, disability and sexual orientations (and other groups with protected characteristics⁴⁴) through the effective spiritual, moral, social and cultural development of pupils, including through the extent to which schools engage their pupils in extra-curricular activity and volunteering within their local community

SUBJECT LEADER: Lorna Haynes			
SUBJECT: Science			
Year Group	Autumn	Spring	Summer
Preschool (Knowledge and understanding of the world)	Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.		
Pre school	<ul style="list-style-type: none"> • Learn about the 5 senses • Introduction to the season autumn • Autumn Walk • Explore natural materials • Join in with different autumn festivals. • Explore signs of autumn. • Talk about people who help us and the different jobs they do. 	<ul style="list-style-type: none"> • Huff and puff science explore different materials. • Looking at the changes from autumn to winter. • Winter walk • Create bird feeders. • Discuss different occupations (Farmer/Builder) • Talk about the different types of dinosaurs, herbivores, carnivores, omnivores. Discuss what each type may eat. • Discuss what is meant by the word 'extinct' and find out what happened to dinosaurs. • Science week activities 	<ul style="list-style-type: none"> • Plant beans in bags and jars and observe them shoot, root and grow. • Talk about what seeds/bean plants need to grow. • Use microscopes to look at leaves, beans and stalks. • Life cycle of a bean. • Go on a minibeast hunt • Explore the 'life cycle of a butterfly'. • Make a minibeast hotel. • Look at features of minibeasts. • Look at the changes into Summer Summer walk
Reception (Knowledge and understanding of the world)	EYFS Statutory Educational Programme: Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading		

	comprehension.		
Reception	<ul style="list-style-type: none"> Explore the changing weather and seasons, noting and recording the weather. Understand the effect of the changing season on the natural world. Explore the changing weather and seasons, noting and recording the weather. 	<ul style="list-style-type: none"> Explore the changing weather and seasons, noting and recording the weather. Understand the effect of the changing season on the natural world. Forest schools Science week activities 	<ul style="list-style-type: none"> Explore the natural world around the school garden and field through touch, smell, and hearing. Discuss how to care for the natural world. Sing songs and rhymes about the natural world. Name and describe some plants growing in the local environment. Explore the changing weather and seasons, noting and recording the weather. Understand the effect of the changing season on the natural world. Describe what they see, hear and feel whilst outside focusing on the natural world and the exploration of minibeast habitats. Name and describe animals and insects seen whilst outside.
1	<p>CHEMISTRY - Everyday materials</p> <ul style="list-style-type: none"> Distinguish between object & material made from Identify and name variety of everyday materials (wood, plastic, glass, metal, water, rock) Describe <u>simple</u> physical properties of variety of everyday materials Compare & group together a variety of everyday materials based on above <p>Seasonal changes</p> <ul style="list-style-type: none"> observe changes across 4 seasons, observe & describe weather how day length varies. 	<p>BIOLOGY - Animals including humans</p> <ul style="list-style-type: none"> identify & name a variety of common animals 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 label basic parts of human body & senses <p>Seasonal changes</p> <ul style="list-style-type: none"> observe changes across 4 seasons, observe & describe weather how day length varies. 	<p>BIOLOGY - Plants</p> <ul style="list-style-type: none"> identify & name a variety of common wild & garden plants (deciduous / evergreen) Identify & describe basic structure of a variety of common flowering plants, including trees. <p>Seasonal changes</p> <ul style="list-style-type: none"> observe changes across 4 seasons, observe & describe weather how day length varies.
2	<p>CHEMISTRY</p> <p>Uses of Everyday Materials</p> <ul style="list-style-type: none"> Identify and compare 	<p>BIOLOGY</p> <p>Living things and their habitats</p> <ul style="list-style-type: none"> Explore & compare 	<p>BIOLOGY</p> <p>Living things – Plants</p> <ul style="list-style-type: none"> Observe & describe how

	<p>suitability of variety of everyday materials for particular uses (wood, plastic, glass, metal, water, rock etc)</p> <ul style="list-style-type: none"> Find out how shapes of solid objects made from some materials can be changed by squashing, bending, twisting, stretching, bending. 	<p>differences between things living, dead and things that have never lived</p> <ul style="list-style-type: none"> Identify that most living things live in habitats to which suited & describe how different habitats provide for basic needs of different kinds of animals and plants & dependency. Identify and name a variety of plants and animals in their habitats, including micro-habitats Identify animals & their habitats. Simple food chains <p>Animal including humans</p> <ul style="list-style-type: none"> 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. 	<p>seeds, bulbs grow into mature plants</p> <ul style="list-style-type: none"> Find out and describe how plants need water, light and suitable temperature to stay healthy Identify and name plants <p>PHYSICS Seasonal changes</p> <ul style="list-style-type: none"> observe changes across 4 seasons, observe & describe weather, how day length varies
3	<p>CHEMISTRY - Rocks and soils</p> <ul style="list-style-type: none"> Compare and group rocks based on appearance and <u>simple</u> physical properties Describe in simple terms how fossils are formed when things that have live are trapped in rock Recognise that soils are made from rocks and organic matter <p>PHYSICS - Forces and magnets</p> <ul style="list-style-type: none"> 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 	<p>PHYSICS - Light</p> <ul style="list-style-type: none"> Recognise that we 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. <p>BIOLOGY – Animals inc. humans</p> <ul style="list-style-type: none"> identify that animals, including humans, need the right types 	<p>BIOLOGY – Animals inc. humans (continued if needed)</p> <ul style="list-style-type: none"> 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. <p>BIOLOGY - Plants</p> <ul style="list-style-type: none"> 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

	<p>together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials</p> <ul style="list-style-type: none"> • describe magnets as having two poles • predict whether two magnets will attract or repel each other, depending on which poles are facing. 	<p>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.</p>	<p>in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>
4	<p>Sound</p> <ul style="list-style-type: none"> • Identify how sounds are made – vibrations • Recognise that sounds travel to ear through a medium • Find patterns between pitch of sound and features of object that produced it • Find patterns between volume of sound and strengths of vibrations that produced it. • Recognise that sounds get fainter as distance from sound source increases <p>States of Matter</p> <p>Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>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.</p> <p>Identify the part played by evaporation & condensation in the water cycle & associate the rate of evaporation with temperature</p>	<p>Living Things and Their Habitats</p> <ul style="list-style-type: none"> • 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. <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p>Animals including Humans</p> <p>Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Identify the different types of teeth in humans and their simple functions.</p> <p>Human: Construct and interpret a variety of food chains,</p> <p>Human: identifying producers, predators and prey.</p>	<p>Electricity</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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.
5	<p>Forces</p> <ul style="list-style-type: none"> • Explain unsupported objects fall to earth – gravity • Identify effects of air resistance, water resistance, friction that act between moving surfaces • Recognise that some mechanisms (levers, pulleys, gears) allow a smaller force to have greater effect <p>Properties and changes of materials</p>	<p>Earth sun and moon</p> <ul style="list-style-type: none"> • Describe movement of earth, sun and moon & other planets relative to sun in solar system • Movement of moon in relation to Earth • Spherical bodies • Earth's rotation as an expression of day and night 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> • Describe life cycles in animals, insects, mammals, amphibians, bird and notice differences • Describe life processes in reproduction in some animals and plants • Water cycle: Identify the part played by evaporation and condensation and associate the rate of evaporation with temperature. <p>Living things- animals</p>

	<ul style="list-style-type: none"> • Properties of everyday materials • Dissolving in liquid to form solution, recover a substance from a solution • Solids, liquids, gases – separate – filtering, sieving, evaporating • Particular uses of everyday materials – compare and test • Dissolving, mixing and changes of state are reversible changes • Some new materials are formed through changes – not always reversible <p>Working scientifically</p>		<ul style="list-style-type: none"> • Describe the changes humans develop to old age
6	<p>BIOLOGY</p> <p>Evolution</p> <ul style="list-style-type: none"> - 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 - I know about evolution and can explain what it is <p>BIOLOGY</p> <p>Living things: Animals</p> <ul style="list-style-type: none"> - 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 	<p>PHYSICS</p> <p>Electricity</p> <ul style="list-style-type: none"> - 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. <p>PHYSICS</p> <p>Light</p> <ul style="list-style-type: none"> - 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 and I know how simple optical instruments work, e.g. periscope, telescope, 	<p>BIOLOGY</p> <p>Living things and their habitats</p> <ul style="list-style-type: none"> - 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 <p>SATs REVISION OF SCIENCE CURRICULUM</p>

	transported within animals, including humans.	mirror or magnifying glass - Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them	
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