Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

Science Units 2024-2025

	Autumn		Spring		Summer	
EYFS	**Human Body and Hygiene** *Learning the importance of washing hands*	**Autumn** *Begin to understand the signs of Autumn.*	**Chinese New Year** *Healthy food choices.* **Floating and Sinking** *Begin to understand how materials behave differently in water.*	**Space** *Understand what we see in the sky during night and beyond.*	**Minibeasts** *Identify common minibeasts growing butterflies.*	**Growing** *Planting and growing vegetables.*
	Human Body and Hygiene *Identifying parts of the body and senses*	**Investigating Materials** *Begin to recognise to different materials and how they have different properties.*	**Winter** *Begin to understand the signs of Winter.*	**Spring** *Begin to understand the signs of Spring.*	**Summer** *Begin to understand the signs of Summer.*	**Healthy Eating** *Using senses to explore healthy food.*
Year 1	**Materials** *Identify everyday materials being able to compare and discuss their properties.*	**Seasonal Changes – CREST** *Observe and describe changes to weather across four seasons.*	**Animals Including Humans** *Identify basic human parts and name common animals putting them into groups.*	**Seasonal Changes – CREST** *Crest Star Infant award delivered by class teacher.*	**Plants** *Name, identify and describe common garden plants and trees through growing seeds.*	**Science Skills** *Recap of Year 1 science skills and missing learning from monitoring.*
Year 2	**Materials and their Properties** *Identify everyday materials being able to compare their suitability in different forms.*	**Animals Including humans** *Understand that animals and humans have offspring that grow into adults with basic needs and requirements for survival.*	**Living things and their habitats** *Understand that most living things are suited to different habitats to enable them to obtain their own food and what happens with the lack of this.*		**Plants** *Name, identify and describe the basic needs for plants to develop through growing bulbs.*	**Science Skills** *Recap of Year 2 science skills and missing learning from monitoring.*
Year 3	**Animals Including Humans** *Understand how the inside of the body works and how our skeleton and muscles develop with the right nutrition.*	**Rocks** *Understand different types of rocks and how they aid fossil formation.*	**Forces and Magnets** *Compare how materials move on different surfaces including how magnetic forces can affect this.*	**Light** *Recognise that light is needed to see things and blocking it can make varying shadows.*	**Plants** *Identify the main functions of different parts of the flower and the part it plays in the life cycle.*	**Science Skills** *Recap of Year 3 science skills and missing learning from monitoring.*
Year 4	**States of matter** *Compare and group materials due to their changing states.*	**Animals including humans:** *Understand the process of eating food from teeth to digestion in both humans and animals using food webs,*	**Electricity** *Construct simple series circuits including switches and conductors.*	**Living things and their habitats** *Understand that living things can be grouped in different ways displaying this as classification keys,*	**Sound** *Identify how sounds are made and changed through differing factors.*	**Crest Superstar Award** *Crest Superstar Junior award delivered by Cronton College students.*
Year 5	**Properties and changes of materials** *Develop knowledge of materials to be able to change their state using reversible and irreversible reactions.*	**Animals Including Humans** *Describe changes as humans develop to old age.*	**Space** *Describe the movements of Earth, Moon, Sun and other planets causing night and day.*	**Forces** *Understand how forces act on objects in air, water and on surfaces before explaining how mechanisms can help this.*	**Living things and their habitats** *Describe different in life cycles and reproduction in plants and animals.*	**Science Skills** *Recap of Year 5 science skills and missing learning from monitoring.*
Year 6	**Living things and their habitats** *Understand how living things; animals, plants and microorganisms are classified into broad groups.*	**Evolution and inheritance** *Understand that living things have changed over time and produce varying offspring.*	**Light** *Understand that light travels in straight lines into our eyes which allows us to see.*	**Animals including humans** *Understand the impact on diet and exercise on the body including the circulatory system.*	**Electricity** *Understand how components can affect a circuit; displaying these as circuit diagrams.*	**Science Skills** *Recap of Year 6 science skills and missing learning from monitoring.*

Appreciate~Aspire~Achieve

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

EYFS

Science Knowledge and Skills	
Communication and Language – Reception • Learn new vocabulary. • Ask questions to find out more and to check what has been said to them. • Articulate their ideas and thoughts in well-formed sentences. • Describe events in some detail. • Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. • Use new vocabulary in different contexts.	**Personal, Social and Emotional – Reception** • Know and talk about the different factors that support their overall health and wellbeing: o regular physical activity o healthy eating o toothbrushing o sensible amounts of 'screen time' o having a good sleep routine • being a safe pedestrian
Understanding the World – Reception • Explore the natural world around them. • Describe what they see, hear and feel while they are outside. • Recognise some environments that are different to the one in which they live. • Understand the effect of changing seasons on the natural world around them.	
Communication and Language – ELG **Listening, Attention and Understanding** • Make comments about what they have heard and ask questions to clarify their understanding.	**Personal, Social and Emotional Development – ELG** **Managing Self** • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. **Understanding the World – ELG** **The Natural World** • Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

• UTW- Science	**Human Body and Hygiene** -Learning the importance of washing hands	**Autumn** Weather - observing Autumn changes • -Compare Autumn leaves and explore similarities and differences	**Chinese New Year** Healthy food choices. **Floating and Sinking** - testing materials to identify which sink/float to get animals across water in Great Race.	**Space** -Glowing stars experiment -Craters on the moon experiment	**Minibeasts** - identify common minibeasts and their habitats -Life cycles, observe changes to classroom caterpillars/butterfly garden •	**Growing** -grow own sunflowers -planting vegetables in the garden -parent planting session - observing changes - recognise that plants grow and should be treated with care -Labelling parts of a plant
	Human Body and Hygiene • -Identifying parts of the body and senses	**Investigating Materials** - making a home for 'The Three Little Pigs' - identifying wood, metal and plastic - recognising similarities/differences - compare and sort materials • - exploring with magnets	**Winter** - weather - observing changes - use senses to explore ice / snow • Exploring ice - Why does ice melt?	**Spring** - weather - observing changes - identifying spring flowers	**Summer** - weather - observing changes **Exploring Shadows** -observe shadows at different times of day **Exploring Bubbles** - testing bubble mixtures	**Healthy Eating** - use senses to explore healthy foods •

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

Year 1

EYFS Prior Knowledge and Skills

EYFS Understanding the World

- **People and communities**: children talk about past and present events in their own lives and in the lives of family members. They know that other children don't always enjoy the same things, and are sensitive to this. They know about similarities and differences between themselves and others, and among families, communities and traditions.
- **The world:** children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.
- **Technology**: children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Year 1 Science Knowledge and Skills

Seasonal Changes *'How do the seasons impact on what we do?'*	**Animals including Humans** *'Why aren't humans like tigers?'*	**Plants** *'Which birds and plants would Little Red Riding hood find in our park?'*	**Everyday Materials** *'Which materials should the three little pigs use to build their house?'*
• Observe changes across the four seasons; • Observe and describe weather associated with the seasons and how day length varies.	• 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 human body is associated with each sense.	• Identify and name a variety of common, wild and green plants, including deciduous and evergreen trees; • Identify and describe the basic structure of a variety of common flowering plants, including trees.	• Distinguish between an object and the materials 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. •

Years 1 and 2
Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways;
- Observe carefully, using simple equipment;
- Identifying and classifying
- Using their observations and ideas to suggest answers to their questions;
- Gathering and recording data to help in answering questions.

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

Year 2

Year 1 Prior Knowledge and Skills

KS1 Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways;
- Observe carefully, using simple equipment;
- Identifying and classifying
- Using their observations and ideas to suggest answers to their questions;
- Gathering and recording data to help in answering questions.

Materials	Plants	Living Things and their Habitats
• Distinguish between an object and the materials 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.	• Identify and name a variety of common, wild and green plants, including deciduous and evergreen trees; • Identify and describe the basic structure of a variety of common flowering plants, including trees.	• 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 human body is associated with each sense.

Year 2 Science Knowledge and Skills

Materials *'What is our school made of?'*	**Living Things** *'Why would a dinosaur not make a good pet?'*	**Plants** *'How can we grow our own salad'*	**Animals including Humans** *'How could you be the next sports star?'*
• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, rock, brick, 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.	• Explore and compare 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 micro-habitats; • 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.	• Observe and describe how seeds and bulbs grow into mature plants; • Find out and describe how plants need water, light and suitable temperature to grow and stay healthy.	• 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 amount of different types of food, and hygiene.

Years 1 and 2
Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways;
- Observe carefully, using simple equipment;
- Identifying and classifying
- Using their observations and ideas to suggest answers to their questions;
- Gathering and recording data to help in answering questions.

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

Year 3

Year 2 Prior Knowledge and Skills

KS1 Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways;
- Observe carefully, using simple equipment;
- Identifying and classifying
- Using their observations and ideas to suggest answers to their questions;
- Gathering and recording data to help in answering questions.

Rocks	Plants	Living Things and their Habitats
• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, rock, brick, paper and cardboard for particular uses; • 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.	• Identify and name a variety of common, wild and green plants, including deciduous and evergreen trees; • Identify and describe the basic structure of a variety of common flowering plants, including trees. • Observe and describe how seeds and bulbs grow into mature plants; • Find out and describe how plants need water, light and suitable temperature to grow and stay healthy.	• 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 human body is associated with each sense. • Explore and compare 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 micro-habitats; • 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. • 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 amount of different types of food, and hygiene.

Year 3 Science Knowledge and Skills

Rocks *'What do rocks tell us about the way the earth is formed?'*	**Forces and Magnets** *'Is it attractive enough?'*	**Plants** *'How did the blossom become an apple?'*	**Light** *'How far can you throw your shadow?'*	**Animals including Humans** *'How does Usain Bolt run so quickly?'*
• 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.	• 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.	• 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.	• 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.	• 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.

Working Scientifically Years 3 and 4

- 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

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

Year 4

Year 3 Prior Knowledge and Skills

KS1 Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways;
- Observe carefully, using simple equipment;
- Identifying and classifying
- Using their observations and ideas to suggest answers to their questions;
- Gathering and recording data to help in answering questions.

States of Matter	Living Things and their Habitats	Animals including Humans
• 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.	• Identify and name a variety of common, wild and green plants, including deciduous and evergreen trees; • Identify and describe the basic structure of a variety of common flowering plants, including trees. • Observe and describe how seeds and bulbs grow into mature plants; • Find out and describe how plants need water, light and suitable temperature to grow and stay healthy. • 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.	• 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 human body is associated with each sense. • Explore and compare 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 micro-habitats; • 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. • 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 amount of different types of food, and hygiene.

Year 4 Science Knowledge and Skills

States of Matter *'How do we survive without water?'*	**Sound** *'Why is the sound of Beyonce enjoyed by so many?'*	**Electricity** *'How could we cope without electricity?'*	**Animals including Humans** *'What happens to the food we eat?'*	**Living Things and their Habitats** *'Which wild animals and plants thrive in Widnes?'*
• 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.	• 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.	• 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.	• 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.	• 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.

Years 3 and 4
Working Scientifically

- 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

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

Year 5

Year 4 Prior Knowledge and Skills

Working Scientifically Years 3 and 4

- 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

Materials	Forces	Plants	Living Things and their Habitats
• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, rock, brick, paper and cardboard for particular uses; • 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. • 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.	• 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.	• Identify and name a variety of common, wild and green plants, including deciduous and evergreen trees; • Identify and describe the basic structure of a variety of common flowering plants, including trees. • Observe and describe how seeds and bulbs grow into mature plants; • Find out and describe how plants need water, light and suitable temperature to grow and stay healthy. • 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.	• 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 human body is associated with each sense. • Explore and compare 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 micro-habitats; • 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. • 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 amount of different types of food, and hygiene.

Year 5 Science Knowledge and Skills

Materials *'Could you be the next CSI investigator?'*	**Forces** ***'Can you feel the force?'***	**Living Things and their Habitats** *'Do all animals and plants start life as an egg?'*	**Animals including Humans** *'How different will you be when you are as old as your grandparents?'*	**Earth and Space** ***'Will we ever send another human to the moon?''***
• 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.	• 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.	• 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.	• describe the changes as humans develop to old age.	• 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.

Working Scientifically Years 5 and 6

- 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.

Lunt's Heath Primary School
Science Curriculum Map and Statutory Requirements

Year 6

Year 5 Prior Knowledge and Skills

Working Scientifically Years 3 and 4

- 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

Light	Electricity	Living Things and their Habitats	Animals
• 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.	• 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.	• 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. •	• . 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 amount of different types of food, and hygiene. • 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. • describe the changes as humans develop to old age.

Year 6 Science Knowledge and Skills

Light *'How could you light up your life?'*	**Electricity** ***'Could you be the next Nintendo apprentice?'***	**Living Things and their Habitats** *' Could Spiderman really exist?'*	**Animals including Humans** *''What would a journey through your body look like?'*	**Evolution** *'Have we always looked like this?''*
• 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.	• 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.	• 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.	• 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.	• 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.

Working Scientifically Years 5 and 6

- 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.