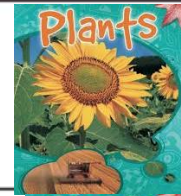
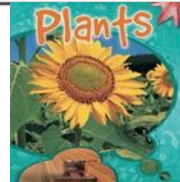
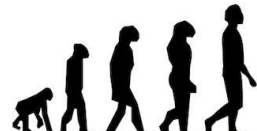


Science Scope



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Everyday Materials 	Seasonal Changes 	Animals including humans 	Seasonal Changes 	Plants 	Seasonal Changes 
Year 2	Everyday Materials 	Animals including humans 	Living things and their habitats 	Seasonal Changes 	Plants 	Seasonal Changes 
Year 3	Animals including humans 	FORCES AND MAGNETS 	Light 		ROCKS ROCK! 	Plants 
Year 4	States of Matter 	Sound 	ELECTRICITY 		Animals including humans 	Living things and their habitats 
Year 5	Living things and their habitats 	FORCES AND MAGNETS 	Earth and Space 		Properties and Changes of Materials 	Animals including humans 
Year 6	Living things and their habitats 	ELECTRICITY 	Animals including humans 		Light 	Evolution and Inheritance 

Year 1 – Everyday Materials



Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What are materials?	Key question: How are materials different?	Key question: What are objects made from?	Key question: How can we sort materials?	Key question: Which material would be best for an umbrella?	Key question: Which material would be best for curtains?
Learning objective: I can identify a variety of everyday materials.	Learning objective: I can describe the physical properties of a variety of everyday materials.	Learning objective: I can distinguish between an object and the material from which it is made.	Learning objective: I can compare and group together a variety of everyday materials on the basis of their simple physical properties.	Learning objective: I can investigate the properties of different materials.	Learning objective: I can investigate the properties of different fabrics.
Success criteria: By the end of this lesson, children will be able to identify different materials.	Success criteria: By the end of this lesson, children will be able to describe the properties of different materials.	Success criteria: By the end of this lesson, children will be able to name objects and name the material from which they are made.	Success criteria: By the end of this lesson, children will be able to sort materials based on their physical properties.	Success criteria: By the end of this lesson, children will be able to investigate which material would be best to make an umbrella. Children will investigate which materials are waterproof, light and strong.	Success criteria: By the end of this lesson, children will be able to investigate which material would be best. Children will investigate which materials are see-through.

asking simple questions and recognising that they can be answered in different ways;	observing closely , using simple equipment ;	performing simple tests ;	identifying and classifying ;	using their observations and ideas to suggest answers to questions;	gathering and recording data to help in answering questions.
Lesson 4	Lesson 5 Lesson 6	Lesson 4 Lesson 5 Lesson 6	Lesson 1 Lesson 2 Lesson 3 Lesson 4	Lesson 5 Lesson 6	Lesson 5 Lesson 6

Year 1 – Seasonal Changes



Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7	Lesson 8	Lesson 9
Key question: What is autumn?	Key question: What is the weather like in the autumn?	Key question: What events happen during autumn?	Key question: When is winter?	Key question: What is the weather like in winter?	Key question: What events happen during winter?	Key question: When is spring?	Key question: When is summer?	Key question: How does the day change?
Learning objective: I can observe and describe changes across the four seasons.	Learning objective: I can observe and describe weather associated with the seasons and how the day length varies.	Learning objective: I can observe and describe changes across the four seasons.	Learning objective: I can observe and describe changes across the four seasons.	Learning objective: I can observe and describe weather associated with the seasons and how the day length varies.	Learning objective: I can observe and describe changes across the four seasons.	Learning objective: I can observe and describe changes across the four seasons.	Learning objective: I can observe and describe changes across the four seasons.	Learning objective: I can observe how the day's length varies.
Success criteria: By the end of this lesson, children will be able to identify the key characteristics of autumn and name the months in which autumn occurs.	Success criteria: By the end of the lesson, children will be able to talk about what weather types are typical during autumn.	Success criteria: By the end of the lesson, children can talk about events and activities, animals and humans, during autumn.	Success criteria: By the end of this lesson, children will be able to identify the key characteristics of winter and name the month's in winter.	Success criteria: By the end of the lesson, children will be able to discuss what weather types are typical during winter.	Success criteria: By the end of the lesson, children will be able to talk about events and activities that occur in winter for both animals and humans.	Success criteria: By the end of this lesson, children will be able to identify the key characteristics of spring and name the months in which it occurs.	Success criteria: By the end of this lesson, children will be able to identify the key characteristics of summer and name the months it occurs. They will be able to list ways to keep safe in the sun.	Success criteria: By the end of this lesson, children will be able to explain how the length of the day changes throughout the year.

asking simple questions and recognising that they can be answered in different ways;	observing closely , using simple equipment ;	performing simple tests ;	identifying and classifying ;	using their observations and ideas to suggest answers to questions;	gathering and recording data to help in answering questions.
	Lesson 5	Lesson 5	Lesson 1 Lesson 2 Lesson 3 Lesson 4	Lesson 5	Lesson 5

Year 1 – Animals including Humans



Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What is this animal?	Key question: How are animals different?	Key question: Do all animals eat the same thing?	Key question: What are our body parts called?	Key question: What are senses?	Key question: Are all humans the same?
Learning objective: I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.	Learning objective: I can compare a variety of common animals including fish, amphibians, reptiles, birds and mammals.	Learning objective: I can identify and name a variety of common animals that are carnivores, omnivores and herbivores.	Learning objective: I can identify, name, draw and label the basic parts of the human body.	Learning objective: I can identify which part of the body is associated with each sense.	Learning objective: I can compare humans.
Success criteria: By the end of this lesson, children will be able to identify the names of common animals and begin to identify the group to which it belongs based on its features.	Success criteria: By the end of this lesson, children will be able to identify the similarities and differences between some common animals using key scientific words to describe features.	Success criteria: By the end of this lesson, children will be able to identify that animals do not all eat the same thing. They should begin to identify animals that are herbivores, omnivores and carnivores.	Success criteria: By the end of this lesson, children will be able to name different parts of the human body and locate them on themselves when asked.	Success criteria: By the end of this lesson, children will be able to discuss the five senses and identify the body part associated with each sense.	Success criteria: By the end of this lesson, children will be able to compare similarities and differences of different humans based on their appearance.
Scientific enquiry skills:  Identifying & classifying	Scientific enquiry skills:  Identifying & classifying	Scientific enquiry skills:  Identifying & classifying	Scientific enquiry skills:  Identifying & classifying	Scientific enquiry skills:  Identifying & classifying	Scientific enquiry skills:  Identifying & classifying
Working scientifically skills:  Observing & measuring  Asking questions	Working scientifically skills:  Interpreting & communicating results	Working scientifically skills:  Recording data	Working scientifically skills:  Observing & measuring	Working scientifically skills:  Asking questions	Working scientifically skills:  Making predictions  Observing & measuring

Year 1 – Plants



Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7	Lesson 8
Key question: What is a plant?	Key question: What are the parts of a plant called?	Key question: Do plants grow?	Key question: Do wild plants grow in our local area?	Key question: How can we group plants?	Key question: Can we eat plants?	Key question: Are trees a type of plant?	Key question: What is a leaf?
Learning objective: I can identify different plants.	Learning objective: I can identify and describe the basic structure of plants.	Learning objective: I understand that plants can grow.	Learning objective: I can name a variety of common wild plants.	Learning objective: I can sort a variety of plants.	Learning objective: I can name a variety of common plants that we can eat.	Learning objective: I can identify, name and describe the basic structure of deciduous and evergreen trees.	Learning objective: I can identify and classify.
Success criteria: By the end of this lesson, children will be able to identify what a plant is and select plants from a selection of objects.	Success criteria: By the end of this lesson, children will be able to label the basic parts of a plant.	Success criteria: By the end of this lesson, children will be able to explain that plants grow from different seeds and they continue to grow and change.	Success criteria: By the end of this lesson, children will be able to name a variety of plants that grow wildly and search for them in the school grounds/local area.	Success criteria: By the end of this lesson, children will be able to sort plants based on their features.	Success criteria: By the end of this lesson, children will be able to identify plants that we can eat.	Success criteria: By the end of this lesson, children will be able to explain that trees are a type of plant and identify the basic features of a tree. Children will also begin to identify deciduous and evergreen trees.	Success criteria: By the end of this lesson, children will be able to identify similarities and differences between different leaves. Children will also be able to sort leaves based on their appearance.

asking simple questions and recognising that they can be answered in different ways;	observing closely , using simple equipment ;	performing simple tests ;	identifying and classifying ;	using their observations and ideas to suggest answers to questions;	gathering and recording data to help in answering questions.
Lesson 5	Lesson 3 Lesson 4 Lesson 5		Lesson 1 Lesson 2	Lesson 7	

Year 2 – Uses of Everyday Materials



Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What are materials?	Key question: How are materials different?	Key question: What are objects made from?	Key question: How can we sort materials?	Key question: Which material would be best for an umbrella?	Key question: Which material would be best for curtains?
Learning objective: I can identify a variety of everyday materials.	Learning objective: I can describe the physical properties of a variety of everyday materials.	Learning objective: I can distinguish between an object and the material from which it is made.	Learning objective: I can compare and group together a variety of everyday materials on the basis of their simple physical properties.	Learning objective: I can investigate the properties of different materials.	Learning objective: I can investigate the properties of different fabrics.
Success criteria: By the end of this lesson, children will be able to identify different materials.	Success criteria: By the end of this lesson, children will be able to describe the properties of different materials.	Success criteria: By the end of this lesson, children will be able to name objects and name the material from which they are made.	Success criteria: By the end of this lesson, children will be able to sort materials based on their physical properties.	Success criteria: By the end of this lesson, children will be able to investigate which material would be best to make an umbrella. Children will investigate which materials are waterproof, light and strong.	Success criteria: By the end of this lesson, children will be able to investigate which material would be best. Children will investigate which materials are see-through.

asking simple questions and recognising that they can be answered in different ways;	observing closely , using simple equipment ;	performing simple tests ;	identifying and classifying ;	using their observations and ideas to suggest answers to questions;	gathering and recording data to help in answering questions.
Lesson 3 Lesson 4	Lesson 3 Lesson 4 Lesson 5	Lesson 3 Lesson 4 Lesson 5	Lesson 1 Lesson 2	Lesson 3 Lesson 4 Lesson 5	Lesson 3 Lesson 4

Year 2 – Seasonal Changes

Lesson 1

Key question:

What changes occur between autumn and winter?

Learning objective:

I can observe and describe changes across the four seasons.

Success criteria:

I can observe and describe changes across the four seasons.

Children can describe the changes that occur from autumn to winter. They will be able to describe changes in weather, length of the day, and changes in nature and list events and activities that occur during autumn and winter.

Year 2 – Animals including Humans



Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7	Lesson 8
Key question: What do humans need?	Key question: What are offspring?	Key question: How do animals change as they grow into adults?	Key question: Do we all grow the same?	Key question: Do we need to exercise?	Key question: What is a healthy diet?	Key question: Why do we need to have good hygiene?	Key question: How can we feel better when we are ill?
Learning objective: I can find out about and describe the basic needs of animals, including humans, for survival.	Learning objective: I notice that animals, including humans have offspring which grow into adults.	Learning objective: I notice that animals, including humans have offspring which grow into adults.	Learning objective: I can gather and record data.	Learning objective: I can describe the importance for humans to exercise.	Learning objective: I can describe the importance for humans to eat the right amounts of different types of food.	Learning objective: I can describe the importance for humans to have good hygiene.	Learning objective: I can describe the importance for humans to look after themselves.
Success criteria: By the end of this lesson, children will be able to identify and explain the basic needs that humans need to survive.	Success criteria: By the end of this lesson, children will be able to identify the offspring of key animals.	Success criteria: By the end of this lesson, children will be able to explain how animals have babies and that they grow and change into adults.	Success criteria: By the end of this lesson, children will be able to plan and carry out an investigation to answer a given question.	Success criteria: By the end of this lesson, children will be able to explain why it is important for humans to exercise regularly.	Success criteria: By the end of this lesson, children will be able to describe a healthy diet for humans and explain the importance of eating a healthy diet.	Success criteria: By the end of this lesson, children will be able to explain how humans can have good hygiene and the importance of good hygiene.	Success criteria: By the end of this lesson, children will be able to identify things we can do to prevent illness and explain what we can do to feel better if we do become ill.

asking simple questions and recognising that they can be answered in different ways;	observing closely , using simple equipment ;	performing simple tests ;	identifying and classifying ;	using their observations and ideas to suggest answers to questions;	gathering and recording data to help in answering questions.
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	Lesson 4 Lesson 5	Lesson 4 Lesson 5	Lesson 1 Lesson 2 Lesson 3	Lesson 4 Lesson 5	Lesson 4 Lesson 5
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Year 2 – Living things and their habitats

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: Is it living, dead or never been alive?	Key question: What is a microhabitat?	Key question: How are habitats different around the world?	Key question: What conditions do woodlice prefer?	Key question: How are living things adapted to their habitat?	Key question: What is a food chain?
Learning objective: I can explore and compare the differences between living, dead, and things that have never been alive.	Learning objective: I can identify and name a variety of plants and animals in their habitats, including microhabitats.	Learning objective: I can identify and name various plants and animals in their habitats.	Learning objective: I can observe closely and use my observations to answer questions.	Learning objective: I can identify that most living things live in a habitat to which they are suited.	Learning objective: I can construct a simple food chain.
Success criteria: By the end of this lesson, children will be able to identify living things and things that have never been alive.	Success criteria: By the end of this lesson, children will be able to identify different microhabitats in their local area and identify living things that might live there	Success criteria: By the end of this lesson, children will be able to identify large habitats worldwide, identify differences and identify living things that might live there.	Success criteria: By the end of this lesson, children will be able to plan and investigate to determine which conditions woodlice prefer.	Success criteria: By the end of this lesson, children will be able to identify characteristics of some living things that make them best suited to their environment.	Success criteria: By the end of this lesson, children will be able to identify what some living things from a habitat eat and how they are linked to a food chain.
Scientific enquiry skills:  Identifying & classifying	Scientific enquiry skills:  Identifying & classifying	Scientific enquiry skills:  Researching	Scientific enquiry skills:  Pattern seeking	Scientific enquiry skills:  Pattern seeking	Scientific enquiry skills:  Researching
Working scientifically skills:  Asking questions	Working scientifically skills:  Interpreting & communicating results	Working scientifically skills:  Recording data	Working scientifically skills:  Recording data	Working scientifically skills:  Interpreting & communicating results	Working scientifically skills:  Interpreting & communicating results

Year 2 – Plants

Key question: Which plants can we eat?	Key question: Are all seeds the same?	Key question: What do plants need?	Key question: Where will they grow?	Key question: How do plants grow and change?
Learning objective: I can identify that fruit, vegetables and herbs are a type of plant that we eat.	Learning objective: I can observe and describe how seeds grow into mature plants.	Learning objective: I know what plants need to grow and stay healthy.	Learning objective: I know what plants need to grow and stay healthy.	Learning objective: I can explain the life cycle of plants.
Success criteria: By the end of this lesson, children will be able to name a variety of different plants that we can eat.	Success criteria: By the end of this lesson, children will be able to describe differences and similarities in different plant seeds.	Success criteria: By the end of this lesson, children will be able to identify what plants need to grow and explain what we need to do to keep them healthy.	Success criteria: By the end of this lesson, children will be able to plan an investigation to find where the best place is to grow cress seeds.	Success criteria: By the end of this lesson, children will be able to explain how plants grow and change throughout their life cycle.

asking simple questions and recognising that they can be answered in different ways;	observing closely , using simple equipment ;	performing simple tests ;	identifying and classifying ;	using their observations and ideas to suggest answers to questions;	gathering and recording data to help in answering questions.
	Lesson 1 Lesson 2 Lesson 3 Lesson 4 Lesson 5		Lesson 1 Lesson 2	Lesson 4	

Year 2 – Seasonal Changes

Lesson 2	Lesson 2
Key question: What changes occur between spring and summer?	Key question: How does the number of daylight hours change through the seasons?
Learning objective: I can observe and describe changes across the four seasons.	Learning objective: I can observe and describe changes across the four seasons. I can read the information in a bar chart.
Success criteria: I can observe and describe changes across the four seasons. Children can describe the changes that occur from spring to summer. They can describe changes in weather, length of the day, and changes in nature and list events and activities that occur during spring and summer. The children can read information presented in a table and bar chart.	Success criteria: I can observe and describe weather associated with the seasons and how the length of the day varies. Children will be able to explain how the length of the day varies in each season and draw a bar chart showing the average number of daylight hours in each season.

Year 3 – Animals including Humans

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Key question: How does our skeleton help us?	Key question: Do our bones affect what we can do?	Key question: What do our muscles do?	Key question: Do all animals have the same skeleton?	Key question: What types of nutrition do we need?
Learning objective: I can identify that humans have bones for support, protection and movement.	Learning objective: I can set up a simple practical enquiry. I can communicate my results.	Learning objective: I can identify that humans have muscles for support, protection and movement.	Learning objective: I can identify that some other animals have bones for support, protection and movement.	Learning objective: I understand that animals, including humans, need the right type of nutrition.
Success criteria: By the end of this lesson, children will be able to identify the names of some of the bones in the human body and understand that we need bones for support, protection and movement.	Success criteria: By the end of this lesson, children will be able to investigate a chosen question by planning out what they will do, gathering data and presenting their results.	Success criteria: By the end of this lesson, children will be able to identify how humans use muscles and understand that we need muscles for support, protection and movement.	Success criteria: By the end of this lesson, children will be able to identify differences in the skeleton in different animals. They will also be able to group animals based on whether they have a backbone.	Success criteria: By the end of this lesson, children will be able to identify the 5 main food types that humans need in order to have a healthy balanced diet.

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.
Lesson 2	Lesson 2	Lesson 2		Lesson 2	Lesson 2			

Year 3 – Forces and Magnets

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What is a force?	Key question: Do objects move the same on different surfaces?	Key question: How do magnetic forces work?	Key question: Which materials are magnetic?	Key question: Do magnets attract each other?	Key question: Are all magnets the same strength?
Learning objective: I can compare how different things move.	Learning objective: I can plan and conduct a fair test to compare how objects move on different surfaces.	Learning objective: I can explore how magnetic forces act at a distance.	Learning objective: I can compare and group various everyday materials based on whether they are attracted to a magnet.	Learning objective: I can predict whether two magnets will attract or repel each other, depending on which poles are facing.	Learning objective: I can record my findings using simple scientific vocabulary. I can use my results to draw simple conclusions.
Success criteria: By the end of this lesson, children will be able to describe pushes and pulls as a type of force and give examples. They will be able to explain how different objects move using these forces.	Success criteria: By the end of this lesson, children will be able to discuss how the object moved on different surfaces. They will be able to explain how they planned a fair test.	Success criteria: By the end of this lesson, children will be able to explain that there are forces that require contact and forces that do not. They will be able to describe magnetic force as non-contact and that it acts at a distance.	Success criteria: By the end of this lesson, children will be able to identify a range of magnetic and non-magnetic materials that they have identified from their explorations.	Success criteria: By the end of this lesson, children will be able to describe magnets as having two poles – north and south. They will be able to explain how opposite poles attract and the same poles repel.	Success criteria: By the end of this lesson, children will be able to describe how not all magnets have the same strength. They will be able to use the results from their investigation to explain how they know.

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.
	Lesson 2	Lesson 4 Lesson 5	Lesson 2	Lesson 3	Lesson 2	Lesson 2	Lesson 2 Lesson 5	Lesson 2 Lesson 5

Year 3 – Rocks

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What are rocks?	Key question: Are all rocks the same?	Key question: How are rocks formed?	Key question: Which rocks make up the Earth?	Key question: What are soils?	Key question: How are fossils formed?
Learning objective: I can compare and group together different kinds of rocks on the basis of their appearance.	Learning objective: I can compare and group together different kinds of rocks on the basis of their physical properties.	Learning objective: I can explain how some rocks are formed.	Learning objective: I can explain how the Earth is made up of different layers of rocks and soils	Learning objective: I can investigate different soils.	Learning objective: I can describe how fossils are formed when things that have lived are trapped within rock.
Success criteria: By the end of this lesson, children will be able to identify what a rock is and group together rocks based on their appearance.	Success criteria: By the end of this lesson, children will be able to plan and carry out an investigation in order to group rocks together based on their physical properties.	Success criteria: By the end of this lesson, children will be able to discuss the three different types of rock and begin to explain how they are formed.	Success criteria: By the end of this lesson, children will be able to describe the different layers of the Earth.	Success criteria: By the end of this lesson, children will be able to identify different types of soils and describe their properties.	Success criteria: By the end of this lesson, children will be able to explain what a fossil is and describe how a fossil is formed in rock.

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.
Lesson 5	Lesson 2 Lesson 5	Lesson 1 Lesson 2 Lesson 5		Lesson 2 Lesson 5	Lesson 2	Lesson 5		

Year 3 - Light

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What is a light source?	Key question: What is reflected light?	Key question: Is the Sun dangerous?	Key question: What is a shadow?	Key question: Does moving the light source above the object make the object's shadow longer?	Key question: How do mirrors work?
Learning objective: I can recognise that there needs to be light in order to see things and that darkness is the absence of light.	Learning objective: I can notice that light is reflected from surfaces.	Learning objective: I can recognise that light from the Sun can be dangerous and that there are ways to protect your eyes and skin from the Sun.	Learning objective: I can recognise that shadows are formed when light from a light source is blocked by an opaque object. I know that shadows take on the shape of the opaque object. I can predict where a shadow will form in relation to an opaque object and a light source.	Learning objective: I can find patterns in the way that the length of shadows change.	Learning objective: I know that light is reflected from surfaces (mirrors).
Success criteria: By the end of this lesson, children will be able to identify natural and man-made light sources; explain what darkness is and sort light sources according to criteria.	Success criteria: By the end of this lesson, children will be able to identify reflective materials and understand how light is reflected. They will be able to design a poster to encourage younger children to wear reflective materials at night to keep them safe.	Success criteria: By the end of this lesson, children will be able to explain why the Sun can be harmful to our eyes if we look at it directly. They will be able to identify ways in which we can protect ourselves from sun damage.	Success criteria: By the end of this lesson, children will be able to predict which materials make the best/worst shadows using the knowledge gained through their own exploration.	Success criteria: By the end of this lesson, children will be able to talk about the relationship between the height/angle of the light source and the length of the shadow. They will be able to use the results from their investigation to explain how they know.	Success criteria: By the end of this lesson, children will be able to explain how mirrors reflect light. Through their explorations, they will have an understanding of how light behaves when it is reflected.

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.
Lesson 5	Lesson 5	Lesson 5	Lesson 5	Lesson 4		Lesson 5	Lesson 4	Lesson 4 Lesson 5

Year 3 – Plants

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What do plants need?	Key question: Do the different parts of the plant have a function?	Key question: What are roots?	Key question: How do plants transport water?	Key question: How do plants reproduce?	Key question: How are seeds dispersed?
Learning objective: I can explore the requirements of plants for life and growth.	Learning objective: I can identify, locate and describe the function of different parts of flowering plants.	Learning objective: I can identify, locate and describe the function of the roots in plants.	Learning objective: I can investigate the way in which water is transported within plants.	Learning objective: I can explore the part that flowers play in the life cycle of flowering plants, including pollination.	Learning objective: I can explore the part that flowers play in the life cycle of flowering plants, including seed formation and seed dispersal.
Success criteria: By the end of this lesson, children will be able to plan an investigation to see what plants need to grow.	Success criteria: By the end of this lesson, children will be able to identify the different parts of the plants and explain their function.	Success criteria: By the end of this lesson, children will be able to identify where the roots are on different plants and explain their function.	Success criteria: By the end of this lesson, children will be able to plan and carry out an investigation to explore how water is transported through plants.	Success criteria: By the end of this lesson, children will be able to identify the parts of a flowering plant that play a part in pollination.	Success criteria: By the end of this lesson, children will be able to explain how seeds are formed in flowering plants and describe the different ways in which they can be dispersed.

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.
Lesson 4	Lesson 1 Lesson 4	Lesson 4		Lesson 4	Lesson 4			

Year 4 – States of Matter

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7
Key Question: What are solids, liquids and gases?	Key Question: Do all liquids behave the same?	Key Question: What is a thermometer used for?	Key Question: How do materials change state?	Key Question: What is the water cycle?	Key Question: Do all liquids evaporate?	Key Question: Does temperature affect the rate of evaporation?
Learning objective: I can identify solids, liquids and gases.	Learning objective: I can make careful observations. I can communicate my results.	Learning objective: I can take accurate measurements using thermometers.	Learning objective: I can observe that some materials change state when they are heated or cooled.	Learning objective: I can identify the part played by evaporation and condensation in the water cycle.	Learning objective: I can plan and carry out a fair test.	Learning objective: I can associate the rate of evaporation with temperature.
Success criteria: By the end of this lesson, children will be able to identify and group solids, liquids and gases. They will be able to describe the characteristics of each state of matter including how the particles are organised.	Success criteria: By the end of this lesson, children will be able to plan an investigation to test the viscosity and taste of different ketchups. They will be able to communicate their results in the form of a text, letter or email.	Success criteria: By the end of this lesson, children will be able to take accurate measurements using a thermometer. They will be able to use their knowledge to make sensible predictions about temperature.	Success criteria: By the end of this lesson, children will be able to explain that heating and cooling can change the state of materials. After conducting an investigation on the melting point of chocolate, children will be able to use their results to draw conclusions and write a report.	Success criteria: By the end of this lesson, children will be able to explain the water cycle and identify the part played by evaporation and condensation in the cycle. They will produce a comic strip to explain the journey of a water droplet in the cycle, using scientific vocabulary to describe each process.	Success criteria: By the end of this lesson, children will be able to identify the key variables when planning a fair test and state which variable will change and which variables will be controlled/kept the same. The children will be able to draw conclusions and communicate their results.	Success criteria: By the end of this lesson, children will be able to explain the relationship between temperature and the rate of evaporation. They will be able to apply their science knowledge to suggest conditions that will accelerate or decelerate the rate of evaporation.

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.
	Lesson 2 Lesson 4 Lesson 6	Lesson 2 Lesson 3 Lesson 4 Lesson 6 Lesson 7	Lesson 2 Lesson 3 Lesson 4 Lesson 6 Lesson 7	Lesson 4 Lesson 6	Lesson 2 Lesson 4 Lesson 6 Lesson 7	Lesson 6 Lesson 7	Lesson 6 Lesson 7	Lesson 6 Lesson 7

Year 4 – Sound

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7
Key question: How are sounds made?	Key question: What is a sound vibration?	Key question: What is inside your ear?	Key question: Does the size of the pinna affect the volume of the sound?	Key question: What is pitch?	Key question: What is volume?	Key question: Which material is best at muffling sound?
Learning objective: I can identify how sounds are made, associating some of them with something vibrating.	Learning objective: I can recognise that vibrations from sounds travel through a medium to the ear.	Learning objective: I can recognise that vibrations from sounds travel to the ear.	Learning objective: I can investigate if the size of the pinna affects the volume of the sound. I can report my findings from enquires.	Learning objective: I can find patterns between the pitch of a sound and features of the object that produced it	Learning objective: I can find patterns between the volume of a sound and the strength of the vibrations that produced it.	Learning objective: I can set up simple fair tests.
Success criteria: By the end of this lesson, children will be able to explain how sound is made and identify what is vibrating when sounds are made.	Success criteria: By the end of this lesson, children will be able to explain how vibrations from sounds travel through either solids, liquids or gases to the ear. They will use their knowledge of particle structure to explain why sound travels more quickly through solids when compared to gases.	Success criteria: By the end of this lesson, children will be able to describe the parts and functions of the outer, middle and inner ear.	Success criteria: By the end of this lesson, children will have planned a fair test investigation to answer the question: does the size of the pinna affect the volume of the sound. They will draw conclusions from the data collected and communicate the findings from their enquires.	Success criteria: By the end of this lesson, children will be able to explain what pitch is. They will have created a set of pan pipes and be able to describe the relationship between the length of the pipe and the pitch of the note.	Success criteria: By the end of this lesson, children have used a variety of instruments to explore how they can alter the volume. They may have used a data logger to record volume in decibels and be able to describe the relationship between the volume of a sound and the strength of the vibration.	Success criteria: After planning and conducting an investigation in response to the question – which material is the best at muffling sound, children communicate their findings by writing a letter.

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.
Lesson 7	Lesson 4 Lesson 7	Lesson 6 Lesson 7	Lesson 7		Lesson 1 Lesson 4 Lesson 6 Lesson 7	Lesson 4 Lesson 7	Lesson 4	Lesson 5 Lesson 6

Year 4 – Animals including Humans

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Key question: What is the digestive system?	Key question: Why are teeth different shapes?	Key question: Which drink causes the most tooth decay?	Key question: What is a food chain?	Key question: How do I play the food chain game?
Learning objective: I can name the basic parts of the digestive system and describe their functions.	Learning objective: I can identify the different teeth and describe their functions.	Learning objective: I can plan and carry out an investigation. I can communicate my results.	Learning objective: I can construct and interpret a variety of food chains. I understand what producers, predators and prey are.	Learning objective: I can construct and interpret a variety of food chains. I understand what producers, predators and prey are
Success criteria: By the end of this lesson, children will be able to name twelve main parts of the digestive system and describe their basic functions. They will be able to label a diagram and use scientific vocabulary for description.	Success criteria: By the end of this lesson, children will be able to name different teeth and relate the shape of the teeth to the function.	Success criteria: By the end of this lesson, children will be able to plan and conduct a fair test investigation to answer the question; which drink causes the most tooth decay? They will make accurate observations and use this information to communicate their results in the form of a text, letter or email message.	Success criteria: By the end of this lesson, children will be able to construct and interpret a variety of food chains. They will be able to use the terms herbivore, carnivore and omnivore accurately and identify animals in each of these groups. They will construct food chains and be able to identify the producer, prey and predator in each chain.	Success criteria: By the end of this lesson, children will be able to use their knowledge of food chains to correctly construct food chains. After playing the game, children will be able to identify the producer and prey or predator in each food chain.

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Year 4 – Electricity

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Key question: Which appliances use electricity?	Key question: How can I make a simple circuit?	Key question: Why don't some circuits work?	Key question: How can we test if a material is a conductor or an insulator?	Key question: How do switches affect a circuit?
Learning objective: I can identify common appliances that use electricity.	Learning objective: I can construct a simple circuit and name the parts of the circuit	Learning objective: I can identify if a bulb will light up in a circuit.	Learning objective: I can recognise common conductors and insulators.	Learning objective: I can investigate switches.
Success criteria: By the end of this lesson, children will be able to recognise and group which electrical appliances run off mains electric and which are battery powered. They will understand how mains electricity is transported from power stations and know why batteries run out of charge.	Success criteria: By the end of this lesson, children will be able to construct a variety of simple circuits using different components.	Success criteria: By the end of this lesson, children will be able to predict which circuits will work and which won't. They will be able to provide an explanation as to why a circuit will or won't work and make suggestions how a circuit can be fixed.	Success criteria: By the end of this lesson, children will recognise common conductors and insulators. They will plan and conduct an experiment to answer the question - How can we test if a material is a conductor or an insulator? They will use knowledge gained in the lesson to explain how insulators and conductors are used in everyday life.	Success criteria: By the end of this lesson, children will be able to explain how switches affect a circuit. They will use this knowledge to design and make a switch to control the flow of electricity in a series circuit and light a bulb.

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.
Lesson 4	Lesson 4	Lesson 4		Lesson 5	Lesson 5	Lesson 4		Lesson 5

Year 4 – Living things and their habitat

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What are the seven life processes?	Key question: How can we sort and group animals?	Key question: What are vertebrate animals?	Key question: Which living things can be found in the local area?	Key question: What is a classification key?	Key question: How is our environment changing?
Learning objective: I can develop descriptions using relevant scientific language and vocabulary.	Learning objective: I can recognise that living things can be grouped in various ways.	Learning objective: I can recognise that living things can be grouped in various ways.	Learning objective: I can explore and name various living things in my local environment.	Learning objective: I can explore and use classification keys to help group, identify and name various living things in my local environment.	Learning objective: I can recognise that environments can change and sometimes pose dangers to living things.
Success criteria: By the end of this lesson, children will be able to name each of the seven life processes using the acronym MRS GREN. They will be able to explain how animals and plants complete each process and distinguish living from non-living objects using this knowledge.	Success criteria: By the end of this lesson, children will be able to name the five main animal groups. They will be able to look at an animal's characteristics and sort it into the correct group. They will be able to use the terms herbivore, omnivore, and carnivore correctly and sort animals according to their diet. They will be able to think of their own criteria for sorting and grouping animals.	Success criteria: By the end of this lesson, children will be able to sort groups of animals into vertebrates and invertebrates. They will use the knowledge gained in the lesson to produce a leaflet to explain the difference between vertebrate and invertebrate animals.	Success criteria: By the end of this lesson, the children will have explored their school grounds and local area and used identification keys to help name a variety of living things, including minibeasts. As a class, the children will create an information booklet about the living things in the school environment.	Success criteria: By the end of this lesson, children will be able to use a classification key to identify living things. They will use this knowledge to construct their own key to identify living things found in their local area.	Success criteria: By the end of this lesson, children will understand the effect that human activity has on the environment. They can produce a balanced argument in response to the question: Should litter be banned?

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.
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Year 5 – Living things and their habitat

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What is a naturalist?	Key question: How do mammals reproduce?	Key question: Do animals reproduce in the same way?	Key question: How do plants reproduce?	Key question: What is a life cycle?	Key question: What are the stages in the life cycle of a plant?
Learning objective: I can compare similarities and differences between how animals and plants perform the seven life processes. I can discuss the work of a naturalist	Learning objective: I can explain how mammals reproduce.	Learning objective: I can explain how animals reproduce.	Learning objective: I understand reproduction in plants.	Learning objective: I can describe the differences in the life cycles of mammals, amphibians, reptiles, insects and birds.	Learning objective: I can explain the life cycle of plants.
Success criteria: By the end of this lesson, children will be able to name each of the seven life processes using the acronym MRS GREN. After completing research, they can discuss the work of a well-known naturalist or animal behaviourist	Success criteria: By the end of this lesson, children will be able to name the five animal groups and understand that the way each of those groups reproduces may be different. They will be able to explain how mammals reproduce and understand that the gestation periods for different mammals may vary.	Success criteria: By the end of this lesson, children will be able to name the five animal groups and understand that the way each of those groups reproduces may be different. They will be able to explain which groups of animals lay eggs and which do not and compare groups of animals that look after their young with those that don't.	Success criteria: By the end of this lesson, children will be able to explain the process of pollination and fertilisation. They will be able to label parts of a flower and understand the purpose of each part. They will also be able to explain seed dispersal and name some seed dispersal methods.	Success criteria: By the end of this lesson, children will be able to describe the differences and similarities in the life cycles of mammals, amphibians, insects and birds.	Success criteria: By the end of this lesson, children will be able to describe and order the stages in the life cycle of a strawberry and/or dandelion plant. They will compare the similarities and differences between the two cycles.

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 a 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.
		Lesson 2		Lesson 2	

Year 5 – Forces

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What is gravity?	Key question: What is friction?	Key question: Whose shoe has the greatest friction?	Key question: What is air resistance?	Key question: What is water resistance?	Key question: What are gears, levers and pulleys?
Learning objective: I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and falling objects.	Learning objective: I can identify the effect of friction between moving surfaces.	Learning objective: I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables. I can take measurements using a range of scientific equipment.	Learning objective: I can identify the effect of air resistance.	Learning objective: I can identify the effect of water resistance.	Learning objective: I can recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.
Success criteria: By the end of this lesson, children will be able to describe the force of gravity and talk about the work of Sir Isaac Newton. They will plan a fair test to answer the question; do objects fall at the same rate?	Success criteria: By the end of this lesson, children understand that friction is a force that acts between two surfaces or objects that are moving. They will be able to identify scenarios in which friction is a useful force and scenarios where friction is an unhelpful force.	Success criteria: By the end of this lesson, children will be able to plan an investigation to answer the question – whose shoe has the greatest friction? They will use their results to draw conclusions.	Success criteria: By the end of this lesson, children will understand that air resistance is a type of frictional force that slows an object down when travelling through air. They will plan an investigation to determine who can make the best plane, taking careful measurements and drawing conclusions about how streamlined the plane is and how this affects air resistance and therefore distance the plane will travel.	Success criteria: By the end of this lesson, children will be able to explain that water resistance is a type of frictional force. They will investigate which shapes have the greatest/least water resistance and write a conclusion.	Success criteria: By the end of this lesson, children will be able to describe how mechanisms use a smaller force to have a greater effect. They will be able to identify gears, levers and pulleys and give everyday examples for each.

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 a 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.
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Lesson 1 Lesson 3 Lesson 4	Lesson 1 Lesson 3 Lesson 4 Lesson 5	Lesson 1 Lesson 3		Lesson 1 Lesson 5	Lesson 1
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Year 5 – Earth and Space

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What are the names of the planets in the solar system?	Key question: How do we know the Earth is a sphere?	Key question: How long does it take for Earth (and other planets) to orbit the Sun once?	Key question: What is the largest object that orbits the Earth?	Key question: Why is there day and night on Earth?	Key question: Does the Moon change shape?
Learning objective: I can describe the planets in the solar system	Learning objective: I can describe the Sun, Earth and Moon as approximately spherical bodies .	Learning objective: I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system.	Learning objective: I can describe the movement of the Moon relative to the Earth.	Learning objective: I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	Learning objective: I can describe the movement of the Moon relative to the Earth.
Success criteria: By the end of this lesson, children will be able to name the planets in the solar system based on their distance from the Sun. They will understand that the Sun is a star (not a planet). They will know some facts about a chosen planet.	Success criteria: By the end of this lesson, children will be able to describe the Earth as a spherical body. They will understand how it was discovered that the Earth was round and not flat by the Greek Philosopher; Aristotle.	Success criteria: By the end of this lesson, children will be able to describe the movement of the Earth, and other planets relative to the Sun. They will understand that a year is the amount of time it takes for a planet to orbit the Sun once, and it is different for each planet. They will be able to complete a maths activity that links to the time taken for each planet to orbit the sun.	Success criteria: By the end of this lesson, children will be able to describe the movement of the Moon in relation to the Earth. They will learn that the Moon is the largest object that orbits the Earth and that we only see one side of the Moon from Earth. Children who complete the challenge activity, will research facts about the Moon.	Success criteria: By the end of this lesson, children will be able to explain why there is day and night on Earth. They will work in groups to plan a fair investigation to answer the question – What happens to the Sun during the day? They will make predictions and draw conclusions using scientific knowledge gained in the lesson.	Success criteria: By the end of this lesson, children will be able explain why the Moon appears to change shape. They will be able to describe the movement of the Moon relative to Earth and name some of the phases of the Moon.
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 a 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.
Lesson 5	Lesson 5	Lesson 5	Lesson 5	Lesson 5	Lesson 5

Year 5 – Properties and Changes of Materials

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7
Key question: What are the properties of solids, liquids and gases?	Key question: How can I describe the properties of materials?	Key question: Which materials make the best thermal insulators?	Key question: Which materials are magnetic?	Key question: Which materials are soluble and which are insoluble?	Key question: How can mixed materials be separated?	Key question: What is irreversible change?
Learning objective: I can compare and group materials according to whether they are solids, liquids or gases and name their properties.	Learning objective: I can describe the properties of materials using scientific vocabulary.	Learning objective: I can investigate the thermal insulation of different materials.	Learning objective: I can compare and group materials based on their response to magnets.	Learning objective: I know that some materials dissolve in a liquid to make a solution.	Learning objective: I can predict how I could separate mixtures.	Learning objective: I can explain why some changes are irreversible.
Success criteria: By the end of this lesson, children will be able to name examples of solids, liquids and gases, identifying the properties of each type of material. They will understand how states of matter change and name some of these processes.	Success criteria: By the end of this lesson, children will be able to describe the properties of materials using the scientific vocabulary taught in the lesson.	Success criteria: By the end of this lesson, children will be able to plan and conduct a fair test investigation to answer a question about thermal insulation. They will interpret their results and conclude using scientific vocabulary.	Success criteria: By the end of this lesson, children will be able to predict, test and group materials according to their magnetic properties.	Success criteria: By the end of this lesson, children will know that some materials dissolve in a liquid to make a solution. They will be able to explain the process of dissolving using scientific vocabulary (soluble, insoluble, solution) and understand that solutions have a saturation point.	Success criteria: By the end of this lesson, children will understand that they can separate some mixed materials through various processes (evaporation, filtering, sieving or using magnets). They will be able to predict how they could separate mixtures depending on the properties of the mixed materials.	Success criteria: By the end of the lesson, children will be able to identify the difference between irreversible and reversible change. They will be able to give examples of each type of change.
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 a 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.	
Lesson 3 Lesson 4	Lesson 3 Lesson 4	Lesson 3 Lesson 4	Lesson 3	Lesson 3		

Year 5 – Animals including Humans

Lesson 1	Lesson 2	Lesson 3	Lesson 4
Key question: How do humans change throughout their life?	Key question: How do we develop in the womb?	Key question: How do we change through puberty?	Key question: How do humans change as we become senior?
Learning objective: I can describe the human life cycle.	Learning objective: I understand how a foetus develops in the womb.	Learning objective: I can describe what happens when I am a teenager.	Learning objective: I can describe what happens when I am a senior.
Success criteria: By the end of this lesson, children will be able to name and describe the main stages of the human life cycle.	Success criteria: By the end of this lesson, children will be able to explain how the foetus grows in the womb at different stages.	Success criteria: By the end of this lesson, children will be able to explain what puberty is and how human bodies change during puberty.	Success criteria: By the end of this lesson, children will be able to explain what it means to be a senior and describe the changes we might face.

Year 6 – Living things and their habitats

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: How are animals classified?	Key question: What is a classification key?	Key question: How can we classify plants?	Key question: Is yeast a living microorganism?	Key question: What are the five main groups of microorganisms?	Key question: Who was Carolus Linnaeus?
Learning objective: I can describe how living things can be classified into broad groups.	Learning objective: I understand how I can use classification keys to help group, identify and name a variety of living things.	Learning objective: I can describe how living things can be classified into broad groups.	Learning objective: I understand that microorganisms are also living things.	Learning objective: I can describe how living things can be classified into broad groups.	Learning objective: I know that scientists have developed different ways to classify living things
Success criteria: By the end of this lesson, children will be able to sort animals into groups using different criteria; e.g. nutrition (omnivore, carnivore or herbivore; animal group (fish, amphibian etc); Vertebrate/invertebrate.	Success criteria: By the end of this lesson, children will be able to use a classification key to identify animals and create a key using yes/no questions to identify animals.	Success criteria: By the end of this lesson, children will be able to select criteria to use to sort plants into groups. They will be able to use the internet to research information about plants and sort them into groups based on their characteristics.	Success criteria: By the end of this lesson, children will be able to explain that microorganisms are living things and will have conducted an experiment to prove that yeast respire and is therefore a living microorganism.	Success criteria: By the end of this lesson, children will be able to name the five main groups scientist use to classify microorganisms. They will be able to give examples of some of the characteristics and features of each group.	Success criteria: By the end of this lesson, children will be able to explain who Carolus Linnaeus was and why he is an important scientist. In groups, they will create a presentation about his life and work.

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 a 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.
		Lesson 4		Lesson 4	Lesson 4

Year 6 – Animals including Humans

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: What is the circulatory system?	Key question: How does our heart work?	Key question: How does exercise affect my heart rate?	Key question: What does the blood transport around the body?	Key question: How can I live a healthy lifestyle?	Key question: What can damage our health?
Learning objective: I can identify and name the main parts of the human circulatory system.	Learning objective: I can identify and name the main parts of the heart.	Learning objective: I can investigate which activity increases my heart rate the most.	Learning objective: I can describe how water and nutrients are transported in humans.	Learning objective: I can identify how humans can live a healthy lifestyle.	Learning objective: I can identify how humans can live a healthy lifestyle.
Success criteria: By the end of this lesson, children will be able to name the main parts of the human circulatory system and explain how the system works.	Success criteria: By the end of this lesson, children will be able to name the main parts of the heart and explain how the heart pumps blood.	Success criteria: By the end of this lesson, children will be able to find their pulse, calculate their heart rate and investigate different activities to see which increases the heart rate.	Success criteria: By the end of this lesson, children will be able to explain how the blood plays a role in transporting nutrients and water around the body.	Success criteria: By the end of this lesson, children will be able to describe how we can keep healthy by exercising, eating a healthy diet and taking care of our hygiene.	Success criteria: By the end of this lesson, children will be able to identify different things that people do that can lead to them being unhealthy.

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 a degree of trust in results, in oral and written forms such as	identifying scientific evidence that has been used to support or refute ideas or arguments.
Lesson 3	Lesson 3	Lesson 3		Lesson 3	

Year 6 – Electricity

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Key question: How do I draw a scientific diagram of a circuit?	Key question: How does voltage in a circuit affect the brightness of a bulb?	Key question: How do I plan a fair test experiment to investigate variations in how components function?	Key question: How do I write a conclusion for my investigation?	Key question: What is renewable and non-renewable energy?
Learning objective: I can use symbols when drawing a simple circuit diagram	Learning objective: I can associate the brightness of a lamp with the number and voltage of cells used in the circuit.	Learning objective: I can investigate variations in how components function.	Learning objective: I can investigate variations in how components function and write a conclusion.	Learning objective: I can name renewable and non-renewable sources of energy.
Success criteria: By the end of this lesson, children will be able to construct and draw a variety of circuits using scientific symbols to represent each component. They will be able to look at a drawing of a circuit and work out if it will work or not.	Success criteria: By the end of this lesson, children will have conducted an investigation to discover the effect that increasing the voltage in a circuit has on the brightness of a bulb. They will be able to describe this relationship and draw conclusions.	Success criteria: By the end of this lesson, children will be able to plan and conduct a fair test investigation to determine variations in how components function in a circuit.	Success criteria: By the end of this lesson, children will be able to write a clear conclusion using the data collected in their investigation.	Success criteria: By the end of this lesson, children will have produced a leaflet to explain renewable and non-renewable energy.

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Lesson 2 Lesson 3	Lesson 2 Lesson 4	Lesson 4	Lesson 2	Lesson 2 Lesson 4	Lesson 4 Lesson 5

Year 6 – Light

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: How does light travel?	Key question: Which materials make the best reflectors?	Key question: How does the eye work?	Key question: How do shadows change during the day?	Key question: Why do objects look different in water?	Key question: How do mirrors work?
Learning objective: I can recognise that light appears to travel in straight lines.	Learning objective: I can 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. I can predict which materials make good reflectors.	Learning objective: I can 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. I can explain how the eye works.	Learning objective: I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. I can explain how shadows change during the day.	Learning objective: I can use the idea that light travels in straight lines to explain that we can see objects because they give out or reflect light into the eye.	Learning objective: I can 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.
Success criteria: By the end of this lesson, children will be able to identify light sources and draw an annotated, scientific diagram to explain how light travels in straight lines from a light source.	Success criteria: By the end of this lesson, children will be able to identify reflective materials and understand how light is reflected. They will be able to predict which materials make good reflectors and discuss the properties of these materials.	Success criteria: By the end of this lesson, children will be able to explain how light, from a light source is reflected from an object and enters the eye. They will be able to name/label parts of the eye (and talk about their functions).	Success criteria: By the end of this lesson, children will have planned a fair investigation to answer the question - how do shadows change during the day? They will be able to draw a conclusion using data collected in their investigation.	Success criteria: By the end of this lesson, children will be able to explain why objects in water appear to be bent. They will be able to explain the difference between reflection and refraction.	Success criteria: By the end of this lesson, children will be able to explain how mirrors reflect light. Through their explorations, they will understand how light behaves when it is reflected. They are able to draw a diagram to show the path of reflected light.

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Lesson 4	Lesson 4	Lesson 4	Lesson 2	Lesson 4	

Year 6 – Evolution and Inheritance

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
Key question: How are plants adapted to their environment?	Key question: How are animals adapted to their environment?	Key question: What is natural selection and how does this lead to evolution?	Key question: How do adaptations lead to evolution?	Key question: What characteristics can you inherit from your parents?	Key question: How can fossils help us explain evolution?
Learning objective: I can identify how plants are adapted to their environment.	Learning objective: I can identify how animals are adapted to their environment.	Learning objective: I can explain natural selection and how it may lead to evolution.	Learning objective: I can explain how adaptations may lead to evolution.	Learning objective: I can recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.	Learning objective: I can recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
Success criteria: By the end of this lesson, children will be able to explain what adaptation is. They will be able to explain how cacti are adapted to live in hot/dry conditions. Some children will also be able to explain the features and adaptations of other plants.	Success criteria: By the end of this lesson, children will explain how their chosen animal is adapted to its environment.	Success criteria: By the end of this lesson, children will be able to explain what natural selection is using the peppered moth as an example. They will understand how adaptation and natural selection lead to species changing (evolving) over time in order to survive.	Success criteria: By the end of this lesson, children will be able to explain how adaptations lead to evolution. They will plan and investigate to answer the question: 'Which beak is better adapted to pick up each seed?'	Success criteria: By the end of this lesson, children will be able to explain that genetic traits are passed on from parents to offspring. They will be able to list characteristics that are possible to inherit and characteristics that aren't.	Success criteria: By the end of this lesson, children will be able to explain how fossils tell us about evolution.

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Lesson 4	Lesson 4			Lesson 4	Lesson 3 Lesson 4 Lesson 6