

St. Mary's Catholic Primary School

Science Overview

Year 1	My Body	I dentifying animals	Everyday materials	I dentifying Plants	Seasonal changes
Year 2	Exploring Everyday Materials	Growth and survival	Super Scientists	Living in Habitats	Growing Plants
Year 3	Rocks, Fossils and Soils	Light and Shadow	How Plants Grow	Forces and Magnets	Health and Movement
Year 4	Circuits and Conductors	Changing Sound	States of Matter	Eating and Digestion	Living in Environments
Year 5	Life Cycles	Classifying Organisms	Properties and Changes of Materials	Earth and Space	Forces in Action
Year 6	Changing Circuits	Seeing Light	Healthy Bodies	Evolution and Inheritance	Changes and Reproduction

Year 1 Objectives	Schemes of work				
	Identifying Plants	Identifying Animals	My Body	Every day Materials	Seasonal Changes
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					
identify and name a variety of common wild and garden plants, including deciduous and evergreen trees					
identify and describe the basic structure of a variety of common flowering plants, including trees					
identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals					
identify and name a variety of common animals that are carnivores, herbivores and omnivores					
describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)					
identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense					
distinguish between an object and the material from which it is made					

identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock					
describe the simple physical properties of a variety of everyday materials					
compare and group together a variety of everyday materials on the basis of their simple physical properties					
observe changes across the four seasons					
observe and describe weather associated with the seasons and how day length varies					

**Year 1 Overview
Objectives**

**Identifying
plants**

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions
- identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- identify and describe the basic structure of a variety of common flowering plants, including trees

**Identifying
animals**

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- identifying and classifying
- 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)
My Body	<ul style="list-style-type: none"> • 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 • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense
Every day materials	<ul style="list-style-type: none"> • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • distinguish between an object and the material from which it is made • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock • describe the simple physical properties of a variety of everyday materials • compare and group together a variety of everyday materials on the basis of

	their simple physical properties
Seasonal changes	<ul style="list-style-type: none">• 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• observe changes across the four seasons• observe and describe weather associated with the seasons and how day length varies

Year 2 Objectives	Schemes of Work				
	Living in Habitats	Growing Plants	Growth and Survival	Exploring Everyday Materials	Super Scientists
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					
explore and compare the differences between things that are living, dead, and things that have never been alive					
identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other					

identify and name a variety of plants and animals in their habitats, including microhabitats					
describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food					
observe and describe how seeds and bulbs grow into mature plants					
find out and describe how plants need water, light and a suitable temperature to grow and stay healthy					
notice that animals, including humans, have offspring which grow into adults					
find out about and describe the basic needs of animals, including humans, for survival (water, food and air)					
describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene					
identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses					
find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching					

Year 2 Overview Objectives

Living in Habitats

- observing closely, using simple equipment
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- explore and compare the differences between things that are living, dead, and things that have never been alive
- identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other
- identify and name a variety of plants and animals in their habitats, including 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

Growing Plants

- 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

	<ul style="list-style-type: none">• explore and compare the differences between things that are living, dead, and things that have never been alive• identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other• identify and name a variety of plants and animals in their habitats, including micro-habitats• observe and describe how seeds and bulbs grow into mature plants• find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
Growth and survival	<ul style="list-style-type: none">• asking simple questions and recognising that they can be answered in different ways• 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• notice that animals, including humans, have offspring which grow into adults• find out about and describe the basic needs of animals, including humans, for survival (water, food and air)• describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

<p>Explo ring Every day Mate rials</p>	<ul style="list-style-type: none"> • 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 • identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
<p>Super Scientists</p>	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions • describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

Year 3 Objectives	How Plants Grow	Forces and Magnets	Rocks, Fossils and Soils	Light and Shadow	Health and Movement
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					

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 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					
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					
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 an opaque object					

find patterns in the way that the size of shadows change					
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					

Year 3 Overview Objectives

How Plants Grow

- 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
- identify and describe the functions of different parts of flowering plants: roots,

	<p>stem/trunk, leaves and flowers</p> <ul style="list-style-type: none"> • 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
<p>Forces and Magn ets</p>	<ul style="list-style-type: none"> • 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 • 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

- using straightforward scientific evidence to answer questions or to support their findings
- 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

Year 3 Overview Objectives

Rocks, Fossils and Soils

- 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
- 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
- using straightforward scientific evidence to answer questions or to support their findings
- 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

Light and Shadows

- 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 straightforward scientific evidence to answer questions or to support their findings
- 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

Health and Move ment

- asking relevant questions and using different types of scientific enquiries to answer them
- 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
- identifying differences, similarities or changes related to simple scientific ideas and processes
- 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

Year 4 Objectives	Living In Envrioments	Eating and Digestion	States of Matter	Changi ng Sound	Circuit s and Conduc tors
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					
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					
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					
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					

Year 4 Overview Objectives

Living in Environ ments

- 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
- identifying differences, similarities or changes related to simple scientific ideas and processes
- 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

Eating and Digestion

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- 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
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings
- 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

State s of Matter

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- 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
- using straightforward scientific evidence to answer questions or to support their findings
- 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 ($^{\circ}\text{C}$)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

Year 4 Overview Objectives

Changing Sound

- 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
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- using straightforward scientific evidence to answer questions or to support their findings
- 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

	<ul style="list-style-type: none">• 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
Circuit s and Conduc tors	<ul style="list-style-type: none">• 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• recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables• 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

- 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

Year 5 Objectives	Classifying Organisms	Properties and Changes of Materials	Earth and Space	Forces in Action	Life 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 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					

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 how living things are classified into broad groups according to common observable characteristics and based on similarities and differences including microorganisms, plants and animals					
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					
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					
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					
give reasons for classifying plants and animals based on specific characteristics					

Year 5 Overview Objectives

Classifying Organisms

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- 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
- 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

Properties and changes of materials

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- 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
- 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

**Year 5 Overview
Objectives**

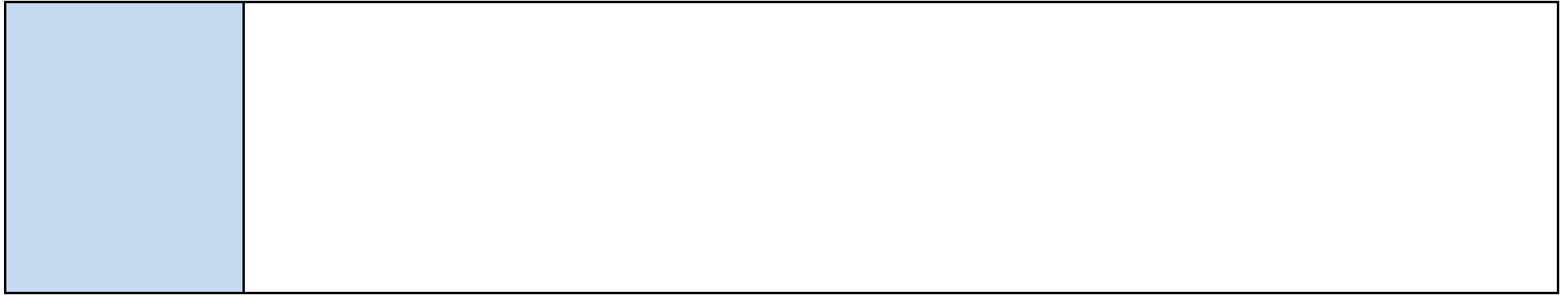
**Earth and
Space**

- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- 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

**Forces in
Action**

- 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
- 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
- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object

	<ul style="list-style-type: none">• 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
Life Cycles	<ul style="list-style-type: none">• 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• 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• 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



Year 6 Objectives	Changes & Reproduction	Healthy Bodies	Evolution and Inheritance	Seeing Light	Changing Circuits
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					

describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, 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					
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 the changes as humans develop to old age					

Year 6 Overview Objectives

Changes & Reproduction

- 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
- describe the changes as humans develop to old age

Healthy Bodies

- 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
- 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
- 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

Evolution and Inheritance

- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- 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
- 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

Year 6 Overview Objectives

Seeing Light

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- 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
- 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

Changi ng Circuit

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- 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
- associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit

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- 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