

PROGRESSION

MAP FOR

SCIENCE

2023-2024

UNIT 1 AUTUMN 1 (06.09.23-20.10.23)

SEASONS/LIGHT/EARTH&SPACE

UNIT 2 AUTUMN 2 (30.10.23-21.12.23)

EVERYDAY MATERIALS/ROCKS/STATES OF MATTER

UNIT 3 SPRING 1 (08.01.24-16.02.24)

PLANTS

UNIT 4 SPRING 2 (26.02.24-28.03.24)

LIVING THINGS/EVOLUTION/INHERITANCE

UNIT 5 SUMMER 1 (15.04.24-24.05.24)

ANIMALS INCLUDING HUMANS

UNIT 6 SUMMER 2 (03.06.24-19.07.24)

FORCES/SOUND/ELECTRICITY

UNIT 1 (AUTUMN 1 - 06.09.23-20.10.23)

SEASONAL CHANGES / LIGHT / EARTH AND SPACE

F1	<ul style="list-style-type: none">• Notice and know seasonal changes.• Name some features of the weather.• Know that plants change during the seasons.• Know that animals change during the seasons. WS – Exploring, stating differences, questioning
F2	<ul style="list-style-type: none">• Notice and know the difference between night and day.• Know that the sun is out in the day and the moon comes out at night.• Know the names of the four seasons.• Notice, know and describe seasonal changes. WS – Exploring, stating differences, questioning
YEAR 1	<ul style="list-style-type: none">• Be able to label eyes on a human body.• Observe changes across the four seasons.• Know the weathers that the seasons bring.• Know that the length of day varies within the seasons. WS – Make charts and tables about the weather, make displays about weather around the world
YEAR 2	<ul style="list-style-type: none">• Explore the weather within the four seasons in more depth.• How day length varies during the seasons.• How sunrise and sunset effects available light.• Know that seasons vary all over the world. WS – Make records, observations and displays
YEAR 3	<ul style="list-style-type: none">• Know that light is needed to see.• Know that light is reflected off surfaces.• Know that looking at the sun is dangerous.• Know how shadows and their patterns are formed. WS – Create experiments to show how shadow patterns change
YEAR 4	<ul style="list-style-type: none">• Know how our Solar system was created.• Know the names of the Planets in our Solar System.• Know facts about the Earth, Sun and Moon.• Know that the planets are spherical objects. WS – Research, make models and diagrams
YEAR 5	<ul style="list-style-type: none">• Know how the Sun, Moon and Earth move around each other.• Know how day and night are created.• Know that there is a northern and a southern hemisphere.• Know that the planets spin on an axis. WS – Create sundials and research Stonehenge
YEAR 6	<ul style="list-style-type: none">• Know that light travels in lines.• Know that objects give off or reflect light.• Know that light travels from its source to an object and then to the eyes.• Know that light appears differently in rainbows and on the surface of soap bubbles. WS – Create a periscope
YEAR 7	Light waves and waves in matter. Speed of light. Explain imaging in mirrors. The human eye. Colours and the different frequencies of light.

UNIT 2 (AUTUMN 2 - 30.10.23-21.12.23)

EVERYDAY MATERIALS / ROCKS / STATES OF MATTER

F1	<ul style="list-style-type: none">• How to respect my environment.• Notice the similarities and differences between different materials.• Use my senses to find out about materials.• Name some different materials WS – Exploring, stating differences and questioning
F2	<ul style="list-style-type: none">• Notice the differences in their environment by what they can feel, hear and see.• Know that objects are made of different things suitable to their use.• Know that some things are man-made and some are natural.• Know the names of some common materials around them. WS – Exploring, stating differences and questioning
YEAR 1	<ul style="list-style-type: none">• Know what is meant by a physical feature.• Know what an object is made of –wood, plastic, glass, metal, water, rock.• Know that things with different properties are used for different things.• Grouping things by their physical properties. WS – Perform simple tests and decide on suitable materials
YEAR 2	<ul style="list-style-type: none">• Suitability of materials – wood, plastic, metal, glass, brick, rock, paper, cardboard.• Know that solids can be squashed, bent, stretched and twisted.• Know that some materials are transparent.• Know that materials can be flexible or rigid. WS – compare materials, research people such as John Dunlop, Charles Macintosh, John McAdam
YEAR 3	<ul style="list-style-type: none">• Know the different appearance and properties of rocks.• Know how fossils are formed.• Know that soil is made from rock and organic matter.• Know how minerals helped form our planet. WS – Observing differences, using a microscope and magnifying glass
YEAR 4	<ul style="list-style-type: none">• Know that all matter can exist as solid, liquid or gas.• Know that states of matter can change with change of temperature.• Know that temperature is measured in Celsius.• Know the meaning of the terms Evaporation and Condensation. WS – Notice and measure how things evaporate over time
YEAR 5	<ul style="list-style-type: none">• Know the terms hardness, solubility, transparency and conductivity• Know that a substance can dissolve to create a substance and this is reversible• Know the terms filtering, sieving and evaporating• Know which changes in state are non-reversible WS – Use baking to explore changes in matter, research chemical changes
YEAR 6	<ul style="list-style-type: none">• Experimental unit - Materials and States of matter.• How to carry out a scientific experiment.• How to record and analyse data.• Year 7 pre-teach WS – Create questions and theories, carry out controlled experiments and tests and record data and make conclusions
YEAR 7	Particle models and atomic models. Elemental compounds. Thermal reactions. Catalysts and enzymes.

UNIT 3 (SPRING 1 - 08.01.24-16.02.24)

PLANTS

F1	<ul style="list-style-type: none"> • How to respect my environment. • Caring for seeds and plants/ simple life cycle – know that seeds and bulbs can be planted and they will grow with water and sunlight. • Know that plants can be planted, they grow and then die (time variable). • Observing seasonal changes to plants – Know that plants look different during the different Seasons. <p>WS – Exploring, questioning and stating similarities and differences</p>
F2	<ul style="list-style-type: none"> • Know that plants and trees have different life cycles and that they need to grow. • Know how to record what I have seen, heard and felt in different ways. • Observing seasonal changes and how they affect growth of plants. • Know that all plants and trees have different characteristics. <p>WS – Exploring, questioning and stating similarities and differences</p>
YEAR 1	<ul style="list-style-type: none"> • Identify and name a variety of common wild/common garden plants. • Know the difference between deciduous and evergreen and identify trees of each type. • Describe the basic structure of common flowering plants and trees. • Know, name and label parts of a flowering plant. <p>WS – Making comparisons, observing changes, making diagrams and keeping records</p>
YEAR 2	<ul style="list-style-type: none"> • Observe and describe how seeds and bulbs grow into mature plants. • Know that bulbs and seeds have food inside them and do not need light only water to grow. • Introduce the concept of germination and reproduction. • Describe how plants need water, light and a suitable temperature to grow and stay healthy. <p>WS – Describe and compare growth over time, set up comparative tests</p>
YEAR 3	<ul style="list-style-type: none"> • Describe the functions of parts of plants including roots, stem/trunk, leaves and flowers. • Know the requirements for plant growth (air, light, water, nutrients, space) and know how growth can vary because of them. • Begin to know how water is transported in plants. • Know the role of flowers in a plant's life cycle including pollination, seed formation and dispersal. <p>WS – comparing the effects of different factors, explore water flow in veins with coloured dye</p>
YEAR 4	<ul style="list-style-type: none"> • Explore how plants are separated into groups by features – introduce classification. • Know that plants can be grouped into flowering and non-flowering including grasses, ferns and mosses. • Explore human impact on the ecology of plants including parks, population, litter and nature reserves. • Explore deforestation. <p>WS – making keys, observing recording quantities</p>
YEAR 5	<ul style="list-style-type: none"> • Describe reproduction in plants and vegetables. • Sexual and asexual reproduction in flowering plants. • Find out about Naturalists such as David Attenborough and Jane Goodall. • Compare plants around the world including rainforests, oceans, deserts and prehistoric plants. <p>WS - Explore the reasons for differences and similarities in plants, grow plants from seeds, tubers and bulbs</p>

<p>YEAR 6</p>	<ul style="list-style-type: none"> • Classification of plants and how subdividing broad groups into subdivisions can be useful. • Ecosystems of plants – know that plants live in a delicate balance and compete for survival. • Field to fork – know that large scale planned growth of plants provides food and how this effect the economy. • How ecosystems can be altered by agriculture. <p>WS - Classify and group plants in their own environment</p>
<p>YEAR 7</p>	<p>Cell structure in plants. Diffusion and osmosis in plant cells. Gas exchange in plants.</p> <p>Plant reproduction. Photosynthesis. Ecosystems.</p>

UNIT 4 (SPRING 2 - 26.02.24-28.03.24)

LIVING THINGS AND HABITATS/EVOLUTION/INHERITANCE

F1	<ul style="list-style-type: none">• Respecting living things and animals.• Explore the life cycle of animals.• Notice the physical differences within their own family.• Know that living things grow and change. WS – Exploring, stating differences and questioning
F2	<ul style="list-style-type: none">• Name some common animals including birds, fish, mammals, amphibians and reptiles.• Know the meaning of the words carnivore, herbivore and omnivore.• Know the parts of the human body.• Know which parts of the body see, hear and smell. WS – Exploring, stating differences and questioning
YEAR 1	<ul style="list-style-type: none">• Explore human habitats.• Know what a human needs to survive.• Explore non-essential resources that a human uses.• Explore how different human habitats effect the environment. WS – Comparing and stating differences
YEAR 2	<ul style="list-style-type: none">• Know the difference between living, dead and what was never alive• Know that things live within habitats suited to them• Name some habitats including microhabitats• Know some simple food chains WS – Sorting, recording, making charts, cresting microhabitats
YEAR 3	<ul style="list-style-type: none">• Know that living things can be grouped.• Know that animals and plants are grouped by characteristics.• Know the terms cold blooded and warm blooded.• Know the terms vertebrate and invertebrate. WS – Making charts and putting things into groups
YEAR 4	<ul style="list-style-type: none">• Know that environmental changes can pose danger to habitats.• Explore endangered species.• Know the definition of a biome and an ecosystem.• Know what competition is between animals and how it can change an ecosystem. WS – Make simple keys, create a guide to local living things
YEAR 5	<ul style="list-style-type: none">• Know the life cycle of a mammal, amphibian, insect and a bird.• Reproduction in animals.• David Attenborough.• Jane Goodall. WS – Making comparisons of life cycles in the local environment and in the wider world.
YEAR 6	<ul style="list-style-type: none">• Classification of animals into groups and Subgroups.• Explore the life of Carl Linnaeus.• Evolution and Inheritance / Charles Darwin and Alfred Wallace.• Mary Anning. WS – Create keys for living things
YEAR 7	Animal cells. How cells are grouped together to form organs. Respiration. Reproduction.

UNIT 5 (SUMMER 1 - 15.04.24-24.05.24)

ANIMALS INCLUDING HUMANS

F1	<ul style="list-style-type: none">• Know the differences within their family and its members.• Explore their own family history.• Know the difference between family and friends.• Know their relationship to their family members. WS – Exploring, stating differences and questioning
F2	<ul style="list-style-type: none">• Know about animals that can be pets.• Know how to care for animals that are pets.• Know which animals can't be pets.• Know the differences between common pets. WS – Exploring, stating differences, questioning
YEAR 1	<ul style="list-style-type: none">• Name some common fish, amphibians, reptiles, birds and mammals.• Name some carnivores, herbivores and omnivores.• Know the different structure of animals.• Know and label parts of the human body that are associated with the senses. WS – Group animals by what they eat. Noticing similarities and differences
YEAR 2	<ul style="list-style-type: none">• Know that offspring grow into adults.• Know the basic needs of survival for animals.• Know that a balanced diet, hygiene and exercise keeps you healthy.• Discuss a balanced diet. WS – Making measurements of growth
YEAR 3	<ul style="list-style-type: none">• Know the basic nutrition of humans.• Know the basic food groups.• Know how the food groups keep our skeleton and muscles healthy.• Know that skeletons and muscles provide protection, support and movement. WS – Group animals into skeletal/non-skeletal, compare different diets, design healthy meals
YEAR 4	<ul style="list-style-type: none">• Know the parts of the human digestive system and their function.• Know the name and function of human teeth and how to look after them.• Know the terms producers, predators, and prey.• Explore food chains and how they can be affected. WS – Make comparisons between carnivore and herbivore teeth
YEAR 5	<ul style="list-style-type: none">• Know the changes that happen to a human in old age.• Know the changes that happen to a human during puberty.• Know the life cycle of a human.• Know that humans reproduce to create offspring. WS – Create a growth timeline, research gestation periods, make charts of length and mass change
YEAR 6	<ul style="list-style-type: none">• Know the human circulatory system.• Know the effect of diet, exercise and drugs.• Know how water is transported in animals.• Know how to increase and measure your pulse rate. WS – Research different scientists in the field of nutrition
YEAR 7	Skeletal and muscular systems. Food groups and health. Digestive enzymes and bacteria. Photosynthesis and carbohydrate production. Human reproduction.

UNIT 6 (SUMMER 2 - 03.06.24 – 19.07.24)

FORCES / SOUND / ELECTRICITY

F1	<ul style="list-style-type: none">• Explore the world around them including sounds and noise.• Create sounds with different objects.• Know that sounds can be quiet or loud.• Know that they use their ears to listen to sounds. WS – Exploring, stating differences, questioning
F2	<ul style="list-style-type: none">• Know that sound can be created in different ways.• Know that the strength of sound varies.• Know how to make sounds vary in volume.• Know a sound can become quieter or fainter if you move it away. WS – Exploring, stating differences, questioning
YEAR 1	<ul style="list-style-type: none">• Know that sound is heard in the ear.• Label the parts of the human body that hear sound.• Know that all animals hear sound differently through vibration.• Know that some animals use eco-location to communicate. WS – Label diagrams, research differences
YEAR 2	<ul style="list-style-type: none">• Know that things move differently on different surfaces.• Know that magnets can act at distance and have two opposite poles.• Know that some forces need contact.• Know the terms attract and repel. WS – Make predictions
YEAR 3	<ul style="list-style-type: none">• Know that sounds are made by vibration that travel through air.• Know that sound is determined by the strength of vibration.• Know that pitch is determined by the object that made the sound.• Know that sound gets fainter with distance and louder when close. WS – Find patterns in sounds created by different objects, make instruments
YEAR 4	<ul style="list-style-type: none">• Name some appliances that need electricity to work• Know how simple circuits work• Know that switches make circuits work ON/OFF• Know some conductors and insulators WS – create circuits
YEAR 5	<ul style="list-style-type: none">• Know that gravity is a force that effects things on Earth.• Know about air and water resistance.• Know about friction.• Know how mechanisms (gears, levers and pulleys) can increase force. WS – Experiment with parachutes, toy cars and boats
YEAR 6	<ul style="list-style-type: none">• Know that brightness and volume is dependent on the number of cells used.• Know how the different components of cells work.• Know how to draw a cell diagram.• Know how currents are measured. WS – Create circuits with changing components, design a usable circuit for a traffic light or an alarm

YEAR 7	Electric currents are measured in amperes. Electrical resistance between conducting and insulating components. Static electricity. Electrical fields. Magnetic fields of a compass.
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WORKING SCIENTIFICALLY

FOUNDATION 1 & 2	look closely, observe, watch, touch, feel, smell, listen, same, different, compare, ask questions, record, sort, group
YEARS 1 & 2	observe, changes, patterns, grouping, sorting, compare, same, different, identify (name), measure, data, record results, drawing, picture, table, tally chart, present, pictogram, block chart, Venn diagram, ask questions, test, investigate, explore, equipment, resources, magnifying glass, hand lens, ruler, tape measure, metre stick, pipette, syringe, spoon, teaspoon, answer questions, interpret results, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources.
YEARS 3 & 4	practical work, fair testing, relationships, accurate, thermometer, data logger, stopwatch, timer, estimate, data, diagram, identification key, chart, bar chart, prediction, similarity, difference, evidence, information, findings, criteria, values, properties, characteristics, conclusion, explanation, reason, evaluate, improve
YEARS 5 & 6	variables, independent variable, dependent variable, control variable, evidence, justify, causal relationship, precision, bar graphs, line graphs, force meter

What Science looks like within each year group 2023-2024

FOUNDATION 1

SEASONAL CHANGES / LIGHT EARTH AND SPACE	<ul style="list-style-type: none"> • Notice and know seasonal changes. • Name some features of the weather. • Know that plants change during the seasons. • Know that animals change during the seasons. <p>WS – Exploring, stating differences, questioning</p>
EVERYDAY MATERIALS / ROCKS STATES OF MATTER	<ul style="list-style-type: none"> • How to respect my environment. • Notice the similarities and differences between different materials. • Use my senses to find out about materials. • Name some different materials <p>WS – Exploring, stating differences and questioning</p>
PLANTS	<ul style="list-style-type: none"> • How to respect my environment. • Caring for seeds and plants/ simple life cycle – know that seeds and bulbs can be planted and they will grow with water and sunlight. • Know that plants can be planted, they grow and then die (time variable). • Observing seasonal changes to plants – Know that plants look different during the different Seasons. <p>WS – Exploring, questioning and stating similarities and differences</p>
LIVING THINGS HABITATS EVOLUTION AND INHERITANCE	<ul style="list-style-type: none"> • Respecting living things and animals. • Explore the life cycle of animals. • Notice the physical differences within their own family. • Know that living things grow and change. <p>WS – Exploring, stating differences and questioning</p>
ANIMALS INCLUDING HUMANS	<ul style="list-style-type: none"> • Know the differences within their family and its members. • Explore their own family history. • Know the difference between family and friends. • Know their relationship to their family members. <p>WS – Exploring, stating differences and questioning</p>
FORCES / SOUND / ELECTRICITY	<ul style="list-style-type: none"> • Explore the world around them including sounds and noise. • Create sounds with different objects. • Know that sounds can be quiet or loud. • Know that they use their ears to listen to sounds. <p>WS – Exploring, stating differences, questioning</p>

FOUNDATION 2

SEASONAL CHANGES / LIGHT EARTH AND SPACE	<ul style="list-style-type: none"> • Notice and know the difference between night and day. • Know that the sun is out in the day and the moon comes out at night. • Know the names of the four seasons. • Notice, know and describe seasonal changes. <p>WS – Exploring, stating differences, questioning</p>
EVERYDAY MATERIALS / ROCKS STATES OF MATTER	<ul style="list-style-type: none"> • Notice the differences in their environment by what they can feel, hear and see. • Know that objects are made of different things suitable to their use. • Know that some things are man-made and some are natural. • Know the names of some common materials around them. <p>WS – Exploring, stating differences and questioning</p>
PLANTS	<ul style="list-style-type: none"> • Know that plants and trees have different life cycles and that they need to grow. • Know how to record what I have seen, heard and felt in • Observing seasonal changes and how they affect growth • Know that all plants and trees have different characteristics <p>WS – Exploring, questioning and stating similarities and differences</p>
LIVING THINGS HABITATS EVOLUTION AND INHERITANCE	<ul style="list-style-type: none"> • Name some common animals including birds, fish, mammals, amphibians and reptiles. • Know the meaning of the words carnivore, herbivore and omnivore. • Know the parts of the human body. • Know which parts of the body see, hear and smell. <p>WS – Exploring, stating differences and questioning</p>
ANIMALS INCLUDING HUMANS	<ul style="list-style-type: none"> • Know about animals that can be pets. • Know how to care for animals that are pets. • Know which animals can't be pets. • Know the differences between common pets. <p>WS – Exploring, stating differences, questioning</p>
FORCES / SOUND / ELECTRICITY	<ul style="list-style-type: none"> • Know that sound can be created in different ways. • Know that the strength of sound varies. • Know how to make sounds vary in volume. • Know a sound can become quieter or fainter if you move it away. <p>WS – Exploring, stating differences, questioning</p>

YEAR 1

<p>SEASONAL CHANGES / LIGHT EARTH AND SPACE</p>	<ul style="list-style-type: none"> • Be able to label eyes on a human body. • Observe changes across the four seasons. • Know the weathers that the seasons bring. • Know that the length of day varies within the seasons. <p>WS – Make charts and tables about the weather, make displays about weather around the world</p>
<p>EVERYDAY MATERIALS / ROCKS STATES OF MATTER</p>	<ul style="list-style-type: none"> • Know what is meant by a physical feature. • Know what an object is made of –wood, plastic, glass, metal, water, rock. • Know that things with different properties are used for different things. • Grouping things by their physical properties. <p>WS – Perform simple tests and decide on suitable materials</p>
<p>PLANTS</p>	<ul style="list-style-type: none"> • Identify and name a variety of common wild/common • Know the difference between deciduous and evergreen of each type. • Describe the basic structure of common flowering plants • Know, name and label parts of a flowering plant. <p>WS – Making comparisons, observing changes, making diagrams and keeping records</p>
<p>LIVING THINGS HABITATS EVOLUTION AND INHERITANCE</p>	<ul style="list-style-type: none"> • Explore human habitats. • Know what a human needs to survive. • Explore non-essential resources that a human uses. • Explore how different human habitats effect the environment. <p>WS – Comparing and stating differences</p>
<p>ANIMALS INCLUDING HUMANS</p>	<ul style="list-style-type: none"> • Name some common fish, amphibians, reptiles, birds and mammals. • Name some carnivores, herbivores and omnivores. • Know the different structure of animals. • Know and label parts of the human body that are associated with the senses. <p>WS – Group animals by what they eat. Noticing similarities and differences</p>
<p>FORCES / SOUND / ELECTRICITY</p>	<ul style="list-style-type: none"> • Know that sound is heard in the ear. • Label the parts of the human body that hear sound. • Know that all animals hear sound differently through vibration. • Know that some animals use eco-location to communicate. <p>WS – Label diagrams, research differences</p>

YEAR 2

SEASONAL CHANGES / LIGHT EARTH AND SPACE	<ul style="list-style-type: none"> • Explore the weather within the four seasons in more depth. • How day length varies during the seasons. • How sunrise and sunset effects available light. • Know that seasons vary all over the world. <p>WS – Make records, observations and displays</p>
EVERYDAY MATERIALS / ROCKS STATES OF MATTER	<ul style="list-style-type: none"> • Suitability of materials – wood, plastic, metal, glass, brick, rock, paper, cardboard. • Know that solids can be squashed, bent, stretched and twisted. • Know that some materials are transparent. • Know that materials can be flexible or rigid. <p>WS – compare materials, research people such as John Dunlop, Charles Macintosh, John McAdam</p>
PLANTS	<ul style="list-style-type: none"> • Observe and describe how seeds and bulbs grow into plants • Know that bulbs and seeds have food inside them and need only water to grow. • Introduce the concept of germination and reproduction • Describe how plants need water, light and a suitable temperature to grow and stay healthy. <p>WS – Describe and compare growth over time, set up comparative tests</p>
LIVING THINGS HABITATS EVOLUTION AND INHERITANCE	<ul style="list-style-type: none"> • Know the difference between living, dead and what was never alive • Know that things live within habitats suited to them • Name some habitats including microhabitats • Know some simple food chains <p>WS – Sorting, recording, making charts, creating microhabitats</p>
ANIMALS INCLUDING HUMANS	<ul style="list-style-type: none"> • Know that offspring grow into adults. • Know the basic needs of survival for animals. • Know that a balanced diet, hygiene and exercise keeps you healthy. • Discuss a balanced diet. <p>WS – Making measurements of growth</p>
FORCES / SOUND / ELECTRICITY	<ul style="list-style-type: none"> • Know that things move differently on different surfaces. • Know that magnets can act at distance and have two opposite poles. • Know that some forces need contact. • Know the terms attract and repel. <p>WS – Make predictions</p>

YEAR 3

SEASONAL CHANGES / LIGHT EARTH AND SPACE	<ul style="list-style-type: none"> • Know that light is needed to see. • Know that light is reflected off surfaces. • Know that looking at the sun is dangerous. • Know how shadows and their patterns are formed. <p>WS – Create experiments to show how shadow patterns change</p>
EVERYDAY MATERIALS / ROCKS STATES OF MATTER	<ul style="list-style-type: none"> • Know the different appearance and properties of rocks. • Know how fossils are formed. • Know that soil is made from rock and organic matter. • Know how minerals helped form our planet. <p>WS – Observing differences, using a microscope and magnifying glass</p>
PLANTS	<ul style="list-style-type: none"> • Describe the functions of parts of plants including roots, stem/trunk, leaves and flowers. • Know the requirements for plant growth (air, light, water, nutrients, space) and know how growth can vary because of them. • Begin to know how water is transported in plants. • Know the role of flowers in a plant's life cycle including pollination, seed formation and dispersal. <p>WS – comparing the effects of different factors, explore water flow in veins with coloured dye</p>
LIVING THINGS HABITATS EVOLUTION AND INHERITANCE	<ul style="list-style-type: none"> • Know that living things can be grouped. • Know that animals and plants are grouped by characteristics. • Know the terms cold blooded and warm blooded. • Know the terms vertebrate and invertebrate. <p>WS – Making charts and putting things into groups</p>
ANIMALS INCLUDING HUMANS	<ul style="list-style-type: none"> • Know the basic nutrition of humans. • Know the basic food groups. • Know how the food groups keep our skeleton and muscles healthy. • Know that skeletons and muscles provide protection, support and movement. <p>WS – Group animals into skeletal/non-skeletal, compare different diets, design healthy meals</p>
FORCES / SOUND / ELECTRICITY	<ul style="list-style-type: none"> • Know that sounds are made by vibration that travel through air. • Know that sound is determined by the strength of vibration. • Know that pitch is determined by the object that made the sound. • Know that sound gets fainter with distance and louder when close. <p>WS – Find patterns in sounds created by different objects, make instruments</p>

YEAR 4

SEASONAL CHANGES / LIGHT EARTH AND SPACE	<ul style="list-style-type: none"> • Know how our Solar system was created. • Know the names of the Planets in our Solar System. • Know facts about the Earth, Sun and Moon. • Know that the planets are spherical objects. <p>WS – Research, make models and diagrams</p>
EVERYDAY MATERIALS / ROCKS STATES OF MATTER	<ul style="list-style-type: none"> • Know that all matter can exist as solid, liquid or gas. • Know that states of matter can change with change of temperature. • Know that temperature is measured in Celsius. • Know the meaning of the terms Evaporation and Condensation. <p>WS – Notice and measure how things evaporate over time</p>
PLANTS	<ul style="list-style-type: none"> • Explore how plants are separated into groups by feature classification. • Know that plants can be grouped into flowering and non-flowering including grasses, ferns and mosses. • Explore human impact on the ecology of plants including population, litter and nature reserves. • Explore deforestation. <p>WS – making keys, observing recording quantities</p>
LIVING THINGS HABITATS EVOLUTION AND INHERITANCE	<ul style="list-style-type: none"> • Know that environmental changes can pose danger to habitats. • Explore endangered species. • Know the definition of a biome and an ecosystem. • Know what competition is between animals and how it can change an ecosystem. <p>WS – Make simple keys, create a guide to local living things</p>
ANIMALS INCLUDING HUMANS	<ul style="list-style-type: none"> • Know the parts of the human digestive system and their function. • Know the name and function of human teeth and how to look after them. • Know the terms producers, predators, and prey. • Explore food chains and how they can be affected. <p>WS – Make comparisons between carnivore and herbivore teeth</p>
FORCES / SOUND / ELECTRICITY	<ul style="list-style-type: none"> • Name some appliances that need electricity to work • Know how simple circuits work • Know that switches make circuits work ON/OFF • Know some conductors and insulators <p>WS – create circuits</p>

YEAR 5

<p>SEASONAL CHANGES / LIGHT EARTH AND SPACE</p>	<ul style="list-style-type: none"> • Know how the Sun, Moon and Earth move around each other. • Know how day and night are created. • Know that there is a northern and a southern hemisphere. • Know that the planets spin on an axis. <p>WS – Create sundials and research Stonehenge</p>
<p>EVERYDAY MATERIALS / ROCKS STATES OF MATTER</p>	<ul style="list-style-type: none"> • Know the terms hardness, solubility, transparency and conductivity • Know that a substance can dissolve to create a substance and this is reversible • Know the terms filtering, sieving and evaporating • Know which changes in state are non-reversible <p>WS – Use baking to explore changes in matter, research chemical changes</p>
<p>PLANTS</p>	<ul style="list-style-type: none"> • Describe reproduction in plants and vegetables. • Sexual and asexual reproduction in flowering plants. • Find out about Naturalists such as David Attenborough and Jane Goodall. • Compare plants around the world including rainforests, oceans, deserts and prehistoric plants. <p>WS - Explore the reasons for differences and similarities in plants, grow plants from seeds, tubers and bulbs</p>
<p>LIVING THINGS HABITATS EVOLUTION AND INHERITANCE</p>	<ul style="list-style-type: none"> • Know the life cycle of a mammal, amphibian, insect and a bird. • Reproduction in animals. • David Attenborough. • Jane Goodall. <p>WS – Making comparisons of life cycles in the local environment and in the wider world</p>
<p>ANIMALS INCLUDING HUMANS</p>	<ul style="list-style-type: none"> • Know the changes that happen to a human in old age. • Know the changes that happen to a human during puberty. • Know the life cycle of a human. • Know that humans reproduce to create offspring. <p>WS – Create a growth timeline, research gestation periods, make charts of length and mass change</p>
<p>FORCES / SOUND / ELECTRICITY</p>	<ul style="list-style-type: none"> • Know that gravity is a force that effects things on Earth. • Know about air and water resistance. • Know about friction. • Know how mechanisms (gears, levers and pulleys) can increase force. <p>WS – Experiment with parachutes, toy cars and boats</p>

YEAR 6

SEASONAL CHANGES / LIGHT EARTH AND SPACE	<ul style="list-style-type: none"> • Know that light travels in lines • Know that objects give off or reflect light • Know that light travels from its source to an object and then to the eyes • Know that light appears differently in rainbows and on the surface of soap bubbles <p>WS – Create a periscope</p>
EVERYDAY MATERIALS / ROCKS STATES OF MATTER	<ul style="list-style-type: none"> • Experimental unit - Materials and States of matter. • How to carry out a scientific experiment. • How to record and analyse data. • Year 7 pre-teach <p>WS – Create questions and theories, carry out controlled experiments and tests and record data and make conclusions</p>
PLANTS	<ul style="list-style-type: none"> • Classification of plants and how subdividing broad groups into subdivisions can be useful. • Ecosystems of plants – know that plants live in a delicate balance and compete for survival. • Field to fork – know that large scale planned growth affects food and how this effect the economy. • How ecosystems can be altered by agriculture. <p>WS - Classify and group plants in their own environment</p>
LIVING THINGS HABITATS EVOLUTION AND INHERITANCE	<ul style="list-style-type: none"> • Classification of animals into groups and Subgroups. • Explore the life of Carl Linnaeus. • Evolution and Inheritance / Charles Darwin and Alfred Wallace. • Mary Anning. <p>WS – Create keys for living things</p>
ANIMALS INCLUDING HUMANS	<ul style="list-style-type: none"> • Know the human circulatory system. • Know the effect of diet, exercise and drugs. • Know how water is transported in animals. • Know how to increase and measure your pulse rate. <p>WS – Research different scientists in the field of nutrition</p>
FORCES / SOUND / ELECTRICITY	<ul style="list-style-type: none"> • Know that brightness and volume is dependent on the number of cells used. • Know how the different components of cells work. • Know how to draw a cell diagram. • Know how currents are measured. <p>WS – Create circuits with changing components, design a usable circuit for a traffic light or an alarm</p>

YEAR 7

SEASONAL CHANGES / LIGHT EARTH AND SPACE	Light waves and waves in matter. Speed of light. Explain imaging in mirrors. The human eye. Colours and the different frequencies of light.
EVERYDAY MATERIALS / ROCKS STATES OF MATTER	Particle models and atomic models. Elemental compounds. Thermal reactions. Catalysts and enzymes.
PLANTS	Cell structure in plants. Diffusion and osmosis in plant cells. Gas exchange in plants. Plant reproduction. Photosynthesis. Ecosystems.
LIVING THINGS HABITATS EVOLUTION AND INHERITANCE	Animal cells. How cells are grouped together to form organs. Respiration. Reproduction.
ANIMALS INCLUDING HUMANS	Skeletal and muscular systems. Food groups and health. Digestive enzymes and bacteria. Photosynthesis and carbohydrate production. Human reproduction
FORCES / SOUND / ELECTRICITY	Electric currents are measured in amperes. Electrical resistance between conducting and insulating components . Static electricity. Electrical fields. Magnetic fields of a compass.