

	Autumn	Spring	Summer
Year 1	<ul style="list-style-type: none"> Autumn 1: Everyday materials (Chemistry) Autumn 2: Seasonal changes (Physics) 	<ul style="list-style-type: none"> Spring 1: Plants (Biology) Identifying Plants Spring 2: Seasonal changes (Physics) 	<ul style="list-style-type: none"> Summer 1: Animals including humans (Biology) Identifying Animals Summer 2: Seasonal changes (Physics)
Year 2	<ul style="list-style-type: none"> Living things and their habitats (Biology) Living in Habitats 	<ul style="list-style-type: none"> Spring 1: Uses of everyday materials (Chemistry) Exploring Everyday Materials Spring 2: Plants (Biology) Growing Plants 	<ul style="list-style-type: none"> Animals including humans (Biology) Growth and Survival
Year 3	<ul style="list-style-type: none"> Autumn 1: Rocks (Chemistry) Rocks, Fossils and Soils Autumn 2: Forces and Magnets (Physics) 	<ul style="list-style-type: none"> Plants (Biology) How Plants Grow 	<ul style="list-style-type: none"> Summer 1: Light (Physics) Light and Shadow Summer 2: Animals including humans (Biology) Health and Movement
Year 4	<ul style="list-style-type: none"> Autumn 1: Animals including humans (Biology) Eating and Digestion Autumn 2: Electricity (Physics) Circuits and Conductors 	<ul style="list-style-type: none"> Spring 1: Living things and their habitats (Biology) Living in Environments Spring 2: Sound (Physics) Changing Sound 	<ul style="list-style-type: none"> States of matter (Chemistry)
Year 5	<ul style="list-style-type: none"> Properties and changes of materials (Chemistry) 	<ul style="list-style-type: none"> Spring 1: Animals including humans (Biology) Changes and Reproduction Spring 2: Forces (Physics) Forces in Action 	<ul style="list-style-type: none"> Summer 1: Living things and their habitats (Biology) Life Cycles Summer 2: Earth and Space (Physics)
Year 6	<ul style="list-style-type: none"> Autumn 1: Animals including humans (Biology) Healthy Bodies Autumn 2: Evolution and inheritance (Biology) 	<ul style="list-style-type: none"> Spring 1: Living things and their habitats (Biology) Classifying Organisms Spring 2: Electricity (Physics) 	<ul style="list-style-type: none"> Light (Physics) Seeing Light

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Changing Circuits

NB- the children need to be given opportunities to meet the working scientifically criteria through each unit.

NB- where the plan bee unit has a slightly different name, I have noted this on the LTP in green.

Y1

Everyday Materials

- L1- To be able to identify a variety of common materials.
- L2- To be able to distinguish between an object and the material from which it is made.
- L3- To be able to describe materials according to their properties.
- L4- To be able to describe why some materials suit certain objects better than others.
- L5- To carry out an experiment to find out which materials are waterproof.
- L6- To recap what we have learnt about everyday materials.

Identifying Animals

- L1- To be able to identify and name a variety of common animals.
- L2- To be able to identify and name a variety of common UK mammals.
- L3- To be able to identify and compare a variety of common UK birds and reptiles.
- L4- To be able to identify and compare a variety of common UK fish and amphibians.
- L5- To be able to identify and sort carnivores, herbivores and omnivores.
- L6- To be able to take care of animals.
- L7- To collect data about animals and answer questions.

Identifying Plants

- L1- To find out what a plant is.
- L2- To identify and describe garden plants.
- L3- To identify and describe wild plants.
- L4- To identify and describe a range of trees.

L5- To identify the different parts of a plant.

L6- To make observations of growing plants.

My Body

L1- To be able to identify, name and label body parts.

L2- To explore what parts of our bodies we use for different activities.

L3- To find out about the five senses, in particular the sense of sight.

L4- To explore the sense of touch.

L5- To explore the sense of smell.

L6- To explore the sense of taste.

L7- To explore the sense of sound.

Seasonal Changes

L1- To find out about different seasons and how to describe them.

L2- To find out about the seasons and how they are different.

L3- To find out about how animals are affected by the seasons.

L4- To find out about how humans are affected by the seasons.

L5- To find out about the day length is affected by the seasons.

L6- To investigate the weather during the seasons.

Y2

Exploring Everyday Materials

L1- To be able to identify a variety of materials and sort them according to a variety of criteria.

L2- To be able to identify natural and man-made materials.

L3- To identify that some materials can change shape by squashing, bending, stretching and twisting, and others can't.

L4- To identify the suitability of metal and plastic for a variety of purposes

L5- To identify different products that can be made from wood and their features and purposes.

L6- To identify different materials that are used for the same product.

L7- To identify material inventions and discoveries.

Growing Plants

L1- To understand that different seeds grow into different plants and to describe them.

L2- To understand that plants can be grown from bulbs.

L3- To be able to explain why and how seeds are dispersed.

L4- To plan, carry out and evaluate an investigation into the conditions that affect germination.

L5- To observe and describe how a plant changes as it matures.

Growth and Survival

L1- To find out about the offspring of a variety of different animals.

L2- To find out about the different ways in which animals reproduce.

L3- To explore how humans grow as they get older.

L4- To find out what animals, including humans, need to survive.

L5- To explore the environment as a factor of survival for animals, including humans.

L6- To find out how to eat a healthy, balanced diet.

L7- To find out why exercise is important to keep our bodies healthy.

Living in Habitats

L1- To be able to identify things that are living, things that are dead and things that have never been alive.

L2- To understand that living things need to live in suitable habitats.

L3- To explore the plants and animals that live in seaside habitats.

L4- To be able to explore plants and animals in an unfamiliar habitat.

L5- To be able to explore and describe a micro-habitat.

L6- To explore food chains in a habitat.

Super Scientists

- L1- To investigate the effect gravity has on everyday objects.
- L2- To investigate what happens to light when it passes through different transparent objects.
- L3- To investigate whether sound can pass through materials.
- L4- To investigate our senses and reflexes.
- L5- To investigate how germs are transferred by touching things.
- L6- To investigate electrical circuits to make a lightbulb light up.

Y3**Forces and Magnets**

- L1- To explore what forces are and notice that some forces need contact between two objects.
- L2- To compare how things move on different surfaces.
- L3- To explore how magnetic forces work.
- L4- To be able to identify magnetic materials.
- L5- To investigate uses for magnets.

Health and Movement

- L1- To identify that humans get the nutrition they need from what they eat.
- L2- To identify that a balanced diet is needed in order to stay healthy.
- L3- To investigate which foods different animals eat.
- L4- To carry out an investigation to find out what pets eat.
- L5- To explore human and animal skeletons.
- L6- To find out about how the skeleton supports and protects the body and to investigate how invertebrates are supported.
- L7- To find out what muscles are and how skeletal muscles help us to move.

How Plants Grow

- L1- To identify and describe the functions of the roots of flowering plants.
- L2- To investigate the way in which water is transported within plants.
- L3- To identify and describe the functions of leaves in flowering plants.
- L4- To explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
- L5- To explore some of the ways in which flowering plants disperse their seeds.
- L6- To understand the structure of seeds and their importance as a food source.

Light and Shadow

- L1- To recognise that we need light in order to see.
- L2- To explore the Sun as a light source and identify the difference between night and day.
- L3- To investigate what shadows are and why they are formed.
- L4- To investigate how shadows behave.
- L5- To investigate how the size of shadows change throughout the day.
- L6- To explore how light is reflected from surfaces.

Rocks, Fossils and Soils

- L1- To be able to identify naturally occurring rocks and explore their uses.
- L2- To be able to group rocks according to their characteristics.
- L3- To be able to plan, carry out and evaluate experiments to compare rocks.
- L4- To identify rocks that are used for particular purposes.
- L5- To explore soil and how it is formed.
- L6- To explore what fossils are and how they are formed.
- L7- To be able to identify fossilised remains.

Y4

Changing Sound

- L1- To find out that sounds are made when objects and materials vibrate.
- L2- To investigate whether sounds can travel through different materials.
- L3- To explore the relationship between distance and volume.
- L4- To find out that some materials are effective in preventing vibrations from sound sources reaching the ear.
- L5- To investigate how sounds can be different pitches and volumes.
- L6- To find out how the length, thickness and tightness of a string affects its pitch.
- L7- To find out how sounds can be made by air vibrating and how to change the pitch of notes produced by vibrating air.

Circuits and Conductors

- L1- To investigate circuits and their different components.
- L2- To investigate the differences between mains and battery-powered circuits.
- L3- To recognise some common conductors and insulators, and associate metals with being good conductors.
- L4- To investigate the purposes of conducting and insulating materials.
- L5- To be able to use knowledge of conductors and insulators to create switches to complete a circuit.
- L6- To be able to plan and carry out an experiment to see how to change the brightness of a bulb.

Eating and Digestion

- L1- To be able to identify and classify carnivores, herbivores and omnivores.
- L2- To be able to construct and interpret a variety of food chains.
- L3- To identify the different types of teeth in humans and identify their functions.
- L4- To explore different ways of keeping teeth healthy.
- L5- To investigate how the digestive system works.
- L6- To be able to describe the functions of the basic parts of the digestive system.

Living in Environments

- L1- To be able to identify a variety of habitats and explore why organisms live in different habitats.
- L2- To be able to group organisms according to their characteristics.
- L3- To be able to classify animals into specific groups according to their characteristics.

- L4- To be able to use a classification key to identify animals.
- L5- To be able to identify and classify a variety of British plants.
- L6- To explore the human impact on habitats and environments.

States of Matter

- L1- To compare and group materials together according to whether they are solids or liquids.
- L2- To identify and explore the properties of gases.
- L3- To observe that materials change state when they are heated or cooled.
- L4- To research the temperature in degrees Celsius ($^{\circ}\text{C}$) at which materials change state.
- L5- To understand the process of evaporation.
- L6- To understand the process of condensation.
- L7- To identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Y5

Changes and Reproduction

- L1- To recognise the stages of growth and development in humans.
- L2- To know the stages in the gestation period of humans and compare them to other animals.
- L3- To recognise the stages of development during childhood and understand the needs of children at those stages.
- L4- To understand the initial changes inside and outside of the body during puberty.
- L5- To know the changes that occur during puberty and how they differ for boys and girls.
- L6- To understand how the body changes during adulthood and old age.

Earth and Space

- L1- To describe the movements of the Sun, Earth and Moon.
- L2- To explore how the rotation of Earth creates day and night.
- L3- To learn about how Earth's tilt creates seasons.

L4- To learn about the phases of the Moon.

L5- To discover how theories about our solar system have changed.

L6- To investigate the planets in the solar system.

Forces in Action

L1- To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.

L2- To identify the effects of friction acting between moving surfaces.

L3- To identify and explain the effects of air resistance.

L4- To identify and explain the effects of water resistance.

L5- To recognise that levers and pulleys allow a smaller force to have a greater effect.

L6- To recognise that gears allow a smaller force to have a greater effect.

Life Cycles

L1- To describe the process of sexual reproduction in flowering plants.

L2- To describe the process of asexual reproduction in plants.

L3- To describe the process of sexual reproduction in animals.

L4- To observe and compare the life cycles of animals in our local environment with other animals around the world.

L5- To compare how different animals reproduce and grow.

L6- To find out about the work of naturalists.

Properties and Changes of Materials

L1- To know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.

L2- That some changes of state and dissolving and mixing processes can be reversed through filtering, sieving and evaporating.

L3- Explain that some changes form new materials, and that these changes are not usually reversible.

L4- Explain that some changes, caused by heating or cooling form new materials, and that these changes are often not reversible.

- L5- Explain that changes caused by burning form new materials, and that these changes are not reversible.
- L6- To compare and group together everyday materials on the basis of their properties.
- L7- To give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials.

Y6

Changing Circuits

- L1- To recap knowledge of electricity and circuits.
- L2- To investigate ways in which the brightness of a bulb or speed of a motor is changed.
- L3- To be able to recognise and use conventional symbols for circuits.
- L4- To be able to plan, carry out and evaluate an experiment to see how changing the wire in a circuit affects the brightness of a bulb.
- L5- To be able to review and assess understanding of circuits.

Classifying Organisms

- L1- To recap ways of grouping organisms according to their characteristics.
- L2- To explore ways of distinguishing between organisms that have similar characteristics.
- L3- To be able to classify plants according to their characteristics.
- L4- To find out about Carl Linnaeus and his classification system.
- L5- To explore what micro-organisms are and how they can be grouped.
- L6- To be able to identify and classify organisms in the local area.

Evolution and Inheritance

- L1- To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
- L2- To identify how animals and plants are adapted to suit their environment in different ways.
- L3- To understand that adaptation of plants and animals to suit their environment may lead to evolution.
- L4- To find out about how the work of scientists has helped develop our understanding of the process of evolution.

L5- To recognise that living things have changed over time and that a number of factors can affect a species' evolution.

L6- To understand how humans have evolved over time, and how human behaviour can affect change in species over time.

Healthy Bodies

L1- To find out how scientific ideas about food and diet were tested in the past and how this has contributed to our knowledge of a balanced diet.

L2- To investigate some different food groups and find out why a variety of foods is important for a healthy diet.

L3- To find out how nutrients and water are transported in the human body.

L4- To investigate what happens to the heart when we exercise and why.

L5- To investigate how muscles move the skeleton and how muscle activity requires increased blood flow.

L6- To investigate the effects of tobacco, alcohol and other drugs.

L7- To evaluate what we can do to keep our bodies healthy.

Seeing Light

L1- To recall facts about how shadows are formed.

L2- To investigate how we can change shadows.

L3- To understand how our eyes allow us to see.

L4- To understand how we see objects.

L5- To investigate reflection.

L6- To learn about refraction.

L7- To investigate the colours in white light.