2025-2026 Subject Overview: Science

Plants (Biology)

Nursery	Reception	1	2	3	5
That plants grow from seeds	That plants grow from seeds The life cycle of a plant	That plants grow from seeds and bulbs That all flowering plants share a basic structure consisting of roots, stem, leaves and flowers That all trees also have a basic structure consisting of roots, trunk, branches and leaves	That plants need water, warmth and light to grow That the roots of a plant grow first followed by a shoot and then leaves That plants change through the seasons with some plants dying and others becoming dormant	That the different parts of a plant all have a function in keeping the plant healthy That plants have a life cycle consisting of germination, growth, flowering, pollination, seed production and seed dispersal	That flowers have different parts which play a role in reproduction

2025-2026 Subject Overview: Science

Light, Sound and Space (Physics)

4	5	6
Light Only light sources produce light; other bright objects reflect light Different materials allow different amounts of light through them Light travels in straight lines Light cannot travel through all materials and opaque materials block light, causing shadows **Sound** Sound is created through vibration Sound varies in pitch and volume (loudness) The ear detects sound	**Earth and Space** Stars, planets and moons are roughly spherical In solar systems, planets orbit a star and moons orbit planets Night and day are due to the rotation of the Earth about its axis The phases of the Moon are the result of the shadow on the dark side of the Moon being visible in different proportions depending on where the Moon is in its orbit	**Light** Light comes from a light source Light can be bent by lenses We see when light enters out eyes and we need light to see things, even shiny things Light reflects off shiny surfaces in an orderly manner, producing reflections Light reflects off non-shiny things in a scattered way producing no reflection

2025-2026 Subject Overview: Science

Forces (Physics)

Reception	2	3	5
Floating and sinking—deciding on the best material to make a boat	**Materials** That the shape of some materials can be changed by forces	**Magnets** A force is a push, a pull or a twist that can change the speed, direction or shape of an object Forces are measured using force meters and the unit of measurement is the Newton The force between two moving surfaces in contact is called friction and that that friction can be useful Magnets attract iron and steel to them Magnetism is a force like gravity and that it can operate at a distance. Like magnetic poles repel and unlike poles attract	**Forces** Gravity pulls objects towards the centre of the Earth Air resistance, water resistance and friction oppose movement Simple machines can reduce the force needed to move things and alter speed and direction

2025-2026 Subject Overview: Science

Electricity (Physics)

4	6
That some materials allow electricity to flow through them and others do not That a complete, unbroken circuit is needed for electricity to flow That the different components of a circuit have different and specific functions	Circuits are a series of linked components that include an electricity supply Cells (batteries) are a store of energy that pushes electricity round a circuit. When the energy is gone, the cell no longer pushes out electricity More cells will push more electricity round a circuit Components in a circuit work harder when more electricity goes through them Circuits can be represented by internationally recognised symbols

2025-2026 Subject Overview: Science

Materials (Chemistry)

Reception	1	2	3	4	5
Solids and liquids— freezing and melting	**Materials** The object and the material it is made from are different Materials can be described by their properties: hard/ soft, weak/strong, dull/ shiny etc We can sort and compare materials according to their properties The shape of some materials can be altered by forces such as twisting, squashing, stretching and bending	**Materials** That material properties are linked to their use That the shape of some materials can be changed by forces	**Rocks** That different rocks have different properties That rocks can be classified as igneous, sedimentary or metamorphic and this classification depends on the method of their formation That soil is composed of rock particles and organic matter That fossils are imprints of living things from millions of years ago That we can learn about prehistoric animals from fossils	**States of matter** Materials can be classified as belonging to one of three states of matter: solid, liquid or gas Each state of matter has specific properties Many materials can change state between solid, liquid and gas	**Mixtures and reactions** The properties of materials include their chemical properties – solubility, type of reactions etc These properties result in some mixtures being easily separated In a chemical reaction new substances are made Most chemical reactions are not reversible

2025-2026 Subject Overview: Science

Classification (Biology)

Nursery	1	2	4	6
Minibeasts—grouping animals	**The Animal Kingdom** Animals can be classified and grouped by their characteristics There are some basic classes of animals: mammals, birds, fish, amphibians, reptiles and invertebrates Animals look different, live in different places and eat different things	**Living Things** That objects can be classified as living things, things that were once alive and things that have never been alive That life is characterised by a series of processes that are common to all living things, including plants	**Classification** That the wide variety of living organisms can be sorted into classes that have certain characteristics in common That there is a hierarchy for sorting organisms	**Classification** Living organisms can be grouped and classified according to their characteristics Individual microorganisms are living and cannot be seen with the naked eye Microorganisms feed on waste products. Some are useful, some are harmful Microorganisms cause decay which is essential for natural recycling Microorganisms can grow and reproduce very rapidly

2025-2026 Subject Overview: Science

Habitats and Environment (Biology)

Nursery & Reception	1	2	3	4	5	6
Seasonal changes	**Our Environment** The environment changes with the seasons Some animals and plants die off or hibernate for part of the year	**Local Habitats** That the area where living things live and feed is called a habitat That within habitats there are microhabitats that support living things **Habitats** Different local conditions in nature are called habitats Different habitats contain different animals and plants that are suited to their habitats in different ways Plants make their own food. Some animals eat plants and some eat other animals	**Animal homes** That some animals build homes and others do not That animals have preferences about where they build their homes that relate to the conditions they enjoy/are suited to	**Respecting our environment** That humans have an impact on the environment and that this can sometimes be positive or negative for the flora and fauna in the area That there are moral aspects to the way we treat our environment	**Decay and recycling** That decay is an essential aspect of nature That some materials can be recycled instead of thrown away That throwing things away has an environmental impact which can be reduced by waste management	**Field studies** That populations of animals and plants vary in different environments and across the year That there are some established techniques for studying the population size of specific species and the variety of species in an area

2025-2026 Subject Overview: Science

Humans and Other Animals (Biology)

Nursery	2	3	4	5	6
Tadpoles to frogs <u>Reception</u> Tadpoles to frogs Hatching chicks Life cycle of a chicken	**Animals and their needs** Animals grow from juveniles into mature adults Mammals give birth to live young but other animals lay eggs Many immature animals including humans need care in order to mature but others grow up independent of their parents A good diet, hygiene and exercise are important for maintaining good health Life is characterised by a series of processes that are common to all living things, including plants	**Animals and skeletons** That what an animal (including a human) eats should be matched to the needs of that animal That food of the wrong type or too much food makes animals (including humans) unhealthy That skeletons provide support and protection for the body That there are two basic types of skeleton – internal skeletons and external skeletons	**Digestion** Animals including humans need to digest (break down) food into chemicals that can be used by the body This process is carried out by the digestive system Plants make their food using sunlight as an energy source, and all other food is dependent on this	**Human development** That human beings have a life cycle like other animals That there are changes in the human body as it develops from childhood to adolescence, in preparation for adulthood and reproduction **Life cycles** Living things have a cycle that involves continual replacement of organisms of the same species The life cycles of different animals vary, and, for insects and amphibians include metamorphosis	**Heart and lungs** That the circulatory system transports blood round the body That the heart is the pump that keeps the blood flowing That the lungs allow gas exchange to take place in the body with oxygen entering the body and carbon dioxide leaving it Oxygen is taken into the blood in the lungs and carried to parts of the body where it is needed That some substances and activities such as smoking are harmful to the body and should be avoided **Evolution and inheritance** If animals can produce young the species will survive Animals are adapted to survive and produce offspring Variation in offspring over time can make animals more or less able to survive in particular environments and lead to evolutionary change