Badsley Primary School Updated 2026-27

Subject: Science

Coverage

	FS2	Y1	Y2	Y3	Y4	Y5	Y6
Autumn 1	**Overall Theme: All About Me!** Head to Toe Text: Funnybones Text: My Body	Everyday Materials	Animals Including Humans Animals and Survival	Animals Including Humans Skeletons and Muscles	Animals Including Humans Teeth and Digestion	Forces	Light Light and Perception
Autumn 2	**Overall Theme: Food,** Winter weatherland Text: One Winters Day	Awesome Autumn Investigation Awe and wonder	Protecting the environment	Rocks Rocks and Fossils	Electricity	Earth and Space	Living Things and their Habitats Classification
Spring 1 & 2	**Overall Theme: Planet Earth** Day and night, dark and light **Overall Theme: Animals** Buggy about Spring bugs, Minibeasts City gardens, country farms, Fur and	Spring 1 Wow it's Winter Investigations Awe and wonder Spring 2 Plants	Materials Living Things and their Habitats	Light Light and Shadows	Living Things and their Habitats Classification and Environments	Properties and Changes of Materials	Evolution and Inheritance (spring 1) Spring2 Electricity Electricity and Circuits
Summer 1	**Overall Theme: Be Expressive!**	Animals Including Humans Amazing Animals Eureka	Living Things and their Habitats	Plants Plants needs for Survival	States of matter	Living Things and their Habitats Life Cycles	Animals Including Humans Circulation and Lifestyle
Summer 2	**Overall Theme: Beside the Seaside Water wonders**	Animals Including Humans Amazing Animals	Plants Plants and Growth	Forces Forces and Magnets	Sound	Animals Including Humans Getting Older	Animals Including Humans Circulation and Lifestyle

Vocabulary progression (Working Scientifically)

	FS2	Y1	Y2	Y3	Y4	Y5	Y6
Need to know	What…? How ….? Why …?	similar different best and worst change plan look biggest and smallest compare sort and group	observe change slowly quickly describe name identify label record measure bigger and smaller pattern notice cycle predict	gradually identify observe recognise investigate record units table fair evidence research length observations prediction	similarities differences research and source scientists discovery process cycle measurements conclude evaluate rank plan vary keep the same/constant bar graph table tally	classify interpret pattern relationship prediction analyse interpret conclude evaluate rank variable constants control repeat key relationship line graph	hypothesis variable constants evaluate plan conclude interpret classify categorise database enquiry control repeat support refute degree of trust scatter graph

Vocabulary progression (Specific unit vocabulary)

Knowledge Progression	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals including humans	Head, body, eyes, ears, mouth, teeth, tail, leg, wing, claw, fin, scales, feathers, fur, beak, paw, hoof, arm Sense, touch, taste, smell, see, hear, skim, eyes, nose, tongue, hearing, eyesight, ear, feel	Revisit vocabulary from EYFS and apply to new objectives	Offspring, reproduction, adolescent, caterpillar, hygiene, germs, protein, carbohydrate, fat, nutrient, life cycle, life stage	sugars, nutrition, vitamins, minerals, skeleton, bones, fibre, water, muscle, digestion, skull, ribs, spine, joints	Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, large intestine, rectum, anus, incisor, canine, molar, premolar, herbivore, carnivore, omnivore, producer, predator, prey, food chain, food web	Puberty, elderly, foetus, gestation period, adulthood	Heart, pulse, pump, blood, blood vessel, artery, vein, aorta, vena cava, ventricle, atrium, valve, oxygenated, deoxygenated, oxygen, carbon dioxide, nutrients, circulatory system, diet, drugs, lifestyle, exercise
Everyday Materials	Object, material, wood, plastic, glass, metal, rock, brick, paper, fabric, elastic, foil, rubber,	transparent, opaque	reflective, non-reflective, translucent, plasticity			Thermal conductor, thermal insulator, electrical conductor, electrical	

	wool, hard, soft, stretchy, stiff, bendy, waterproof, absorbent, brittle, shiny, dull					insulator, change of state, mixture, dissolve, solute, solvent, solution, insoluble, filtration, evaporation, technique, soluble, reversible change, irreversible change, burning	
Light	Light, dark, transparent, shiny, shadow, reflect			Light, light source, dark, transparent, translucent, opaque, shiny, matt, shadow, reflect			straight lines, ray diagram
Magnets				*See forces*			
Electricity					Electricity, appliance, mains, plug, circuit, complete circuit, open circuit, cell, battery, electrode, positive, negative connection, crocodile, clip, bulb, bulb holder, switch, buzzer, motor, component, conductor, insulator, wire, metal, non-metal, circuit symbol		voltage, current
Seasonal changes	Weather, climate, windy, sunny, rainy, snowy, season, winter, spring, summer, autumn, temperature, lightning, thunder, rainfall, sunrise, sunset, night-time, thermometer	Weather, climate, windy, sunny, rainy, snowy, season, winter, spring, summer, autumn, temperature, tornado, lightning, thunder, rainfall, sunrise, sunset, horizon, day length, day light, night-time, thermometer, rain gauge					

Plants	Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, bulb, germination	Revisit vocabulary from EYFS and apply to new objectives	shade, nutrient	Photosynthesis, pollen, pollination, seed dispersal, anther, filament, stigma, style, ovule, ovary, fertilisation, stomata, transpiration			
Living things and their habitats	Living, dead, habitat, grassland, forest, pond, woodland, desert, ocean, polar, mountains, river		never been alive, food chain, microhabitat, excretion, reproduction, respiration,		Classification, classification key, human impact, positive, environment, habitat, negative, migration, hibernate, extinct,	Life cycle, reproduction, sexual reproduction, sperm, fertilisation, egg, metamorphosis, asexual reproduction, pollination, seed, bulb, cutting, larva, pupa, chrysalis	Vertebrates, invertebrates, fish, amphibians, reptiles, birds, mammals, insects, flowering, non-flowering, aorta, diaphragm, DNA, taxonomy
Rocks	fossil, soil, texture, hardness, porous			Sedimentary, igneous, metamorphic, weathering, mineral, crystal, drainage			
Forces	Force, push, pull, twist, magnetism, magnet, attract, repel, magnetic material, iron, steel			contact force, non-contact force, pole, friction, magnetic field		gravity, air resistance, water resistance, machine, lever, pulley, gears	

Sound	Sound, source, vibrate, vibration, travel, pitch, frequency, volume, faint, loud				insulation, solid, liquid, gas, dissipate, spread		
States of matter	change of state, solid, liquid, gas, melting, freezing, evaporation, condensation, temperature, water cycle				State of matter, solidify, melting point, boiling point, precipitation, cloud		
Earth and Space	Sun, moon, mercury, Venus, earth, mars, Jupiter, Saturn, Uranus, Neptune					spherical, elliptical, rotation, orbit, clockwise, anticlockwise,	
Evolution and inheritance							Sexual reproduction, asexual reproduction, offspring, reproduction, variation, characteristics, adaption, environment, inherited, evolution, species, fossils

Progression of knowledge and skills

Concept	FS2- understanding of the world.	Y1	Y2	Y3	Y4	Y5	Y6
Observe	Observe decay e.g an apple core going mouldy over time. Describe and observe animal life cycles e.g., caterpillars or chick eggs. Observe seeds growing over time.	**-Seasonal changes** - observe changes across the four seasons -Seasonal changes - observe and describe weather associated with the seasons and how day length varies	**Plants** - observe and describe how seeds and bulbs grow into mature plants	**Forces** - observe how magnets attract or repel each other and attract some materials and not others	**States of matter –** observe and investigate how some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius	**Properties and changes of materials –** observe how some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution	**Light –** observe that light appears to travel in straight lines
Describe	Use a wide range of vocabulary to describe collections of natural materials. Describe and observe animal life cycles e.g., caterpillars or chick eggs.	**Animals** - describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	**Animals** - describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene -**Everyday materials -** describe the simple physical properties of a variety of everyday materials - **Living things and their 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	**Plants** - identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. **Rocks** - describe in simple terms how fossils are formed when things that have lived are trapped within rock **Forces** - describe magnets as having two poles	**Animals, including humans** - describe the simple functions of the basic parts of the digestive system in humans	**Living things and their habitats** - describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird **Living things and their habitats** - describe the life process of reproduction in some plants and animals **Living things and their habitats** - describe the life process of reproduction in some plants and animals **Properties and changes of materials** - know that some materials will dissolve in liquid to form a solution, and **describe** how to recover a substance from a solution **Earth and space** - describe the movement of the Earth, and other planets, relative to the Sun in the solar system	**Living things and their habitats** - 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 **Animals, including humans** - describe the ways in which nutrients and water are transported within animals, including humans

						Earth and space - describe the movement of the Moon relative to the Earth **Earth and space** - describe the Sun, Earth and Moon as approximately spherical bodies	
Identify	Explore and identify collections of materials with similar or different properties.	-**Plants** - identify and name a variety of common wild and garden plants, including deciduous and evergreen trees -**Plants -** identify and describe the basic structure of a variety of common flowering plants, including trees **-Animals** - identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals **-Animals -** identify and name a variety of common animals that are carnivores, herbivores and omnivores -**Animals -** identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	**Animals -** find out about and describe the basic needs of animals, including humans, for survival (water, food and air) **Everyday materials -** identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock - **Uses of everyday materials** - identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses **Living things and their habitats -** identify and name a variety of plants and animals in their habitats, including micro-habitats	**Animals, including humans** - identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get their nutrition from what they eat **Animals, including humans -** identify that humans and some other animals have skeletons and muscles for support, protection and movement **Plants** - identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	**Animals, including humans** - identify the different types of teeth in humans and their simple functions **States of matter** - identify part played by evaporation and condensation in water cycle and associate the rate of evaporation with temperature **Sound** - identify how sounds are made, associating some of them with something vibrating **Electricity** - identify common appliances that run on electricity **Electricity** - identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a loop with a battery -**Everyday materials** identify an object and the material from which it is made	**Forces** - recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	**Animals, including humans - identify** and name the main parts of the human circulatory system, and **describe** the functions of the heart, blood vessels and blood **Evolution and inheritance** - identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
Explore	Explore and identify collections of materials with similar or different properties.	**-Plants** - find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	**Living things and their habitats** - identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of	**Plants** - explore the requirements of plants for life and growth and how they vary from plant to plant	**Sound** – explore the patterns between the pitch of a sound and features of the object that produced it	**Forces** - explore the effects of air resistance, water resistance and friction, that act between moving surfaces	**Evolution and inheritance** - explore how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

	Use all senses in hands on exploration of natural materials. Explore how water pushes up using a plastic boat. Explore shadows and transparency.		different kinds of animals and plants, and how they depend on each other -**Living things and their habitats -** 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	**Plants** - explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal			
Compare	Compare collections of materials e.g pieces of bark, leaves, seeds, rocks and shells.	**-Animals** - describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) **-Everyday materials** - compare and group together a variety of everyday materials on the basis of their simple physical properties	**Uses of everyday materials** - identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	**Forces** - compare how things move on different surfaces **Forces** - 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	**States of matter** - compare and group materials together, according to whether they are solids, liquids or gases	**Properties and changes of materials** - 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	**Electricity** - 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
Recognise	Recognise the need to respect and care for the natural environment. Recognise how our choices about food, drink and activity impact our health.	Recognise carnivores, herbivores and omnivores. (Sorting diagram)	**Animals** – recognise that animals, including humans, have offspring which grow into adults	**Rocks -** recognise that soils are made from rocks and organic matter **Light** - recognise that they need light in order to see things and that dark is the absence of light **Light** - recognise that light from the Sun can be dangerous and that there are ways to protect their eyes **Light** - recognise that shadows are formed when the light from a light source is blocked by a solid object **Light** - recognise that light is reflected from surfaces **Forces** - recognise that some forces need contact	**Living things and their habitats** - recognise that living things can be grouped in a variety of ways **Living things and their habitats** - recognise that environments can change and that this can sometimes pose dangers to living things **Sound** - recognise that vibrations from sounds travel through a medium to the ear **Sound** - recognise that sounds get fainter as the distance from the sound source increases **Electricity** - recognise that a switch opens and closes a circuit and associate this with whether or not a	**Earth and space** - recognise the Sun, Earth and Moon as approximately spherical bodies	**Animals, including humans** - recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function **Evolution and inheritance** - recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago **Evolution and inheritance** - recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

				between two objects, but magnetic forces can act at a distance	lamp lights in a simple series circuit **Electricity** - recognise some common conductors and insulators, and associate metals with being good conductors		**Light** - recognise that light appears to travel in straight lines **Electricity** - use recognised symbols when representing a simple circuit in a diagram
Predict	To predict how materials change from one state to another e.g when cooking or melting. To predict which materials will float and sink.	Predict what changes will take place in different seasons.	**Uses of everyday materials** - predict how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	**Forces** - predict how things will move on different surfaces **Forces** - predict whether two magnets will attract or repel each other, depending on which poles are facing	**States of matter** – predict how some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius	**Forces** - predict the effects of air resistance, water resistance and friction, that act between moving surfaces	**Animals, including humans** - predict the impact of diet, exercise, drugs and lifestyle on the way their bodies function
Investigate	Investigate how to change materials from one state to another e.g cooking and melting. Investigate floating and sinking.	Investigate what a plant needs in order to grow.	Investigate the effects of seasonal changes on plant growth. (Link to deciduous and ever green)	**Plants** - investigate the way in which water is transported within plants	**States of matter –** observe and investigate that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius	**Forces –** investigate the effects of air resistance, water resistance and friction, that act between moving surfaces	Investigate how light travels in straight lines. **Electricity –** investigate how the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuits
Demonstrate	Demonstrate how they can stretch, snap and bend different materials. Demonstrate magnetic attraction and repulsion.	**Animals** - demonstrate the basic parts of the human body and say which part of the body is associated with each sense	**Plants** - demonstrate how plants need water, light and a suitable temperature to grow and stay healthy	**Forces** - demonstrate that some forces need contact between two objects, but magnetic forces can act at a distance	**States of matter** - demonstrate that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius	**Properties and changes of materials -** demonstrate that dissolving, mixing and changes of state are reversible changes **Properties and changes of materials** - use knowledge of solids, liquids and gases **to decide** how mixtures might be separated, including through filtering, sieving and evaporating	**Electricity** – demonstrate how the brightness of a lamp or the volume of a buzzer affected by the number and voltage of cells used in the circuits
Explain	Explain the concept of growth, change and decay with natural materials.	**Plants** – explain the basic structure of a variety of common flowering plants, including trees and the job that each part of a plant does	**Animals** - explain the basic needs of animals, including humans, for survival (water, food and air)	**Light** - explain that shadows are formed when the light from a light source is blocked by a solid object	**Electricity** - explain whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a loop with a battery	**Properties and changes of materials -** 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	**Light** - 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 **Light** - explain that we see things because light

						and the action of acid on bicarbonate of soda **Earth and space** - use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky **Forces** - explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	travels from light sources to our eyes or from light sources to objects and then to our eyes **Light** - use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them **Living things and their habitats** – explain reasons for classifying plants and animals based on specific characteristics