

Belswains Primary School Science Progression Map

		Autumn 1	Autumn 2	Spring 1 and 2	Summer 1	Summer 2
>	K	Human Senses Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Everyday materials 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.	Seasonal changes Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.	Plant parts 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.	Animal parts 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
	S	Ask simple questions. Perform simple tests. Identify and classify. Use observations to answers questions.	Perform simple tests. Identify and classify. Use observations to answers questions.	Ask simple questions. Make observations, Use observations to answers questions.	Ask simple questions. Make observations, Identify and classify. Use observations to answers questions.	Ask simple questions. Make observations, Perform simple tests. Gather and record data to answer questions.

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	>	Sense: touch, hear, smell, sight, taste, Abdomen, animal, ankle, arm, calf, chest, chin, war, elbow, eye, finger, foot, forearm, forehead, hair, hand, head, hearing, human, knee, leg, limb, mammal. Mouth. Neck. Nose, pelvis, shoulder, skin, thigh, toe, tongue, unique, upper arm, wrist	material, human-made, natural, property Hard, rough, opaque, shiny, smooth, waterproof, stretchy, transparent, bendy, absorbent, wood, plastic, paper, glass, fabric, metal, metal alloy, water, oil, rock, brick, ceramic, clay, concrete, cotton, leather, rubber, sand, silk, stone, synthetic fabric	Seasons: Autumn, Spring, Summer, Winter, weather, seasonal change, deciduous, evergreen, fruit, earth, bud, blossom, fruit, leaf, grow, dormant, weather types: rain, rainfall, hail, snow, wind breeze, fog, gale, hurricane, sleet, cloud, precipitation, dark, daytime, night time, hibernate, Anemometer, animal, Beaufort Scale, life, meteorologist, migrate, rain gauge, rays, sun, sun cream, sunglasses, sunrise, sunset, temperature, thermometer, weather forecast, windsock,	leaf, petal, plant, root, stem, Bark, blade, blossom, branch, bud, bulb, deciduous, evergreen, flower, fruit, garden, garden plant, hedgerow, margin, meadow, season, seed, shelter, soil. Stalk, tree, trunk, vein, wild plant, woodland	Amphibian, animal, bird, carnivore, herbivore, omnivore, mammal, reptile antenna, beak, , body covering, camouflage, , claw, ear, eye, feather, fin, fish, fur, gill, group, hearing, , human, hunt, invertebrate, limb, , mouth, nose, off-spring, , pet, , scale, sense, shell, sight, skin, smell, tail, teeth, tongue, touch, wild, animal, wing
	P	Next Unit: 1f	Next Unit: 2c	Next Unit: N/A	Next Unit: 2d	Previous Unit: 1a Next Units: 2a

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		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1 and 2
	> K	Human Survival Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Notice that animals, including humans, have offspring which grow into adults.	Habitats Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).	Use of 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. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Plant Survival {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.	Animal Survival Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Notice that animals, including humans, have offspring which grow into adults.
	S	Ask simple questions. Gather and record data to answer questions. Use observations to answers questions.	Perform simple tests. Identify and classify. Gather and record data to answer questions.	Ask simple questions. Identify and classify. Use observations to answers questions.	Perform simple tests. Gather and record data to answer questions. Use observations to answers questions.	Ask simple questions. Gather and record data to answer questions. Use observations to answers questions.

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		> balanced diet carbohydrates, dairy and alternatives, fat, food group, fruit and vegetables, healthy, hydrate, Adult, aerobic exercise, air, balancing exercise, birth, bone, coordination, embryo, energy, exercise, food, germ, growth, heart, human, hygiene	Adaptation, camouflage, carnivore, food chain, herbivore, identify, invertebrate, living, non- living, omnivore, predator, prey, Air, amphibian, animal, bird, excretion, fish, food, growth, habitat, mammal, mimicry, movement, nutrient, offspring, plant, quill, reproduction, reptile, respiration, sensitivity, shelter, soil, space, temperature, thorn warning coloration, water, woodland	man-made, material, natural, property, recycle, sustainability, Absorbency, absorbent, bend, bendy, cardboard, clay, fabric, glass, hard, metal, natural resource, object, opaque, paper, plastic, pollution, rock, rough, rubbish, shape, smooth, soft, squash, strength, stretch, strong, texture, transparent, twist, waterproof, wood	bulb, flower germination, habitat, leaf, nutrient, root, seed, stem, sunlight, water Air, bark, basal plate, branch, deciduous, embryo, evergreen, , flower bud, fruit, germinate, plant, scales, seasons, seed coat, shade, soil, , survive, temperature, tree, trunk, tunic, warmth,	carnivore, consumer, food chain, herbivore interdependent, invertebrate life cycle, metamorphosis, omnivore, producer, Adult, air, amphibian, arachnid, bird, birth, crustacean, egg, embryo, fish, food, grow, growth, habitat, hatch, hatching, , hibernation, insect, , larva, mammal., microhabitat, migration, mollusc, offspring, pupa, pupation, reproduce, reproduction, reptile, season, shelter, space, survive, water, worm
		P Previous units: 1a, 1f Next Unit: 2b	Previous Units: 1a, 1f, 2a Next Unit: 2 e/f	Previous Units: 1b Next Unit: 4c	Previous Units: 1e Next Unit: 3e	Previous Units: 1a, 1f, 2a, 2b Next Unit: 3a/b

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		Autumn 1 and 2	Spring 1	Spring 2	Summer 1	Summer 2
Y	K	Skeletal and muscular systems Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 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.	Forces and Magnets 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. Describe magnets as having two poles.	Rocks and relics 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 the three different types of rock and how they are formed.	Plant nutrition and reproduction 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.	Light and Shadow 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.
	S	Ask relevant questions and using different types of	Make systematic and	Make systematic and	Identify differences, similarities or changes related to simple	Set up simple practical enquiries, comparative

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		scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Record findings in a range of ways.	careful observations. Report on findings from enquiries. Use results to draw simple conclusions	careful observations.	scientific ideas and processes. Make systematic and careful observation.	and fair tests. Make systematic and careful observations. Identify differences, similarities or changes related to simple scientific ideas and processes.
	>	contract, diet, endoskeleton, exoskeleton, invertebrate, joint, muscle, nutrition, Ball and socket joint, biceps, bone marrow, carbohydrates, cardiac muscle, carnivore, cartilage, , cranium, dairy and alternatives, , femur, fibre, fibula, fruit and veg, gastrocnemius, gluteus maximus, hamstring, herbivore, hinge joint, hip flexors, humerus, latissimus dorsi, ligament, limb, malnutrition, mandible, mineral, nutrient, oils and spreads	attract, force, force meter, friction, magnet, newton, non-contact force, pull, push, repel, Alloy, atmosphere, attraction, aurora, bar chart, cobalt, compass, contact force, ferrofluid, ferrous, iron, iron, filings, lubricant, magnetic, magnetic field, magnetic force, magnetise, magnetism, magnetite, magnetosphere, nickel, north pole, outer core, repulsion, solar wind, south pole, steel, surface, tread pattern.	fossil, fossilisation, igneous, impermeable, metamorphic, permeable rock, sediment, sedimentary, Clay soil, Earth, erosion, eruption, gas, geology, lava, layer, magma, magma chamber, Mary Anning, material, metal, mineral, molten, organic, palaeontology, , pressure, pumice stone, sandy soil, semi-molten, silty soil, subsoil, superheated, transform, volcano	anther carpel, filament, germination, nectar, petal, phloem, pollen, seed, sepal, vein, xylem. Anchor, , blade, bud, carbon dioxide, epiphyte, fibrous root system, flower, fruit, , growth, lateral root, leaf, life cycle, nutrient, offspring, photosynthesis, pollination, pollinator, pore, preproduction, root, seed dispersal, seeding, stalk, statement, stem, taproot system, transpiration, vascular plant, vessel,	darkness, light, light source, opaque. shadow, reflect, translucent, transparent, Artificial, block, mirror, moon, natural, refractive, ray,, shiny, sun, sun cream, sun protection factor, ultraviolet (UV) light.
	P	Previous units: 1a, 1f, 2a, 2b, 2 e/f Next Units: 4a	Previous Units: N/A Next Units: 5a	Previous Units: N/A Next Units: N/A	Previous Units: 1e, 2d Next Units: N/A	Previous Units: N/A Next Units: 6e



Belswains Primary School Science Progression Map

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		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1 and 2
Y	K	Food and the digestive system 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.	Sound Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Recognise that sounds get fainter as the distance from the sound source increases.	States or Matter 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).	Grouping and classifying Questions can help us find out about the world and can be answered using scientific enquiry. Classification is the arrangement of living and non-living things into groups or categories. Scientists classify living things according to shared characteristics	Electrical circuits and conductors 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.
	S	Make systematic and careful observations. Gather, record, classify and present data in a variety of	Ask relevant questions and using different types of scientific enquiries to answer them.	Make systematic and careful observations. Gather, record, classify and present data in a	Report on findings from enquiries. Use results to draw simple	Report on findings from enquiries. Use results to draw simple conclusions, make

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	ways to help in answering questions. Record findings in a variety of ways.	Set up simple practical enquiries, comparative and fair tests.	variety of ways to help in answering questions. Use results to draw conclusions.	conclusions. Use straightforward scientific evidence to answer questions or to support their findings	predictions for new values, suggest improvements and raise further questions. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
>	anus, canine, crown, dentine, digestive system, fluoride, incisor, large intestine, molar, mouth, oesophagus, permanent teeth, plaque, premolar, pulp, rectum, stomach, small intestine tooth enamel, Abiotic, apex predator, bacteria, biotic, , carbohydrate, carnivore, consumer, cusp, digestion, digestive acid, digestive enzyme, digestive organ, ecosystem, excretion, faeces, ,food chain, food energy, food web, frugivore, herbivore, , insectivore, interdependence, , mandible, maxilla, microorganism, nutrient, omnivore, oral hygiene, organism, photosynthesis, piscivore, predator, prey, primary consumer, primary teeth, producer, protein, root canal, saliva, secondary consumer, , tertiary consumer, tongue,	Air, cochlea, decibel (dB), Eardrum hearing pitch, sound source, sound wave, vibrate, volume, wavelength, brass instrument, cochlea nerve, ear, ear canal., gas, , hertz (Hz), inner ear, medium, muffle, musical instrument, liquid, ossicles, particle, percussion, pinna, solid, sound, stringed instrument, woodwind instrument	Boling point, condensation, Degrees Celsius, evaporate, evaporation, freezing point, gas, liquid, melting point reversible, solid, state of matter, compress, condense, condensing point, cool, foam, freeze, freezing, , gel, heat, ice, material, matter, melt, melting, , particle, powder, process, property, steam, temperature, thermometer, viscous, water vapour	animal kingdom, classification, Amphibian, annelid, arachnid, arthropod, bird, common name, cone-bearing plant, crustacean, evolution, exoskeleton, fish, flowering plant, insect, invertebrate, mammal, mollusc, myriapod, non-vascular, plant, observable feature, plant kingdom, reptile, scientific name, seed, segmented, shell, species, spore, spore-producing, plant, taxonomy, vascular plant, vertebrate,	battery, buzzer, cell, complete circuit, conductor, electricity, incomplete circuit, insulator, light bulb, mains electricity, motor non-conductive, wire 3-core flexible cable, appliance, battery holder, brass, cartridge fuse, circuit, coding, component, conductive, copper, core, crocodile clip, earth wire, electrical conductivity, electric current, electric shock, , filament, incandescent light bulb, lamp, light-emitting diode (LED), live wire, material, , neutral wire, , power station, programmable, push-to-break switch, push-to-make switch, pylon, rechargeable, reed switch, resistance, rocker switch, sensor, series circuit, socket, source, switch, three-pin plug, toggle switch, tungsten,



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		tooth, vitamin				
	D	Previous Unit: 1a, 1f, 2a, 2b, 2 e/f , 3a/b Next Units: 5c/d	Previous Unit: 1a Next Unit: N/A	Previous Unit: 1b, 2c Next Unit: 5e/f	Previous Unit: N/A Next Unit: 6 Frozen Kingdoms	Previous Unit: N/A Next Units: 6c/d

		Autumn 1	Autumn 2	Spring 1 and 2	Summer 1 and 2
>	⋈	Forces and Mechanisms 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.	Earth and Space 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. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	Human Aging and Reproduction Describe the changes as humans develop to old age. Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	Properties and change of Materials Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Demonstrate that dissolving, mixing and changes of state are reversible changes.

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				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.
S	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables. Take measurements, using a range of scientific equipment,	Report and present findings from enquiries. Identify scientific evidence that has been used to support or refute ideas or arguments.	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables. Record data and results of increasing complexity in a range of ways.	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables. Take measurements, using a range of scientific equipment, Use test results to make predictions to set up further comparative and fair tests.
>	Aerodynamic, air resistance, contact force, force meter, friction, gravitational force, magnetism, newton, non-contact force, pull, push, streamline water resistance, , drag, force, , fulcrum, gear, gravity, lever, lubricant, machine, mass, mechanical advantage, mechanism, particle, pulley, , surface area, weight	Earth, galaxy, Jupiter, Mars, Mercury, the Moon, Neptune, planet, Pluto, Saturn, the Solar System, universe, Uranus, Venus, Atmosphere, axis, block, constellation, daytime, dwarf planet, first quarter moon, full moon, , gas giant, geocentric model, Goldilocks planet, gravitational force, heliocentric model, horizon, , last quarter moon, lunar, lunar eclipse, mass, matter, Milky Way Galaxy, moon, new moon, night time, Northern Hemisphere, orbit, partial lunar eclipse, penumbra, phases of the moon, , rotate, satellite, season, shadow, solar, solar eclipse, Southern Hemisphere, space, spacecraft, start, Sun, sundial, sunrise, sunset, terrestrial, total lunar eclipse, umbra, waning crescent moon, waning	adolescent, adult ageing infant, juvenile, Life cycle, lifespan Acne, aggression, amphibian, bird, birth, blastocyst, breasts, cell, deterioration, development, egg, embryo, emotion, fallopian tube, female, fertilisation, fish, foetus, gestation, growth, growth spurt, hormone, insect, larva., male, mammal, menopause, metamorphosis, mood swing, offspring, ovary, penis, period, preschool, process, puberty, pubic hair, pupa, reaction time, reproduction, reproductive organ, reproductive system, reptile, self-esteem, semen, sexual intercourse, sexually mature, sexual	chemical change, filter, insoluble, irreversible change. Mixture, physical change, reversible change, soluble, solute, solution, solvent, absorbent, bendy, condense, conductor, dissolve, electrically conductive, evaporate, , filtration, freeze, gas, hard, heterogeneous mixture, homogeneous mixture, , insulator, , liquid, magnetic, material, melt, , particle, property, reflective, rough, rust, saturated solution, sieve, sieving, solid, solubility, stretchy, strong, temperature, thermally conductive, transparent, waterproof

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			gibbous moon, wane, waxing crescent Moon, waxing gibbous Moon, wax, year	reproduction, sperm, stage, sweat, testicle, umbilical cord, urethra, uterus, vagina, vertebrate, warm blooded	
	P	Previous unit: 3c/d Next Unit: N/A	Previous unit: N/A Next Unit: N/A	Previous units: 1a, 1f, 2a, 2b, 2 e/f , 3a/b, 4a Next Units: 6 a/b	Previous Units: 1b, 2c, 4c Next Units: N/A

		Autumn 1 and 2	Spring 1	Spring 2	Summer 1	Summer 2
>	⌞	Circulatory System 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.	Electrical Circuits and components Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Use recognised symbols when representing a simple circuit in a diagram.	Classification Classify living things, including microorganisms, animals and plants, into groups according to common observable characteristics and based on similarities and differences. Identify how animals and plants are adapted to suit their environment, Use and construct	Light Theory Recognise that light appears to travel in straight lines. 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.	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. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

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		Describe the ways in which nutrients and water are transported within animals, including humans.		classification systems to identify animals and plants from a range of habitats.		Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
S		Plan different types of scientific enquiries to answer questions, including recognising and controlling variables. Take measurements, using a range of scientific equipment, Record data and results of increasing complexity in a range of ways.	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables. Take measurements, using a range of scientific equipment,	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables. Take measurements, using a range of scientific equipment, Use test results to make predictions to set up further comparative and fair tests. Identify scientific evidence that has been used to support or refute ideas or arguments.	Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations. Identify scientific evidence that has been used to support or refute ideas or arguments.
>		artery, blood, blood pressure, capillary, circulatory system, heart, heart rate, oxygen, plasma, platelet, red blood cell, vein, white blood cell aerobic exercise, antibody, aorta, atrium, blood vessel, bone marrow, , carbohydrate, carbon dioxide, cell, cholesterol, clot, deoxygenate, digestive system, excretion, excretory system, haemoglobin, hormone, immune system,	battery, buzzer, cell, circuit, circuit diagram conductor, electrical current, insulator, mains, motor, series circuit, wire appliance, battery holder, coding, component, crocodile clip, electricity, environmental variable, lamp, light-emitting diode (LED), light meter, multimeter, sensor, source, switch symbol, terminal volt, voltage,	animal kingdom, classification, classification key, characteristics, adaption, evolution, extinction, invertebrate, kingdom, vertebrate,	absorb, concave, convex, cornea, electromagnetic spectrum, iris, lens, light source, opaque, optic nerve, prism, pupil, , ray, reflect, refract, retina, afterimage, beam, cone, darkness, light meter, light wave, lux, optical fibre, perceive, plane mirrorreflector, rod, scatter, shadow, spectrum, translucent, transparent, ultraviolet (UV) light, visible light, wavelength, white light	adaptation, artificial selection, characteristic, evolve, evolution, extinct, genetics, inheritance, natural selection, species, variation, ancestor, animal kingdom, asexual reproduction, bacteria, classification, deoxyribonucleic acid (DNA), dinosaur, fossil, fungus kingdom, gene, host, kingdom, microorganism, monera kingdom, multicellular, naturalist, origin, palaeontologist, pathogen, plant kingdom, Protista kingdom, sexual reproduction, theory,



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		immunity, lumen, muscular system, nervous system, nutrient, organ, oxygenate, oxygenated, processed food, protein, pulmonary artery, pulmonary vein, pulse rate, reproductive system, respiratory system, resting heart rate, saturated fat, septum, skeletal system, tissue, unsaturated fat, valve, vena cava, ventricle,	voltmeter,			unicellular, virus
	P	Previous units: 1a, 1f, 2a, 2b, 2 e/f , 3a/b, 4a, 5 c/d	Previous Unit: 4e/f	Previous Unit: 4d	Previous Units: 3f	Previous Units: N/A