

Early Years Foundation Stage	Knowledge	Key Vocabulary
Animal Adventures	• I can sort objects into living and non-living. • I can find and describe minibeasts. • I can sort and describe farm animals. • I can sort animals based on where they live. • I can compare my home with a zoo animal home.	Alive, desert, farm, grow, home, minibeast, move, non-living, ocean, polar, woodland, zoo
Changing seasons	• I can recognise changes outside in Autumn. • I can recognise different types of weather. • I can recognise how animals prepare for winter. • I can recognise changes outside in spring. • I can investigate the mixture needed to build a sandcastle. • I can recognise changes outside in summer.	Autumn, season, spring, summer, weather, winter
I am a Scientist	• I can explore ways to make objects move. • I can explore different sounds. • I can explore whether objects float or sink. • I can explore freezing and melting.	Float, freeze, light, loud, melt, pull, push, quiet, sink, volume
Our Beautiful planet	• I can recognise some ways to look after the planet. (exploring outdoors) • I can identify and name plants. • I can explore what helps seeds grow. • I can recognise some ways to look after the planet. (caring for the Earth)	Care, Earth, grow, plant, seed, sunflower, rose, daisy

Year 1	Knowledge	Key Vocabulary
Introduction to Plants	- I can identify plants in the school grounds and I can identify the features of a plant. - I can identify parts of a flowering plant. - I can identify and name wild and garden plants. - I can identify and name deciduous and evergreen trees.	Flower, leaf, bulb, roots, trunk, seed, stem, fruit, garden plants, wild plants, deciduous, evergreen
Animals - Comparing animals	- I can name a variety of common animals including fish, amphibians (frog), reptiles (snake), birds and mammals. - I can describe the structure of a variety of animals - I can compare features of animals - I can identify and name animals that are carnivores, herbivores and omnivores.	arms, legs, wings, tails, fins, head, trunk, horns/tusks, shell)
Animals- Sensitive bodies	- I can name parts of the human body. - I can name the body parts used for each sense. - I can identify the body parts used for the sense of taste and touch. - I can identify the body parts used for the smell and sight.	head, neck, arms, elbows, legs, knees, face (ears, eyes, nose, mouth, teeth, tongue) feet, hair, shoulders, hands, wrist, hearing, senses, sight, smell, taste, touch
Materials - Everyday Materials	- I can identify everyday materials. - I can recognise the difference between objects and materials - I can describe the properties of materials - I can group materials based on their properties (absorbency) - I can group materials based on their properties (waterproofness)	Absorbent, fabric, glass, group, material, metal, object, plastic, rock, tough, waterproof, wood
Forces and Space - Seasonal Changes	- I can identify how the weather changes across the four seasons. - I can recognise how trees change across the four seasons. - I can recognise that daylight hours change across the four seasons. - I can observe changes across the four seasons.	Autumn, season, spring. Summer. Symbol, weather, deciduous tree evergreen tree, temperature, sunrise, sunset

Year 2	Knowledge	Key Vocabulary
Living things: Habitats	- I can recognise the difference between things that are alive, were once alive, or have never been alive. - I can identify plants and animals in different habitats. - I can identify how a habitat provides animals and plants with what they need to survive. - I can recognise how animals and plants depend on each other. - I can recall how animals get their food from plants and other animals.	Living, dead, never been alive, Coastal, habitat, ocean, predator, rainforest, woodland basic needs, diet, food chain, shelter, camouflage, prey, predator, producer, food chain
Living things: Microhabitats	- I can name and classify a variety of minibeasts. - I can recognise that living things live in habitats to which they are suited. - I can ask questions and plan how to carry out an experiment. - I can carry out an experiment and record data in a table.	microhabitat, minibeast, camouflage, condition data, food chain, method, test, results, tally
Plants -plant growth	- I can recognise that seeds need certain conditions for growth. - I can recognise that seeds and bulbs contain what they need to grow into a plant. - I can describe what seeds need to grow into a plant. - I can describe the effect of light on plant growth. - I can recognise what plants need for healthy growth.	seeds, bulbs, water, light, growth, healthy, condition, shoot, seedling, germinate, plant, conditions
Animals, including humans Life cycles and health	- I can learn which offspring come from which parent animal. - I can observe and measure growth in humans. - I can identify and list the basic needs for survival for humans and animals. - I can recognise the importance of exercise and personal hygiene. - I can identify how to have a balanced diet.	offspring, life cycles, grow, change, adults, basic needs, water, food, air survival, exercise, hygiene, teenager, toddler, health
Materials - Uses of everyday materials	- I can recognise that objects are made from materials that suit their uses. (2 lessons) - I can recognise that the shape of some solid objects can be changed. - I can compare the suitability of materials for particular uses. - I can recognise that the strength of some materials can be changed.	Elastic, fabric, flexible, glass, material, metal, object, plastic, property, rock, suitable, wood, stretch, twist, bend, squash, pull, push

Year 3	Knowledge	Key Vocabulary
Plants – Plant reproduction	- I can identify the growth and survival needs of plants. - I can describe the relationship between structure and function in plants. - I can investigate how water is transported in plants. - I can explore the role of flowers in the life cycle of a plant. - I can apply knowledge of plant life and growth. - I can name methods of seed dispersal.	Flowering plant, pollen, seed dispersal, pollination, transport, leaves, petal, roots, soil, seed formation, stem/trunk, sunlight, fruit
Animals movement and nutrition	- I can explain the role of a skeleton. - I can recognise the main bones in the body. - I can explain how muscles are used for movement. - I can explain how food is an essential energy source for animals. - I can identify the main nutrient groups and their simple functions.	skeleton, muscles, support, protection, movement, spine, joint, measure, pelvis, ribs, skull, contract, relax, bones, vertebrate, invertebrate Nutrition, food types, carbohydrates, protein, vitamins and minerals, fat, energy, fibre, balanced diet,
Energy - Light and shadows	- I can explain the role of light sources. - I can notice that light is reflected from surfaces. - I can recognise which materials cast a shadow. - I can recognise that light from the sun can be dangerous. - I can investigate how the distance of the light source affects the size of its shadow.	Light, light source, darkness, reflect, reflective, mirror, shadow, block, direction, opaque, translucent, transparent
Materials - Rocks and soil	- I can group rocks using their appearance. - I can group rocks using their physical properties. - I can describe the process of fossil formation. - I can compare soils and how they were formed.	Crystal, grain, group, igneous rock, lava, magma, metamorphic rock, mineral, absorbency, acid rain, hard, hardness, impermeable, permeable, soft, bone, fossil, clay soil, sand
Forces and space - Forces and Magnets	- I can describe the effects of contact forces. (pushes pulls and twists) - I can recognise the effects and uses of forces. (friction) - I can interpret why and how things move differently on different surfaces. - I can 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 - I can describe the effects of magnets. - I can compare the properties of different types of magnets.	Force, friction, magnetic force, magnet, strength, bar/ring/button/horseshoe magnets, attract, repel, north/south pole

Year 4	Knowledge	Key Vocabulary
Living things Classification and changing habitats	• I can group animals in various ways. • I can group plants in various ways. • I can make and use classification keys. • I can recognise and describe different habitats and their inhabitants. • I can recognise the impact of natural disasters on habitats.	Classification keys, environment, fish, amphibians, reptiles, birds, mammals, vertebrates, invertebrates, deforestation, endangered, conservation, pollution, flowering and non-flowering plants, habitats
Animal, including humans Digestion and food	• I can describe the function of the human digestive system. • I can recall the four types of human teeth and I can explain what the different teeth are used for. • I can explain how to care for our teeth. • I can recognise producers, predators and prey in food chains. • I can recognise that animal poo can give us clues about digestion, teeth and diet.	Digestive system, saliva, tongue, oesophagus (gullet), stomach, small intestine, large intestine, mouth, teeth, canine, incisor, molar, pre-molar, carnivore, herbivore, omnivore, producer, consumer, predator, prey, food chain
Materials - States of Matter	• I can identify solids using their properties. • I can identify liquids and gases using their properties. • I can describe melting and freezing. • I can describe condensing and evaporating. • I can describe the different stages of the water cycle. • I can describe how temperature affects evaporation rates and the water cycle.	Boiling, condensing, degrees Celsius, evaporating, evaporation rate, freezing, gas, liquid, melting, precipitation, rate, solid, steam, temperature, thermometer
Energy – Sound and vibrations	• I can describe how sounds are made. • I can describe how sounds are heard through different mediums. • I can describe the relationship between vibration, strength and volume. • I can describe the relationship between volume and distance. • I can describe pitch and how to change it.	Sound, noise, vibration, travel, pitch, tune, air, volume,
Energy - Electricity and circuits	• I can recognise how electrical appliances are powered. • I can construct an electrical circuit. (Only draw pictorial diagram not with symbols) • I can explain the use of switches in a circuit. • I can explain the use of materials as electrical conductors or insulators. • I can investigate what effects bulb brightness. • I can explain how to be safe around electricity.	Appliance, battery/cell, bulb, buzzer, circuit, electrical conductor, electrical insulator, electricity, mains, method, motor, power source, switch

Year 5	Knowledge	Key Vocabulary
Living things – Life cycles and reproduction	- I can describe the life cycle of a plant including the reproductive stage. - I can describe the life cycle of a mammal. - I can describe the life cycle of a bird and compare it with that of a mammal. - I can describe the life cycle of an amphibian. - I can describe the life cycle of an insect and compare it with that of an amphibian. - I can describe asexual reproduction in plants.	Adolescence, asexual reproduction, characteristic, data, fertilisation, germination Gestation, gills, Incubation, lungs, mating Metamorphosis, offspring, ovule, pollen, pollination, reproduction, sexual reproduction, testable
Animals, including humans – Human timeline	- I can describe how humans, change from babies through to old age. - I can identify changes in males and females as a result of puberty.	Adolescence, adolescent, adult, adulthood Child, childhood, infant, life cycle, new born old age, toddler, hormones, period (menstruation), puberty
Forces and Space - Earth and space	- I can compare the contributions of Copernicus to models of the solar system. (heliocentric model and Spherical Bodies) - I can describe the movement of the Moon relative to the Earth. - I can explain the causes of day and night and the seasons.	celestial bodies, discovery, Earth, evidence, model, moon, planet, orbit, solar system, spherical, space, star, sun, first quarter moon, full moon, last quarter moon, moon, new moon phase, axis, day, daytime, night, rotate, tilt, season,
Materials – Mixtures and separation	- I can describe mixtures. - I can explain the process of sieving. - I can explain the process of filtering. - I can describe solutions and how they can be identified. - I can identify which factors affect the time taken to dissolve. - I can describe the process of evaporation.	control variable, dissolve, filtering, insoluble, mixture, sieving, soluble, solution

Materials – Properties and change	• I can determine the hardness of materials and link this to their uses. • I can determine the transparency of different materials and link this to their uses. • I can determine the conductivity of different materials and link this to their uses. • I can demonstrate reversible change. • I can demonstrate irreversible changes. (2 lessons)	Burning, conductor, electrical conductivity, insulator, irreversible change, reversible change, thermal conductivity, rust, rusting, transparency
Forces and space – unbalanced forces	• I can describe gravity and its effects. • I can describe air resistance and its effects. • I can describe water resistance and its effects. • I can describe friction and its effects. • I can describe the effects of levers, pulleys and simple machines on movement.	Gravity, force, fall, air resistance, water resistance, friction, surfaces, mechanism, lever, pulley, gear, pivot,

Year 6	Knowledge	Key Vocabulary
Living things – classifying big and small	• I can classify the cold-blooded vertebrate groups using their common characteristics. • I can classify the warm-blooded vertebrate groups using their common characteristics. • I can classify invertebrates using their characteristics. • I can describe how the plant kingdom is organised (based on shared characteristics). • I can describe and classify microorganisms.	Vertebrate, fish, amphibian, reptile classification key, cold-blooded, bird, mammal, warm-blooded, classification key, exoskeleton, insect, invertebrate, snail, spider (arachnid), worm, fern, moss, microorganism, microscopic
Living things: Evolution and inheritance.	• I can explain why there are differences within a species. • I can recognise the inheritance of characteristics in plants and animals. • I can explain why adaptation is necessary. • I can model how natural selection affects population size. • I can describe the theory of evolution. • I can recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	Adaptation, anomaly Competition, environment Environmental, evolution, extinct Fossil, gene, inherit, inheritance, natural selection, parent, population Reliable, selective breeding, survival of the fittest
Animals, including humans – Circulation and health	• I can identify factors that affect our health and how to reduce their negative impact. • I can summarise the key structures and purpose of the circulatory system. • I can identify key roles of blood. • I can investigate the relationship between exercise and heart rate. • I can describe the relationship between heart rate and fitness.	Blood, bloodstream, blood vessels, carbon dioxide, circulatory system, drug, heart, heart rate, line graph, oxygen, relationship
Energy – Light and reflection	• I can describe the pathway of light. • I can describe how we see. • I can explain how shadows change. • I can explain how a periscope works.	Light ray, light source, luminous, straight, non-luminous, eye, iris, pupil, darkness, cast, reflect, shadow, block, direction, opaque

Energy – Circuits, batteries and switches	• I can use recognised symbols for electrical components. • I can predict and present results for electrical circuits. • I can recognise a link between the number of components and resistance. • I can investigate how voltage affects bulb brightness.	Appliance, battery, bulb, buzzer, cell, circuit, component, current, electricity, model, motor, power source, switch, voltage, wire, circuit diagram, ammeter, resistance, data logger
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