



| Science overview | Foundation  | Year 1  | Year 2  | Year 3   | Year 4  | Year 5  | Year 6   |
|------------------|---|---|---|--|---|---|--|
| <b>AUT 1</b>     | <p><b>All About Me</b><br/>-name main face and body parts</p> <p><b>Living Things and Habitats</b><br/>-caring for creation/environment<br/>- around our school (class garden plots)</p>              | <p><b>Materials – part 1</b><br/>-distinguish between object and material<br/>-sense of touch to describe material<br/>-properties of different materials</p>   | <p><b>Living Things and their Habitats – part 1</b><br/>-identify living and non-living things<br/>-features of a range of habitats<br/>-how habitats provide for basic needs<br/>-how plants and animals are suited to their habitat</p> | <p><b>Materials – Rocks and Soils</b><br/>-how rocks are formed<br/>-differences between sedimentary, igneous and metamorphic rocks<br/>-classify rocks based on simple physical properties<br/>-how fossils are formed in sedimentary rocks<br/>-what is soil made from</p>   | <p><b>States of Matter</b><br/>-compare and group materials based on states of matter (liquid/solid/gas)<br/>-effect of heating or cooling on material<br/>-identify temperature at which different materials change state<br/>-use measurements to explain changes to the state of water (freezing point, boiling point, melting point)<br/>-role of evaporation and condensation in water cycle</p> | <p><b>Earth and Space</b><br/>-movement of the earth in relation the sun<br/>-how seasons and associated weather is created<br/>-movement of the moon relative to the earth<br/>-size, shape and position of the earth, sun and moon<br/>-how night and day are created<br/>-link between planets and stars</p> | <p><b>Light and Shadows</b><br/>-how light travels<br/>- how the human eye sees objects<br/>-how different colours of light are created<br/>-how simple optical instruments work<br/>-use the ray model to explain size of shadows</p> |
| vocabulary       | head, eye, ear, mouth, nose, arm, elbow, leg, knee, shoulder, back, feet, toe, hand, finger, thumb, heart, lungs, brain, plant, grow, water, soil, litter and rubbish, recycle, environment, Creation | plastic, metal, rubber, fabric, texture, rough, smooth, prickly, spiky, soggy, gooey, squashy, fluffy, furry, bumpy, spongy, sharp, smooth, stretchy, bendy, rigid, brittle, strong, transparent, translucent, opaque, waterproof | living, non-living, dead, habitat, woodland, vegetation, desert, arid, rainforest, shady, depend, flexible  | formation, igneous, metamorphic, sedimentary, chalk, limestone, granite, basalt, sandstone, flint, slate, marble, volcanoes, erosion, geology, geologist, Mohs hardness scale, fossils, preserved, skeleton, palaeontology organisms, extinct, sediment, fossilisation, earthquake, loamy, silky hummus, clay, particles organic matter, texture, topsoil, bed rock, sub soil, rocky soil, waterlogged, permeable, permeability, impermeable | states of matter, solid, liquid, gas, particles, viscosity, fair test, variables, heating, melting, energy, degrees Celsius, °C, solidify, solidification, evaporation, water vapour, steam, condensation, condenses, precipitation, water cycle  | universe, solar system, star, Sun, planets, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, orbit, revolve, sphere, phases of the Moon, full moon, gibbous moon, half moon, crescent moon, new moon, waxing, waning, lunar month, Earth, axis, rotate, tilted                             | reflect, reflective, block, distort, compress, periscope, light meter, absorb, magnifying glass, converging lens, bend, split, refract, refraction, filtered, illusion   |
| <b>AUT 2</b>     | <p><b>Weather and Seasons</b><br/>-winter weather</p>   | <p><b>Materials – part 2</b><br/>-different materials used for houses<br/>-how materials are chosen<br/>-where rubbish goes<br/>-how to reduce paper use</p>  | <p><b>Living Things and their Habitats – part 2</b><br/>-what microhabitats are and what lives there<br/>-classify animals by diet (herbivore/ carnivore/ omnivore)<br/>-simple food chain</p>  | <p><b>Forces and Magnets</b><br/>-name and identify forces<br/>-how different surfaces affect how things move<br/>-poles of magnets<br/>-how magnets attract and repel<br/>-classify materials that are attracted to magnets<br/>-identify materials through which magnet force work<br/>-explain how magnetism works<br/>-identify everyday uses of magnetism</p>   | <p><b>Sound – Noise and Music – part 1</b><br/>-identify different sounds and how they are made<br/>-compare sources of sound and their differences<br/>-how sound travels to from source to our ears</p>   | <p><b>Forces – part 1</b><br/>-what gravity is and impact on our lives<br/>-impact of friction on a moving object</p>   | <p><b>Electricity</b><br/>-identify and name basic parts of a simple electric series circuit<br/>-explain variation in component function<br/>-how to make changes in circuit</p>  |
| vocabulary       | winter, weather, cold, cloud, wet, ice, snow  | thatch, straw, reeds, tin, insulation, absorb, thickness, measuring, cylinder, reduce, re-use, recycle  | microhabitat, minibeast, carnivore, herbivore, omnivore, hibernation, producer, consumer, predator, prey  | force, gravity, stationary, turn, twist, friction, grip, interaction, magnet, magnetism, variables. magnetic, attract, repel, north pole, south pole, poles, magnetic force  | vibrations, source, volume, particles, vacuum, medium, dense, sparse, solid, liquid, gas, audible, inaudible, volume, distance, amplitude, intensity  | force, gravity, air resistance, upthrust, weight, Newton meter, Newton, mass, air resistance, surface area, resist, affect, effect, rate, gravitational pull, velocity, friction  | electrons, volts, voltage, series circuit, symbols, flow, current, accurately, accuracy, reliability, dependent  |
| <b>SPR 1</b>     | <p><b>Materials and States of Matter</b><br/>-different types of houses<br/>-joining materials</p>  | <p><b>Animals, including Humans – part 1</b><br/>-name parts of human body</p>  | <p><b>Materials – Everyday Materials</b></p>  | <p><b>Animals, including Humans – part 1</b><br/>-importance of nutritious diet</p>  | <p><b>Sound – Noise and Music – part 2</b><br/>-how pitch can be changed</p>  | <p><b>Forces – part 2</b><br/>-effect of drag force on moving object</p>  | <p><b>Animals, including Humans – part 1</b><br/>-function of organs in human circulatory system (heart, blood</p>   |



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|--------------|--|---|---|---|--|--|--|
|              |  | -name senses and link to body parts<br>-name parts of animal's body<br>-use of body parts in animals<br>-classify common animals by body parts  | -describe physical properties of everyday materials (wood, plastic, metal, water, rock)<br>-classify materials based on own categories<br>-why material is suitable for purpose<br>-how solids are changed by squashing, bending, twisting and stretching<br>-environmental impact of plastic | -how nutrients, water and oxygen are transported within animals and humans  | -effect of different materials on pitch and volume   | -how force and motion is transferred through gears, pulleys, levers and springs  | vessels, blood, blood pressure, clotting)  |
| vocabulary   | same, different, house, straw, sticks, brick, glue, string   | skin, chin, shoulder, elbow, forearm, wrist, fingers, thumb, knee, ankle, bones, bend, turn, twist, sense, sight, sound, touch, smell, taste, blind, deaf, paws, claws, horn, trunk, feathers, scales, beak, fins, shell, protect | malleable, tough, reflective, natural, man-made, squashing, bending, twisting and stretching, solid, liquid, chemicals  | nutrition, require, correct, accurate, varied, balanced, amount, carbohydrates, protein, fats and oils, dairy, fruits and vegetables, nutrients, diet, balanced, variety, food groups, consume, content   | pitch, wavelength, frequency, reflect, absorb, insulate  | water resistance, mechanical devices, gears, levers, pulleys   | brain, heart, lungs, stomach, liver, kidneys, pancreas, oxygen, inhale, urine, digestion, large intestine, small intestine, circulatory system, pulmonary artery, pulmonary vein, arteries, veins, pulse, heart rate, left atrium, right atrium, septum, aorta, right ventricle, left ventricle, blood vessels, platelets, plasma, white blood cells, red blood cells, absorb, infection, immune system, capillaries<br>AA - bronchi, bronchial tubes, diaphragm, ribs, gaseous exchange |
| <b>SPR 2</b> | <b>Weather and Seasons</b><br>-name the four seasons<br>-identify and describe different weather<br><br><b>Animals and Humans / Living Things and Habitats</b><br>-insects<br>-animals and their young<br>-life cycles   | <b>Animals, including Humans – part 2</b><br>-how to look after a pet dog<br>-life cycle of some living things (butterfly)  | <b>Animals, including Humans</b><br>-animals and humans have offspring that grow into adults<br>-basic needs of animals and human<br>-life cycle of a frog<br>-keeping body healthy<br>-importance of hygiene<br>-why regular exercise is good for humans                                     | <b>Animals, including Humans – part 2</b><br>-skeletal and muscular system of a human   | <b>Electricity</b><br>-uses of electricity<br>-how to construct a simple circuit<br>-what a conductor is and test materials for conductivity<br>-closed and open circuits  | <b>Animals, including Humans</b><br>-timeline of stage growth in humans<br>-timeline in stages of growth of butterflies (contrast with humans)<br>-stages of puberty   | <b>Animals, including Humans – part 2</b><br>-effect of exercise on heart rate<br>-transportation of water and nutrients around the body<br>-impact of drugs on body function  |
| vocabulary   | spring, summer, autumn, winter, rainy, windy, snowy, cold, sunny, hot, warm, insects, six legs, wings, bee, fly, ladybird, black ant, butterfly, moth, beetle, offspring, dog, puppy, horse, foal, cow, calf, lion, lion cub, hen, chick, owl, owl, frog, tadpole, bee, larvae, butterfly, caterpillar, human, baby, seal, pup, crocodile, hatchling, life cycle, stages of life, baby, child, teenager, adult, elderly, birth, hatch, egg, chick, chicken, metamorphosis, egg, caterpillar, chrysalis, butterfly, | health, diet, exercise, environment, cocoon, larva, pupa, adult, transform, metamorphosis, appetite   | offspring, shelter, breathe, frogspawn, tadpole, froglet, lungs, nutrients, diet, health, hygiene, germs, microscopic, blood, heart, muscles, pulse, regular  | bones, skeleton, cranium, clavicle, humerus, ribs, carpals, metacarpals, femur, tibia, metatarsals, joints, ball and socket, hinge, gliding, moveable, tendons, ligaments, muscles, voluntary, involuntary, digest, tissue, organ, cell, contract, relax, bicep, tricep, pectoral, abdominal, thigh, calf, forearm, jaw, shoulder | electricity, mains-powered, battery-powered, appliance, energy, renewable, non-renewable, primary energy source, secondary energy source, fossil fuel, nuclear, solar, hydro, geothermal, components, battery, cell, bulb (lamp), bulb holder, buzzer, motor, crocodile clip, leads, wires, switch, conductor, insulator | species, human gestation period, placental, mammals, womb, fertilise, pregnant, foetus, pregnancy, placenta, oxygen, nutrients, embryo, reproduce, fertilisation, prenatal, embryonic stage, foetal stage, baby, toddler, child, adolescent, adult, elderly, puberty, hormones, pituitary gland, testosterone, oestrogen | intensity, strength, cardiovascular/cardio, endorphins, villi/villus, drugs, legal, illegal, alcohol, smoking, tobacco   |



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|--------------|---|--|--|--|--|--|---|
|              | amphibians, eggs, tadpole, froglet, frog  |  |  |  |  |  |   |
| <b>SUM 1</b> | <p><b>Plants</b></p> <ul style="list-style-type: none"> <li>-similarities and differences</li> <li>-growth and change</li> <li>-where fruit and vegetables come from</li> </ul>   | <p><b>Plants – part 1</b></p> <ul style="list-style-type: none"> <li>-what a plant is</li> <li>-name parts of plant</li> <li>-name most common plants in area</li> <li>-role of roots</li> </ul> | <p><b>Plants – part 1</b></p> <ul style="list-style-type: none"> <li>-identify chosen trees from leaves</li> <li>-classify seeds</li> <li>-function of parts of plant</li> <li>-what a plant needs to grow and stay healthy</li> </ul> | <p><b>Plants</b></p> <ul style="list-style-type: none"> <li>-how water, nutrients and oxygen are transported within plants</li> <li>-life cycle of flowering plant</li> <li>-difference in needs of different plants</li> </ul>  | <p><b>Animals, including Humans</b></p> <ul style="list-style-type: none"> <li>-identify and name the basic part of the human digestive system</li> <li>-function of the organs of the human digestive system</li> <li>-function of different teeth</li> <li>-compare teeth of herbivores and carnivores</li> <li>-explain a simple food chain</li> </ul>  | <p><b>Living Things</b></p> <ul style="list-style-type: none"> <li>-compare life cycles of a range of animals: humans, amphibians, insects and birds</li> <li>-describe life cycle of common plants</li> <li>-respiration process in humans and plants</li> <li>-birth, death and reproduction of familiar animals and plants</li> <li>-examine work of famous naturalists</li> </ul>  | <p><b>Living Things - Classification</b></p> <ul style="list-style-type: none"> <li>-group animals into vertebrates and invertebrates</li> <li>-Carl Linnaeus</li> <li>-classify living things into groups based on common characteristics (vertebrates, mammals, marsupials)</li> <li>-devise own sub-divisions</li> </ul>                           |
| vocabulary   | plant, roots, stem, leaf, petal, seeds, germinate, shoot, seedling, flowers, fruit, dies, water, light, soil, vegetable, under the ground, above the ground, ripe, decay,   | petals, stem, leaves, roots, head, flower, seeds, bulbs, soil, trunk, most common, wild plant, daisy, dandelion, buttercups, rose, daffodil, tulip, roots, shoots                                | sycamore, oak, holly, pines, needles, microscope, texture, anchor, absorb, nutrients, prove  | nutrients, stomata, transported, xylem, pollen, stigma, stamen, anther, filament, dissect, reproduce, pollination, nectar, scent, embryo, germination, seed dispersal  | incisors, canines, premolars, molars, function, saliva, oesophagus, stomach, acid, small intestine, protein, vitamin, mineral, carbohydrate, fats, energy, growth, repair, producer, consumer, predator, prey  | development, egg, larva, pupa, nymph, adult, metamorphosis, birth, young, adult, gestation, lifespan, developments, courtship, maternal, paternal, fledging, egg, hatched, spawn, gills, lungs, petal, stamen (anther + filament), carpel (stigma + style + ovary + ovule), pollen, sepals, petals, pollination, fertilisation, germination seeds, fruit   | sub-category, micro-organism, botanist, physician, zoologist, taxonomy, phylum, class, monotremes, placentals, marsupials, lobed, bacteria, fungus/fungi, virus, mould, yeast, influenza/flu, replicate, urbanisation, pollution, deforestation   |
| <b>SUM 2</b> | <p><b>Living Things and Habitats</b></p> <ul style="list-style-type: none"> <li>-sea creatures</li> <li>-caring for creation/environment</li> </ul> <p><b>Earth and Space</b></p> <ul style="list-style-type: none"> <li>-items in space</li> </ul> | <p><b>Plants – part 2</b></p> <ul style="list-style-type: none"> <li>-how seeds change as they grow</li> <li>-seasonal changes to deciduous and evergreen trees</li> </ul>                       | <p><b>Plants – part 2</b></p> <ul style="list-style-type: none"> <li>-how plants change as they grow</li> </ul>  | <p><b>Light and Shadows</b></p> <ul style="list-style-type: none"> <li>-why we need light</li> <li>-difference between transparent, translucent and opaque</li> <li>-compare brightness and colour of lights</li> <li>-how shadows are formed</li> <li>-how light reacts to different surfaces</li> <li>-benefits and dangers of sun for humans</li> </ul> | <p><b>Living Things</b></p> <ul style="list-style-type: none"> <li>-use a classification key to group a variety of living things</li> <li>-compare common plants and animals to those found in other places (under the sea, prehistoric)</li> <li>-name and group living things based on feeding patterns (producer, consumer, predator etc.)</li> <li>-identify how environments change and how this threatens living things</li> </ul> | <p><b>Properties of Materials</b></p> <ul style="list-style-type: none"> <li>-test and group materials based on scientific evidence (hardness, solubility, transparency, conductivity, insulation, magnetism)</li> <li>-process of dissolving</li> <li>-recovering a substance from a solution</li> <li>-identify most appropriate method of separation (filtering, sieving, evaporating)</li> <li>-give reasons for choices of everyday materials based on scientific evidence</li> <li>-classify</li> <li>-describe changes in state (evaporation and condensation)</li> <li>-use the terms 'reversible' and 'irreversible'</li> </ul> | <p><b>Evolution</b></p> <ul style="list-style-type: none"> <li>-why living things produce offspring of the same kind</li> <li>-give reasons why offspring are not identical with each other or their parents</li> <li>-process of evolution with evidence</li> <li>-variation in offspring over time for survival</li> <li>-Charles Darwin</li> </ul> |
| Vocabulary   | sea, fish, shark, pufferfish, jellyfish, dolphin, turtles, octopus, rivers, plastic pollution, biodegradable, sun, planet, solar system, Earth, moon, astronaut, Neil Armstrong   | change, same, different, size, colour, deciduous, evergreen, holly, pines, needles   | germination, sprouting   | dark, darkest, absence of light, texture, transparent, shadow, opaque, source, direction, translucent, bounce, absence of light, reflect, reflect, bounce, mirror, reflection, light source, sunlight, sunrise, position, shadow, block, absence of light,   | organism, vertebrates, mammals, fish, reptiles, amphibians, invertebrates, carnivore, herbivore, omnivore, habitat, microhabitat, meadow, lake, beach, cliff, wild flowering plants, garden plants, deciduous, evergreen,  | material, property, natural, synthetic, magnetic, flexible, permeable, conductive, transparent, opaque, thermal, variable, conductor, insulator, dissolve, solution, solute, solvent, soluble, insoluble, separation, filtration, sieving,   | naturalist, specimens, adapted, offspring, genes, inheritance, identical, variation, evolution, fossil, preserved, observation, amber, Charles Darwin, respiration, sense, nutrition, excretion, reproduction, generations, camouflage,   |



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|  |  |  |  | reflect, bounce, light source, sunset, position, sunrise, opaque, dull, bright, very bright, brighter, duller, dimmer, switch, bulb | similarity, difference, impact, positive, negative, thrive, suffer, deteriorate | evaporation, magnetic attraction, reversible, irreversible, chemical change, physical change, reactants, products, heating, mixing, burning | mimicry, predators, prey, reproduce, characteristic, trait, learned behaviour, attract, pollinators, pollination |
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