EYFS	Science
Vocabulary– tier 3	season, spring, summer, autumn, winter, environment,
Vocabulary– tier 2	Same, difference, busy, quiet, patterns, observe, create
Knowledge	⇒ Know the seasons ⇒ Know that living things go through changes over time ⇒ To know that living things grow ⇒ Know the features of plant and animals
Equipment/resources	Outside, magnifying glasses, plant pots, seeds, photos, mini-beast toys, gardening tools, now press play
Skills (End point)	• (Observing) Observe the effects of physical activity on their body • (Identifying and classifying) Discuss the similarities and differences of objects • (Recording) Create a food diary of what they have eaten

Year 1	Science
Vocabulary– tier 3	Carnivore, herbivore, omnivore, amphibian, fish, bird, reptile, mammal, petal, stem, leaves, root, trunk, branches, arms, legs, neck, elbows, knees, face, deciduous, evergreen, bulb, seed, fruit, blossom, wood, glass, plastic, metal, water, rock, brick, paper, elastic, fabric, foil, hard, soft, stretch, stiff, shiny, dull, rough, smooth, bendy, waterproof, absorbent, opaque, transparent, rain, snow, sleet, clouds, thunder, lightening, sun, day
Vocabulary– tier 2	Observe, discuss, simple, equipment, identify, classify, fair, test, record
Knowledge Biology Chemistry Physics	⇒ Know what some animals eat, what features they have and whether they are living or non living. ⇒ Know the parts of the human body you can see on the outside. ⇒ Know which part of the body is associated with which sense ⇒ Know a variety of flowering plants including trees ⇒ Know which plants are wild and which are found in gardens ⇒ Know the parts of a plant/tree ⇒ Know and name a variety of common animals ⇒ Know the materials that objects are made from ⇒ Know the properties of everyday materials and describe them ⇒ Know the difference in the seasons including weather (EYFS)
Equipment/resources	Skeleton, different materials
Skills (End point)	• (Questioning) Ask simple scientific questions including why something happens • (Observing) Observe and discuss the start and end point of a change over time using simple equipment • (Identifying and classifying) Identify and classify animals by what they eat • (Testing) Carry a fair test in a small group with an adult • (Recording) Use symbols and pictures to record changes over time

Year 2	Science
Vocabulary– tier 3	Habitat/micro habitat, ocean, rainforest, woodland, seashore, food chain, germination, reproduction, survival, light, oxygen, water, temperature, healthy, unhealthy, nutrition, hygiene, life cycles, squashing, bending, twisting, stretching
Vocabulary– tier 2	Simple, fair, test, record, recognise, research, different, observe, diiscuss, variable, predict, variety
Knowledge Biology Chemistry Physics	⇒ Know what is living, dead and never living. (Y1) ⇒ Know where animals live and what is needs from a habitat ⇒ Know the basic needs of animals ⇒ Know what a simple food chain contains (Y1) ⇒ Know about the human life cycle ⇒ Know what constitutes a balanced diet and good hygiene ⇒ Know how plants grow from seeds or bulbs and what they need to continue to stay healthy (Y!) ⇒ Know what happens to certain material when they are squashed or twisted (EYFS, Y!) ⇒ Know which materials are suitable for different jobs. ⇒ Know about famous inventors of materials—John Dunlop, Charles Macintosh, John McAdam
Equipment/resources	Life cycle equipment, quadrant, mini beast hotel, seeds, soil, pots, materials
Skills (End point)	• (Questioning) Ask simple scientific questions recognising different ways to find the answer (experiments, research etc.) • (Observing) Observe and discuss the start and end point of a change over time with a changing variable using simple equipment • (Predicting) Give a verbal prediction for what they think may happen when observing a change over time • (Identifying and classifying) Sort a variety of objects and living things into simple groups (including materials and animals) • (Testing) Carry out a simple fair test, working with a partner • (Recording) Use tables to record changes over time

Year 3	Science
Vocabulary– tier 3	Contract, relax, biceps, triceps, pollination, seed formation, seed dispersal, fertiliser, fossils, organic matter, sedimentary, metamorphic, igneous, crystals, soil, pulleys, shadows, reflect, repel, attract, magnet
Vocabulary– tier 2	Accurate, measure, equipment, method, compare, diagrams, findings, conclusions, observations, systematically, record, predict, objects, identify.
Knowledge Biology Chemistry Physics	⇒ Know what a skeleton is and its function in the body (Y1) ⇒ Know the names of some muscles in the body ⇒ Know what plants need to survive ⇒ Know that animals need the right amount of nutrition ⇒ Know the functions of different parts of a plant (Y2) ⇒ Know how water is transported through a plant. ⇒ Know about the life cycle of a plant. (Y2) ⇒ Know the different types of rock and the differences between them. ⇒ Know how fossils are formed ⇒ Know that soils are made from different rock and matter ⇒ Know how objects move through forces. ⇒ Know that magnets attract and repel ⇒ Know what materials are magnetic ⇒ Know that light is needed to see things and that it is reflected from surfaces ⇒ Know how light creates shadows and reflects from a surface. ⇒ Know that light can be dangerous and can damage the eyes
Equipment/resources	Seeds, bulbs, flowers, food colouring, rocks, magnifying glasses, fossils, torches, magnets, pulley, reflective materials, metals
Skills (End point)	• (Questioning) Ask relevant questions based on some scientific thinking • (Observing) Make accurate observations throughout a change over time systematically recording what you see • (Predicting) After seeing a test, make predictions about what they think will happen with new values/variables • (Identifying and classifying) Identify similarities and differences between different living things or objects • (Measuring) Take accurate measurements using the correct equipment (e.g. thermometer) • (Testing) Follow a method to carry out a comparative and fair test • (Recording) Use labelled drawings and diagrams to explain findings alongside scientific language • (Concluding) Draw conclusions from a test explaining why something has happened

Year 4	Science
Vocabulary– tier 3	Vertebrates, invertebrates, deforestation, producer, predator, prey, digestion, oesophagus, stomach, intestine, molar, pre-molar, incisor, canine, solid, liquid, gas, evaporation, condensation, vibration, volume, pitch, cells, wires, bulbs, buzzers, circuit, current, voltage, insulations
Vocabulary– tier 2	Pose, enquiries, appropriate, record, observe, reasonable, predictions, knowledge, variety, classifications, objects, accurate, equipment, method, keys, data.
Knowledge Biology Chemistry Physics	⇒ Know the parts and functions of the digestive system ⇒ Know the types and functions of different teeth ⇒ Know what a producer, predator and prey in a food chain. (Y2) ⇒ Know how animal have adapted to survive and which animals are endangered (Y2) ⇒ Know how living things can be grouped ⇒ Know that changes can pose dangers to living things ⇒ Know the difference between a solid, liquid and gas ⇒ Know how materials change state (e.g. melting and boiling) ⇒ Know the key points of the water cycle. ⇒ Know what parts are needed for an electrical circuit and the functions of each part ⇒ Know common appliances that need electricity ⇒ Know what a conductor and insulator are ⇒ Know how sound is made and how it travels. ⇒ Know what pitch is and how volume is changed depending on the strength of vibration
Equipment/resources	Teeth model, digerstive system, augmented reality, thermometers, circuit equipment, elastic bands, musical instruments
Skills (End point)	• (Questioning) Pose scientific questions and use different types of enquiries to find the answers • (Observing) Use appropriate equipment and measurements in the recording of observations • (Predicting) Make reasonable scientific predictions base on some scientific knowledge • (Identifying and classifying) Use a variety of ways to present classification of living things or objects • (Measuring) Take accurate measures from tests considering the scale of the equipment • (Testing) Choose the correct equipment and method needed to carry out a successful comparative and fair test • (Recording) Use keys and bar charts to present the data of scientific findings • (Concluding) Use what has happened in a simple fair test to suggest improvements and raise more questions.

Year 5	Science
Vocabulary– tier 3	Naturalists, behaviourist, pre-historic, asexual, sexual, stigma, stamen, anther, filament, ovule, puberty, gestation, solubility, transparency, conductivity, thermal, dissolve, solution, separation, filter, sieve, evaporate, reversible, irreversible, rusting, spherical, relative, solar system, gravity, planets, moon, friction, resistance, pulleys, gears, levers, orbit
Vocabulary– tier 2	Accurate, measure, range, equipment, present, data, report, specific, controlling, variables, prediction, outcome, different, classification.
Knowledge Biology Chemistry Physics	⇒ Know about the life cycles of different types of animals (mammal, amphibian, insect, bird) and the differences between them (Y2) ⇒ Know how plants reproduce (Y1) ⇒ Know how animals reproduce and what happens during the gestation period ⇒ Know the timeline of growth in humans(Y2) ⇒ Know about the individuals and the work of David Attenborough and Jane Goodall ⇒ Know about the properties of different materials and how they can change (Y4) ⇒ Know different materials that are soluble and dissolve ⇒ Know the differences between reversible and irreversible changes (Y4) ⇒ Know how to separate some materials (filtering, sieving and evaporating) (Y4) ⇒ Know the use of different types of materials ⇒ Know that some changes result in the formation of new materials ⇒ Know about the Earth and other planets ⇒ Know how night and day occurs and about the movement of the moon ⇒ Know about forces such as gravity, air and water resistance, friction (Y3) ⇒ Know the functions of pulleys, gears and levers (Y3) ⇒ Know about the individuals and the work of Isaac Newton and Galileo
Equipment/resources	Root cutting, bulbs, tubers, test tubes, vinegar, bicarb, filter paper, sieves, models of planets, different surfaces, wheels, brakes
Skills (End Point)	• (Questioning) Plan a simple test to answer a specific question, controlling variables where necessary • (Predicting) Make a prediction of the outcome of a test where a different variable could be changed to the one done first • (Identifying and classifying) Use classification keys, tables and graphs to present data • (Measuring) Accurately measure using a range of scientific equipment (Newton meters, measuring cylinders, thermometers etc.) • (Testing) Independently plan different types of scientific enquiries to find the answer to a question • (Recording) Present scientific data using line and scatter graphs • (Concluding) Report and present findings in written and oral forms such as presentations.

Year 6	Science
Vocabulary– tier 3	Micro-organisms, bacteria, virus, fungi, heart, lungs, blood vessels, blood, arteries, veins, chambers, evolution, variation, palaeontologist, refraction, parallel circuit
Vocabulary– tier 2	Plan, appropriate, enquiry, specific, incorporate, wider, predict, outcome, support, refute, identify, classify, precision, measure, accuracy, repeating, conducting, appropriate, present, findings, report, reliability.
Knowledge Biology Chemistry Physics	⇒ Know the main components of the circulatory system and their function within it. ⇒ Know the effect of diet, exercise, drugs and lifestyle on our bodies (Y2) ⇒ Know how water and nutrients are transported around plants. (Y3) ⇒ Know features of micro-organisms to in order to classify them ⇒ Look at evidence of evolution and adaptation by looking at offspring and fossils. (Y4) ⇒ Know how plants and animals have adapted to their environment ⇒ Know how living things are classified and give reasons for this ⇒ Know that living things produce offspring of the same kind but not identical to their parents ⇒ Know about the individual and work of Carl Linnaeus (classification) and Charles Darwin, Mary Anning and Alfred Wallace (evolution) ⇒ Know what the voltage in a circuit is by looking at the volume of a buzzer and the brightness of a lamp (Y4) ⇒ Know the symbols for drawing a circuit (Y4) ⇒ Know that light always comes from a source ⇒ Know that light travels in straight lines ⇒ Know how light helps us to see objects by reflecting into our eyes ⇒ Know why shadows change from a light source
Equipment/resources	Heart/model of a heart, periscope, mirrors, binoculars, shadow puppets
Skills (End point)	• (Questioning) Plan and use the most appropriate scientific enquiry to answer a specific question • (Predicting) Incorporate wider scientific knowledge to predict the outcome of new tests • (Identifying and classifying) Use scientific knowledge to support or refute how something has been identified or classified • (Measuring) Measure with precision and accuracy when conducting a repeating test • (Testing) Plan a scientific enquiry based on a previous test and the questions raised from it • (Recording) Choose the most appropriate way to present scientific data and findings • (Concluding) Report and present findings in written and oral forms such as presentations commenting on the accuracy and reliability of results.