

Science Key Vocabulary

Topic	Year Group	Key Vocabulary	Scientists to Consider
Animals, including humans (Biology)	1	Amphibians, birds, fish, mammals, reptiles, carnivores, herbivore, omnivore, sight, hearing, touch, taste, smell, head, neck, ear, mouth, shoulder, hand, fingers, leg, foot, thumb, eye, nose, knee, toes, teeth, elbow	Chris Packham (Animal Conservationist) Joe Wicks (Personal Trainer)
	2	Living, dead, never alive, habitats, micro-habitats, food, food chain, leaf litter, shelter, seashore, woodland, ocean, rainforest, conditions, desert, damp, shade (Higher level vocabulary may be introduced for HA pupils: contagious; infectious; parasites; respiratory system; digestive system; circulatory system)	Steve Irwin (Crocodile Hunter) Robert Winston (Human Scientist)
	3	Build upon KS1 vocab. Nutrients, nutrition, carbohydrates, protein, fats, vitamins, minerals, water, fibre, skeleton, bones, joints, endoskeleton, exoskeleton, hydrostatic skeleton, vertebrates, invertebrates, muscles, contract, relax	Adelle Davis (20th Century Nutritionist) Marie Curie (Radiation / X-Rays)
	4	Build on KS1 & Y3 Herbivore, Carnivore, Digestive system, tongue, mouth, teeth, oesophagus, stomach, gall bladder, small intestine, pancreas, large intestine, liver, tooth, canine, incisor, molar, premolar, producer, consumer. <u>Digestion</u> : digestive system; food; nutrients; mouth; tongue; teeth; oesophagus; stomach; small intestine; large intestine; rectum; anus; mucus; peristalsis; acid; absorption <u>Teeth</u> : carnivore; herbivore; omnivore; tooth; incisor; molar; pre-molar; canine; biting; holding; tearing; grinding; root; gum; jaw bone; tooth decay; plaque; enamel; dentine; pulp <u>Food chains</u> : predator; prey; food chain; producer; consumer; food webs; ecosystem; habitat; apex predator; photosynthesis; decompose; scavenger	Ivan Pavlov (Digestive System Mechanisms) Carl Linnaeus
Animals, including humans	5	Note: Link this unit should be linked to school SRE policy and Y5 unit on 'Living things and their environment' for vocabulary, diagrams of male and female body, diagrams showing development during adolescence taught in year 5	Dr Steve Jones (Geneticist) Prof Robert Winston (Human Scientist)

		Foetus, Embryo, Womb, Gestation, Baby, Toddler, Teenager, Elderly, Growth, Development, Puberty, Hormone, Physical, Emotional	
	6	<p>(See also lower KS2 vocabulary for digestion, skeleton & muscles)</p> <p>Oxygenated, Deoxygenated, Valve, Exercise, Respiration Circulatory system, heart, lungs, blood vessels, blood, artery, vein, pulmonary, alveoli, capillary, digestive, transport, gas exchange, villi, nutrients, water, oxygen, alcohol, drugs, tobacco.</p> <p>Pupil can describe the work of some scientists in overcoming conditions and diseases associated with the heart, blood and circulatory system.</p>	<p>Justus von Liebig (Theories of Nutrition and Metabolism) Sir Richard Doll (Linking Smoking and Health Problems)</p> <p>Leonardo Da Vinci (Anatomy)</p>
Everyday Materials (Chemistry)	1	Hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy/not bendy, waterproof/not waterproof, absorbent, opaque,	<p>John Dunlop</p> <p>John McAdam</p>
	2	<p>(Build on Year 1 word list)</p> <p>Hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy/not bendy, waterproof/not waterproof, absorbent, opaque,</p> <p>Pupils may research recently invented materials which may affect our lives now and in the future e.g. superglue; BacillaFilla; D30.</p>	<p>William Addis (Toothbrush Inventor)</p> <p>Charles Mackintosh (Waterproof coat)</p> <p>John McAdam (roads)</p>
Plants (Biology)	1	<p>leaves, flower, seed, root, bulb, trunk, branches, stem, wild, garden, deciduous, evergreen.</p> <p>Pupils create lists of common flowers/plants seen in/around the local area with photographs of the plants at different times of the year/stages in their life cycle e.g. dandelion; daisy; buttercup; bluebell; dock; clover; grass; nettles</p>	<p>Beatrix Potter;</p> <p>Charles Darwin;</p> <p>David Attenborough; David Bellamy;</p> <p>Agnes Arber.</p>
	2	<p>(In addition to Y1)</p> <p>Leaves, trunk, branch, root, seed, bulb, flower, stem, wild, garden, deciduous, evergreen, observe, grow, compare, record, temperature, predict, measure, diagram, germinate, warmth, sunlight.</p>	<p>Agnes Arber (Botanist)</p> <p>Alan Titchmarsh (Botanist & Gardener)</p>
	3	Building upon KS1 vocabulary	Charles Darwin;

		air, light, water, nutrients, soil, support, anchor, reproduction, pollination, dispersal, transportation, flower, energy, growth, seedling, carbon dioxide, sugar, material, photosynthesis, chlorophyll.	David Attenborough; David Bellamy
Seasonal Change (Physics)	1	<p>Seasons, spring, summer, autumn, winter, windy, sunny, overcast, snow, rain, temperature</p> <p>Consider also using local and common phrases about the weather to help pupil understanding of how people discuss the intensity of weather e.g. raining cats and dogs; it's pelting down – opportunity perhaps to discuss standard English used in weather forecasts.</p> <p>Set up a weather station in class and weather watching stations around the school to record how different areas of the school grounds/local area look in different seasons.</p>	Dr Steve Lyons (Extreme Weather) Holly Green (Meteorologist)
Living things and their habitats (Biology)	2	<p>Living, dead, never alive, habitats, micro-habitats, food, food chain, leaf litter, shelter, seashore, woodland, ocean, rainforest, conditions, desert, damp, shade</p> <p>In addition give names of some key local and global habitats that you will explore and animals/plants which live there e.g. woodland; pond; seashore; ocean; rainforest; polar; under a log/rock/bush; on a stony path; canopy; woodlouse; hermit crab; sea weed; bracken; moss;</p>	Terry Nutkins (TV Presenter) Liz Bonnin (Conservationist)
	4	Environment, flowering, nonflowering, plants, animals, vertebrates, fish, amphibians, reptiles, mammals, invertebrate, human impact, nature reserves, deforestation.	Cindy Looy (Environmental Change and Extinction) Jaques Cousteau (Marine Biologist)

	5	<p>Key vocabulary: (see also KS1 and Lower KS2) Reproduction, Sexual, Asexual, Pollination, Dispersal, reproduction, cell, fertilisation, pollination, male, female, pregnancy, young, mammal, metamorphosis, amphibian, insect, egg, embryo, bird, plant</p> <p>Pupil recognises some scientists, naturalists and/or environmentalists for their work in scientific research of life cycles and reproduction.</p> <p>Vocabulary for HA pupils to explore: angiosperm; gymnosperm; embryo; genome; meiosis; haploid; diploid; generation; gene; gamete; zygote; gestation; chromosome; blastocyst; placenta; mitosis</p>	<p>Key Scientist James Brodie of Brodie(Reproduction of Plants by Spores) David Attenborough (Naturalist and Nature Documentary Broadcaster)</p>
	6	<p>Teach after ‘Animals including Humans’ & ‘Evolution and Inheritance’ as they can inform this unit</p> <p>Variation Organisms Populations. Classification Characteristics Environment, flowering, nonflowering, plants, animals, vertebrates, fish, amphibians, reptiles, mammals, invertebrate, human impact, nature reserves, deforestation. Classify, compare, bacteria, microorganism, organism, invertebrates, vertebrates, Linnaean.</p>	<p>Carl Linnaeus (Identifying, Naming and Classifying Organisms)</p>
Forces and Magnets Physics	3	<p>Force, push, pull, friction, surface, magnet, magnetic, magnetic field, pole, north, south, attract, repel, compass</p>	<p>Isaac Newton; The Wright Brothers (Aeroplanes) Henry Ford (Cars) William Gilbert (Theories on Magnetism) Andre Marie Ampere (Founder of Electro-Magnetism)</p>
Rocks (Chemistry)	3	<p>Rocks, igneous, metamorphic, sedimentary, anthropic, permeable, impermeable, chemical fossil, body fossil, trace fossil, Mary Anning, cast fossil, mould fossil, replacement fossil, extinct, organic matter, topsoil, sub soil, base rock.</p>	<p>Mary Anning (Discovery of Fossils) Inge Lehmann (Earth’s Mantle)</p>
Light (Physics)	3	<p>Light source, dark, reflect, ray, mirror, bounce, visible, beam, sun, glare, travel, straight, opaque, shadow, block, transparent, translucent.</p>	<p>James Clerk Maxwell (Visible and Invisible Waves of Light)</p>

	6	Key vocabulary: (Build on Y3 vocabulary) Light source, dark, reflect, ray, mirror, bounce, visible, beam, sun, glare, travel, straight, opaque, shadow, block, transparent, translucent. Reflect Absorb Emitted Scattered Refraction	Thomas Young (Wave Theory of Light) Percy Shaw (The Cats Eye)
Electricity (Physics)	4	Electricity, electric current, appliances, mains, crocodile clips, wires, bulb, battery cell, battery holder, motor, buzzer, switch, conductor, electrical insulator, component	Thomas Edison (First Working Lightbulb) Joseph Swan (Incandescent Light Bulb)
	6	Key vocabulary: (See also Year 4 'Electricity') Electricity, neutrons, protons, electrons, nucleus, atom, electric current, appliances, mains, crocodile clips, wires, bulb, battery cell, battery holder, motor, buzzer, switch, conductor, electrical insulator, conductor.	Thomas Edison Alessandro Volta (Electrical Battery) Nicola Tesla (Alternating Currents)
Sound (Physics)	4	Amplitude, volume, quiet, loud, ear, pitch, high, low, particles, instruments, wave	Aristotle (Sound Waves) Gailileo Galilei (Frequency and Pitch of Sound Waves) Alexander Graham Bell (Invented the Telephone)
States of Matter (Chemistry)	4	(Build upon properties of materials in KS1 – Everyday Materials and Y3 - Rocks) Solid, liquid, gas, particles, state, materials, properties, matter, melt, freeze, water, ice, temperature, process, condensation, evaporation, water vapour, energy, precipitation, collection,	Anders Celsius (Celsius Temperature Scale) Daniel Fahrenheit (Fahrenheit Temperature Scale / Invention of the Thermometer)
Earth and Space (Physics)	5	Earth, Sun, Moon, Axis, Rotation, Day, Night, Phases of the Moon, star, constellation, waxing, waning, crescent, gibbous. Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, planets, solar system, day, night, rotate, orbit, axis, spherical, geocentric, heliocentric.	Claudius Ptolemy and Nicolaus Copernicus (Heliocentric vs Geocentric Universe) Neil Armstrong (First man on the Moon) Helen Sharman (First British astronaut) Tim Peake (First British ESA astronaut)

Forces (Physics)	5	Air resistance, Water resistance, Friction, Gravity, Newton, Gears, Pulleys, force, push, pull, opposing, streamline, brake, mechanism, lever, cog, machine, pulley	Galileo Galilei (Gravity and Acceleration) Isaac Newton (Gravitation) John Walker (The Match)
Properties and changes of materials (Chemistry)	5	<p>Key vocabulary: (See also KS1 & Lower KS2 materials vocabulary)</p> <p>Hardness, Solubility, Transparency, Conductivity, Magnetic, Filter, Evaporation, Dissolving, Mixing Material, conductor, dissolve, insoluble, suspension, chemical, physical, irreversible, solution, reversible, separate, mixture, insulator, transparent, flexible, permeable, soluble, property, magnetic, hard. Solid, liquid, gas, particles, state, materials, properties, matter, melt, freeze, ice, temperature, process, evaporation, water vapour, energy, collection,</p> <p>Pupil can describe the work of a number of scientists who have developed new materials to meet changing needs in society/the world e.g. space exploration; medicine</p>	<p>Spencer Silver, Arthur Fry and Alan Amron (Post-It Notes)</p> <p>Ruth Benerito (Wrinkle-Free Cotton)</p> <p>Silver, Arthur Fry and Alan Amron (Post-It Notes)</p> <p>Ruth Benerito (Wrinkle-Free Cotton)</p>
Evolution and Inheritance	6	<p>Key vocabulary: (Build upon rocks/fossils vocabulary from LKS2 – Rocks topic in year 3)</p> <p>Fossils, Adaptation, Evolution, Characteristics, Reproduction, Genetics, Variation, Inherited, Environmental, Mutation, Competition, Survival of the Fittest, Evidence</p>	<p>Charles Darwin and Alfred Russel Wallace (Theory of Evolution by Natural Selection)</p> <p>Jane Goodall (Chimpanzees)</p>