

## Appendix 3

### Scientific vocabulary

This appendix lists the scientific terms and technical language found in the QCA schemes of work for science for Key Stage 2 and Key Stage 3, and in materials produced by the Key Stage 3 Strategy to support the teaching of literacy, mathematics or science. Pupils should be able to use them accurately in a range of contexts. For convenience, the words are arranged by year and, for Key Stage 3, by the units from the QCA scheme of work. Words in the lists appear only once although pupils will meet them in other units and in later year groups.

#### Year 6

By the end of Year 6 most pupils will have used these scientific terms and technical language.

##### Sc1 Scientific enquiry

accurate, average, bar line graph, bar chart, collect, compare, conclusion, data, graph, explain, evaluate, evidence, fair test, idea, identify, interpret, limitation, line graph, observation, measurement, pattern, predict, present, record, repeat measurements, repeat observations, results, secondary data, test

##### Sc2 Life processes and living things

alcohol, artery, balanced diet, carbohydrate, circulate, consumer, dispersal/disperse, dissolve, drug, egg, energy, exercise, fat, fertilisation/fertilise, fertiliser, fibre, food chain, germ, germination/germinate, growth, health, heart beat, life cycle, petal, plant food, pulse, pulse rate, microbe, muscle, nutrients, nutrition, ovary, oxygen, pollen, pollination/pollinate, predator, prey, producer, pump, reproduction/reproduce, starch, teeth, tobacco, sepal, side effect, stamen, stigma, style, vein, virus

##### Sc3 Materials and their properties

air, ash, baking powder, bath salts, bicarbonate of soda, boiling temperature, bubbles, carbon dioxide, cement, change, change of state, charcoal, condense, conditions, dissolve, evaporation/evaporate, filter, freeze, gas, hazard, heat, insoluble, irreversible, liquid, melt, mixture, natural gas, oxygen, plaster of Paris, reversible, solid/solidify, soluble, solution, state, steam, washing soda, water cycle

##### Sc4 Physical processes

air, at rest, axis, buzzer, cell, circuit diagram, circuit symbol, complete circuit, component, conductor, force meter, gravity, insulator, light, light beam, loudness, mirror, newton, opaque, orbit, pitch, reflection/reflect, revolve, rotation/rotate, sound, sphere/spherical, spin, stationary, tension, tuning, upthrust, vibration/vibrate, water, weight

# Year 7

## Sc1 Scientific enquiry

correlation, data logger, generalisation, line of best fit, prediction, reliability, repeat reading, sample size, strength of evidence, theory

## Sc2 Life processes and living things

adolescence, baby, cell, fetus/foetus, gestation, hereditary, inherited, mammary glands, menstruation, nucleus, ovary, oviduct, ovulation, penis, placenta, puberty, sperm, testis, tissues, uterus, vagina

carnivore, consumer, dormant, food web, habitat, hibernation, insulation, interdependence, light intensity, migration, organisms, over-wintering, producer

abdomen, amphibian, association, characteristics, classify, feature, invertebrate, limb, mammal, multi-cellular, reptile, species, taxonomic group, variation, vertebrate

## Sc3 Materials and their properties

acid, alkali, caustic, colour change, corrosive, equation, hazard, hydrochloric acid, hydroxides, indicator, litmus, neutral, pH range, reaction, risk

carbon, carbonates, combustion reactions, element, hydrogen, line graph, methane, oxide, oxygen, product, reactant, word equation, zinc

compressible, diffusion, expansion, gas pressure, particle, particle theory, proximity, vibration

attracted, chromatography, chromatogram, compound, distillation, filtration, insoluble, saturated solution, separate, solute, solution, solvent, suspension, trace

## Sc4 Physical processes

air resistance, attraction, conservation, density, drag, energy transfer, friction, fuel, lubricants, magnetic, magnitude, mass, repulsion

asteroid, atmosphere, eclipse, orbit, planet, satellite

## Year 8

### Sc1 Scientific enquiry

anomalous results, data search, environmental conditions, epidemic, evaluate, hypothesis, opinion, population size, precision, quadrat sampling, qualitative, quantitative, range, reliable data, repeats, sample size, sequence of events, sufficient data, time-lapse photography, transect, trial measurements, trials, using secondary sources, variable

### Sc2 Life processes and living things

absorption, albumen, digestion, enzyme, intestine, minerals, molecules, protease, protein, starch, sugars, villus, vitamins

aerobic, artery, breathing, bronchus, circulation, exhale, glucose, haemoglobin, inhale, inspire, lungs, oxygen concentration, respire, ribcage, trachea, vein, ventilation

antibiotic, antibodies, bacteria, epidemic, food poisoning, fungi, hygiene, immunisation, immunity, infection, infectious disease, inoculation, micro-organisms, pathogen, sterilising, vaccination, viruses

community, conifers, distribution, ecosystem, ferns, habitat, humidity, mosses, population sizes, pyramid of numbers, transect

### Sc3 Materials and their properties

atom, chlorides, chlorine, compound, element, equation, formula, molecule, reactants, sodium, symbol

composition, oxides

aligned, basalt, cooling rates, crystals, deposit, erupt, granite, igneous, lava, limestone, magma, metamorphic, mineral, obsidian, porous, precipitation, pumice, quartzite, sandstone, sedimentary, shale, slate, volcanic ash, weathering

### Sc4 Physical processes

conduction, convection, insulator, joule, radiation

coil, core, electromagnet, magnetic field, magnetic field line, nickel, north-seeking pole, solenoid, south-seeking pole, steel

absorption, image, laser, luminous, mirror image, opaque, propagation, radiation, refraction, shadow, spectrum, translucent, transmission, transparent

amplitude, dynamics, frequency, noise pollution, oscillations, oscilloscope, signal generator, tuning fork, volume, wave

## Year 9

### Sc1 Scientific enquiry

carrying out a survey, control accuracy, controlling variables, dependent variable, developing a technique, independent variable, most appropriate equipment, precision, proportional, quantitative data, reliability/trustworthiness of data, sampling, scientific method, trial run, validity of conclusions

### Sc2 Life processes and living things

asexual, breed, classification, clone, characteristics, gamete, gene, genetically modified, grafting, selective breeding, species, variety

addiction, cilia, circulation, emphysema, vitamins

biomass, chlorophyll, Elodea, etiolation, palisade cell, photosynthesis, xylem

balance, compete, competition, deficiency, fungicide, insecticide, nitrates, nutrient, pesticide, sustainable development, toxin, weedkiller, yield

### Sc3 Materials and their properties

carbonates, product, salt, sulfates/sulphates

displacement, order of reactivity

acid rain, catalyst, global warming, neutralisation, ozone depletion, phlogiston theory, vegetation cover

prefixes: di-, mono-, poly-; suffixes: -ate, -ide, -ite

### Sc4 Physical processes

dissipation, dynamo, electric generator, kinetic energy, potential difference, potential energy

acceleration, constant speed, light gate, resistance/drag, streamline

gravitational attraction, heliocentric, orbit, revolve, satellite

antagonistic muscles, counterbalance, hydraulic, lever, moment, pivot, pneumatic, turning effect