

Vocabulary progression document

September 2024

Introduction

The use of accurate scientific vocabulary is essential for children's understanding and communication of scientific concepts. This document presents a detailed mapping of scientific vocabulary progression, illustrating how language skills in science develop over time.

| Animals, including humans | | | | | |
|---|---|--|---|--|--|
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| hair, eyes, face, nose, ears, teeth, mouth, head, neck, arm, elbow, hand, leg, knee, foot, light, dark, blind, hear, loud, quiet, noisy, sweet, salty, sour, bitter, soury, skin, rough, smooth, hard, soft, smell, scent, sniff, stench, animal, mammal, fur, wild mammal, pet, bird, wings, beak, feathers, webbed feet, flippers, tail, fins, scales, gills, amphibians, frog, toad, newt, reptile, lizard, crocodile, turtle, carnivore, sharp teeth, herbivore, plants, vegetable, fruit, omnivore | insect, adult, baby, shelter, heart, exercise, physical, health, mental health, healthy diet, unhealthily diet, meat, sugar, germs, hygiene, doctor, disease, plaque, gums, filling, offspring, egg, parent, baby, child, teenager, life cycle, adolescent, frogspawn, tadpole, froglet, caterpillar, pupa, butterfly | skeleton, skull, ribcage, pelvis, femur, spine, antennae, exoskeleton, joint, hinge joint, ball-and-socket joint, muscle, biceps, triceps, contract, relax, carbohydrates, proteins, dairy and vegetables, balanced diet, nutrition, Eatwell Guide, vegan diet, vegetarian diet, omnivorous diet, pescatarian diet | incisors, canines, premolars, molars, enamel, root, decay, digestive system, mouth, oesophagus, stomach, small intestine, large intestine, rectum, solvo, producer, consumer, prey, predator, farming, overfishing, hunting | foetus, elderly adult, milestone, womb, period, reproduction, hormone, puberty, life expectancy, gestation period, gestation | circulatory system, blood vessels, arteries, veins, capillaries, red blood cells, white blood cells, lungs, plasma, oxygen, atria, ventricles, right atrium, left atrium, right ventricle, left ventricle, deoxygenated blood, calories, saturated fats, unsaturated fats, trans fats, drug, painkiller, depressant, stimulant, cigarette, tar, nicotine, vape, carbon monoxide, addiction, heart rate |

The aim of this document is to give an at-a-glance guide to the progression of vocabulary throughout the curriculum. Vocabulary is broken down into Years 1 – 6 for the topic areas from the National Curriculum and sustainability blocks. Working scientifically vocabulary is broken down into the primary phases.

Words are listed in order of where they appear in the scheme of learning. To save repetition of vocabulary, the words are documented where they are first introduced. For example, the word 'carnivore' is used throughout the schemes however it is tracked in Year 1 as this is the year group this word is first introduced in.

| Key vocabulary | | | | | |
|---|--------|--|--------|--|--------|
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| measure, observe, compare, measurement, growth, trowel, temperature, bend, squash, twist, stretch, absorb | | hardness, reaction, bar chart, pictogram, data, increase, decrease, prediction, dissection, scales, filter paper, filter funnel, measuring cylinder, thermometer, conclusion, evaluation, data, volume, decibel meter, stopwatch, beaker, temperature, Petri dish, block chart, bar graph, classifying, classification key | | line graph, microscope, anomaly, anomalous result, control, control beaker, sieve, filtering, repeatability, accuracy, correlation, precision, angle, periscope, line graph, scatter graph, independent variable, dependent variable, controlled variables, duration, theory | |
| Exposure words | | | | | |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| draw, label, change, same, table, record, tally, pipette, size, predict, similar, different, sort, group, identify, pattern, height, number, amount, hand lens, ruler, counting cubes, centimetres, meters, suitable, unsuitable, match, test, scientific enquiry, comparative test, research, patterns seeking | | fair test, identify, group and classify, model, modelling, investigate, changed, measured, stayed the same, millimetres, millilitres, data logger, tape measure, features, scientists, diagram, sorting diagram, block diagram, distance, results | | causal relationships, decimals, analyse, interpret, conclude, capacity, mass, approximate, justify, secondary source, evidence, duration, mean, calculate, method | |

The working scientifically section has been split into two categories. This includes key vocabulary from the schemes and exposure words. Children are not expected to use every word in the exposure words list, but they can hear correct scientific language verbally through teacher discussion and instruction.

Animals, including humans

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---|---|--|---|--|---|
| <p>hair, eyes, face, nose, ears, teeth, mouth, head, neck, arm, elbow, hand, leg, knee, foot</p> <p>light, dark, blind, hear, loud, quiet, noisy, sweet, salty, sour, bitter, savoury, skin, rough, smooth, hard, soft, smell, scent, sniff, stench</p> <p>animal, mammal, fur, wild mammal, pet, bird, wings, beak, feathers, webbed feet, flippers, tail, fins, scales, gills, amphibian, frog, toad, newt, reptile, lizard, crocodile, turtle, carnivore, sharp teeth, herbivore, plants, vegetable, fruit, omnivore</p> | <p>shelter, heart, exercise, physical health, mental health, healthy diet, unhealthy diet, meat, sugar, germs, hygiene, doctor, disease, plaque, gums, filling</p> <p>offspring, egg, parent, baby, child, teenager, life cycle, adolescent, frogspawn, tadpole, froglet, caterpillar, pupa, butterfly, insect, adult</p> | <p>skeleton, skull, ribcage, pelvis, femur, spine, antennae, exoskeleton, joint, hinge joint, ball-and-socket joint, muscle, biceps, triceps, contract, relax</p> <p>carbohydrates, proteins, dairy products, fats, fruit and vegetables, balanced diet, balanced meal, nutrition, Eatwell Guide, vegan diet, vegetarian diet, omnivorous diet, pescatarian diet</p> | <p>incisors, canines, premolars, molars, enamel, root, decay, digestive system, mouth, oesophagus, stomach, small intestine, large intestine, rectum, saliva</p> <p>producer, consumer, prey, predator, farming, overfishing, hunting</p> | <p>foetus, elderly adult, milestone, womb, period, reproduce, hormone, puberty, life expectancy, gestation period, gestation</p> | <p>circulatory system, blood vessels, arteries, veins, capillaries, red blood cells, white blood cells, lungs, plasma, oxygen, atria, ventricles, right atrium, left atrium, right ventricle, left ventricle, oxygenated blood, deoxygenated blood</p> <p>calories, saturated fats, unsaturated fats, trans fats, drug, painkiller, depressant, stimulant, cigarette, tar, nicotine, vape, carbon monoxide, addiction, heart rate</p> |

Living things and their habitats

| Year 2 | Year 4 | Year 5 | Year 6 |
|--|--|---|---|
| Arctic plants, hibernate, habitat, cactus, desert, rainfall, ocean, seagrass, woodland, fern, moss, microhabitat, spider, snail, diet, food chain, living, dead, never alive | vertebrate, invertebrate, soft-bodied invertebrate, flowering plant, non-flowering plant, seasonal changes, natural resources, rewilding, nature reserve | monotreme, mammary gland, metamorphosis, larva, chrysalis, hatchling, nestling, fledgling, fertilisation, embryo, sperm cells, egg cells, sexual reproduction, anther, stigma, style, filament, ovary, ovule, clone, runner, tuber, asexual reproduction, cutting, parent plant | organism, excretion, reproduction, mollusc, arachnid, classification, coniferous tree, microorganism, bacteria, virus, fungi, characteristics |

Plants

| Year 1 | Year 2 | Year 3 |
|---|---|--|
| plant, flower, leaf, petals, stem, roots, branch, trunk, roots, wildflower, daisy, garden plant, sunflower, nettle, buttercup, dandelion, deciduous tree, horse chestnut, oak, sycamore, evergreen tree, pine, holly, needles, seed, soil, growth | sunlight, compost, herb, blossom, bulb, shoot | water transportation, seedling, seed coating, germination, stamen, pistil, pollen, reproductive organs, pollination, pollinators, wind dispersal, animal dispersal, water dispersal, explosion dispersal, seed dispersal |

Materials

| Year 1 | Year 2 | Year 5 |
|--|--|---|
| material, shiny, dull, rock, heavy, light, object, wood, metal, plastic, glass, wool, solid, liquid, melt, freeze, ice, float, sink, absorb, transparent, opaque | natural material, human-made material, recycle, flexible, rigid, stone, pebble, brick, brittle, flexible, translucent, tough, lightweight, strong, breakable, waterproof | electrical conductor, electrical insulator, thermal insulator, properties, lifespan, dissolve, soluble, insoluble, solution, mixture, reversible changes, reverse, chemical reaction, irreversible change, burning, heating, vinegar, bicarbonate of soda |

Rocks

| Year 3 |
|---|
| granite, pumice, sandstone, chalk, marble, gneiss, crystals, grains, layers, texture, hardness, weathering, fossil, shell, fossilisation, sediment, sandy soil, clay soil, peat soil, chalky soil, organic matter, nutrients, deforestation, habitat loss |

States of matter

Year 4

solid, liquid, gas, states of matter, pouring solid, ooblek, flow, freezing, melting, boiling, condensation, evaporation, melting point, water cycle, precipitation, atmosphere, petri dish

Electricity

Year 4

appliances, plug, socket, cell, electrocuted, circuit, switch, battery, buzzer, conductor, insulator

Year 6

series circuit, voltage, current, complete circuit, incomplete circuit

Earth and space

Year 5

Solar System, orbit, Sun, planets, Pluto, celestial body, gravity, heliocentric model, geocentric model, rotate, axis, North Pole, South Pole, Earth, night, day, moon, gravitational force, satellite

Seasonal changes

Year 1

autumn, daylight, night, weather, season, rainfall, weather, rain gauge, winter, rainy, snowy, windy, cloudy, frosty, sunny, spring, summer

Sound

Year 4

vibration, sound, volume, pitch, outer ear, ear bones, cochlea, ear drum, ear canal, decibel, insulate, high-pitched, low-pitched, background noise

Light

Year 3

light sources, natural light sources, artificial light sources, Sun, sunglasses, protect, reflection, shadow

Year 6

retina, iris, pupil, lens, ray diagram, solar eclipse, refraction, medium, rainbow, prism, coloured filter, spectrum of light

Forces and magnets

Year 3

push, pull, force, contact force, friction, magnet, magnetic, poles, magnetic force, non-metal, iron, aluminium, steel, attract, repel

Year 5

frictional force, motion, air resistance, parachute, surface area, water resistance, streamlined, non-contact force, gravity, weight, lever, gear, pulley, machine

Evolution and inheritance

Year 6

variation, species, inheritance, desirable characteristics, polar habitat, desert habitat, adaptations, evolution, common ancestor, natural selection, finch, Galapagos Islands, decompose, Charles Darwin, palaeontologist, Mary Anning

Working scientifically

Key vocabulary

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---|--------|--|--------|--------|--|
| measure, observe, compare, measurement, growth, trowel, temperature, bend, squash, twist, stretch, absorb | | hardness, reaction, bar chart, pictogram, data, increase, decrease, prediction, dissection, scales, filter paper, filter funnel, measuring cylinder, thermometer, conclusion, evaluation, data, volume, decibel meter, stopwatch, beaker, temperature, Petri dish, block chart, bar graph, classifying, classification key | | | line graph, microscope, anomaly, anomalous result, control, control beaker, sieve, filtering, repeatability, accuracy, correlation, precision, angle, periscope, line graph, scatter graph, independent variable, dependent variable, controlled variables, duration, theory |

Exposure words

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|--|--------|---|--------|--------|---|
| draw, label, change, same, table, record, tally, pipette, size, predict, similar, different, sort, group, identify, pattern, height, number, amount, hand lens, ruler, counting cubes, centimetres, meters, suitable, unsuitable, match, test, scientific enquiry, comparative test, research, pattern seeking | | fair test, identify, group and classify, model, modelling, investigate, changed, measured, stayed the same, millimetres, millilitres, data logger, tape measure, features, scientists, diagram, sorting diagram, block diagram, distance, results | | | causal relationships, decimals, analyse, interpret, conclude, capacity, mass, approximate, justify, secondary source, evidence, duration, mean, calculate, method |

Sustainability

Sustainability

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|--|---|--|--|---|---|
| Earth, helpful, harmful, recycle, reuse, crops, farmer, cook | single-use plastic, wildlife, nature, local | food waste, landfill, food waste recycling, edible, inedible, biodiversity, rewilding, endangered, extinct | mains electricity, battery-powered, renewable energy, non-renewable energy, energy usage, habitat destruction, palm oil, sustainable | global warming, greenhouse gases, fossil fuels, climate change, glacier, carbon footprint, plastic pollution, pollution, microplastic | solar power, wind power, solar panels, wind turbine, migration, glare, light pollution, light trespass, skyglow, urban, rural, light emission |