

Firs Primary School Subject Curriculum and Progression

Science

	Early Years	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum	<p>Knowledge and Understanding of the World: The World</p> <p>Development Matters 30-50 Months</p> <ul style="list-style-type: none"> Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. Can talk about some of the things they have observed such as plants, animals, natural and found objects. Talks about why things happen and how things work. Developing an understanding of growth, decay and changes over time. Shows care and concern for living things and the environment. <p>Development Matters 40-60 Months</p> <ul style="list-style-type: none"> Looks closely at similarities, 	1. Plants					
		<p>a) identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>b) identify and describe the basic structure of a variety of common flowering plants, including trees</p>	<p>c) observe and describe how seeds and bulbs grow into mature plants</p> <p>d) find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>e) identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>f) explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</p> <p>g) investigate the way in which water is transported within plants</p> <p>h) explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>			
2. Animals, Including Humans							
	<p>a) identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>b) identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>c) describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>d) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p>	<p>e) notice that animals, including humans, have offspring which grow into adults</p> <p>f) find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>g) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</p>	<p>h) identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p> <p>i) identify that humans and some other animals have skeletons and muscles for support, protection and movement</p>	<p>j) describe the simple functions of the basic parts of the digestive system in humans</p> <p>k) identify the different types of teeth in humans and their simple functions</p> <p>l) construct and interpret a variety of food chains, identifying producers, predators and prey</p>	<p>m) describe the changes as humans develop to old age</p>	<p>n) identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>o) recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p>p) describe the ways in which nutrients and water are transported within animals, including humans</p>	

<p>differences, patterns and change.</p> <p>Early Learning Goal</p> <ul style="list-style-type: none"> Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. 	3. Living Things and Their Habitats					
		<ul style="list-style-type: none"> a) explore and compare the difference between things that are living, dead, and things that have never been alive b) identify that most living things live in habitats to which they are suited and describe how different habitats provide the basic needs of different kinds of animals and plants, and how they depend on each other c) identify and name a variety of plants and animals in their habitats, including micro-habitats d) describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food 		<ul style="list-style-type: none"> e) recognise that living things can be grouped in a variety of ways f) explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment g) recognise that environments can change and that this can sometimes pose dangers to living things 	<ul style="list-style-type: none"> h) describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird i) describe the life process of reproduction in some plants and animals 	<ul style="list-style-type: none"> j) describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals k) give reasons for classifying plants and animals based on specific characteristics
	4. Evolution and Inheritance					
						<ul style="list-style-type: none"> a) recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago b) recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents c) identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

5. Light and Sound

- a) recognise that they need light in order to see things and that the dark is the absence of light
- b) notice that light is reflected from surfaces
- c) recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- d) recognise that shadows are formed when the light from a light source is blocked by a solid object
- e) find patterns in the way that the size of shadows changes

- f) identify how sounds are made, associating some of them with something vibrating
- g) recognise that vibrations from sounds travel through a medium to the ear
- h) find patterns between the pitch of a sound and features of the object that produced it
- i) find patterns between the volume of a sound and the strength of the vibrations that produced it
- j) recognise that sounds get fainter as the distance from the sound source increases

- k) recognise that light appears to travel in straight lines
- l) use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
- m) explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
- n) use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

6. Electricity

- a) identify common appliances that run on electricity
- b) construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- c) identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- d) recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- e) recognise some common conductors and insulators, and associate metals with being good conductors

- f) Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
- g) compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches
- h) use recognised symbols when representing a simple circuit in a diagram

7. Forces and Magnets						
				<ul style="list-style-type: none"> a) compare how things move on different surfaces b) notice that some forces need contact between two objects, but magnetic forces can act at a distance c) observe how magnets attract or repel each other and attract some materials and not others d) compare and group together a variety of everyday materials on the basis on whether they are attracted to a magnet, and identify some magnetic materials e) describe magnets as having two poles f) predict whether two magnets will attract or repel each other, depending on which poles are facing 		<ul style="list-style-type: none"> g) explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object h) identify the effects of air resistance, water resistance and friction, that act between moving surfaces i) recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect
8. Seasonal Change and Earth and Space						
	<ul style="list-style-type: none"> a) observe changes across the four seasons b) observe and describe weather associated with the seasons and how day length varies 					<ul style="list-style-type: none"> c) describe the movement of the Earth, and other planets, relative to the Sun d) describe the movement of the Moon relative to the Earth e) describe the Sun, Earth and Moon as approximately spherical bodies f) use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky

9. Materials, Properties and Changes of Materials, and States of Matter

- a) distinguish between an object and the material from which it is made
- b) identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- c) describe the simple physical properties of a variety of everyday materials
- d) compare and group together a variety of everyday materials on the basis of their simple physical properties

- e) identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- f) find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

- g) compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- h) describe in simple terms how fossils are formed when things that have lived are trapped within rock
- i) recognise that soils are made from rocks and organic matter

- j) compare and group materials together, according to whether they are solids, liquids or gases
- k) observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- l) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

- m) compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- n) know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- o) use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- p) give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- q) demonstrate that dissolving, mixing and changes of state are reversible changes
- r) explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda

10. Working Scientifically

- a) ask simple questions and recognise that they can be answered in different ways
- b) observe closely, using simple equipment
- c) perform simple tests
- d) gather and record data to help in answering questions
- e) identify and classify
- f) use their observations and ideas to suggest answers to questions

- g) ask relevant questions and use different types of scientific enquiries to answer them
- h) set up simple practical enquiries, comparative and fair tests
- i) make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- j) record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- k) gather, record, classify and present data in a variety of ways to help in answering questions
- l) identify differences, similarities or changes related to simple scientific ideas and processes
- m) report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- n) use straightforward scientific evidence to answer questions or to support their findings
- o) use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

- p) plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- q) take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- r) record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- s) identify scientific evidence that has been used to support or refute ideas or arguments
- t) report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- u) use test results to make predictions to set up further comparative and fair tests

Enchanted Woodland

Year 1: 1a, 1b, 10a, 10b, 10d, 10e, 10f
Year 2: 1c, 1d, 10a, 10b, 10d, 10e, 10f

Year 1: identify, describe, name, common, wild, garden, deciduous, evergreen, tree, plant, structure, leaf, stem, petal, root, trunk, branch

Year 2: observe, describe, seeds, bulbs, grow, mature, plants, water, light, dark, temperature, healthy, soil, seedling, warm, cool, hot, cold

Investigation: Are all leaves the same?

Investigation vocabulary: question, answer, gather, record, identify, classify, sort, label, observe, observation, same, different, similar

Moon Zoom

Year 1: 8a 8b, 10b, 10c, 10d, 10f
Year 2: 10b, 10c, 10f

Year 1: observe, change, season, Autumn, Spring, Summer, Winter, weather, hot, cold, dun, snow, rain, wind, cloud, night, day, sunrise, sunset

Year 1 Investigation: Weather investigations e.g. wind diary or rain gauge

Investigation vocabulary: question, answer, observe, gather, record

Year 1 and 2 investigation: Fizzy bottle rockets

https://www.rigb.org/docs/fizzybottlerockets_infosheet_v2_0.pdf

Investigation vocabulary: question, answer, observe, test, experiment, fuel, rocket, gas, propel, chemical reaction, predict

Muck, Mess and Mixtures

Year 1: 2d, 10a, 10b, 10c, 10e
Year 2: 2f, 2g, 10a, 10b, 10c, 10d, 10f

Year 1: identify, name, human, body, eyes, ears, nose, mouth, arms, hands, head, face, legs, feet, knees, elbows, shoulders, hips, fingers, toes, sight, sound, seeing, hearing, touch, feel, texture, taste, sweet, sour, bitter, salty, smell

Year 2: needs, humans, survive, survival, water, food, air, oxygen exercise, food, hygiene, healthy, unhealthy, weight, energy, sleep, rest, fruit, vegetables, carbohydrates, dairy, meat, eggs, sugar

Year 1 Investigation: Senses Investigations

<https://kidshealth.org/en/kids/experiment-main.html>

Investigation vocabulary: question, answer, observe, test, classify, identify, predict

Year 2 Investigation: Egg Shell/healthy teeth investigation

<https://www.science-sparks.com/how-to-keep-teeth-healthy/>

Investigation vocabulary: question, answer, observe, test, record, change, similar, different, same, toothpaste, acid, protect, damage, predict

Rio de Vida

Year 1: 2a, 2b, 2c
Year 2: 2e, 3a, 3b, 3c, 3d

Year 1: fish, amphibians, reptiles, birds, mammals, goldfish, frog, toad, newt, snake, lizard, mouse, cat, dog, pig, sheep, horse, cow, goat, chicken, pigeon, owl, blackbird, carnivore, herbivore, omnivore,

Gods and Mortals

6a, 6b, 6c, 6d, 6e
10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o

Appliance, electricity, series circuit, cells, wires, bulbs, switches, buzzers, battery, lamp, loop, conductor, insulator, metal

Investigation: Conductors and Insulators

file:///C:/Users/lpugh/Downloads/Conductors_And_Insulators.pdf

Investigation Vocabulary: enquiry, practical, comparative, fair, test, systematic, observation, findings, table, Venn diagram, record, classify, data, differences, similarities, material, evidence, findings, predictions,

Urban Pioneers

1e, 1f, 1g, 1h
10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o

Function, flowering, roots, stem, trunk, leaves, flowers, life, growth, requirement, air, light, water, nutrients, soil, transported, life cycle, pollination, seed, formation, dispersal

Investigation: Room for Growth

<https://www.farmafrica.org/downloads/2016-ghtb/science-ks2---plant-growth-2017.pdf>

Investigation Vocabulary: enquiry, practical, comparative, fair, test, systematic, observation, findings, table, record, data, differences, similarities, evidence, findings, predictions, conditions, factors

Predator

2h, 2i, 2l, 3e, 3f, 3g
10g, 10i, 10j, 10k, 10l, 10m, 10n

Animals, humans, nutrition, skeletons, muscles, support, protection, movement, food chain, interpret, producers, predators, prey, group, classification key, environment, habitat, endangered, extinct, classify, mammals, reptiles, amphibians, birds, fish

Investigation: Habitats, Soil Soup

<https://www.sustainablelearning.com/resource/habitats-investigation-lower-ks2>

Investigation Vocabulary: observe, record, differences, similarities, change, survey, grounds, wildlife, survival, soil, pollinators, sites, ecologists, wildlife corridors, record, map, identify, explore, investigate, soil, ingredients, pollinators, wildflowers

Playlist

5f, 5g, 5h, 5i, 5j
10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o

Sound, vibrate, vibration, vibrating, medium, ear, pitch, low, high, sound wave, volume, loud, quiet, distance

Investigations: How does sound travel through solids, liquids and gases?

- *Hydrophone Experiment:*
https://www.ogdentrust.com/assets/general/Phizzi-Practical-Make-a-hydrophone_for-website.pdf
- *'See the Sound' and 'Classic Paper Cup and String Phone' Experiments* <https://www.kidsacademy.mobi/storytime/sound-science-experiments/>

A Child's War

7g, 7h, 7i
10p, 10q, 10r, 10s, 10t, 10u

Unsupported, object, fall, Earth, gravity, air resistance, water resistance, friction, surfaces, mechanism, lever, push, pull, pulley, gear, force, effect, weight, heavy, light, effect

Investigation: Slipping and Sliding; testing friction

<https://www.science-sparks.com/slipping-and-sliding/>

Investigation vocabulary: enquiry, control, variable, measurement, precision, accuracy, repeat reading, record, data, table, scatter graph, bar graph, line graph, evidence, support, refute, report, present, findings, conclusions, causal relationships, explanation, degree of trust, predictions, comparative, fair, test

Frozen Kingdom

3j,3k
10q, 10r, 10s, 10t

classify, characteristics, similarities, differences, micro-organisms, plants, animals, producer, prey, predator, mammal, amphibian, reptile, bird, fish, invertebrate, insect, arachnid

Investigation: Melting Polar Ice Caps

<https://www.science-sparks.com/melting-polar-ice-caps/>

Investigation vocabulary: measurement, centimetres, millimetres, water level, sea level, melt, ice caps, habitat, temperatures, climate change, record, diagram, line graph, evidence, refute, support, findings, conclusions, causal relationships

Bloodheart

2n, 2o, 2p
10r, 10t

heart, blood, blood vessels, veins, arteries, nutrients, water, oxygen, waste, exercise, drugs, alcohol, cigarettes, diet, lifestyle, healthy, unhealthy, function, circulate, circulatory system, pulse, heart rate

Investigation: Dissecting Sheep's Heart

<https://www.instructables.com/id/Heart-Dissection/>

Investigation vocabulary: diagram, label, explanation, dissect, valves, ventricles, atrium

Darwin's Delights

4a, 4b, 4c
10p, 10t

Change, time, fossils, information, inhabit, inhabited, Earth, dinosaurs, prehistoric, skeleton, offspring, vary, identical, adapt, adapted, environment, evolution, extinct

Investigation – Who has the best beak? Understanding why birds have different beaks.

<https://www.stem.org.uk/resources/elibrary/resource/33665/education-pack-seeds-and-fruits-adaptation>
<https://www.tes.com/teaching-resource/bird-beaks-6267561>

Investigation vocabulary: predict, enquiry, variable, report, present, explanation

fins, scales, tail, beak, wing, snout, legs, feet, paws, talons, claws, trotters, hooves, toes, skin, fur, feathers

Year 2: Foal, piglet, calf, lamb, tadpole, caterpillar, kitten, puppy, egg, hatch, baby, adult, offspring, living, dead, never alive, habitat, home, live, needs, suited, animals, plants, trees, nest, ground, sky, water, river, pond, farm, forest, garden, food, food chain, predator, prey, herbivore, carnivore, omnivore, wild, domestic, seeds, nuts, berries

Street Detective

Year 1: 1a, 1b, 10a, 10b, 10d, 10e, 10f
Year 2: 1c, 1d, 10a, 10b, 10d, 10e, 10f

Year 1: identify, describe, name, common, wild, garden, deciduous, evergreen, tree, plant, structure, leaf, stem, petal, root, trunk, branch

Year 2: observe, describe, seeds, bulbs, grow, mature, plants, water, light, dark, temperature, healthy, soil, seedling, warm, cool, hot, cold

Investigation: Compost in a bottle

<https://www.tes.com/teaching-resource/how-to-make-a-compost-in-a-bottle-6138110>

Investigation vocabulary: question, answer, gather, record, identify, classify, sort, label, observe, observation, same, different, similar, compost, bacteria, fungi, mould, food waste

Land Ahoy

Year 1: 9a, 9b, 9c, 9d, 10a, 10b, 10c, 10d, 10e, 10f
Year 2: 9e, 9f, 10a, 10b, 10c, 10d, 10e, 10f

Year 1: object, material, identify, wood, plastic, glass, metal, water, rock, fabric, properties, hard, soft, smooth, rough, bend, stretch, twist, rigid, compare, same, different, similar, waterproof, light, heavy, float, sink, dissolve

Year 2: identify, compare, suitable, unsuitable, materials, wood, metal, plastic, glass, brick, rock, paper, cardboard, squash, bend, stretch, twist, shape, change, waterproof, light, heavy, float, sink, dissolve

Investigation: Waterproofing coins -

<https://www.science-sparks.com/protect-the-pirate-coins-waterproofing-activity/>

Investigation vocabulary: question, answer, observe, test, record, change, similar, different, identify, classify, sort, observe, observation, predict

Bright Lights, Big City

Year 1: 9a, 9b, 9c, 9d, 10a, 10b, 10c, 10d, 10e, 10f

Year 2: 9e, 9f, 10a, 10b, 10c, 10d, 10e, 10f

Year 1: object, material, identify, wood, plastic, glass, metal, water, rock, fabric, properties, hard, soft, smooth, rough, bend, stretch, twist, rigid, compare, same, different, similar

Year 2: identify, compare, suitable, unsuitable, materials, wood, metal, plastic, glass, brick, rock, paper, cardboard, squash, bend, stretch, twist, shape, change

Investigation: Protect the egg – Egg Drop Challenge

Investigation vocabulary: enquiry, practical, comparative, fair, test, systematic, observation, findings, table, record, classify, data, differences, similarities, material, evidence, findings, predictions, solid, liquid, gas

Tribal Tales

5a, 5b, 5c, 5d, 5e
10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o

light, dark, reflected, reflect, reflection, surface, sun light, protection, shadow, absence, light source, solid, opaque, transparent

Investigation: Shadow Size

file:///C:/Users/lpugh/Downloads/Investigating_Shadow_Size.pdf

Investigation vocabulary: enquiry, practical, comparative, fair, test, systematic, observation, findings, table, record, data, differences, similarities, evidence, findings, predictions, width, measurement

Heroes and Villains

5a, 5b, 5c, 5d, 5e
10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o

light, dark, reflected, reflect, reflection, surface, sun light, protection, shadow, absence, light source, solid, opaque, transparent

Investigations: Reflective materials

<https://www.tes.com/teaching-resource/reflections-and-mirrors-6163976>

Investigation vocabulary: enquiry, practical, comparative, fair, test, systematic, observation, findings, table, record, data, differences, similarities, evidence, findings, predictions, width, measurement, shiny, matt, dull

Tremors

9g, 9h, 9i, 9j, 9k
10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o

Compare, group, same, different, similar, appearance, properties
Sedimentary, metamorphic, igneous, fossil, formed, soil, rock, organic matter, solid, liquid, gas, state, matter, heat, cool, melt, burn, evaporate, temperature, degrees, Celcius, boil, freeze

Investigation: Rock suitability (e.g. <https://www.tes.com/teaching-resource/rocks-and-soils-science-investigation-6403906>)

Investigation vocabulary: purpose, permeability, durability, enquiry, practical, comparative, fair, test, systematic, observation, findings, table, record, data, differences, similarities, evidence, findings, predictions

Burps, Bottoms, Bile

2j, 2k
10a, 10h, 10i, 10j, 10m
mouth, oesophagus, stomach, small intestine, large intestine, gallbladder, pancreas, liver, saliva, rectum, digest, nutrition, nutrients, waste, urine, faeces, teeth, gums, tongue incisors, canines, pre-molars and molars, cut, tear, grind, crush

Off With Her Head

5k, 5l, 5m, 5n
10p, 10q, 10r, 10s, 10t, 10u

Light, travel, straight, waves, reflect, light source, eyes, objects, shadows, cast

Investigations: Yr 6 Light Investigations

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=6d

Investigation vocabulary: enquiry, control, variable, measurement, precision, accuracy, repeat reading, record, data, table, scatter graph, bar graph, line graph, evidence, support, refute, report, present, findings, conclusions, causal relationships, explanation, degree of trust, predictions, comparative, fair, test, diagram, spectrum, periscope, angle

Stargazers

8c, 8d, 8e, 8f
10r, 10s, 10t

Earth, Sun, planets, solar system, relative, moon, orbit, spherical, rotation, axis, day, night, sky, stars, galaxy, universe, gravity

Investigations: Yr 5 Earth and Space Investigations

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=5d

Orbit modelling

<https://www.bbc.co.uk/bitesize/clips/zkyvncw>

<https://www.bbc.co.uk/bitesize/clips/z3jd7ty>

Investigation vocabulary: record, diagram, label, evidence, refute, support, report, present, conclusion, explanation, presentation

Alchemy Island

9m, 9n, 9o, 9p, 9q, 9r
10p, 10r, 10t, 10u

Compare, group, properties, hardness, solubility, transparency, conductivity, electrical, thermal, response, magnets, attract, repel, opaque, transparent, dissolve, liquid, solution, recover, substance, solid, gas, mixture, separate, filter, sieve, evaporate, comparative, fair, test, evidence, metals, wood, plastic, state, reversible, irreversible, burning, action, acid, bicarbonate of soda

Investigations: Separating Solutions, Separating Mixtures and Reversible and Irreversible Changes

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=5c

Investigation vocabulary: enquiry, variable, data, results, diagram, label, report, present, findings, conclusions, predictions, comparative, fair, tests

Pharaohs

6f, 6g, 6h

Brightness, lamp, bulb, volume, buzzer, voltage, cells, circuit, electricity, electrical, components, switches, wires, symbol, series circuit, diagram

Investigation: Making traffic lights

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=6e

<https://www.tes.com/teaching-resource/egg-drop-challenge-6408374>

Investigation vocabulary: question, answer, observe, test, record, change, similar, different, same, identify, classify, sort, observe, observation, predict

Superheroes

Year 1: 2d, 10a, 10b, 10c, 10d, 10e, 10f

Year 2: 2f, 2g, 10a, 10b, 10c, 10d, 10e, 10f

Year 1: identify, name, human, body, eyes, ears, nose, mouth, arms, hands, head, face, legs, feet, knees, elbows, shoulders, hips, fingers, toes, sight, sound, seeing, hearing, touch, feel, texture, taste, sweet, sour, bitter, salty, smell

Year 2: needs, humans, survive, survival, water, food, air, oxygen exercise, food, hygiene, healthy, unhealthy, weight, energy, sleep, rest, fruit, vegetables, carbohydrates, dairy, meat, eggs, sugar

Year 1 Investigation: Senses Investigations

<https://kidshealth.org/en/kids/experiment-main.html>

Investigation vocabulary: question, answer, observe, test, classify, identify, predict

Year 2 Investigation: Egg Shell/healthy teeth investigation

<https://www.science-sparks.com/how-to-keep-teeth-healthy/>

Investigation vocabulary: question, answer, observe, test, record, change, similar, different, same, toothpaste, acid, protect, damage, predict

Paws, Claws and Whiskers

Year 1: 2a, 2b, 2c, 10a, 10b

Year 2: 2e, 2f, 3a, 3b, 3c, 3d, 10a, 10b

Year 1: fish, amphibians, reptiles, birds, mammals, goldfish, frog, toad, newt, snake, lizard, mouse, cat, dog, pig, sheep, horse, cow, goat, chicken, pigeon, owl, blackbird, carnivore, herbivore, omnivore, fins, scales, tail, beak, wing, snout, legs, feet, paws, talons, claws, trotters, hooves, toes, skin, fur, feathers

Year 2: Foal, piglet, calf, lamb, tadpole, caterpillar, kitten, puppy, egg, hatch, baby, adult, offspring, living, dead, never alive, habitat, home, live, needs, suited, animals, plants, trees, nest, ground, sky, water, river, pond, farm, forest, garden, food, food chain, predator, prey, herbivore, carnivore, omnivore, wild, domestic, seeds, nuts, berries, needs, humans, survive, survival, water, food, air, oxygen

Investigation: (If possible) Frogspawn to Tadpole; growth and change - observation over time.

Investigation vocabulary: grow, change, frogspawn, tadpole, tail, legs, head, body, egg, observe

Scented Garden

Year 1: 1a, 1b, 8a, 8b, 10a, 10b, 10c, 10d, 10f

Year 2: 1c, 1d, 10a, 10b, 10c, 10d, 10f

Year 1: identify, describe, name, common, wild, garden, deciduous, evergreen, tree, plant, structure, leaf, stem, petal, root, trunk, branch, observe, change, season, Autumn, Spring, Summer, Winter, weather, hot, cold, sun, snow, rain, wind, cloud, night, day, sunrise, sunset

Year 2: observe, describe, seeds, bulbs, grow, mature, plants, water, light, dark, temperature, healthy, soil, seedling, warm, cool, hot, cold

Investigation: Show the digestive system using food and a pair of tights.

<https://www.stem.org.uk/resources/elibrary/resource/35396/digestive-system-experiment>

Investigation vocabulary: practical, enquiry, observation, record, explanation, present, diagram

Mighty Metals

7a, 7b, 7c, 7d, 7e, 7f

10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o

Friction, fast, slow, push, pull, contact, magnetic, forces, attract, repel, materials, compare, group, poles, north pole, south pole, predict

Investigation: Magnetism through Materials

[file:///C:/Users/lpugh/Downloads/Magnetism Through Materials.pdf](file:///C:/Users/lpugh/Downloads/Magnetism%20Through%20Materials.pdf)

Investigation vocabulary: enquiry, practical, comparative, fair, test, systematic, observation, findings, table, record, data, differences, similarities, evidence, findings, predictions, Venn diagram

Blue Abyss

3e, 3f, 3g, 9l, 2l

10g, 10h, 10i, 10j, 10m

Group, classify, classification key, mammals, reptiles, amphibians, birds, fish, environment, habitat, endangered, extinct, evaporation, condensation, precipitation, transpiration, vapor, water cycle, river, lake, sea, ocean, mountain, cloud, mouth, source, food chain, predator, prey, producer

Investigation: Water cycle investigation

<https://www.science-sparks.com/make-a-mini-water-cycle/>

Investigation vocabulary: practical, enquiry, observation, record, explanation, present, diagram

Time Traveller

2m, 3h, 3i

10r, 10s,

Foetus, baby, toddler, infant, child, teenager, puberty, old age, elderly, physical changes, emotional changes, reproduce, life cycle, gender, hormones, period, gestation, frail, mammal, amphibian, insect, bird, egg, hatch, birth, milk, reproduction, seed, pollination, nectar, pollinator, mate

Investigations: Vegetative reproduction

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=5a

Investigation vocabulary: diagram, label

Foetal Development

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=5b

Investigation vocabulary: line graph, data, measurement, evidence, support, refute

Investigation: Observe and record the growth of plants as they change over time - setting up comparative tests to show what plants need to stay healthy.

Investigation vocabulary: observe, record, predict, compare, test, same, different

Dinosaurs

Year 1: 10a, 10d, 10e, 10f

Year 2: 3a, 10a, 10d, 10e, 10f

Year 1: dinosaur, fossil, extinct

Year 2: Compare, same, different, similar, living, dead, never alive, extinct, endangered, fossil, skeleton, breathe, move, reproduce, dinosaur

Investigation: Did all dinosaurs have the same body parts?

Investigation vocabulary: question, answer, gather, record, identify, classify, sort, label, observe, tail, legs, horns, frill, plates, claws, same, different, similar

Towers, Turrets and Tunnels

Year 1: 9a, 9b, 9c, 9d, 10a, 10c, 10d, 10e, 10f

Year 2: 9e, 9f, 10a, 10c, 10d, 10e, 10f

Year 1: object, material, identify, wood, plastic, glass, metal, water, rock, fabric, properties, hard, soft, smooth, rough, bend, stretch, twist, rigid, compare, same, different, similar, strong, weak

Year 2: identify, compare, suitable, unsuitable, materials, wood, metal, plastic, glass, brick, rock, paper, cardboard, squash, bend, stretch, twist, shape, change, strong, weak

Investigation: The Billy Goats Gruff; Children to design and choose materials to build a bridge. Which will be the strongest? Build a variety of bridges from various materials and find out which is the strongest by putting on a weight/ object to see if it holds.

Investigation vocabulary: predict, test, record, weight, heavy, light, observation