

SCIENCE OUTCOMES

KEYSTAGE 1

KEYSTAGE 2

YEAR 1

PLANTS

Pupils should be taught to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.

Identify and describe the basics structure of a variety of common flowering plants, including trees.

ANIMALS INCLUDING HUMANS

Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.

Identify and name a variety of common animals that are carnivores, herbivores and omnivores.

SEASONAL CHANGES

Observe changes across the four seasons. Observe and describe the weather associated with the seasons and how day length varies.

YEAR 2

PLANTS

Find out how plants need water, light and a suitable temperature to grow and stay healthy.

LIVING THINGS AND THEIR HABITATS

Explore and compare the differences between things that are living, dead and things that have never been alive.

Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.

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.

ANIMALS INCLUDING HUMANS

Pupils should be taught to notice that animals, including humans, have offspring which grow into adults.

Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).

YEAR 3

ANIMALS INCLUDING HUMANS

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.

Identify that humans and some other animals have skeletons and muscles for support and protection.

PLANTS

Identify and describe the functions of different parts of flowering plants; roots, stem / trunk, leaves and flowers.

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.

Investigate the way in which water is transported within plants.

Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

ROCKS

Recognise that soils are made from rocks and organic matter.

YEAR 4

ANIMALS INCLUDING HUMANS

Construct and interpret a variety of food chains, identifying producers, predators and prey.

LIVING THINGS AND THEIR HABITATS

Recognise that living things can be grouped in a variety of ways.

Recognise that environments can change and that this can sometimes pose dangers to living things.

YEAR 5

LIVING THINGS AND THEIR HABITATS

Describe the life processes of reproduction in some plants and animals.

YEAR 6

ANIMALS INCLUDING HUMANS

Describe the ways in which nutrients and water are transported within animals, including humans.

EVOLUTION AND INHERITANCE

Pupils should be taught to recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

KEYSTAGE 1

YEAR 1

NUMBER AND PLACE VALUE

Given a number identify one more and one less.

Identify and represent numbers using objects and pictorial representations and use the language of equal to, more than, less than, most least.

ADDITION & SUBTRACTION,

Add and subtract one digit and two digit numbers to 20, including zero.

Solve one step problems that involve addition and subtraction, using concrete objects.

MEASUREMENT

Compare, describe and solve practical problems for Lengths and heights (long/short, tall/short); Mass/weight (heavy/light); Capacity and volume (full/empty, more than/less than, half, half full, quarter); Time (earlier/later, quicker/slower).

Sequence events in chronological order using language n(before/after, today/tomorrow, next/first, morning/afternoon/evening)

Recognise and use language relating to dates including days of the week, weeks, months and years.

PROPERTIES OF SHAPE

Recognise and name common 2D and 3D shapes, including

2D shapes — rectangles, squares, circles and triangles

3D shapes — cubes, cuboids, pyramids and spheres.

YEAR 2

NUMBER AND PLACE VALUE

Identify, represent and estimate numbers using different representations.

ADDITION & SUBTRACTION,

Solve problems with addition and subtraction using concrete objects, including those involving numbers, quantities and measures.

Add and subtract numbers using concrete objects

MEASUREMENT

Choose and use appropriate standard units to estimate and measure lengths/height (m/cm) in any direction, mass (kg/g), temperature (oC) , capacity (l/ml), to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.

Compare and sequence intervals of time.

YEAR 3

NUMBER AND PLACE VALUE

Identify, represent and estimate numbers using different representations.

Solve number problems and practical problems.

ADDITION & SUBTRACTION,

Estimate the answer to a calculation and use inverse operations to check answers

Solve problems, using number facts, place value, and more complex addition and subtraction.

MEASUREMENT

Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g), volume/capacity (l/ml).

Compare the duration of events (for example by the time taken by particular events or tasks).

YEAR 4

NUMBER AND PLACE VALUE

Identify, represent and estimate numbers using different representations.

Round any number to the nearest 10,100 or 1000.

Solve number and practical problems with increasingly large positive numbers.

ADDITION & SUBTRACTION,

Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to sue and why.

MEASUREMENT

Convert between different units of measure (for example km to m, hour to minutes)

Estimate, compare and calculate different measures.

STATISTICS

Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

KEYSTAGE 2

YEAR 5

MULTIPLICATION AND DIVISION

Multiply and divide numbers mentally drawing upon known facts.

Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.

MEASUREMENT

Convert between different units of metric measure (km-m, m-cm, cm-mm, g-kg, l-ml).

Understand and use approximate equivalences between metric units and common imperial units, such as inches, pounds and pints

Estimate volume and capacity.

STATISTICS

Complete, read and interpret information in tables.

YEAR 6

NUMBER AND PLACE VALUE

Round any whole number to the required degree of accuracy

ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION

Perform mental calculations, including mixed operations and large numbers

Solve addition and subtraction multistep problems in contexts, deciding operations ad methods to use and why.

Solve problems involving addition, subtraction, multiplication and division.

MEASUREMENT

Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

Use, read, write and convert between standard units, converting measurement of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places.

STATISTICS

Interpret and construct pie charts and line graphs and use these to solve problems

Calculate and interpret the mean as an average

RATIOS

Solve problems involving the calculation of percentages (e.g.15% of 360) and the use of percentages for comparison.

KEYSTAGE 1

YEAR 1

WRITING - COMPOSITION

Write sentences by:
Saying out loud what they are going to write about.
Composing a sentence orally before writing it.
Sequencing sentences to form short narratives.

YEAR 2

WRITING - COMPOSITION

Develop positive attitudes towards writing and stamina for writing by:
Writing narratives about personal experiences.
Writing about real events.
Writing for different purposes.
Consider what they are going to write before beginning by:
Planning or saying out loud what they are going to write about.
Writing down ideas and/or key words, including new vocabulary.
Encapsulating what they want to say, sentence by sentence.

KEYSTAGE 2

YEAR 3

WRITING COMPOSITION

Plan writing by discussing and recording ideas
Draft and write by:
Composing and rehearsing sentences orally, progressively building a varied and rich vocabulary.
Organising paragraphs around a theme.
In non-narrative material use simple organisational devices (for example heading and subheadings).

YEAR 4

YEAR 5

WRITING COMPOSITION

Plan writing by:
Identifying their audience and purpose of writing, selecting the appropriate form and using similar writing as their own.
Noting and developing initial ideas, drawing on reading and research where necessary.

YEAR 6

SPOKEN LANGUAGE - ALL YEARS

Listen and respond appropriately to adults and their peers.
Ask relevant questions to extend their understanding and knowledge.
Articulate and justify answers, arguments and opinions.
Give well structured descriptions, explanations and narratives for different purposes, including for expressing feelings.
Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments.
Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas.
Speak audibly and fluently with an increasing command of standard English.
Participate in discussions.
Consider and evaluate different viewpoints, attending to and building on the contributions of others.

GEOGRAPHY OUTCOMES

KEYSTAGE 1

YEAR 1

HUMAN AND PHYSICAL GEOGRAPHY

Identify seasonal and daily weather patterns in the UK.

Use basic geographical vocabulary to refer to key physical features (soil, vegetation, river, trees, grass, season, weather) and key human features (village, farm, house, shop, factory).

GEOGRAPHICAL SKILLS AND FIELDWORK

Use simple compass directions (north, south, east, west), and locational and directional language (near, far, left, right) to describe the location and features on a map.

Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key.

Use simple fieldwork and observational skills to study the geography of the farm and the key human and physical features of its surrounding environment.

YEAR 2

YEAR 3

HUMAN AND PHYSICAL GEOGRAPHY

Children can describe and understand key aspects of physical geography, including climate zones, biomes, the water cycle.

Human geography including types of settlement and land use.

Use key vocabulary to demonstrate knowledge and understanding in this strand: climate, evaporation, water cycle, condensation, precipitation, cooling, filter, pollution, site, need, shelter, food.

GEOGRAPHICAL SKILLS AND FIELDWORK

Use symbols and keys to build their knowledge of the United Kingdom

Use fieldwork to observe and present the human and physical features in the local area using sketch maps, plans and digital technologies

Use key vocabulary to demonstrate knowledge and understanding in this strand: sketch map, map, aerial view, feature, annotation, landmark, distance, key, symbol, land use, rural, population, co-ordinates.

YEAR 4

KEYSTAGE 2

YEAR 5

HUMAN AND PHYSICAL GEOGRAPHY

Human geography including: types of settlement and land use, economic activity and the distribution of natural resources including energy, food, minerals and water

Use key vocabulary to demonstrate knowledge and understanding in this strand: settlement, resources, services, goods, electricity, supply, generation, renewable, non-renewable, solar power, wind power, biomass, efficiency, conservation, carbon footprint, economic, social, environmental.

GEOGRAPHICAL SKILLS AND FIELDWORK

Use fieldwork to observe, measure, record and present human features using a range of methods, including sketch maps, plans and graphs and digital technologies.

Use key vocabulary to demonstrate knowledge and understanding in this strand: coordinates, latitude, longitude, key, symbol, legend, borders, fieldwork, measure, observe, record, map, sketch, graph.

YEAR 6

KEYSTAGE 2 - END OF KEY STAGE EXPECTATIONS

LOCATIONAL KNOWLEDGE

Identify human and physical characteristics, key topographical features (including rivers, hills) and land-use patterns; and understand how some of these aspects have changed over time.

HUMAN AND PHYSICAL GEOGRAPHY

Describe and understand key aspects of: Physical geography, including climate zones, biomes and vegetation belts, rivers ...and the water cycle.

Human geography, including: types of settlement and land use, economic activity, including trade links, and the distribution of natural resources including energy, food, minerals and water.

GEOGRAPHICAL SKILLS AND FIELDWORK

Use fieldwork to observe, measure, record and present the human and physical features in the local areas using a range of methods, including sketch maps, plans and graphs, and digital technologies.

KEYSTAGE 1

YEAR 1

KEEPING SAFE

Learn about rules that keep us safe.

Learn how to keep safe in unfamiliar environments.

HEALTH AND WELL BEING

Understand which foods support good health.

Learn simple hygiene routines that can stop germs from spreading.

Learn about the things that help people feel good (e.g., playing outside, doing things they enjoy).

RESPECTING SELF AND OTHERS

Know how to listen to other people and play and work cooperatively.

Know how to talk about their opinions on things that matter to them.

LIVING IN THE WIDER WORLD

What are rules and why are they needed and why are different rules needed for different situations.

Learn about how people and other living things have different needs; about the responsibilities of caring for them.

Learn about the things they can do to look after the environment.

ECONOMIC WELLBEING: ASPIRATIONS, WORK AND CAREER

Learn about different jobs that people do.

Learn about the strengths and interests someone might need to do different jobs.

YEAR 2

YEAR 3

KEEPING SAFE

Understand how to predict, assess and manage risk in different situations.

HEALTH AND WELL BEING

Learn how to make informed choices about health.

Learn about the elements of a balanced, healthy lifestyle.

To learn about strategies and behaviours that support mental health – including spending time outdoors.

RESPECTING SELF AND OTHERS

Listen to and respond respectfully to a wide range of people, including those whose traditions, beliefs and lifestyle are different to their own.

LIVING IN THE WIDER WORLD

Recognise the reasons for rules and laws and the consequences of not adhering to rules and laws.

Learn about the value the different contributions that people and groups make to the community.

ECONOMIC WELLBEING: ASPIRATIONS, WORK AND CAREER

Recognise that there are a broad range of jobs/careers that people have and that people often have more than one career/type of job during their life.

KEYSTAGE 2

YEAR 5

KEEPING SAFE

Learn about strategies for keeping safe in the local environment or unfamiliar places.

HEALTH AND WELL BEING

Know what constitutes a healthy diet; benefits to health and well being of eating nutritionally rich foods; risks associated with not eating a healthy diet, including obesity and tooth decay.

Know that bacteria and viruses can affect health; how everyday hygiene routines can limit the spread of infection.

RESPECTING SELF AND OTHERS

Consider how to discuss and debate topical issues, respect other people's point of view and constructively challenge those they disagree with.

LIVING IN THE WIDER WORLD

Understand the importance of having compassion towards others; shared responsibilities we all have for caring for other people and living things; how to show care and concern for others.

Learn the ways of carrying out shared responsibilities for protecting the environment and how everyday choices can affect the environment.

ECONOMIC WELLBEING: ASPIRATIONS, WORK AND CAREER

Learn about stereotypes in the workplace and that a person's career aspirations should not be limited by them.

Understand factors that might influence people's decisions about a job or career (e.g., personal interests and values, family connections to certain trades or businesses, strengths and qualities, ways in which stereotypical assumptions can deter people from aspiring to certain jobs).

Recognise a variety of routes in careers .

YEAR 6

DESIGN & TECHNOLOGY MODULES

KEYSTAGE 1

YEAR 1

YEAR 2

COOKING AND NUTRITION

Understand where food comes from.

Children can...

- » Understand that all food comes from plants or animals.
- » Understand that food has to be farmed, grown elsewhere or caught.
- » Name and sort foods into the five food groups in the Eatwell Guide.

KEYSTAGE 2

YEAR 3

YEAR 4

YEAR 5

YEAR 6

COOKING AND NUTRITION

Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

Children can...

- » Start to know when, where and how food is grown in the UK, Europe and the wider world.
- » Understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body.
- » Start to understand seasonality.

COOKING AND NUTRITION

Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

Children can...

- » Know, explain and give examples of food that is grown, reared and caught in the UK, Europe and wider world.
- » Know the basic steps for producing food.
- » Understand about seasonality and how this may affect the food availability.
- » Explain that food contains different substances, such as protein, that are needed for health.

COMPUTING OUTCOMES

KEYSTAGE 1

YEAR 1

YEAR 2

TITLE REQUIRED

Understand what algorithms are: how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.

Use logical reasoning to predict the behaviour of simple programs

Recognise common use of information technology beyond school

KEYSTAGE 2

YEAR 3

YEAR 4

YEAR 5

YEAR 6

TITLE REQUIRED

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

Understand computer networks including the internet; how they can provide multiple services, such as world wide web; and the opportunities they offer for communication and collaboration.

Select use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.