



LCC Curriculum Content – Year 3 and 4

Cycle A every 2 years from 2013/14

Science	Geography	History
<p><u>Working scientifically</u></p> <p>During Years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiry to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations, and where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables 	<p>See Notes and Guidance Cycle A (v)</p> <p><u>On-going provision for geographical knowledge acquisition Locational Knowledge</u></p> <ul style="list-style-type: none"> • locate the world’s countries, using maps to focus on Europe and North and South America and concentrating on their environmental regions, key physical and human characteristics, countries, and major cities • name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, including hills, mountains, cities, rivers, key topographical features and land-use patterns; and understand how some of these aspects have changed over time • identify the position and significance of latitude, longitude, Equator, Northern 	<p>See Notes and Guidance Cycle A (vi)</p> <p><u>Local History – Lottery Funded Project</u></p> <ul style="list-style-type: none"> • understand how evidence is used rigorously to make historical claims, and discern how and why contrasting arguments and interpretations of the past have been constructed • gain historical perspective by placing their growing knowledge into different contexts, understanding the connections between local, regional, national and international history; between cultural, economic, military, political, religious and social history; and between short- and long-term timescales. <p><u>Changes in Britain from the Stone Age to the Iron Age</u></p> <p>Please see Notes and Guidance Cycle A (vii)</p>

- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

* See Notes and Guidance Cycle A (i)

Animals, including humans (Y3)

Pupils should be taught to:

- 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 animals have skeletons and muscles for support, protection and movement

* See Notes and Guidance Cycle A (ii)

Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, and time zones (including day and night)

- use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- use the eight points of a compass, four-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world

Place Knowledge and Fieldwork Skills

- understand geographical similarities and differences through the study of human and physical geography of a region or area of the United Kingdom (different from that taught at Key Stage 1), a region or area in a European country, and a region or area within North or South America
- human geography, including: settlements, land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals, and water supplies
- use fieldwork to observe, measure and record the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs,

Animals, including humans (Y4)

Pupils should be taught to:

- describe the simple functions of the basic parts of the digestive system in humans
- identify the different types of teeth in humans and their simple functions.
- construct and interpret a variety of food chains, identifying producers, predators and prey

* See Notes and Guidance Cycle A (iii)

Sound (Y4)

Pupils should be taught to:

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

* See Notes and Guidance Cycle A (iv)

and digital technologies.

LCC Curriculum Content – Year 3 and 4

Cycle B every 2 years from 2014/15

Science	Geography	History
<p><u>Working scientifically</u></p> <p>During Years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiry to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations, and where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables 	<p>See Note and Guidance Cycle B (xi)</p> <p><u>On-going provision for geographical knowledge acquisition - Locational Knowledge</u></p> <ul style="list-style-type: none"> • locate the world’s countries, using maps to focus on Europe and North and South America and concentrating on their environmental regions, key physical and human characteristics, countries, and major cities • name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, including hills, mountains, cities, rivers, key topographical features and land-use patterns; and understand how some of these aspects have changed over time • identify the position and significance of latitude, longitude, Equator, Northern 	<p><u>The Roman Empire and its impact on Britain</u></p> <p>See notes and guidance Cycle B (xii)</p>

- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

* See Notes and Guidance Cycle B (i)

Plants (Y3)

Pupils should be taught to:

- 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 role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the prime/Greenwich meridian and time zones (including day and night)

Geographical Skills

- use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- use the eight points of a compass, four-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world
- use fieldwork to observe and measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs and digital technologies

Physical Geography

possible links to Science Rocks

describe and understand key aspects of:

- physical geography, including: climate zones, biomes and vegetation belts, rivers, *mountains, volcanoes and earthquakes,*

and the water cycle

*See Notes and Guidance Cycle B (ii)

Living things and their habitats (Y4)

Pupils should be taught to:

- recognise that all living things can be groups in a variety of ways
- explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- recognise that environments can change and that this can sometimes pose dangers to living things

* See Notes and Guidance Cycle B (iii)

Rocks (Y3)

possible links to physical geography

Pupils should be taught to:

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

*See Notes and Guidance Cycle B (iv)

States of matter (Y4)

Pupils should be taught to:

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

See Notes and Guidance Cycle B (v)

Forces and magnets (Y3)

Pupils should be taught to:

- compare how things move on different surfaces
- notice that some forces need contact between two objects, but magnetic forces can act at a distance
- observe how magnets attract or repel each other and attract some materials and not others
- compare and group together a variety of

everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials

- describe magnets as having two poles
- predict whether two magnets will attract or repel each other, depending on which poles are facing.

See Notes and Guidance Cycle B (vi)

Forces (Y6)

Pupils should be taught to:

- gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

* See Notes and Guidance Cycle B (vii)

Notes and Guidance – Cycle A

Non – statutory

- i) **Working Scientifically** - Pupils in years 3 and 4 should be given a range of scientific experiences to enable them to raise their own questions about the world around them. They should start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions; recognise when a simple fair test is necessary and help to decide how to set it up; talk about criteria for grouping, sorting and classifying; and use simple keys. They should begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them. They should help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.
- ii) **Animals including humans** - Pupils should continue to learn about the importance of nutrition and should be introduced to the main body parts associated with the skeleton and muscles, finding out how different parts of the body have special functions. Pupils might work scientifically by: identifying and grouping animals with and without skeletons and observing and comparing their movement; exploring ideas about what would happen if humans did not have skeletons. They might compare and contrast the diets of different animals (including their pets) and decide ways of grouping them according to what they eat. They might research different food groups and how they keep us healthy and design meals based on what they find out.
- iii) **Animals including humans** - Pupils should be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them to understand their special functions. Pupils might work scientifically by: comparing the teeth of carnivores and herbivores, and suggesting reasons for differences; finding out what damages teeth and how to look after them. They might draw and discuss their ideas about the digestive system and compare them with models or images.
- iv) **Sound** - Pupils should explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways. Pupils might work scientifically by: finding patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. They might make earmuffs from a variety of different materials to investigate which provides the best insulation against sound. They could make and play their own instruments by using what they have found out about pitch and volume

- v) **Geography** - A high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth's key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge, understanding and skills provide the frameworks and approaches that explain how the Earth's features at different scales are shaped, interconnected and change over time. Pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world's most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.
- vi) **History** A high-quality history education will help pupils gain a coherent knowledge and understanding of Britain's past and that of the wider world. It should inspire pupils' curiosity to know more about the past. Teaching should equip pupils to ask perceptive questions, think critically, weigh evidence, sift arguments, and develop perspective and judgement. History helps pupils to understand the complexity of people's lives, the process of change, the diversity of societies and relationships between different groups, as well as their own identity and the challenges of their time. Pupils should continue to develop a chronologically secure knowledge and understanding of British, local and world history, establishing clear narratives within and across the periods they study. They should note connections, contrasts and trends over time and develop the appropriate use of historical terms. They should regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance. They should construct informed responses that involve thoughtful selection and organisation of relevant historical information. They should understand how our knowledge of the past is constructed from a range of sources.
- vii) **Changes in Britain from the Stone Age to the Iron Age** - This could include: late Neolithic hunter-gatherers and early farmers, for example, Skara Brae; Bronze Age religion, technology and travel, for example, Stonehenge Iron Age hill forts: tribal kingdoms, farming, art and culture. Additional ideas to consider are
- Shelter and Homes:**
- From Neolithic hunters/gathers simple home inc stone houses of Skara Brae,
Early Round Houses and supportive settlement (farming, domestication of animals, weaving etc)
Round Houses and settlements (Cockley Cley: Iron age living
- Religion and Death:**
- Neolithic

Revised Jan 2014

Bronze Age

Iron Age Burial Rites: Offerings to gods, cremation burials, Sutton Hoo

Art and Culture:

Celtic Artwork and design

It would be appropriate to focus on just one of these aspects as a learning challenge

Notes and Guidance – Cycle B

Non – statutory

- i) **Working Scientifically** - Pupils in years 3 and 4 should be given a range of scientific experiences to enable them to raise their own questions about the world around them. They should start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions; recognise when a simple fair test is necessary and help to decide how to set it up; talk about criteria for grouping, sorting and classifying; and use simple keys. They should begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them. They should help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.
- ii) **Plants** - Pupils should be introduced to the relationship between structure and function: the idea that every part has a job to do. They should explore questions that focus on the role of the roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction. Note: Pupils can be introduced to the idea that plants can make their own food, but at this stage they do not need to understand how this happens. Pupils might work scientifically by: comparing the effect of different factors on plant growth, for example, the amount of light, the amount of fertiliser; discovering how seeds are formed by observing the different stages of plant life cycles over a period of time; looking for patterns in the structure of fruits that relate to how the seeds are dispersed. They might observe how water is transported in plants, for example, by putting cut, white carnations into coloured water and observing how water travels up the stem to the flowers
- iii) **Living things and their habitats** - Pupils should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat. They should identify how the habitat changes throughout the year. Pupils should explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants. Pupils could begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects. Note: Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants, such as ferns and mosses. Pupils should explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks, or garden ponds, and the negative effects of population and development, litter or deforestation. Pupils might work scientifically by: using and making simple guides or keys to explore and identify local plants and animals; making a guide to local living things; raising and answering questions based on their observations of animals and what they have found out about other animals that they have researched.

- iv) Rocks** - Linked with work in geography, pupils should explore different kinds of rocks and soils, including those in the local environment. Pupils might work scientifically by: observing rocks, including those used in buildings and gravestones, and exploring how and why they might have changed over time; using a hand lens or microscope to help them to identify and classify rocks according to whether they have grains or crystals, and whether they have fossils in them. Pupils might research and discuss the different kinds of living things whose fossils are found in sedimentary rock and explore how fossils are formed. Pupils could explore different soils and identify similarities and differences between them and investigate what happens when rocks are rubbed together or what changes occur when they are in water. They can raise and answer questions about the way soils are formed.
- viii) States of Matter** - Note: Teachers should avoid using materials where heating is associated with chemical change, for example, through baking or burning. Pupils might work scientifically by: grouping and classifying a variety of different materials; exploring the effect of temperature on substances such as chocolate, butter, cream (for example, to make food such as chocolate crispy cakes and ice-cream for a party). They could research the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid. They might observe and record evaporation over a period of time, for example, a puddle in the playground or washing on a line, and investigate the effect of temperature on washing drying or snowmen melting.
- ix) Forces and Magnets** - Pupils should observe that magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary (for example, opening a door, pushing a swing). They should explore the behaviour and everyday uses of different magnets (for example, bar, ring, button and horseshoe). Pupils might work scientifically by: comparing how different things move and grouping them; raising questions and carrying out tests to find out how far things move on different surfaces and gathering and recording data to find answers their questions; exploring the strengths of different magnets and finding a fair way to compare them; sorting materials into those that are magnetic and those that are not; looking for patterns in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another; identifying how these properties make magnets useful in everyday items and suggesting creative uses for different magnets.
- x) Forces** - Pupils should explore falling objects and raise questions about the effects of air resistance. They should explore the effects of air resistance by observing how different objects such as parachutes and sycamore seeds fall. They should experience forces that make things begin to move, get faster or slow down. Pupils should explore the effects of friction on movement and find out how it slows or stops moving objects, for example, by observing the effects of a brake on a bicycle wheel. Pupils should explore the effects of levers, pulleys and simple machines on movement. Pupils might find out how scientists, for example, Galileo Galilei and Isaac Newton helped to develop the theory of gravitation. Pupils might work scientifically by: exploring falling paper cones or cup-cake cases, and designing and making a variety of parachutes and carrying out fair

tests to determine which designs are the most effective. They might explore resistance in water by making and testing boats of different shapes. They might design and make products that use levers, pulleys, gears and/or springs and explore their effects.

- xi) Geography** - A high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth's key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge, understanding and skills provide the frameworks and approaches that explain how the Earth's features at different scales are shaped, interconnected and change over time. Pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world's most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.
- xii) History** - A high-quality history education will help pupils gain a coherent knowledge and understanding of Britain's past and that of the wider world. It should inspire pupils' curiosity to know more about the past. Teaching should equip pupils to ask perceptive questions, think critically, weigh evidence, sift arguments, and develop perspective and judgement. History helps pupils to understand the complexity of people's lives, the process of change, the diversity of societies and relationships between different groups, as well as their own identity and the challenges of their time. Pupils should continue to develop a chronologically secure knowledge and understanding of British, local and world history, establishing clear narratives within and across the periods they study. They should note connections, contrasts and trends over time and develop the appropriate use of historical terms. They should regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance. They should construct informed responses that involve thoughtful selection and organisation of relevant historical information. They should understand how our knowledge of the past is constructed from a range of sources.
- xiii) Ideas for Learning Challenges**
The Romans are Coming! Caesar's invasion; The Elephant's story: Claudius's invasion from his elephant's point of view
Forts and Threats; Roman conquest of England
Living life like A Roman; Roman Homes and living (food and Drink, Roman banquet
Religion and The Gods
Rebellion: Boudicca and others