

NATIONAL CURRICULUM CONTENT

TEACHING & LEARNING OUTCOMES

OTHER POINTS TO NOTE

Biosphere

To include:

- **Science:** Living Things and their Habitats
- **Science:** Evolution and Inheritance
- **Geography:** Biomes & Vegetation Belts

Working Scientifically

- ✓ Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- ✓ Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- ✓ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- ✓ Using test results to make predictions to set up further comparative and fair tests
- ✓ Reporting and presenting 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
- ✓ Identifying scientific evidence that has been used to support or refute ideas or arguments.

Living Things and their Habitats

- ✓ Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.
- ✓ Give reasons for classifying plants and animals based on specific characteristics

- Describe the life cycles of a mammal, an amphibian, an insect and a bird; recognising their similarities and differences.
- Recognise that living things produce offspring, but they vary and are not identical to their parents.
- Identify how animals and plants are adapted to suit their environment.
- Classify living things based on specific characteristics; discussing the reasons why they are placed in one group and not another.
- Begin to subdivide classification groups for more accuracy.
- Organise animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals).
- Use classification systems and keys to identify some animals and plants found within the immediate environment.
- Research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system.
- Explore the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification.

See Collins Connect 'Snap Science' Teaching Framework and Online Platform - <http://connect.collins.co.uk>

UNIT: Our Changing World
UNIT: The Nature Library

Science

Working Scientifically

- ✓ Asking relevant questions and using different types of scientific enquiries 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, keys, bar charts, and tables
- ✓ 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.

Evolution & Inheritance

- ✓ Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
- ✓ 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.

- Investigate and discuss how the characteristics of living things, for example, height, size or colour, vary from individual to individual.
- Explore inheritance; understanding how characteristics are passed on from parents to offspring within both plants and animals.
- Examine the advantages and disadvantages associated with selective breeding.
- Explore how a variety of living things are adapted to suit their particular environment.
- Analyse the pros and cons of specific adaptations, such as being on two feet rather than four, having a long or short beak, having gills or lungs, tendrils on climbing plants.
- Know how changes in an environment can cause extinction.
- Examine fossils of plants and animals to determine how living things have evolved over time as well as use findings to suggest the environment in which they may have lived.
- Understand the process of natural selection.
- Explore scientific theories from palaeontologists, such as Mary Anning, and ideas on evolution, Charles Darwin and Alfred Wallace.

See Collins Connect 'Snap Science' Teaching Framework and Online Platform - <http://connect.collins.co.uk>

UNIT: Everything Changes

Possible Educational Visits:

- Science Museum
- Royal Botanical Gardens, Kew
- Environment Centre

Geography

Human and physical geography

- ✓ Describe and understand key aspects of:
 - ⇒ Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, 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 maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- ✓ Use the eight points of a compass, four and six-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, 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

- Recognise that climate is influenced by many factors, such as proximity to the equator or the poles and proximity to the sea, as well as things like elevation, ocean currents and prevailing winds.
- Know that it is possible to divide the world into a number of climatic zones, biomes or vegetation belts, each with their own characteristic climate, vegetation and wildlife.
- Identify, locate and explore the characteristics of the world's nine major biomes: Tropical Forests, Savannah, Desert, Mediterranean, Temperate Grassland, Temperate Deciduous Forests, Coniferous Forests, Mountain, and Tundra.
- Understand how human geography may be influenced by physical geography.
- Explore a variety of maps (e.g. climate, satellite, terrain) using direction, scale and key accurately; understanding how to give instructions using compass directions, grid references and latitude/longitude coordinates.

Clash of the Titans

To include:

- **History:** Ancient Greece (& its Impact on Britain)
- **Art and Designs:** Drawing - Still Life / Life Drawing
- **Design and Technology:** Paper Structures & Mechanisms

Possible Educational Visits:

- British Museum
- Queen Elizabeth Olympic Park
- National Gallery

History

- ✓ A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066
- ✓ Ancient Greece – a study of Greek life and achievements and their influence on the western world

- Understand the features, events and achievements associated with life in ancient Greece, including Greek wars (Athenian, Spartan, Trojan, and Persian), religious practices and beliefs, Greek Myths, the Olympic Games, and Greek theatre.
- Plot historical events onto a chronological timeline.
- Explain the legacy of Greek Culture upon British history and the western world, e.g. art, architecture and literature.

Art and Design

- ✓ To create sketch books to record their observations and use them to review and revisit ideas
- ✓ To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]
- ✓ About great artists, architects and designers in history

- Investigate a range of prominent still-life and life drawing artists; identifying the qualities and characteristics of different works of art.
- Develop observational skills; exploring what can actually be seen from a viewpoint.
- Explore ideas; sketching and recording appropriate observations into sketch books.
- Investigate and experiment with different art techniques (e.g. charcoal, graphite sticks, and water colour).
- Evaluate work and identify possible areas for improvement.

Artists:

- Henri Matisse
- Juan Gris
- Harmen Steenwyck
- Leonardo Da Vinci
- Gustav Klimt

Design and Technology

Design

- ✓ Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- ✓ Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- ✓ Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately
- ✓ Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- ✓ Investigate and analyse a range of existing products
- ✓ Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- ✓ Understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- ✓ Apply their understanding of how to strengthen, stiffen and reinforce more complex structures

- Investigate and analyse the qualities and characteristics of a range of layered paper structures and mechanisms; identifying materials and methods used during assembly.
- Apply what they have learnt through investigation to the design process; producing ideas which are fit for purpose and audience.
- Present ideas clearly; using a variety of appropriate methods.
- Assemble materials together to produce a quality product.
- Evaluate work and identify possible areas for improvement.

Artists:

- Cheong-ah Hwang
- Helen Musselwhite
- Jen Stark
- Yulia Brodskaya

Resources:

- Paper (White & Coloured), Card (White & Coloured), Craft Knives, Cutting Board.

Incorporate across all topics

To include:

- **Computing:** E-Safety and Digital Literacy
- **Computing:** Programming and Computer Science
- **Computing:** Creative use of ICT
- **PHSE:** Health and Wellbeing
- **PHSE:** Relationships
- **PHSE:** Living in the Wider World

Computing

- ✓ Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- ✓ Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- ✓ Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

- ✓ Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- ✓ Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- ✓ Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

- ✓ 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 – *Word Processing, Presentation, Graphics, Digital Media (capturing video & sound footage, photography, animation) and Data Handling*

Suggested Software:

- World Wide Web (www) – Search Engine
- CEOP – www.thinkuknow.co.uk
- LGFL: E-Safety Framework
- LGFL London Mail

Suggested Software:

- 2Simple Software (& Purple Mash): 2Go, 2logo, 2DIY, 2DIY 3D, 2Simulate
- Roamer World (with 2Paint A Picture)
- Purple Mash 2Code: Gorilla Lessons, Debug Challenges Gorilla
- J2Code www.j2e.com/j2code
- Scratch www.scratch.mit.edu
- Flowol3

Suggested Equipment:

- Floor Robots - BeeBot, Pro-Bot, Roamer
- FlowGo Interface
- FlowGo Mimics
- Electrical Circuit Components [e.g. Wire, Light Switches, Proximity Switches, Small Pressure Pad Switches, 6V Light Bulbs & Holders, 6V Square Buzzers, Motors]
- K'NEX & Lego Construction Sets

Suggested Software:

- 2Simple Software (& Purple Mash): 2Paint A Picture, 2Design and Make, 2Type, 2Create a Story, 2Create, 2Publish, 2Connect, 2Photo, 2Animate, 2Count, 2Graph, 2Question, 2Investigate, 2Calculate, 2Music – Explore, Beat & Sequence
- Purple Mash Topics www.purplemash.com
- Clicker 6
- Microsoft Office: Word, PowerPoint, Excel
- Microsoft Movie Maker

Suggested Equipment:

- Tablets
- Digital Cameras
- Tuff Cams
- Recordable Microphones
- Film Production Equipment, e.g. lighting, green screen, tripod
- Data Loggers

Pupil should have the opportunity to learn:

- ✓ what positively and negatively affects their physical, mental and emotional health (including the media)
- ✓ how to make informed choices (including recognising that choices can have positive, neutral and negative consequences) and to begin to understand the concept of a 'balanced lifestyle'
- ✓ to recognise opportunities to make their own choices about food, what might influence their choices and the benefits of eating a balanced diet
- ✓ to recognise how images in the media do not always reflect reality and can affect how people feel about themselves
- ✓ to reflect on and celebrate their achievements, identify their strengths, areas for improvement, set high aspirations and goals
- ✓ to deepen their understanding of good and not so good feelings, to extend their vocabulary to enable them to explain both the range and intensity of their feelings to others
- ✓ to recognise that they may experience conflicting emotions and when they might need to listen to their emotions or overcome them
- ✓ about change, including transitions (between Key Stages and schools), loss, separation, divorce and bereavement
- ✓ to differentiate between the terms, 'risk', 'danger' and 'hazard'
- ✓ to deepen their understanding of risk by recognising, predicting and assessing risks in different situations and deciding how to manage them responsibly (including sensible road use and risks in their local environment) and to use this as an opportunity to build resilience
- ✓ to recognise their increasing independence brings increased responsibility to keep themselves and others safe
- ✓ that bacteria and viruses can affect health and that following simple routines can reduce their spread
- ✓ that pressure to behave in an unacceptable, unhealthy or risky way can come from a variety of sources, including people they know and the media
- ✓ to recognise when and how to ask for help and use basic techniques for resisting pressure to do something dangerous, unhealthy, that makes them uncomfortable, anxious or that they believe to be wrong
- ✓ school rules about health and safety, basic emergency aid procedures, where and how to get help
- ✓ what is meant by the term 'habit' and why habits can be hard to change
- ✓ which, why and how, commonly available substances and drugs (including alcohol and tobacco) could damage their immediate and future health and safety, that some are legal, some are restricted and some are illegal to own, use and supply to others
- ✓ how their body will, and emotions may, change as they approach and move through puberty
- ✓ about human reproduction
- ✓ about taking care of their body, understanding that they have autonomy and the right to protect their body from inappropriate and unwanted contact their body autonomy and rights; understanding that actions such as female genital mutilation (FGM) constitute abuse, are a crime and how to get support if they have fears for themselves or their peers
- ✓ Strategies for keeping physically and emotionally safe including road safety (including cycle safety- the Bikeability programme), safety in the environment (including rail , water and fire safety), and safety online (including social media, the responsible use of ICT and mobile phones)
- ✓ the importance of protecting personal information, including passwords, addresses and the distribution of images of themselves and others
- ✓ about people who are responsible for helping them stay healthy and safe and ways that they can help these people

PHSE

Pupil should have the opportunity to learn:

- ✓ to recognise and respond appropriately to a wider range of feelings in others
- ✓ to recognise what constitutes a positive, healthy relationship and develop the skills to form and maintain positive and healthy relationships
- ✓ to recognise ways in which a relationship can be unhealthy and who to talk to if they need support
- ✓ to be aware of different types of relationship, including those between acquaintances, friends, relatives and families,
- ✓ that civil partnerships and marriage are examples of stable, loving relationships and a public demonstration of the commitment made between two people who love and care for each other and want to spend their lives together and who are of the legal age to make that commitment
- ✓ to be aware that marriage is a commitment freely entered into by both people, that no one should enter into a marriage if they don't absolutely want to do so
- ✓ that their actions affect themselves and others
- ✓ to judge what kind of physical contact is acceptable or unacceptable and how to respond
- ✓ the concept of 'keeping something confidential or secret', when we should or should not agree to this and when it is right to 'break a confidence' or 'share a secret'
- ✓ to listen and respond respectfully to a wide range of people, to feel confident to raise their own concerns, to recognise and care about other people's feelings and to try to see, respect and if necessary constructively challenge their points of view
- ✓ to work collaboratively towards shared goals
- ✓ to develop strategies to resolve disputes and conflict through negotiation and appropriate compromise and to give rich and constructive feedback and support to benefit others as well as themselves
- ✓ that differences and similarities between people arise from a number of factors, including family, cultural, ethnic, racial and religious diversity, age, sex, gender identity, sexual orientation, and disability (see 'protected characteristics' in the Equality Act 2010)
- ✓ to realise the nature and consequences of discrimination, teasing, bullying and aggressive behaviours (including cyber bullying, use of prejudice-based language, how to respond and ask for help)
- ✓ to recognise and manage 'dares'
- ✓ to recognise and challenge stereotypes

Pupil should have the opportunity to learn:

- ✓ to research, discuss and debate topical issues, problems and events concerning health and wellbeing and offer their recommendations to appropriate people
- ✓ why and how rules and laws that protect themselves and others are made and enforced, why different rules are needed in different situations and how to take part in making and changing rules
- ✓ to understand that everyone has human rights, all peoples and all societies and that children have their own special rights set out in the United Nations Declaration of the Rights of the Child
- ✓ that these universal rights are there to protect everyone and have primacy both over national law and family and community practices
- ✓ to know that there are some cultural practices which are against British law and universal human rights, such as female genital mutilation
- ✓ to realise the consequences of anti-social and aggressive behaviours such as bullying and discrimination of individuals and communities
- ✓ that there are different kinds of responsibilities, rights and duties at home, at school, in the community and towards the environment
- ✓ to resolve differences by looking at alternatives, seeing and respecting others' points of view, making decisions and explaining choices
- ✓ what being part of a community means, and about the varied institutions that support communities locally and nationally
- ✓ to recognise the role of voluntary, community and pressure groups, especially in relation to health and wellbeing
- ✓ to appreciate the range of national, regional, religious and ethnic identities in the United Kingdom
- ✓ to think about the lives of people living in other places, and people with different values and customs
- ✓ about the role money plays in their own and others' lives, including how to manage their money and about being a critical consumer
- ✓ to develop an initial understanding of the concepts of 'interest', 'loan', 'debt', and 'tax' (e.g. their contribution to society through the payment of VAT)
- ✓ that resources can be allocated in different ways and that these economic choices affect individuals, communities and the sustainability of the environment
- ✓ about enterprise and the skills that make someone 'enterprising'
- ✓ to explore and critique how the media present information

Also to cover:

- **Music:** African Drumming
- **Music:** Winter Performance - Singing
- **PE:** Basket Ball/Netball
- **PE:** Gymnastics
- **Languages:** Spanish
- **Religious Education:** Sacred Texts – Teaching & Authority (Include an in-depth study of Hinduism)

Music

- ✓ Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
- ✓ Improvise and compose music for a range of purposes using the inter-related dimensions of music
- ✓ Listen with attention to detail and recall sounds with increasing aural memory
- ✓ Use and understand staff and other musical notations

Musical Instruments:

- African Drums

PE

- ✓ Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
- ✓ Listen with attention to detail and recall sounds with increasing aural memory
- Perform in ensemble contexts using voices with increasing control and expression (Winter Concert).
- ✓ Use running, jumping, throwing and catching in isolation and in combination
- ✓ Play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending
- ✓ Use running, jumping, throwing and catching in isolation and in combination
- ✓ Develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]
- ✓ Compare their performances with previous ones and demonstrate improvement to achieve their personal best

Record performances and evaluate.

Possible Educational Visits:

- African Drumming Workshop
- Local Place of Worship – Hindu Temple (Neasden)
- School Visit by a Local Religious Leader

Languages

- ✓ Listen attentively to spoken language and show understanding by joining in and responding
- ✓ Explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words
- ✓ Engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help
- ✓ Speak in sentences, using familiar vocabulary, phrases and basic language structures
- ✓ Develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases
- ✓ Present ideas and information orally to a range of audiences
- ✓ Read carefully and show understanding of words, phrases and simple writing
- ✓ Appreciate stories, songs, poems and rhymes in the language
- ✓ Broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
- ✓ Write phrases from memory, and adapt these to create new sentences, to express ideas clearly
- ✓ Describe people, places, things and actions orally and in writing
- ✓ Understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English

RE

- Explore a range of religious stories and sacred writings about God, the world and how we should treat it and human life.
- Understand that there are similarities and differences in the answers that faiths give to questions and the ways in which faiths express and interpret ideas.
- Identify stories which enable believers to answer difficult questions.
- Reflect upon their own beliefs and the sources on which they are based.

Resources:

- Religious stories/books.
- Artefacts from a variety of religions.