

Year 6 Curriculum Overview (2019-20)

BIG questions are to promote effective lifelong learning inventory (ELLI) skills

| | Term One | Term Two | Term Three | Term Four | Term Five | Term Six |
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| Primary Focus | Science | Geography | History | PHSE | Geography | Science |
| Secondary Focus | Geography | Science/RE | Music/RE/science | Computing/PE/RE | DT/Music/art | PSHE/RE |
| The BIG question: | Can you use your curiosity to classify everyday changes into physical and chemical? | What is the effect of climate change on people and animals? What creative measures must society take to ensure that the effect of climate change is limited? | How has Britain changed and adapted since the stone age? | How can we use technology to support us to be healthy? How can we ensure that technology links to positive healthy living? | How are mountains, volcanoes and oceans formed? What is the relationship between mountains, volcanoes and oceans? | How have we changed since starting primary school? How will perseverance support me in secondary school and in my future? |
| Wow moments (First week) | Film canister rockets | | | | Tornado in a bottle make a volcano | Secondary induction day Careers day How can we look after ourselves in the future? |
| Trip/ Bristol links | Trip Morfe Bay | Visit religious building (Mosque – Islam) | | | | Bristol secondary schools |
| Celebration | ICT PowerPoint of Morfe Bay for parents/school | | | | | End of year presentation about identity |
| High quality texts | Northern lights The curious incident of the dog | How to live forever The viewer Framed | Jurassic Park (film clips) Night at the museum clip Indiana jones | War Poetry 5/6 Boy in the Striped PJs 6 Rose Blanche 5/6 War boy Friend and Foe Once 6 Goodnight Mr Tom The railway children Sebastian faulks– bird song– year 6 | The hunger games Divergent I, robot Brave new world 1984 Animal Farm Replay– clip The Truman show Mad max | Boy in the girls bathroom Invictus games trailer The outsider (grand national) Renegade song Clockwork (PC) The hobbit (PC) The arrival (PC) |
| Linked enquiry texts/stimulus | | | | | The Story Pompeii Escape from Pompeii You wouldn't want to live | |

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| Science 1 – 1.5 hours a week in morning | <p>Chemistry: Matter & change</p> <p><u>Atoms, molecules and compounds:</u></p> <p>*Basics of atomic structure: nucleus, protons (positive charge), neutrons (neutral), electrons (negative charge)</p> <p>*Atoms are constantly in motion, electrons move around the nucleus in paths called shells (or energy levels).</p> <p>*Atoms may join together to form molecules or compounds.</p> <p>*Common compounds and their formulas: o Water H₂O o Salt NaCl o Carbon Dioxide CO₂</p> <p><u>Elements:</u></p> <p>*Elements have atoms of only one kind, having the same number of protons. There are a little more than 100 different elements.</p> <p>*The periodic table: organises elements with common properties; Atomic symbol and atomic number</p> <p>*Some well-known elements and their symbols: Hydrogen H ;</p> | <p>Classifying living things</p> <p>*Study animal classifications, discuss: why do we classify? How does classification help us understand the natural world?</p> <p>*Scientists have divided living things into five large groups called kingdoms, as follows: Plant; Animal; Fungus (Mushrooms, yeast, mould, mildew); Protist (algae, protozoans, amoeba, euglena); Prokaryote (blue-green algae, bacteria)</p> <p>*Each Kingdom is divided into smaller groupings as follows: Kingdom; Phylum; Class; Order; Family; Genus; Species; Variety</p> <p>*When classifying living things, scientists use special names made up of Latin words (or words made to sound like Latin words), which help scientists around the world understand each other and ensure that they are using the same names for the same living things o Homo Sapiens: the scientific name for</p> | <p>Evolution and Inheritance</p> <p>*Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>*Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>*Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> | <p>Plants and living things</p> <p>*Structure: Non-vascular and vascular plants</p> <p>*Non-vascular plants (for example: algae)</p> <p>*Vascular plants o Vascular plants have tube-like structures that allow water and dissolved nutrients to move through the plant: Parts and functions of vascular plants: roots, stems and buds, leaves</p> <p>Photosynthesis</p> <p>*Photosynthesis is an important life process that occurs in plant cells, but not animal cells (photo = light; synthesis = putting together). Unlike animals, plants make their own food, through the process of photosynthesis.</p> <p>*Role in photosynthesis of: energy from sunlight, chlorophyll, carbon dioxide and water, xylem and phloem, stomata, oxygen, sugar (glucose)</p> | | <p>Human body, reproduction & the human body (Endocrine system)</p> <p><u>Human growth stages</u></p> <p>*Puberty: - Glands and hormones (see below, Endocrine System), growth spurt, hair growth, breasts, voice change <u>The reproductive system:</u></p> <p>*Females: ovaries, fallopian tubes, uterus, vagina, menstruation</p> <p>*Males: testes, scrotum, penis, urethra, semen</p> <p>*Sexual reproduction: intercourse, fertilisation, zygote, implantation of zygote in the uterus, pregnancy, embryo, foetus, newborn</p> <p><u>The endocrine system</u></p> <p>* The human body has two types of glands: duct glands (such as the salivary glands), and ductless glands, also known as the endocrine glands.</p> <p>*Endocrine glands secrete (give off) chemicals called hormones. Different hormones control different body</p> |

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| | <p>Helium He ; Carbon C ; Nitrogen N ; Oxygen O ; Sodium Na ;Aluminium Al ;Silicon Si ;Chlorine Cl ; Iron Fe ;Copper Cu ;Silver Ag ;Gold Au</p> <p>*Two important categories of elements: metals and non-metals; Metals comprise about 2/3 of the known elements; Properties of metals: most are shiny, ductile, malleable, conductive</p> <p><u>Chemical and Physical change:</u></p> <p>*Chemical change changes what a molecule is made up of and results in a new substance with a new molecular structure. Examples of chemical change: rusting of iron, burning of wood, milk turning sour</p> <p>*Physical change changes only the properties or appearance of the substance, but does not change what the substance is made up of. Examples of physical change: cutting wood or paper, breaking glass, freezing water</p> | <p>the species to which human beings belong to (genus: Homo, species: Sapiens); Taxonomists: biologists who specialise in classification</p> <p>*Different classes of vertebrates and major characteristics: fish, amphibians, reptiles, birds, mammals (review from Year 4)</p> <p><u>Cells: Structures and processes</u></p> <p>*All living things are made up of cells</p> <p>*Structure of cells (both plant and animal)</p> <p>o Cell membrane: selectively allows substances in and out: Nucleus: surrounded by nuclear membrane, contains genetic material, divides for reproduction: Cytoplasm contains organelles, small structure that carry out the chemical activities of the cell, including mitochondria (which produce the cell's energy) and vacuoles (which store food, water, or wastes)</p> <p>*Plant cells, unlike animal cells, have cell walls and chloroplasts.</p> <p>*Cells without nuclei: monerans (bacteria)</p> <p>*Some organisms consist</p> | | | | <p>processes. Pituitary gland: located at the bottom of the brain; secretes hormones that control other glands, and hormones that regulate growth</p> <p>*Thyroid gland: located below the voice box; secretes a hormone that controls the rate at which the body burns and uses food</p> <p>*Pancreas: both a duct and a ductless gland; secretes a hormone called insulin that regulates how the body uses and stores sugar; when the pancreas does not produce enough insulin, a person has a sickness called diabetes (which can be controlled).</p> <p>*Adrenal glands: secrete a hormone called adrenaline, especially when a person is frightened or angry, causing rapid heartbeat and breathing</p> |
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| | | <p>of only a single cell: for example, amoeba, protozoans, some algae.</p> <p>*Cells are shaped differently in order to perform different functions.</p> <p>*Organisation of cells into tissues, organs, and systems: - In complex organisms, groups of cells form tissues (for example: in animals, skin tissue or muscle tissue; in plants, the skin of an onion or the bark of a tree). - Tissues with similar functions form organs (for example: in some animals, the heart, stomach, or brain; in some plants, the root or flower). - In complex organisms, organs work together in a system (recall, for example, from earlier studies of the human body, the digestive, circulatory, and respiratory systems).</p> | | | | |
| History | | | Era Study :Changes in Britain from stone age to the Iron age (800BC) | | Era study: Ancient Greek life and achievements and their influence on the western world (80BC – 146 AD) | |
| Geography | Locational knowledge of the UK *Know the counties of | Climate change *The world’s climate changes and has warmed | | | Mountains, volcanoes and earthquakes <u>Mountains</u> | |

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| | <p>west coast of England: West Midlands, North West & North-east England.</p> <p>*Know significant highland areas (Brecon Beacons, Black Mountains, Lake District, Grampians, Peak District, Pennines, Southern Uplands & Southern Highlands)</p> | <p>and cooled at different points in Earth's history.</p> <p>The world's climate is currently changing.</p> <p>*Currently the climate is getting hotter.</p> <p>*Climatologists widely believe that the current climate change is caused by human activity (burning fossil fuels, farming, deforestation).</p> <p>*A warmer climate leads to increased rainfall, changing seasons, shrinking sea ice, rising sea levels. *Climate change impacts upon wildlife and people.</p> <p>*Physical processes cause climate change (volcanic activity, solar output, orbital changes)</p> | | | <p>*Know the names of some of the world's mountain ranges in the world: The Alps; The Himalayas; The Andes and The Appalachian Mountains; The Atlas Mountains.</p> <p>*The terms peak meaning the highest point of a mountain and range meaning a connected group of mountains.</p> <p>*How mountains are formed: Folded mountains, fault-block mountains, dome-shaped mountains</p> <p><u>The Earth's Layers / Volcanoes & Earthquakes</u></p> <p>*Crust, mantle, core (outer core and inner core)</p> <p>*Movement of tectonic plates</p> <p>*Earthquakes: Faults, San Andreas fault; Measuring intensity: seismograph and Richter scale; Tsunamis</p> <p>*Volcanoes: Magma, lava and lava flow; Active, dormant and extinct; Famous volcanoes: Vesuvius, Krakatoa, Mount St. Helens</p> <p>*Hot springs and geysers: Old Faithful (in Yellowstone National</p> | |
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| | | | | | Park, US) *Theories of how the continents and oceans were formed: Pangaea and continental drift | |
| Geography skills | <p>use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied</p> <p>use the 8 points of a compass, 4- and 6-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.</p> <p>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.</p> <p>Draw simple geographical diagrams to represent physical processes.</p> | | | | | |
| DT | | | <p>Use a range of information to inform my design</p> <p>Use tools and materials precisely</p> <p>Justify my plan to someone else</p> <p>Test and evaluate my final product</p> <p>Use computer aided designs to show my ideas</p> <p>Say if my product is fit for purpose</p> <p>Evaluate what would improve it</p> | | <p>Consider culture and society in my designs</p> <p>Evaluation existing products against criteria which I have set (Linked to history)</p> <p>Practise my evaluation skills by evaluating existing products against criteria which I have set</p> | |
| Art | <p>Consider how to apply and blend colour through different brushstrokes?</p> <p>Explain how different artists have used colour and for what purpose? (Anish Kapoor, Mark Rothko)</p> <p>Use colour for different purposes and explain my choices?</p> <p>Use a variety of mediums to create the illusion of tone? (sketching pencils, rubbers, paint and collage)</p> <p>Use line in conjunction with colour? (lines crossing, filling negative space)</p> | | <p>Look at how people/objects are arranged in a picture using shapes to analyse the arrangement and relationship? (Pietre Breugal)</p> | | <p>Look at different cultural uses of pattern? (Moorish, Islamic, Indian, Aztec, Greek)</p> | |
| Music | 'Air' - Group Composition | Winter Concert | Music through History – Chronology | Trains – Reading and Notating Rhythm | | Summer Showcase Learning an Instrument – Ukulele |

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| Computing | Extend Scratch to start using it to make simple games including inputs E-Safety KS2 Review of all lessons | | | | | |
| Computing | | Write/publish a newspaper report using publisher. Insert title using WordArt > add banners and shapes Insert text boxes/pictures Print and stick in books/read to another class | | Create an excel spreadsheet Insert columns and rows for categories of jobs e.g. infantry Create basic formulae to find the total of pay Print for display/stick in books Create a graph using findings | | |
| R.E. | What does it mean to belong to a religion? (Unit 11 -Islam) | | Unit 6— How do we make a moral choice? | | Unit 7 – How can people express their beliefs and identify? | |
| PSHE | Being me in my world | Celebrating difference | Dreams and goals | Healthy me | Relationships | Changing me |
| French | En route pour l'école (On the way to school) | | Scene de plage (Beach scene) | | Les quatre saisons (The four seasons) | |
| Real PE | Unit 1 – Cognitive | Unit 2 – Creative | Unit 3 – Social | Unit 4 – Physical | Unit 5 – Health and Fitness | Unit 6 – Personal |