

Year 5: Autumn 1 '3...2...1...Blast Off!'

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| <u>Science</u> | | |
| <p>Earth and Space Pupils should be taught to:</p> <ul style="list-style-type: none"> • describe the movement of the Earth, and other planets, relative to the Sun in the solar system • describe the movement of the Moon relative to the Earth • describe the Sun, Earth and Moon as approximately spherical bodies • use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. | <p><u>Non-statutory guidance:</u> Pupils should be introduced to a model of the Sun and Earth that enables them to explain day and night. Pupils should learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). They should understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones). Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses. Pupils should find out about the way that ideas about the solar system have developed, understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus. Pupils might work scientifically by: comparing the time of day at different places on the Earth through internet links and direct communication; creating simple models of the solar system; constructing simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day; finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks.</p> | |
| <u>History</u> | | |
| <p>A study of an aspect or theme in British History beyond 1066 See non statutory science guidance: Pupils should find out about the way that ideas about the solar system have developed, understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus.</p> | | |
| <p style="text-align: center;"><u>Cooking & Nutrition - Enchilladas</u></p> <ul style="list-style-type: none"> ▪ prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques ▪ understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. | <p style="text-align: center;"><u>Design & Technology – (moon buggy)</u></p> <p>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Generate, develop and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.</p> <p>Select from and use a wider range of tools and equipment to perform practical tasks accurately</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> | |
| <p style="text-align: center;"><u>Physical Education</u></p> <ul style="list-style-type: none"> • perform dances using a range of movement patterns (<u>Holst</u>) | <p style="text-align: center;"><u>Computing topic: (Networks)</u></p> <p>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</p> | |
| <u>Music</u> - From provider | <u>French</u> - From provider | |
| <p><u>Religious Education</u> Religion and the individual: What is expected of a person in following a religion or belief? Christians</p> | <p style="text-align: center;"><u>Personal, Social and Health Education/SRE</u></p> <p>Core Theme 2: Relationships (R) R7. that their actions affect themselves and others R8. to judge what kind of physical contact is acceptable or unacceptable and how to respond R9. the concept of 'keeping something confidential or secret', when they should or should not agree to this and when it is right to 'break a confidence' or 'share a secret' R10. 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 others' points of view R11. to work collaboratively towards shared goals R12. 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.</p> | |
| <u>English Skills</u> | <u>Maths Skills:</u> | <u>Computing Skills:</u> |
| <u>Trip/Visitor/Immersion Day</u> | | |
| Star Dome | | |

Year 5: Autumn 2 'Bridge It!'

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| <p>Science Forces Pupils should be taught to:</p> <p>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> | <p><u>Non-statutory guidance:</u> 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.</p> | |
| <p>Geography Geographical skills and fieldwork: use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied</p> <p>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</p> | <p>History A study of an aspect or theme in British History beyond 1066 Newton, Brunel, Stephenson</p> <p>a significant turning point in British history, for example, the first railways or the Battle of Britain</p> | |
| <p>Cooking & Nutrition understand and apply the principles of a healthy and varied diet</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> | <p>Design & Technology 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</p> <p>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>understand how key events and individuals in design and technology have helped shape the world</p> | |
| <p style="text-align: center;"><u>Physical Education</u></p> <ul style="list-style-type: none"> ▪ develop flexibility, strength, technique, control and balance for example, through athletics and gymnastics | <p>Computing topic: (Programming) https://hourofcode.com/uk/how-to 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</p> | |
| <p style="text-align: center;"><u>Music</u> (From provider)</p> | <p style="text-align: center;"><u>French</u> (From provider)</p> | |
| <p style="text-align: center;"><u>Religious Education</u></p> <p>Religion and the individual: What is expected of a person in following a religion or belief? Christians</p> | <p style="text-align: center;"><u>Personal, Social and Health Education/SRE</u></p> <p>Core Theme 2: Relationships R14. to realise the nature and consequences of discrimination, teasing, bullying and aggressive behaviours (including cyber bullying, use of prejudice-based language, 'trolling', how to respond and ask for help) R15. to recognise and manage 'dares' R16. to recognise and challenge stereotypes R18. how to recognise bullying and abuse in all its forms (including prejudice-based bullying both in person, online and through social media)</p> | |
| <p style="text-align: center;"><u>English Skills:</u></p> | <p style="text-align: center;"><u>Maths Skills:</u></p> | <p style="text-align: center;"><u>Computing Skills:</u></p> |
| <p><u>Trip/Visitor/Immersion Day</u></p> <p>Curriculum Day – Design, build and test a bridge using CAD software</p> | | |

Year 5: Spring 1 'Baking and Boiling'

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| <u>Science</u> | | <p>Non-statutory guidance: Pupils should build a more systematic understanding of materials by exploring and comparing the properties of a broad range of materials, including relating these to what they learnt about magnetism in year 3 and about electricity in year 4. They should explore reversible changes, including, evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes. Pupils should explore changes that are difficult to reverse, for example, burning, rusting and other reactions, for example, vinegar with bicarbonate of soda. They should find out about how chemists create new materials, for example, Spencer Silver, who invented the glue for sticky notes or Ruth Benerito, who invented wrinkle-free cotton.</p> <p>Note: <i>Pupils are not required to make quantitative measurements about conductivity and insulation at this stage. It is sufficient for them to observe that some conductors will produce a brighter bulb in a circuit than others and that some materials will feel hotter than others when a heat source is placed against them. Safety guidelines should be followed when burning materials.</i></p> <p>Pupils might work scientifically by: carrying out tests to answer questions, for example, 'Which materials would be the most effective for making a warm jacket, for wrapping ice cream to stop it melting, or for making blackout curtains?' They might compare materials in order to make a switch in a circuit. They could observe and compare the changes that take place, for example, when burning different materials or baking bread or cakes. They might research and discuss how chemical changes have an impact on our lives, for example, cooking, and discuss the creative use of new materials such as polymers, super-sticky and super-thin materials.</p> |
| <p>Properties and changes of materials Pupils should be taught to: 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 know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and changes of state are reversible changes 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.</p> | | |
| <u>History</u> | | <p>Art & 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</p> <p>Computing topic: Data Retrieving and Organising: Information listening to and downloading sound files and keyboard skills</p> <p>French From provider</p> <p>Personal, Social and Health Education/SRE Core Theme 1: Health and Wellbeing (H) H1. what positively and negatively affects their physical, mental and emotional health H5. to reflect on and celebrate their achievements, identify their strengths and areas for improvement, set high aspirations and goals H4. to recognise how images in the media (and online) do not always reflect reality and can affect how people feel about themselves H22. strategies for keeping safe online; the importance of protecting personal information, including passwords, addresses and the distribution of images of themselves and others H10. to recognise, predict and assess risks in different situations and decide 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 H11. to recognise how their increasing independence brings increased responsibility to keep themselves and others safe</p> |
| <p>A study of an aspect or theme in British History beyond 1066 See non statutory science guidance - inventors and inventions re: materials e.g. Nylon</p> | | |
| <u>Cooking & Nutrition (soup and bread)</u> | | <p>Physical Education 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</p> <p>Music From provider</p> <p>Religious Education Beliefs and questions: How do people's beliefs about God, the world and others have impact on their lives? Two from Muslims, Hindus, Buddhists</p> |
| <p>understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> | | |
| English Skills: | Maths Skills: | Computing Skills: |
| <p>Trip/Visitor/Immersion Day Curriculum Day</p> | | |

Year 5: Spring 2 'The Trials of Life'

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| <u>Science</u> | |
| Living things and their habitats | |
| Pupils should be taught to: | |
| <ul style="list-style-type: none"> • describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • describe the life process of reproduction in some plants and animals. | |
| Animals, including humans | |
| Pupils should be taught to: | |
| <ul style="list-style-type: none"> • describe the changes as humans develop to old age. | |
| <p><u>Non-statutory guidance:</u> Pupils should study and raise questions about their local environment throughout the year. They should observe life-cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. They should find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall.</p> <p>Pupils should find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals.</p> <p>Pupils might work scientifically by: observing and comparing the life cycles of plants and animals in their local environment with other plants and animals around the world (in the rainforest, in the oceans, in desert areas and in prehistoric times), asking pertinent questions and suggesting reasons for similarities and differences. They might try to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs. They might observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow.</p> <p>Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty.</p> <p>Pupils could work scientifically by researching the gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows.</p> | |
| <p>Cooking & Nutrition understand and apply the principles of a healthy and varied diet</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> | <p>Design & Technology 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</p> <p>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>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</p> |
| <u>Physical Education</u> | <u>Computing Topic</u> |
| <ul style="list-style-type: none"> ▪ take part in outdoor and adventurous activity challenges both individually and within a team | <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information; use technology safely, respectfully and responsibly. <i>(Computational Thinking + Programming A 4.5 How do I programme a physical system?)</i></p> |
| <u>Music</u> | <u>French</u> <i>From provider</i> |
| <p><u>Religious Education</u> Worship and sacred places: Where, how and why do people worship? Investigating places of worship in Sheffield and Yorkshire</p> | <p><u>Personal, Social and Health Education/SRE</u> Core Theme 3: Living in the Wider World – Economic wellbeing and being a responsible citizen (L) L2. why and how rules and laws that protect them and others are made and enforced, why different rules are needed in different situations and how to take part in making and changing rules L6. to realise the consequences of anti-social, aggressive and harmful behaviours such as bullying and discrimination of individuals and communities; to develop strategies for getting support for themselves or for others at risk L7. that they have different kinds of responsibilities, rights and duties at home, at school, in the community and towards the environment; to continue to develop the skills to exercise these responsibilities L8. to resolve differences by looking at alternatives, seeing and respecting others' points of view, making decisions and explaining choices L9. what being part of a community means, and about the varied institutions that support communities locally and nationally</p> |
| English Skills: | Maths Skills: |
| Computing Skills: | |
| <u>Trip/Visitor/Immersion Day</u> | |
| Thornbridge residential | |

Year 5: Summer 1 'Built to Last'

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| <p style="text-align: center;"><u>History</u></p> <p>The achievements of the earliest civilizations</p> <p>An overview of where and when the first civilizations appeared and a depth study of the following: Ancient Egypt</p> <ul style="list-style-type: none"> ○ What is an archaeologist and how have they helped us find out about the past? ○ What have we learnt from Ancient Egyptians writing? ○ Who were the Pharaohs and why were they important? ○ How did the Ancient Egyptians live (rich and poor)? ○ Could you mummify a body? | <p style="text-align: center;"><u>Design and Technology</u></p> <ul style="list-style-type: none"> • How can the wonder of the pyramids be recreated? <p>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>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</p> | |
| <p style="text-align: center;"><u>Geography</u></p> <p>Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied.</p> <ul style="list-style-type: none"> ○ Where is Egypt and why is it a popular holiday destination? | | |
| <p style="text-align: center;"><u>Physical Education</u></p> <p>Use running, jumping, throwing and catching in isolation and in combination Acquiring and developing skills</p> | <p style="text-align: center;"><u>Computing topic</u></p> <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; 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.</p> | |
| <p style="text-align: center;"><u>Music</u></p> | <p style="text-align: center;"><u>French</u></p> <p style="text-align: center;">From provider</p> | |
| <p style="text-align: center;"><u>Religious Education</u></p> <p>Beliefs and questions: How do people's beliefs about God, the world and others have impact on their lives? Two from Muslims, Hindus, Buddhists</p> | <p style="text-align: center;"><u>Personal, Social and Health Education/SRE</u></p> <p>Core Theme 1: Health and Wellbeing (H) H21. strategies for keeping physically and emotionally safe including road safety (including cycle safety - the Bikeability programme), and safety in the environment (including rail, water and fire safety) H23. about people who are responsible for helping them stay healthy and safe; how they can help these people to keep them healthy and safe H14. to recognise when they need help and to develop the skills to ask for help; to use basic techniques for resisting pressure to do something dangerous, unhealthy, that makes them uncomfortable or anxious or that they think is wrong H16. what is meant by the term 'habit' and why habits can be hard to change H12. that bacteria and viruses can affect health and that following simple routines can reduce their spread</p> | |
| <u>English Skills:</u> | <u>Maths Skills:</u> | <u>Computing Skills:</u> |
| <p><u>Trip/Visitor/Immersion Day</u></p> <p style="background-color: #e0f0ff; display: inline-block; padding: 2px;">Weston Park Museum</p> | | |

Year 5: Summer 2 '30 million species'

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| <u>Geography</u> | | <u>Art & Design</u> | |
| <p>Locational Knowledge:</p> <ul style="list-style-type: none"> locate the world's countries, using maps to focus on North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night) <p>Place knowledge:</p> <ul style="list-style-type: none"> understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom and a region within North or South America (Brazil; rainforest). <p>Physical Geography:</p> <ul style="list-style-type: none"> describe and understand key aspects of climate zones, biomes and vegetation belts | | <p>to create sketch books to record their observations and use them to review and revisit ideas</p> <p>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]</p> | |
| <u>Physical Education</u> | | <u>Computing topic:</u> | |
| <p>compare their performances with previous ones and demonstrate improvement to achieve their personal best</p> | | <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; 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. <u>(Computational Thinking + Programming B 5.5. How do I create a maths game in Scratch)?</u></p> | |
| <u>Music</u> | | French (From provider) | |
| <u>Religious Education</u> | | <u>Personal, Social and Health Education/SRE</u> | |
| <p>Worship and sacred places: Where, how and why do people worship? Investigating places of worship in Sheffield and Yorkshire</p> | | <p>Core Theme 1: Health and Wellbeing (H) Core Theme 3: Living in the Wider World – Economic wellbeing and being a responsible citizen (L) L12. to consider the lives of people living in other places, and people with different values and customs L13. about the role money plays in their own and others' lives, including how to manage their money and about being a critical consumer L15. that resources can be allocated in different ways and that these economic choices affect individuals, communities and the sustainability of the environment across the world L17. to explore and critique how the media present information H18. how their body will, and their emotions may, change as they approach and move through puberty</p> | |
| <u>English Skills:</u> | <u>Maths Skills:</u> | <u>Computing Skills:</u> | |
| <p><u>Trip/Visitor/Immersion Day</u></p> <p style="background-color: yellow;">Be a scientist for a Day at Sheffield University.</p> | | | |