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| Years 5/6Cycle A2018-2019 | Autumn 1Energy and engineers | Autumn 2River deep, mountain high | Spring Term 1Cuthbert, Aidan and Bede(What happened after the Romans left?) | Spring 2Global citizens | Summer 1Lifecycles | Summer 2‘Right to roam’ |
| **science**investigative skillselectricityproperties of materialsForces lifecyclesclassification and keys | * Working Scientifically re-visited : See below skills which will also be taught throughout the year.
* Pupils should be taught to:
* associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
* compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches
* use recognised symbols when representing a simple circuit in a diagram.
 | 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.
 | * Pupils should be taught to:
* explain that unsupported objects fall towards the Earth because of the force of 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.
 | * (working scientifically)
 | * 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.
* Pupils should be taught to:
* describe the changes as humans develop to old age.
 | Pupils should be taught to:* 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.
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|  | Working Scientifically - Ongoing throughout year* 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.
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| Geography* Fieldwork
* Locational knowledge
* Human and physical geography
 | * describe and understand key aspects of: human geography, including: land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water
 | describe and understand key aspects of: physical geography, including rivers, mountains, and the water cycleuse 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. use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied**Compare and contrast the Tyne Valley with a river valley in North America** | * use the eight points of a compass, four and six-figure grid references, symbols and keys (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom

(**Locate Lindisfarne, map the journeys of the saints especially Cuthbert etc)** | 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‘Fair trade’ |  | * understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom,
* 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
* 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.

**Compare and contrast Northumberland National Park and** **?Peak District National Park or possibly Lake District (detailed)**Overview of other UK National ParksCompare and contrast Yellowstone National Park? |
|  | Locational knowledgeLocate the world’s countries, using maps to focus on Europe (including the location of Russia) and North and South America, 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, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over timeIdentify 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) |
| History | * a study of an aspect or theme in British history that extends pupils’ chronological knowledge beyond 1066
* development of early transport routes ; especially railways
* Victorian industrialists eg Lord Armstrong
* Discovery of electricity and use in light bulbs
 |  | What happened when the Romans left?Study of the development of the early Christian churchSynod of Whitby,importance of Cuthbert, Aidan and Bede,Lindisfarne gospels,development of monasteries and their importance through Middle Ages |  |  | history of the access movement in UK ( theme across time) |
| 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 collaborationUse technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | 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 informationUse technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. | Use sequence, selection, and repetition in programs; work with variables and various forms of input and outputUse logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programsUse technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. |
| Art | * To use a range of materials creatively to design and make products Learn about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work
* To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination.
* Develop range of art and design techniques in using colour, pattern, texture, line, shape, form and space
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| D&T | * To use a range of materials creatively to design and make products
* Use range of tools & materials to complete practical tasksCookery - use the basic principles of a healthy and varied diet to prepare dishes.
* Build and improve structure & mechanism
* Generate, model & communicate ideas
* Understand where food comes from - evaluate existing products & own ideas

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| P.E | Gymnastics | Dance | Swimming | Swimming | Games | Athletics |