

	Geography	Science	Art and Design	Design Technology	Computing	Music
Programme of Study	<p>Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America.</p> <p>Locate 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.</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>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 time.</p> <p>Describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.</p> <p>Are competent in the geographical skills needed to: collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes; interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS); communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.</p>	<p>Gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p>Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).</p> <p>Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.</p>	<p>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>	<p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p>	<p>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.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p>	<p>Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression.</p>

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Year 4 Learning Intention (skills)	<p>Describe and compare aspects of physical features.</p> <p>Name, locate and explain the importance of significant mountains or rivers.</p> <p>Use the eight points of a compass, four and six-figure grid references, symbols and a key to locate and plot geographical places and features on a map.</p> <p>Identify the topography of an area of the UK using contour lines on a map.</p> <p>Identify, describe and explain the formation of different mountain types.</p> <p>Describe and compare aspects of physical features.</p> <p>Describe altitudinal zonation on mountains.</p> <p>Investigate a geographical hypothesis using a range of fieldwork techniques.</p>	<p>Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs).</p> <p>Describe the water cycle using words or diagrams and explain the part played by evaporation and condensation.</p> <p>Observe and explain that some materials change state when they are heated or cooled and measure or research the temperature in degrees Celsius (°C) at which materials change state.</p> <p>Explain how adaptations help living things to survive in their habitat.</p>	<p>Choose an interesting or unusual perspective or viewpoint for a landscape.</p> <p>Use a range of stitches to add detail and texture to fabric or mixed-media collages.</p> <p>Develop techniques through experimentation to create different types of art.</p>	<p>Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.</p>	<p>Apply computing skills to use new computing software</p> <p>Use new and unfamiliar computing hardware.</p> <p>Manipulate a range of text, images, sound or video clips and animation for given purposes.</p>	<p>Sing songs accurately, both solo and as part of an ensemble.</p>

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Year 4 Knowledge	<p>A physical feature is one that forms naturally and can change over time due to physical processes, such as erosion and weathering. Physical features include rivers, forests, hills, mountains and cliffs. An aspect of a physical feature might be the type of mountain, such as dome or volcanic, or the type of forest, such as coniferous or broad-leaved.</p> <p>Significant mountain ranges include the Himalayas, Urals, Andes, Alps, Atlas, Pyrenees, Apennines, Balkans and Sierra Nevada. Significant rivers include the Mississippi, Nile, Thames, Amazon, Volga, Zambezi, Mekong, Ganges, Danube and Yangtze.</p> <p>The four cardinal directions are north (N), east (E), south (S) and west (W), which are at 90° angles on the compass rose. The four intercardinal (or ordinal) directions are halfway between the cardinal directions: north-east (NE), south-east (SE), south-west (SW) and north-west (NW).</p> <p>Topography is the arrangement of the natural and artificial physical features of an area.</p> <p>Mountains form over millions of years. They are made when the Earth's tectonic plates push together or move apart. Mountains are also formed when magma underneath the Earth's crust pushes large areas of land upwards. There are five types of mountain: fold, fault-block, volcanic, dome and plateau.</p> <p>Land uses include agricultural, recreational, housing and industry. Water systems are used for transport, industry, leisure and power.</p> <p>Altitudinal zonation describes the different climates and types of wildlife at different altitudes on mountains. Examples include forests that grow at low altitudes and support a wide variety of plants and animals, tundra that is found at higher altitudes and supports plants and animals that are adapted to harsher environments, and the summits of mountains, which are usually covered in ice and snow and don't support any life.</p> <p>Fieldwork techniques, such as sketch maps, data collection and digital technologies, can provide evidence to support and answer a geographical hypothesis.</p>	<p>Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams.</p> <p>The water cycle has four stages: evaporation, condensation, precipitation and collection. Water in lakes, rivers and streams is warmed by the Sun, causing the water to evaporate and rise into the air as water vapour. As the water vapour rises, it cools and condenses to form water droplets in clouds. The clouds become full of water until the water falls back to the ground as precipitation (rain, hail, snow and ice). The fallen water collects back in lakes, rivers and streams. Evaporation and condensation are caused by temperature changes.</p> <p>Heating or cooling materials can bring about a change of state. This change of state can be reversible or irreversible. The temperature at which materials change state varies depending on the material. Water changes state from solid (ice) <math>\rightleftharpoons</math> liquid (water) at 0°C and from liquid (water) <math>\rightleftharpoons</math> gas (water vapour) at 100°C. The process of changing from a solid to liquid is called melting. The reverse process of changing from a liquid to a solid is called freezing. The process of changing from a liquid to a gas is called evaporation. The reverse process of changing from a gas to a liquid is called condensation.</p> <p>An adaptation helps an animal or plant survive in its habitat. If living things are unable to adapt to changes within their habitat, they are at risk of becoming extinct.</p>	<p>Art can display interesting or unusual perspectives and viewpoints.</p> <p>Stitches include running stitch, cross stitch and blanket stitch.</p> <p>Materials, techniques and visual elements, such as line, tone, shape, pattern, colour and form, can be combined to create a range of effects.</p>	<p>Evaluation can be done by considering whether the product does what it was designed to do, whether it has an attractive appearance, what changes were made during the making process and why the changes were made. Evaluation also includes suggesting improvements and explaining why they should be made.</p>	<p>New computing software commonly has features that should be familiar to users, such as icons or terminology.</p> <p>Interacting regularly with hardware enables users to recognise common features and become confident in working with new or unfamiliar hardware.</p> <p>Manipulating a range of text, images, sound or video clips and animation may include changing their style, size, colour, effect, shape, location or format.</p>	<p>Solo singing is singing alone. Accurate solo singing includes good timing, note memory and accurate pitching of notes. Ensemble singing is singing in a group. Accurate ensemble singing includes the ability to listen to others, sing at the same volume as them, and follow the signals and instructions of a conductor.</p>