

<p>Fieldwork Observation and description of what is around you</p> <p>Rocks: Sorting and grouping rocks based on appearance</p>	<p>Fieldwork Observe and record local fossils and rock types</p> <p>Fossils as a record of extinct species and of evolution</p> <p>Formation and identification of sedimentary, metamorphic and igneous rocks, their resultant properties</p> <p>Solar system – Sun, Moon and Earth and their effects – light, heat, seasons, night and day</p>	<p>Lab/Fieldwork Observe, record and experiment to test hypotheses about past processes and environments</p> <p>Life has evolved over billions of years – observing fossils and properties of rocks in the geological record informs our understanding of past environments and the development of life and the planet</p> <p>The Rock Cycle – formation and cycling of igneous, metamorphic and sedimentary rock by Earth processes Earth structure – core, mantle and crust The age of rocks at the Earth's surface can be estimated by their pattern of distribution and radiometric dating</p> <p>Formation of the solar system and of the Earth; evolution of atmosphere, oceans and solid Earth Climate has varied through Earth history and continues to do so</p>	<p>Observation of the present and evidence about past processes and environments can be used to model future change</p> <p>Life has evolved over billions of years and continuously modifies Earth systems</p> <p>Earth and its atmosphere consist of dynamic and complex interacting systems of rock, water, ice, air and life; feedbacks operate, and energy and mass are cycled Greenhouse effect - composition of the atmosphere controls the balance of incoming and outgoing energy, and hence the temperature and climatic conditions for life The carbon cycle – fossil fuels, limestone etc as sinks which lock away atmospheric carbon, which is rapidly released when fuels are burnt</p> <p>Global distribution of mineral resources depends on past geological processes</p> <p>Plate tectonics as a unifying theory caused by mantle convection Plate tectonics has shaped the continents, ocean circulation and climate, and the development of landforms and active geological processes at plate margins</p> <p style="text-align: right;"><b>Science programme of study</b></p>
<p><b>KS1</b> - The world is made up of what you see around you</p>	<p><b>KS2</b> - Natural processes shape the Earth and its surface</p>	<p><b>KS3</b> - The Earth, its environments and landscapes change and evolve over time</p>	<p><b>KS4</b> - Earth and its environments as dynamic and complex systems</p>

<p>Landscapes and Environments: Identifying key land forms, soil, vegetation, water (rivers and coasts) and weather</p> <p>Fieldwork Observation and description of what is around you</p>	<p>The world's major physical features – locations, patterns, characteristics and scale: continents, oceans and currents, mountain chains, river basins, coasts, and hot and cold deserts</p> <p>World climate zones, environments and vegetation belts</p> <p>The UK: Climate and weather patterns; types of landscapes</p> <p>Fieldwork Observe and record local landscapes and weather</p>	<p>The processes shaping the Earth's surface including the water cycle; weathering and erosion and the formation of soils Landscapes as distinctive collections of landforms, soils and Earth surface processes; focus on rivers and coasts</p> <p>Weather systems, climate zones and ocean currents; their properties, processes and patterns</p> <p>People-Environment interactions Renewable and non-renewable resources from the Earth and its atmosphere Human activity affects climate, oceans and landscapes Humans are affected by natural hazards: distributions and patterns (volcanoes, earthquakes, flooding, landslides, hurricanes etc)</p> <p>Fieldwork - Observe, map, measure, analyse and interpret UK landscapes/surface processes e.g. rivers, weather</p>	<p>Fragile landscapes and environments - deserts, polar regions, mountains and reefs – Earth surface processes and human interactions</p> <p>Human life has rapidly modified Earth's systems and surface resulting in climate change, ocean pollution, land degradation and flood risk</p> <p>Ecosystems as the balance and interconnections between climate, soil, water, plants and animals</p> <p>Sustainability and use of renewable and non-renewable resources</p> <p>Fieldwork - Observe, map, measure, analyse, interpret and evaluate UK landscapes/surface processes e.g. rivers, weather</p> <p style="text-align: right;"><b>Geography programme of study</b></p>
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