

Science and Geography in the Curriculum

Key Stage	Year Group	Science	Geography	Lesson Ideas
Early Years	Nursery	<p><u>3 and 4 year old will:</u></p> <ul style="list-style-type: none"> • Use all their senses in hands on exploration of natural materials (KUW) • Talk about what they see, using a wide vocabulary (KUW) • Plant seeds and care for growing plants (KUW) • Begin to understand the need to respect and care for the natural environment and all living things (KUW) 	<p><u>3 and 4 year old will:</u></p> <ul style="list-style-type: none"> • Know that there are different countries in the world and talk about the differences they have experienced or seen in photos (KUW) 	<ul style="list-style-type: none"> • Scavenger hunt following a trail. • Observe their environment including plants/animals. • Looking after plants in their environment. • Minibeast hunt. • Comparing animals from different countries/habitats/environments and make comments • Fairtrade • Growing potatoes. Where does our food come from? • Grouping and classifying plants/minibeasts in the environment. • Comparing environments linking with seasons. • Stories from other cultures. • Daily weather • Farm visit - access farm map, draw map, draw animals seen • Harvest festival
	Foundation	<p><u>Reception children will:</u></p> <ul style="list-style-type: none"> • Explore the natural world around them (KUW) • Describe what they see, hear and feel whilst outside (KUW) • Understand the effect of changing seasons on the natural world around them (KUW) <p>ELG: The Natural World</p>	<p><u>Reception children will:</u></p> <ul style="list-style-type: none"> • Draw information from a simple map (KUW) • Recognise some similarities and differences between life in this country and life in other countries (KUW) • Recognise some environments that are different to the one in which they live (KUW) 	

		<ul style="list-style-type: none"> • Explore the natural world around them, making observations and drawing pictures of animals and plants • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 	<ul style="list-style-type: none"> • Understand the effect of changing seasons on the natural world around them (KUW) <p>ELG: People, Culture and Communities</p> <ul style="list-style-type: none"> • Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps; • Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and - when appropriate - maps. 	
1	Year 1	<p><u>Plants</u></p> <ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. • Identify and describe the basic structure of a variety of common flowering plants, including trees. <p><u>Seasonal changes</u></p> <ul style="list-style-type: none"> • Observe changes across the 4 	<ul style="list-style-type: none"> • Use basic geographical vocabulary to describe and compare key physical features. • Use simple compass direction (NESW) and locational and directional language to describe the location of features and routes on maps. • Use aerial photographs and plan perspectives to recognise landmarks and basic human and 	<ul style="list-style-type: none"> • Use compass directions to locate features (trees) on the school grounds. • Daily weather • Locate types of trees around the school grounds and devise a simple map. • Identify the materials within the physical features identified • Walk the school grounds and use senses to identify physical features

	<p>seasons.</p> <ul style="list-style-type: none"> Observe and describe weather associated with the seasons and how day length varies. <p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p><u>Everyday Materials</u></p> <ul style="list-style-type: none"> Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. 	<p>physical features; devise a simple map; and use and construct basic symbols in a key.</p> <ul style="list-style-type: none"> Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment. Identify seasonal and daily weather patterns in the United Kingdom. 	<p>(rain, grass, leaves, soil, vegetation, seasons) and human features (school building, sheds, planters, playground equipment) and identify the materials from which they are made.</p> <ul style="list-style-type: none"> Seaside visit - Cleethorpes (seaside animals) Tally chart of observations in environment - trees, plants Treasure hunt of things in the environment objects plotted on a map
Year 2	<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats. 	<ul style="list-style-type: none"> Identify the location of hot and cold areas of the world in relation to the Equator and the North and South Poles. Name and locate the world's seven continents and five oceans. Use atlases, world maps and globes to identify the UK and its countries as well as the countries, continents and oceans studied at this stage. Use simple compass direction (NESW) and locational and 	<ul style="list-style-type: none"> Walk the school grounds and identify any habitats and microhabitats. Identifying places which are hot and cold and how animals are suited. Use atlases and identify animals in their habitats linking to oceans, continents and countries. Use compass directions to locate features (habitats) on the school grounds. Use ordnance survey map with grid references to locate features Locate types of habitat around the

			<p>directional language to describe the location of features and routes on maps.</p> <ul style="list-style-type: none"> • devise a simple map; and use and construct basic symbols in a key. • Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment. 	<p>school grounds and devise a simple map.</p> <ul style="list-style-type: none"> • Create a tally/table of animals in local habitats • Fairtrade
2	Year 3	<p><u>Rocks</u></p> <ul style="list-style-type: none"> • Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. • Describe in simple terms how fossils are formed when things that have lived are trapped within rock. • Recognise that soils are made from rocks and organic matter. <p><u>Light</u></p> <ul style="list-style-type: none"> • Recognise that shadows are formed when the light from a light source is blocked by an opaque object. • Find patterns in the way that the size of shadows change. 	<ul style="list-style-type: none"> • Physical geography including: volcanoes. • Use the eight points of a compass, four and six-figure grid references, symbols and keys. • 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. • Geographical terms to describe and compare: Physical: earth crust, mantle, active, dormant, extinct, core, crust, vent, conduit, eruption, crater, ash, lava and magnitude. 	<ul style="list-style-type: none"> • Create sourdough volcanoes. • Local rock walk/photograph rocks in different areas use maps and grid references • Collect soil samples • Wormery(vegetations) physical geography) • Plaster of paris fossils (erosion and decay of animals). • Observing shadows outside, movement throughout the day referring to compass directions. • Using magnets and north and south poles (compass magnet) • Fairtrade

		<p><u>Force</u></p> <ul style="list-style-type: none"> describe magnets as having 2 poles 	<p>Human: manufacturing, mining, service industry, recreation, town, rural, urban</p>	
Year 4	<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> recognise that environments can change and that this can sometimes pose dangers to living things <p><u>States of matter</u></p> <ul style="list-style-type: none"> identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 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) 	<ul style="list-style-type: none"> Physical geography, including rivers and the water cycle. 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 Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied 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 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. 	<ul style="list-style-type: none"> Water cycle in a bag Investigation and experiments into how the water cycle works Locality study: River Humber dangers in our locality (flooding, coastal erosion, wildlife, impact on farming, wider world) Watersedge visit Using maps to look at environmental dangers (deforestation, litter) Using maps to track rivers from source to sea Make a weather vane Track rainfall (link localised flooding) Use the compass points and grid references to locate potential dangers to the environment Fairtrade - melting chocolate 	

			<ul style="list-style-type: none"> • Geographical terms to describe and compare: evaporation, condensation, precipitation, transpiration, surface runoff 	
Year 5	<u>Earth and space</u> <ul style="list-style-type: none"> • use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky 	<ul style="list-style-type: none"> • 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 • 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). 	<ul style="list-style-type: none"> • Time zones when locating different countries. • Use photos from the space station and make comparisons • Make a sundial • Use weather equipment to monitor climate - thematic maps 	
Year 6	<u>Evolution and inheritance</u> <ul style="list-style-type: none"> • recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • identify how animals and plants are 	<p>Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied</p> <ul style="list-style-type: none"> • Use the eight points of a compass, four and six-figure grid references, symbols and 	<ul style="list-style-type: none"> • Locate animals Charles Darwin discovered • Using six figure grid references and compass points to locate the Galapagos islands • Plot Charles Darwin's Journey • Identify change in physical 	

		<p>adapted to suit their environment in different ways and that adaptation may lead to evolution</p> <p><u>Electricity</u></p>	<p>key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world</p> <ul style="list-style-type: none"> • Geographical terms to describe and compare: energy, renewable/non renewable, fossil fuel, power, fuel, natural resource and fairtrade. 	<p>features over time (Black Peppered Moth)</p> <ul style="list-style-type: none"> • Non-renewable and renewable energy sources. • Loan Wind turbine/EDF wind workshop (Lab Rascals)
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