



Knowledge Stems



Shurdington Knowledge Stems are up to 6 pieces of key knowledge that subject leaders have chosen as the building blocks for each unit. Following a quick introductory lesson at the start of lesson 1, where all 6 stems are shared, they will then be learnt by all children through the use of low stake tests at the start of each of the following lessons. These 'Knowledge Stems' are core pieces of knowledge we want all children to learn and will be built on within the main part of the unit lessons. All children should be able to confidently remember these stems and previous stems they have learnt.

Geography

Reception			
Unit	Our home: Shurdington	Contrasting Places	Maps/Seaside
Knowledge Stems	My five senses help me describe my environment. To observe means to look at something and think about it. The natural environment are things created by nature. The position of something is where it is. The school is in the village of Shurdington.	There are 4 seasons: Spring, Summer, Autumn and Winter. Similarities are things that places have in common. Differences are things that places don't have in common. Lots of places around the world have differences. The climate of a place is the weather it has.	A human feature is something that has been made by man. A physical feature is something made by nature. A map is a drawing of a part of the Earth. A beach is a strip of land separating the rest of the land from the sea.

Year 1			
Unit	Weather and Land	Our School	Our Island
Knowledge Stems	Wind, rain, sunshine, cloud, thunderstorms and snow are all weather we expect to experience in the UK. The temperature rises in the day and falls at night in the UK. The North Pole is the point which is furthest north on planet Earth and the South Pole is the point which is furthest south on planet Earth. The equator is an imaginary line that runs around the centre of the globe. The point closest to the equator is the hottest. The equator is the hottest place on Earth as it is closest to the sun. Spring, summer, autumn and winter are the four seasons of the year.	North, east, south and west are directions found on a compass. The directional language 'left' and 'right' can be used to locate features. An aerial photograph has been taken from above. Observing and measuring are ways in which we can collect information about a location. Our village is Shurdington, our closest town is Cheltenham and our county is Gloucestershire. Houses, parks, roads, shops, schools and churches are all needed in a town.	The United Kingdom is made up of England, Wales, Scotland and Northern Ireland. London, Cardiff, Edinburgh and Belfast are the capital cities in the United Kingdom. The North Sea, Irish Sea, English Channel and The Atlantic Ocean surround the United Kingdom. Physical features are features that have naturally formed such as mountains, rivers and forests and Human features are features that have been built such as schools, roads and towns. A map is an aerial view of a place that can have pictures or symbols to show what is on the ground. An atlas is a flat map of the world and a globe is a sphere. It is a model of the Earth.

Year 2		
Unit	Our World and The Arctic	Maps

Knowledge Stems	North America, South America, Asia, Europe, Antarctica, Africa and Australasia are the continents of the world. The continent we live on is called Europe. The Arctic, Southern, Indian, Atlantic and Pacific are the oceans of the world. The Arctic is not a continent or part of a continent as there is no land under the ice. The Arctic Tundra refers to a cold, frozen landscape. The people that live in the Arctic are known as Inuits.	A grid reference are usually numbers, sometimes letters, on gridlines which enables us to locate specific point or area on a map. Landmarks are recognisable features that enables a person to establish their location. North is the opposite direct to south. East is the opposite direction to west. A route is a way taken to get from a start point to a desired destination. A compass has a magnetised needle which always points north.
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Year 3			
Unit	The United Kingdom	Nepal	Mountains
Knowledge Stems	Gloucester is our closest city. Bristol, Birmingham and Bath are some cities close to us. Gloucestershire is our county. Herefordshire, Worcestershire, Warwickshire, Oxfordshire, Wiltshire and Somerset border Gloucestershire. The Peak District, Snowdonia, Yorkshire Dales and Brecon Beacons are some of the UK's National Parks. The Countryside Code helps to protect our National Parks.	Nepal is a country in Asia. There are five different climates in Nepal. Nepal experiences five seasons, summer, monsoon, autumn, winter and spring. Kathmandu is the capital city of Nepal. A biome is a large area characterised by its vegetation, soil, climate and wildlife. Reliance Co-Ed. School is our partner school in Nepal.	Mount Everest is the highest mountain in the world and it is in Nepal. Great Britain's highest mountains, England: Scafell Pike, Wales: Snowdon and Scotland: Ben Nevis. A contour line shows elevation on a map. Mountains are formed when two tectonic plates collide. To be a mountain the elevation must be 300 meters above the surrounding land.

Year 4			
Unit	Europe: France	Rivers	Where does the rain go when it falls on our school?
Knowledge Stems	Russia, Ukraine and France are Europe's largest countries. Europe is surrounded by the Arctic Ocean, the Atlantic Ocean, the Mediterranean Sea, Black Sea and Caspian Sea. Why do tourist visit Paris? A land border is a line that separate two countries. Urban areas relate to towns and cities. Rural areas relate to the countryside.	71% of the Earth's surface is covered in water. Clouds form when warm, moist air is cooled. When it is cooled, it condenses into tiny water droplets which appear as clouds. Heat from the sun evaporates water into water vapour, which rises, condenses in the cool air and then falls back down to earth as rain. Fluvial, pluvial, coastal and plumbing are the different types of floods. Transport, water supply and creating electricity are some uses of rivers. Litter, pesticides and factory waste all contribute to river pollution.	Water will always flow in the path of least resistance. Ground saturation, wind and sunlight may impact on the accuracy of findings. A rain gage is the standard instrument to measure rainfall. Rainfall is measured in millimetres. Human and physical features can change the path of rainfall. Guttering and water butts can be used to collect rain so water can be reused.

Year 5			
Unit	The Americas	Rainforests	Route planning
Knowledge Stems	Lines of latitude run north-south. Lines of longitude run east-west. South America is made up of 12 countries. South America is surrounded by the	Rainforests are found near the equator between the tropics of Cancer and Capricorn. The Amazon Rainforest is the largest in the world covering 5.5 million square	Ordinance survey maps are most commonly used by walkers. A six-figure grid reference will give an exact position on a map. A map scale indicates the relation

	Caribbean Sea, Atlantic Ocean and Pacific Ocean. The climate in most of south America is tropical but there are areas that are not. Ecuador has the highest population density in South America, The Atacama Desert, the Andes mountains and the Amazon River re a few of South America's most famous landmarks.	kilometres. 250000 Native tribes live within the Amazon rainforest. Deforestation is where trees are cut down to make space for farming, housing and to produce timber. There are 4 layers to the rainforest each one a habitat for thousands of specials of plants and animals. Recycling paper, buying eBooks and buying some Fairtrade goods are some of the ways we can protect our rainforests.	between the distance on the map and the actual distance on land. A compass and gridlines can be used to orientate a map. Naismith's Rule can be used to calculate how long a route will take to walk. Contour lines that are very close together indicate a steep incline or decline.
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Year 6			
Unit	China	Natural disasters	Trade and Economics
Knowledge Stems	China is on the continent of Asia and borders 14 other countries. Beijing is the capital city of China and has a population of 21 million. China has a lot of desertification mainly due to clearing of vegetation, over grazing and depletion of water resources. Economic growth refers to the increase of economic goods and services. China has the fastest economic growth in the world causing production of cheap	Hurricanes, tornados, blizzards, flooding, drought and dust storms are all extreme weathers. There are seven tectonic plates on Earth. Tsunamis are caused by large, impulsive displacements of sea levels which are usually caused by earthquakes. An earthquake is caused by a sudden slip on a fault line. Volcanoes are formed when one tectonic plate moves under another. Natural disasters can have huge impacts	Natural resources are materials from the Earth that are used to support life and meet people's needs. Oil, coal, natural gas, metals, stone and sand are natural resources. Trade is the action of buying and selling goods and services. USA, Germany, Netherlands, France and China are the UK's key trading partners. Fairtrade is a system of certification that aims to ensure a set of standards are met

	goods and a reduction in poverty but also pollution and unemployment in other countries. The Great wall of China is 13000 miles long and brings in 10 million tourists a year.	on the environment leading to landslides, flooding, silting and water contamination.	in the production and supply of a product or ingredient. Global supply chains are networks that can span across multiple continents and countries for the purpose of sourcing and supplying goods and services. The COVID pandemic has caused significant disruption to global trade. In 2020, global trade fell by 8.9%, the steepest drop since the global financial crisis in 2008.
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