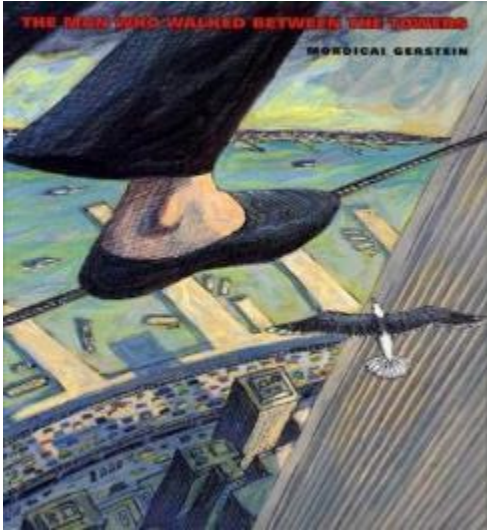



Year 5 Spring Term Knowledge Mats

Year 5: Forces Knowledge Mat

Subject Specific Vocabulary		Interesting Book	Sticky Knowledge about Forces
friction	Friction is a force between two surfaces that are sliding, or trying to slide, across each other.		<input type="checkbox"/> Frictional force is any force that is caused due to friction. An example of this might be when you put on the brakes on your bike.
gravity	Gravity is a force which tries to pull two objects towards each other.		<input type="checkbox"/> Gravity is the pulling force acting between the Earth and a falling object, for example when you drop something. Gravity pulls objects to the ground.
air resistance	Air resistance is a type of friction between air and another material. For example, when an aeroplane flies through the air.		<input type="checkbox"/> Surface resistance is the force on objects moving across a surface, such as an ice-skater skating on ice.
water resistance	If you go swimming, there is friction between your skin and the water particles.		<input type="checkbox"/> Any kind of force is really just a push or a pull.
levers	A lever can be described as a long rigid body with a fulcrum along its length.		Important facts to know by the end of the forces topic: <ul style="list-style-type: none"> • Know what gravity is and its impact on our lives. • Identify and know the effect of air resistance. • Identify and know the effect of water resistance. • Identify and know the effect of friction. • Explain how levers, pulleys and gears allow a smaller force to have a greater effect. • Know who Isaac Newton and Galileo were.
pulleys	Pulley is a simple machine and comprises of a wheel on a fixed axle, with a groove along the edges to guide a rope or cable.		
gears	Gears are wheels with teeth that slot together. When one gear is turned the other one turns as well.	<input type="checkbox"/> Air resistance is the force on an object moving through air, such as a plane moving through the sky. Air resistance affects how fast or slowly objects move through the air	
parachute	A parachute is a device used to slow down an object that is falling towards the ground. As the parachute opens, the Air resistance increases.	<input type="checkbox"/> Water resistance is the force on objects floating on or moving in water.	
Galileo	Galileo developed the telescope to enable close observation of the night sky.	<input type="checkbox"/> Magnetic force is an invisible force created by electrons. Magnetic force controls magnetism and electricity.	
Newton	During his lifetime, Newton developed the theory of gravity and made breakthroughs in the area of optics, such as the reflecting telescope.		

Year 5: Earth and Space Knowledge Mat

Subject Specific Vocabulary			Sticky Knowledge about Earth and space		
orbit	An orbit is a repeating path that one celestial body takes around another.		Important facts to know by the end of the Earth and space topic: <ul style="list-style-type: none"> • Know about and explain the movement of the Earth and other planets relative to the Sun. • Know about and explain the movement of the Moon relative to the Earth. • Know and demonstrate how night and day are created. • Describe the Sun, Earth and Moon (using the term spherical). • Know information about the planets. • Neil Armstrong was the first man to step on the moon. 	<input type="checkbox"/> One million Earths could fit inside the sun – and the sun is considered an average-sized star.	
solar system	The solar system is made of the eight planets that orbit our sun; it is also made of asteroids, moons, comets and lots more.			<input type="checkbox"/> An asteroid about the size of a car enters Earth's atmosphere roughly once a year – but it burns up before it reaches us.	
astronomical	Astronomy is the study of outer space, focusing on celestial bodies such as stars, comets, planets, and galaxies.			<input type="checkbox"/> The sunset on Mars appears blue.	
planet	There are 8 planets in our solar system, they are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.			<input type="checkbox"/> Earth, is the third planet from the sun and the only world known to support an atmosphere with free oxygen, oceans of liquid water on the surface and life.	
rotation	Rotation is when a shape is turned around a point.	<input type="checkbox"/> There is no atmosphere in space, which means that sound has no medium or way to travel to be heard.			
spherical	Something spherical is like a sphere in being round, or more or less round, in three dimensions.	<input type="checkbox"/> Venus is the hottest planet in the solar system and has an average surface temperature of around 450° C.			
crescent moon	It is a slither of the moon that is lit up and can be seen. It is less than half the moon.	<input type="checkbox"/> The sheer size of space makes it impossible to accurately predict just how many stars we have.			
gibbous moon	The best way to describe a gibbous moon is that the moon is three-quarters lit up.				
eclipse	An eclipse occurs when an astronomical object is temporarily obscured. A lunar eclipse is when the Earth moves between the Sun and the Moon, therefore blocking the Sun's rays from striking the Moon.				
lunar	Is anything related to the moon.				

North America KS2 Knowledge Mat

Subject Specific Vocabulary	
A buck	A nickname for the American dollar.
Cherokee	A member of an American Indian people formerly inhabiting much of the southern US.
American state	The U.S. is a country of 50 states covering a vast swathe of North America.
national park	An area of countryside, or occasionally sea or fresh water, protected by the state for the enjoyment of the general public or the preservation of wildlife.
The 'big apple'	This is the nickname associated with New York City (NYC). The nickname became common from the 1920s.
coyotes	Coyotes were a purely North American animal that lived in the West. They are small wolf-like creatures.
Statue of Liberty	The Statue of Liberty is a colossal neoclassical sculpture on Liberty Island in New York Harbour in New York City.
Chichén Itzá	Chichén Itzá is a complex of Mayan ruins in Mexico. It is a massive step pyramid.
A cold shoulder	An American metaphor for deliberately ignoring someone.
lighten up	To relax and not to take things too seriously.



Sticky Knowledge about North America

- There are 23 countries in North America, with Canada being the biggest.
- Mexico City is the largest city with more than 9 million people living there.
- Before the Europeans arrived, the indigenous and native Americans lived in the continent. Today, only about 2% of US Americans consider themselves as descendants from native Americans.
- Greenland is the not only the biggest island in North America but also in the world.
- The Missouri River is the longest in North America and flows through seven US states. Denali is the highest mountain in North America.
- Lake Superior, which borders Canada and the US, is the third largest lake in the world and the largest North American lake.


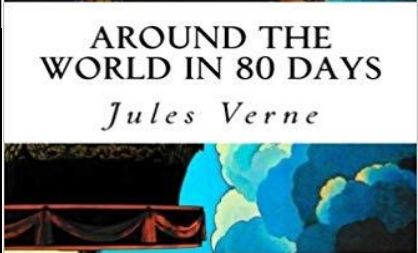

Exciting Books



10 biggest North American countries

- Canada
- USA
- Mexico
- Nicaragua
- Honduras
- Cuba
- Guatemala
- Panama
- Cost Rica
- Dominican Republic

Map Reading KS2 Knowledge Mat

Subject Specific Vocabulary			Exciting Books
Ordnance Survey	An Ordnance Survey map is a detailed map produced by mapping agency of the United Kingdom (UK).		<h3>Sticky Knowledge about Map Reading</h3> <ul style="list-style-type: none"> ❑ Cartography is the study of maps and map making. Someone who makes maps is called a cartographer. ❑ There are two norths: true north and magnetic north. True north is the direction of the geographic North Pole. Magnetic north is the direction the north end of a needle in a compass points. ❑ Throughout Medieval times in Europe most maps of the world, known as Mappae Mundi, were expensive to create by hand, so were used by royals and nobles as displays of wealth rather than for practical purposes. ❑ The map that's familiar to most of us is the Mercator projection, but it is also, full of distortions. ❑ North may be at the top of maps today, but that wasn't always the case. During the middle ages, most Western maps put east at the top instead.
symbol	Map symbols are used to represent real objects. Both shapes and colours can be used for symbols on maps.		
hemisphere	A hemisphere is formed by dividing the earth into the Northern and Southern Hemispheres at the equator.		
latitude	The lines extending around the Earth horizontally are called lines of latitude.		
longitude	The lines extending around the Earth vertically are called lines of longitude.		
time zones	Time zones give specific areas on the earth a time of day that is earlier or later than the neighbouring time zones.		
grid reference	Numerical grid references consist of an even number of digits. Eastings are written before Northings.		
aerial photograph	Aerial photography is the taking of photographs of the ground from an elevated/direct-down position.		
Greenwich meridian	The prime meridian is the imaginary line that divides Earth into two equal parts: the Eastern Hemisphere and the Western Hemisphere, often called the Greenwich meridian.		
tropics	The tropics are regions of the Earth that lie roughly in the middle of the globe.		