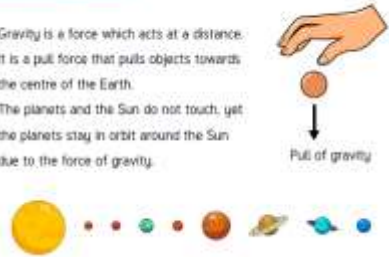






Forces Knowledge Mat

What should I already know?	Key Knowledge	
<ul style="list-style-type: none"> • Know what a force is and be able to explain that a push and pull are types of forces. • That when forces are applied to an object they allow them to move or stop moving. • The strength of the force determines how far and fast an object moves. • Friction is the resistance of motion when there is contact between two surfaces • The force that causes objects to move downwards towards the ground is gravity. • That magnets have poles, and that opposite poles attract, while similar poles repel. 	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Forces</p> <p>A force is a push or pull that acts upon an object. We can't see forces, but they are an important part of our everyday lives. We push and pull objects to do many different things. When we push or pull objects we can move the object, change the shape of the object or make the object change direction.</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Gravity</p> <p>Gravity is a force which acts at a distance. It is a pull force that pulls objects towards the centre of the Earth. The planets and the Sun do not touch, yet the planets stay in orbit around the Sun due to the force of gravity.</p>  </div>	
Subject Specific Vocabulary		
Acceleration	an increase in speed	
Air resistance	a force which resists motion through air	
Data	bits of information you have gathered about something you are investigating	
Deceleration	a decrease in speed	
Drag	a force which resists motion through a fluid, a fluid being anything that can flow e.g. liquids, gases	
Evidence	information or measurements you use to help you come to a conclusion	
Friction	a force which resists the motion of objects sliding over each other	
Force	something which will affect either the movement or shape of an object	
Gravity	attraction between physical objects, easily noticeable when one of the objects is massive, such as the Earth	
Motion	a move or change in position	
Variables	something which could change in value, such as time or temperature	
Water resistance	a force which resists motion through water	
Weight	the force on an object due to gravity	
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Air Resistance</p> <p>Air resistance is a force that acts in the opposite direction to gravity. It acts between a moving object and the air molecules around it, slowing the object down. Air resistance is a type of friction. Parachutes are used to increase air resistance and slow down the parachutist, so they can land safely. Modern cars and planes are streamlined in design to reduce air resistance, allowing them to move faster.</p>  </div>		
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Water Resistance</p> <p>Water resistance is the force responsible for making it difficult for us to move through the water. It acts between a moving object and the water molecules around it, slowing the object down.</p>  </div>		
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Friction</p> <p>Friction is a force created between two surfaces when they rub together. Friction creates heat and always slows down an object. Rough surfaces create more friction than smooth surfaces.</p>  </div>		
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Did you know?</p>  <p>Issac Newton was a scientist who developed the first description of the force of gravity. Newton said that he started thinking about gravity after watching an apple fall from a tree but it did not actually hit him on the head, as it is often claimed!</p> </div>		

