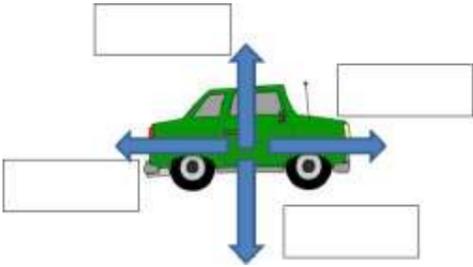
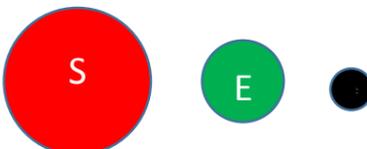


Percentage	I can ...	Prove it!
	<ul style="list-style-type: none"> - Explain the movement of bodies in the solar system in terms of gravity - Work out the size and direction of resultant forces when objects interact - Use the relationship between speed, distance and time to calculate speed of a moving object - Explain that falling objects reach a terminal velocity 	<ul style="list-style-type: none"> • Draw a diagram using arrows to show how forces affect the movement of at least three elements of the solar system. • What is the size and direction of the resultant force on this object? <div style="text-align: center;"> </div> <ul style="list-style-type: none"> • A tortoise 'runs' a 30 cm race in 45 seconds. Use an equation calculate the average speed of the tortoise throughout the race. • Explain in terms of forces the phenomenon of terminal velocity.
	<ul style="list-style-type: none"> - Explain the difference between weight and mass - Use arrows on diagrams to represent the size and direction of forces - Explain changes in speed in an object in terms of unbalanced forces - Begin to use particle model to explain the relationship between resistance and speed - Explain the action of levers 	<ul style="list-style-type: none"> • What is the difference between weight and mass? Use units of measurement in your answer and describe whether weight and mass stay the same or change on other planets. • Draw an object that has a thrust force of 10N and a frictional force of 5N. Use arrows to represent the size and direction of the forces. • How are unbalanced forces related to acceleration? Can you describe this using an equation? • As the speed of an object increases, so too does the size of the air resistance. Can you use the concept of particles to explain why this happens? • Calculate the turning moment on this lever. <div style="text-align: center;"> </div>
	<ul style="list-style-type: none"> - Use the terms balanced and unbalanced in describing the forces acting on an object - Describe some ways of reducing friction - Explain how friction can be useful - Explain air resistance in terms of a frictional force - Use a model of the Earth and the Sun to explain how we get day and night - Name the planets in order and know their relative sizes. - Identify a relationship between speed, distance and time - Describe speeding up or slowing down in terms of unbalanced forces - Describe how increasing the length of a lever can increase the turning effect of a force 	<ul style="list-style-type: none"> • Are the forces acting on the following objects balanced or unbalanced? <div style="text-align: center;"> </div> <ul style="list-style-type: none"> • Describe two ways in which the friction felt between two objects could be reduced. • Friction is not always a problem. Can you describe a situation where it could be useful? • What kind of force is air resistance? How can we tell that it is this kind of force? • Draw a cartoon strip showing how day and night occur. What misconceptions might people have? How can you demonstrate the correct explanation? • List the planets in order of distance from the Sun. • On which planet would gravity exert the greatest pull? Why? • State the equation to calculate the speed of an object. • When forces are unbalanced, what is the effect on an objects speed? • State the equation for calculating a moment.



	<ul style="list-style-type: none"> Identify and describe common forces (e.g. friction, upthrust, gravity, weight) Identify Newton as unit of force List some differences between the Earth and other planets Recognise the sources of light in the solar system Describe the term streamlined Identify the forces acting on an object Describe friction as a force that slows moving objects down by acting in the opposite direction to the movement Recognise the Sun as a star 	<ul style="list-style-type: none"> Make a list of common forces and describe the basic principles of each of them. What is the unit of measurement for forces? What is the symbol?  <p>Label the forces acting on this object</p> <ul style="list-style-type: none"> What affect does friction have on the movement of an object? In which direction does friction always act? Write an advert recruiting new space explorers. Tell them about the planet you will be visiting and in what ways it will be the same or different from the Earth. Which star is in the centre of our solar system?
	<ul style="list-style-type: none"> Recognise that the Moon orbits the Earth and the Earth orbits the Sun Recognise that forces can change the speed of objects or change the direction Give examples of streamlined objects 	<ul style="list-style-type: none"> Draw lines to show the movement of the sun, the earth, and the moon  <ul style="list-style-type: none"> It takes the earth one _____ to orbit the sun. A force can change the speed of an object, it can also change the _____ that an object is travelling in Circle the object which would be most streamlined when moving from left to right  <ul style="list-style-type: none"> If we push an object, what happens to its speed?

Key Terms:

Newton Gravity Reaction Up thrust Friction Air resistance Motion Normal

Tension Streamline

Speed acceleration Moment Pivot Mass Weight Star Solar

System Planet Orbit

Axis Tilt Season Hemisphere Satellite Telescope Space probe

