## Year 5 and 6 – Forces **KNOWLEDGE ORGANISER Key vocabulary Key Information Key revision** Unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object vocabulary: force A push or a pull The effects of air resistance, water resistance and friction, can be seen between magnet moving surfaces A pulling force exerted by Earth (or anything else which gravity repel has a mass) Some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect The pull the Earth exerts on an attract object, pulling it towards the Earth's gravitation-Isaac Newton is famously Forces Earth's centre. It is the Earth's al pull thought to have developed The Moon has a smaller gravitational pull that keeps his theory of gravity nass than Earth so the start to move. stop moving. us on the groupnd. gravitational pull on the when he saw an apple material -Moon is smaller than it fall to the ground from an is on Earth. apple tree. Forces A type of fraction caused by change move can make direction. faster. air resistance air pushing against any mov-Jupiter has an object... surface a greater mass than Earth ing object so the gravitational pull on Jupiter is stronger change its shape. move more slowly than on Earth. poles -A type of fraction caused by Examples of forces in action: water resistance water pushing against any moving object magnetic swimmer's water aravitu cuclist's resistance force A force that acts between friction driving force two surfaces or objects that friction are moving or trying to move, air across each other

When an object is shaped to

minimize the effects of air or

water resistance

streamlined

Water resistance and air resistance are forms of friction. Friction is sometimes helpful and sometimes unhelpful. For example, air resistance is helpful as it stops the skydiver hitting the ground at high speed. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.

resistance

Year 5 and 6 – Forces

## KNOWLEDGE ORGANISER



## **Key Information**

## Key vocabulary

			Revision questions:
Unsupported objects fall towards the Earth because of the force of act- ing between the and the falling object	force		
			Name 4 different
The effects of air resistance, water resistance and friction, can be seen between		A pulling force exerted by Earth (or anything else which has a mass)	types of force
Some mechanisms including levers, pulleys and gears allow a force			How does gravity
to have a effect		The pull the Earth exerts on an object, pulling it towards the Earth's centre. It is the Earth's gravitational pull that keeps	work?
Isaac Newton is famously Forces		us on the groupnd.	Can you give an
thought to have developed his theory of			example of where
when he saw an apple fall to the ground from an apple tree. change direction. change direction. change can make an object move faster. change direction. change direction. change direction. change direction. change direction. change direction. change direction. change direction. change direction. change direction. change direction. change can make an object change direction. change direction. change direction. change direction. change direction. change direction. change change direction. chan	air resistance		a lack of friction is fun?
change its shape. move more slowly.	water resistance		When is air re- sistance useful?
Examples of forces in action:			
swimmer's force resistance driving force		A force that acts between two surfaces or objects that are moving or trying to move, across each other	Describe what happens when you try to run through water.
Water resistance and air resistance are forms of		When an object is shaped to minimize the effects of air or water resistance	