

Science – Y5/6 – Autumn Term (1)
Forces



Prior Learning	
Children should know: <ul style="list-style-type: none">• forces (including pushes or pulls)• friction as being a forces that acts between two surfaces or objects that are moving or trying to move across together• surface – the top layer of something	
Key vocabulary for this unit	
Friction Air resistance Water resistance Buoyancy Streamlined Mechanism upthrust	
Learning Sequence	
Fabulous Forces	<ul style="list-style-type: none">• To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object by identifying forces acting on objects. To identify the effects of air resistance, water resistance and friction by identifying forces acting on objects.• To identify forces acting on objects.

Gravity	<ul style="list-style-type: none"> • To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object by measuring the force of gravity pulling on objects. • To explore the effect gravity has on objects and how gravity was discovered.
Air Resistance	<ul style="list-style-type: none"> • To identify the effects of air resistance by investigating the best parachute to slow a person down. • To investigate the effects of air resistance.
Water Resistance	<ul style="list-style-type: none"> • To identify the effects of water resistance by creating and racing streamlined boats. • To explore the effects of water resistance.
Friction	<ul style="list-style-type: none"> • To identify the effects of friction by investigating brakes. • To investigate the effects of friction.
Marvelous Mechanisms	<ul style="list-style-type: none"> • To recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect by exploring and designing a simple mechanism. • To explore and design mechanisms.
Assessment milestones	
<p>Working scientifically:</p> <ul style="list-style-type: none"> • recognise that there are different variables in an investigation; • predict what will happen in an investigation; • make observations. 	<p>Scientific knowledge:</p> <ul style="list-style-type: none"> • identify forces as pushes and pulls; • explain gravity as a force that pulls objects down; • identify Isaac Newton's discoveries; • explain the effects of friction, including air and water resistance, on moving objects; • identify different mechanisms;