

Subject: Science

Theme: Forces (Y5)

Knowledge	Skills	Vocabulary (Top 20)	Common Misconceptions
<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction that act between moving surfaces.</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	<p>You might work scientifically by:</p> <p>Pattern seeking:</p> <ul style="list-style-type: none"> Do all objects fall through water in the same way? How does surface area of parachute affect the time it takes to fall? <p>Comparative and fair testing:</p> <ul style="list-style-type: none"> Which shoe is the most slippy? Which shape parachute takes the longest to fall? How does the surface area of a container affect the time it takes to sink? <p>Research how scientists such as Galileo Galilei and Isaac Newton helped develop the theory of gravitation.</p>	<p>contact effect force mass movement object surface unsupported weight gravity friction air resistance Galileo Galilei gear Isaac Newton lever mechanism pulley theory water resistance</p>	<p>Some children may think:</p> <ul style="list-style-type: none"> The heavier the object the faster it falls, because it has more gravity acting on it. Forces always act in pairs which are equal and opposite. Smooth surfaces have no friction. Objects always travel better on smooth surfaces. A moving object has a force which is pushing it forwards and it stops when the pushing force wears out. A non-moving object has no forces acting on it. Heavy objects sink and light objects float.



Love



Friendship



Compassion



Community



Trust



Forgiveness

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Do all the good you can.... John Wesley*



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