



Progression of knowledge science – Movement, Forces and Magnets (Physics)

| Threshold Concepts This concept involves understanding what causes motion. | EYFS | Year 1 | Year 3 | Year 5 |
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| <p>KS 1</p> <ul style="list-style-type: none"> • Notice and describe how things move, using simple comparisons such as faster and slower. • Compare how different things move. <p>LKS2</p> <ul style="list-style-type: none"> • Compare how things move on different surfaces. • Notice that some forces need contact between two objects, but magnetic forces can act at a distance. • Observe how magnets attract or repel each other and attract some materials and not others. • Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. • Describe magnets as having two poles. • Predict whether two magnets will attract or repel each other, depending on which poles are facing. <p>UKS2 Magnets</p> | <ul style="list-style-type: none"> • Explore how things work • Explore and talk about different forces they can feel • Talk about the differences between materials and changes they notice • Explore the natural world around them • Describe what they see, hear, and feel whilst outside | <ul style="list-style-type: none"> • Observe and describe different ways of moving • Identify similarities and differences between movement of different objects • Make suggestions about how objects can be made to move • Explore contact forces (push and pull) • Explore how objects sink or float • Know that it is not only ourselves that make things move and ask questions about what is causing movement | <ul style="list-style-type: none"> • Compare how things move on different surfaces • Notice that some forces need contact between two objects, but magnetic forces can act at a distance • Describe magnets as having two poles • Observe how magnets attract or repel each other and attract some materials and not others • Predict whether two magnets will attract and repel each other, depending on which poles are facing • Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials | <ul style="list-style-type: none"> • Know the work of Isaac Newton and know that force is measured in Newtons by a Newton Meter • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • Identify the effects of air resistance • Identify the effects of water resistance • Identify the effects of friction acting between moving surfaces • Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater affect |



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| <ul style="list-style-type: none">• Describe magnets as having two poles.• Predict whether two magnets will attract or repel each other, depending on which poles are facing. <p>Forces</p> <ul style="list-style-type: none">• Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.• Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces.• Describe, in terms of drag forces, why moving objects that are not driven tend to slow down.• Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs.• Understand that some mechanisms including levers, pulleys and gears, allow a smaller force to have a greater effect. | | | | |
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Progression of skills to KS3 are detailed on Magnets and Forces / trust science sheets

Links from Reception Development Matters are detailed on the Reception Termly Planning Document