

Objective	Milestone Indicators	Basic Activities	Advanced Activities	Deep Activities	Resources
To understand movement, forces and magnets.	<p>Milestone 2</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p>	<p>Provide children with Picture Cards showing different push/pull scenarios. Children organise the pictures into two groups: pictures showing pushes and pictures showing pulls. Children stick the pictures in two columns. When finished, encourage children to explain the forces happening in each picture to a partner.</p>	<p>Challenge children to think of as many examples of pushes and pulls as they can and list. When finished, children draw an annotated diagram to show given scenarios.</p>	<p>Provide children with a set of Question Cards in pairs. Challenge children to think about each of the questions and discuss in their pairs. When they have had time to explore these questions, challenge children to draw annotated diagrams to explain what they have found out, using the questions on the cards as prompts.</p>	<p>Slides Picture Cards Question Cards</p>

<p>To understand movement, forces and magnets.</p>	<p>Milestone 2</p> <p>Compare how things move on different surfaces.</p>	<p>Provide children with a forcemeter and an object to pull with the forcemeter. Challenge children to pull the object with the forcemeter on different surfaces to see the force in newtons needed to make the object move. Children test carpet, table top, grass. Children record their findings on Worksheet 2A, then complete the conclusion.</p>	<p>Provide children with a forcemeter and an object to pull with the forcemeter. Challenge children to pull the object with the forcemeter on different surfaces to see the force in newtons needed to make the object move. Children test carpet, table top, grass. Children record their findings on Worksheet 2B, then complete the conclusion.</p>	<p>Provide children with forcemeters and different objects. Challenge children to set up their own investigation to explore how objects move across different surfaces. Children plan their investigation on Worksheet 2C, then carry it out and record their findings and conclusion.</p>	<p>Slides Worksheet 2A/2B/2C Access to a variety of surfaces, e.g. carpet, concrete, grass, wood, etc.</p>
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<p>To understand movement, forces and magnets.</p>	<p>Milestone 2</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>Describe magnets as having two poles.</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p>Provide children with magnets that clearly have a north and south pole (e.g. bar magnets). Following the instructions on Worksheet 3A, children investigate what happens when like and opposite poles are put next to each other and choose the appropriate response on the worksheet.</p>	<p>Provide children with magnets that clearly have a north and south pole (e.g. bar magnets). Ask children to investigate what happens when like and opposite poles are put next to each other. Children answer the questions on Worksheet 3C and then describe what they have found out.</p>	<p>Provide children with a variety of magnets of different sizes, shapes and strengths. Give children some time to investigate what happens when they are put next to each other. Children record what happened to three different examples by drawing a diagram of the two magnets and drawing arrows to show whether they were attracted or repelled.</p>	<p>Slides Worksheet 3A/3C Variety of magnets, including bar magnets</p>
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<p>To understand movement, forces and magnets.</p>	<p>Milestone 2</p> <p>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.</p>	<p>Provide children with a copy of Worksheet 4A and a magnet. Children walk around the classroom testing each item on the sheet to see if it is magnetic. Children record the results on the worksheet.</p>	<p>Provide children with a copy of Worksheet 4C and a magnet. Children walk around the classroom to find materials to test. Children predict whether each material will be magnetic or not before testing and record on the worksheet. Children see if their predictions were correct. Children then answer the questions.</p>	<p>Children get into small groups of around three. Provide each group with a magnet attached to a pole with string (like a fishing rod) and two hoops. Put the materials they are testing (e.g. rubbers, paper, clips, coins, keys, cans, tins, scissors, pencils, etc) into the first hoop and challenge the children to go 'magnet fishing'. Lower the magnet onto one of the materials. If it is magnetic it will attract the object and they will be able to lift it out of the first hoop and place it into the second hoop. Children take it in turns to go fishing until all the objects have been tested. Children record their experiment and the results.</p>	<p>Slides Worksheet 4A/4C Magnets Variety of materials to test (e.g. paper clips, tin cans, aluminium cans, keys, coins, rubbers, pencils, marbles, etc)</p>
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<p>To understand movement, forces and magnets.</p>	<p>Milestone 2</p> <p>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.</p>	<p>Provide children with Picture Cards and Description Cards cut up. Children spread the cards out on the table and match the picture to the use described on the Description Card. Children then stick the pairs together on a large sheet of paper to create a 'Uses of Magnets' poster.</p>	<p>Provide children with an Information Sheet and ask them to read through it carefully. Using the information provided as well as information from other secondary sources (e.g. books, the internet) children then create an information booklet on the uses of magnets.</p>	<p>Provide each child with a Challenge Card. Children decide which of the four areas they want to research: trains; recycling; everyday objects; and electromagnetism. Give children some time to research the area they are responsible for using books and the internet. Children record their research any way they wish. They could do this as an information booklet, a PowerPoint presentation, a poster, a mind map or any other way they feel appropriate. When all the children have finished, invite each to present their findings to the class.</p>	<p>Slides Picture Cards Description Cards Information Sheet Books, Internet Challenge Card</p>
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Mrs Hansell

Class 3 (Y3/4)