

# Forces and Magnets : Science : Year 3

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To explore what forces are and notice that some forces need contact between two objects.	Children will learn and describe what a force is. They will identify pushing and pulling actions in photographs, distinguishing between the two and describing which direction the forces are acting in.	<ul style="list-style-type: none"> <li>Can children explain what a force is?</li> <li>Do children know that some forces need contact between two objects?</li> <li>Can children identify pushes and pulls and explain the forces in action?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 1A/1B/1C</li> <li>Picture Cards</li> <li>Question Cards (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To compare how things move on different surfaces.	Children will find out what a forcemeter is and recognise that forces are measured in newtons. They will practise reading the scales on forcemeters before carrying out an investigation to measure whether the same objects need the same amount of force to be pulled along different surfaces.	<ul style="list-style-type: none"> <li>Do children know that forces can be measured in newtons using a forcemeter?</li> <li>Can children set up and carry out an investigation to explore how objects move on different surfaces?</li> <li>Can children draw conclusions from their observations?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B/2C/2D</li> <li>Forcemeters</li> <li>Access to a variety of surfaces, e.g. carpet, concrete, grass, wood, etc.</li> <li>Ramp and toy car (FSD? activity only)</li> <li>Metre rulers/tape measures (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To explore how magnetic forces work.	Children will learn that some forces do not need contact between objects, including gravity and magnetism. They will then find out what magnets are and how they work before testing how magnets behave when they are put together.	<ul style="list-style-type: none"> <li>Do children know that there are forces between magnets and that don't need contact between two objects?</li> <li>Can children record observations of magnets?</li> <li>Can children make generalisations about what happens when magnets are put together?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B/3C/3D</li> <li>Variety of magnets, including bar magnets</li> </ul>
<b>Lesson 4</b>	To be able to identify magnetic materials.	Children will recap how magnets behave when they are put together before testing a variety of objects to see if they are magnetic. Children will make predictions based on their prior knowledge then carry out an investigation to check if their predictions were correct.	<ul style="list-style-type: none"> <li>Can children make and test predictions about whether materials are magnetic or not?</li> <li>Can children make careful observations?</li> <li>Can children group objects on the basis of whether or not they are magnetic?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B/4C/4D</li> <li>Magnets</li> <li>Variety of materials to test (e.g. paper clips, tin cans, aluminium cans, keys, coins, rubbers, pencils, marbles, etc.)</li> </ul>
<b>Lesson 5</b>	To investigate uses for magnets.	Children will recap different magnetic materials and make generalisations about which materials are not magnetic. They will then find out about a variety of uses for magnets, including medical equipment, credit cards and recycling. There is also the chance to carry out their own research to find out about different uses for magnets.	<ul style="list-style-type: none"> <li>Can children name some uses for magnets?</li> <li>Can children use a variety of sources to find out about the different uses of magnets?</li> <li>Can children present the information they have found in an appropriate way?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Picture Cards</li> <li>Description Cards</li> <li>Information Sheet</li> <li>Books, internet, etc.</li> <li>Challenge Card (FSD? activity only)</li> <li>End on Unit Quiz</li> </ul>