

PAPER 2

Tier 3–6	Q No 1	4/2a 4/3a 4/3j	how to determine the speed of a moving object and to use the quantitative relationship between speed, distance and time that light travels in a straight line at a finite speed in a uniform medium the relationship between the loudness of a sound and the amplitude of the vibration causing it	Tier 3–6	Q No 1
Part	Mark	Answer	Additional guidance		
(a) (i)	1	* B			
(ii)	1	* about a hundred millionth of a second ✓	if more than one box is ticked, award no mark		
(b) (i)	1	* quieter	accept 'softer' or 'fainter' accept 'they cannot hear him' <i>do not accept 'lower'</i>		
(ii)	1	* longer	accept 'more'		
Total	4				

Tier 3–6	Q No 2	4/1d 4/2d 4/2e 4/2f	about magnetic fields as regions of space where magnetic materials experience forces, and that like magnetic poles repel and unlike poles attract ways in which frictional forces, including air resistance, affect motion, <i>for example, streamlining cars, friction between tyre and road</i> that forces can cause objects to turn about a pivot the principle of moments and its application to situations involving one pivot	Tier 3–6	Q No 2		
Part	Mark	Answer	Additional guidance				
(a) (i)	1	* an arrow pointing towards the right					
(ii)	1	* label line touching or leading towards the ball and socket hinge	accept P without a line if written alongside the pivot not more than 1 cm from it				
(b)	1	* <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>N</td></tr><tr><td>S</td></tr></table>	N	S	both poles, N and S, of the magnet must be labelled for the mark		
N							
S							
(c)	1	any one from * grease * oil * lubricant					
Total	4						

Tier 3–6	Q No 3	1/2j 4/3h	use diagrams, tables, charts and graphs, including lines of best fit, to identify and describe patterns or relationships in data the effects of loud sounds on the ear, <i>for example, temporary deafness</i>	Tier 3–6	Q No 3
Part	Mark	Answer	Additional guidance		
(a)	1	* 2			
(b)	1	* it would damage or burst the ear drum	accept 'the cochlea or nerve endings or inner ear or middle ear is damaged' accept 'it makes you deaf' accept 'tinnitus' or 'ringing in the ear'		
(c) (i)	1	* 92			
(ii)	1	any one from * they make the sound quieter * they absorb the sound * they prevent damage to the eardrum	accept 'they stop the sound' or 'they prevent the sound energy from reaching the eardrum' accept 'they stop the cochlea or nerve endings or inner ear or middle ear being damaged' accept 'she cannot hear the music as well' <i>do not accept</i> 'it prevents damage to the ear'		
Total	4				

Tier 3–6	Q No 4	1/2j 1/2k 4/2d	use diagrams, tables, charts and graphs, including lines of best fit, to identify and describe patterns or relationships in data use observations, measurements and other data to draw conclusions ways in which frictional forces, including air resistance, affect motion, <i>for example, streamlining cars, friction between tyre and road</i>	Tier 3–6	Q No 4
Part	Mark	Answer	Additional guidance		
(a)	1	* friction ✓	if more than one box is ticked, award no mark		
(b) (i)	1	* it gets longer	accept 'it is more'		
(ii)	1	any one from * there is less friction or grip * the road is slippery	accept 'water is a lubricant'		
(iii)	1	* it gets longer	accept 'it is more'		
(iv)	1	* concrete			
Total	5				

Tier 3–6	Q No 5	1/2j 3/3d	use diagrams, tables, charts and graphs, including lines of best fit, to identify and describe patterns or relationships in data to use indicators to classify solutions as acidic, neutral or alkaline, and to use the pH scale as a measure of the acidity of a solution	Tier 3–6	Q No 5												
Part	Mark	Answer	Additional guidance														
(a)		<table border="1"> <thead> <tr> <th><i>liquid added to the cabbage water</i></th> <th><i>colour of the cabbage water</i></th> <th><i>Is the liquid acidic, alkaline or neutral?</i></th> </tr> </thead> <tbody> <tr> <td><i>water</i></td> <td><i>purple</i></td> <td><i>* neutral</i></td> </tr> <tr> <td><i>lemon juice</i></td> <td><i>* red</i></td> <td><i>acidic</i></td> </tr> <tr> <td><i>washing up liquid</i></td> <td><i>blue</i></td> <td><i>* alkaline</i></td> </tr> </tbody> </table>	<i>liquid added to the cabbage water</i>	<i>colour of the cabbage water</i>	<i>Is the liquid acidic, alkaline or neutral?</i>	<i>water</i>	<i>purple</i>	<i>* neutral</i>	<i>lemon juice</i>	<i>* red</i>	<i>acidic</i>	<i>washing up liquid</i>	<i>blue</i>	<i>* alkaline</i>			
<i>liquid added to the cabbage water</i>	<i>colour of the cabbage water</i>	<i>Is the liquid acidic, alkaline or neutral?</i>															
<i>water</i>	<i>purple</i>	<i>* neutral</i>															
<i>lemon juice</i>	<i>* red</i>	<i>acidic</i>															
<i>washing up liquid</i>	<i>blue</i>	<i>* alkaline</i>															
(b)	1	* indicators ✓	if more than one box is ticked, award no mark														
Total	4																

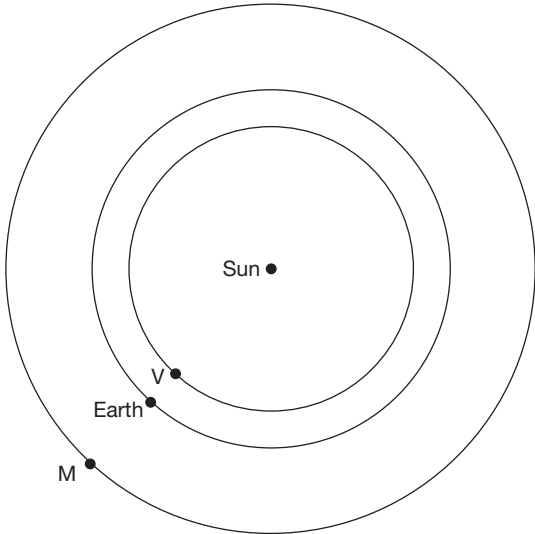
Tier 3–6	Q No 6	3/1a 3/1d 3/1e 3/2f	how materials can be characterised by melting point, boiling point and density how elements vary widely in their physical properties, including appearance, state at room temperature, magnetic properties and thermal and electrical conductivity, and how these properties can be used to classify elements as metals or non-metals how elements combine through chemical reactions to form compounds, <i>for example, water, carbon dioxide, magnesium oxide, sodium chloride, most minerals</i> , with a definite composition how igneous rocks are formed by the cooling of magma, sedimentary rocks by processes including the deposition of rock fragments or organic material, or as a result of evaporation, and metamorphic rocks by the action of heat and pressure on existing rocks	Tier 3–6	Q No 6
Part	Mark	Answer	Additional guidance		
(a) (i)	1	* magma			
(ii)	1	* igneous			
(b) (i)	1	any one from * thermal energy * electricity	accept 'heat' or 'energy'		
(ii)	1 1	* solid * liquid	answers may be in either order accept 'fluid'		
(c)	1	* oxygen			
Total	6				

Part	Mark	Answer	Additional guidance
(a)	1 1 1	* solution * insoluble * solvent	answers must be in the correct order
(b)	1	any one from * filter it or filtration * pour off the liquid	<i>do not accept</i> 'sieve it' accept 'centrifuge it'
(c)	1	* it evaporated	accept 'it had become gas or vapour'
(d)	1	* condensing ✓	if more than one box is ticked, award no mark
Total	6		

Tier 3–6	Q No 8	2/3a 2/3c 2/5d	that plants need carbon dioxide, water and light for photosynthesis, and produce biomass and oxygen that nitrogen and other elements, in addition to carbon, oxygen and hydrogen, are required for plant growth how predation and competition for resources affect the size of populations, <i>for example, bacteria, growth of vegetation</i>	Tier 3–6	Q No 8
Part	Mark	Answer	Additional guidance		
(a) (i)	1	* C			
(ii)	1	any one from * no light * it was in the dark	accept 'no Sun' <i>do not accept</i> 'it was in the box'		
(b)	1	any one from * less light reached the lower plants * plants need light to grow * the water lilies blocked the light	accept 'plants need light' accept 'no photosynthesis could take place' accept 'no light' accept 'lilies prevented or reduced the air getting into the water' accept 'plants need carbon dioxide' <i>do not accept</i> 'the water lilies used the minerals'		
(c) (i)	1	any one from * the waterweed in E will grow bigger than in D	accept 'it will grow more or faster or better in E'		
		* the waterweed in E will have more leaves than in D	accept 'it will have more leaves in E' <i>do not accept</i> 'it grew fast in E'		
(ii)	1	* minerals ✓	if more than one box is ticked, award no mark		
Total	5				

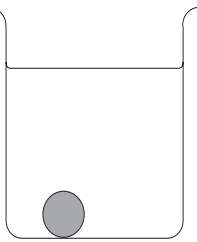
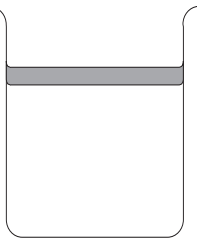
Tier 3–6	Q No 9	1/2j 2/2a 2/2d	use diagrams, tables, charts and graphs, including lines of best fit, to identify and describe patterns or relationships in data about the need for a balanced diet containing carbohydrates, proteins, fats, minerals, vitamins, fibre and water, and about foods that are sources of these that food is used as a fuel during respiration to maintain the body's activity and as a raw material for growth and repair	Tier 3–6	Q No 9												
Part	Mark	Answer	Additional guidance														
(a)	2	<table border="1"> <thead> <tr> <th><i>food and drink</i></th> <th><i>* meal with the least fat</i></th> <th><i>* meal with the most fibre</i></th> </tr> </thead> <tbody> <tr> <td><i>type of burger</i></td> <td>single burger accept 'single'</td> <td>double burger accept 'double'</td> </tr> <tr> <td><i>type of drink</i></td> <td>cola or orange juice</td> <td><i>the drinks do not contain fibre</i></td> </tr> <tr> <td><i>type of potato</i></td> <td>baked potato</td> <td>baked potato</td> </tr> </tbody> </table>	<i>food and drink</i>	<i>* meal with the least fat</i>	<i>* meal with the most fibre</i>	<i>type of burger</i>	single burger accept 'single'	double burger accept 'double'	<i>type of drink</i>	cola or orange juice	<i>the drinks do not contain fibre</i>	<i>type of potato</i>	baked potato	baked potato	award one mark for each correct column		
<i>food and drink</i>	<i>* meal with the least fat</i>	<i>* meal with the most fibre</i>															
<i>type of burger</i>	single burger accept 'single'	double burger accept 'double'															
<i>type of drink</i>	cola or orange juice	<i>the drinks do not contain fibre</i>															
<i>type of potato</i>	baked potato	baked potato															
(b)	4	<p>* calcium ●</p> <p>* fibre ●</p> <p>* protein ●</p> <p>* sugar ●</p> <p>● to keep the intestine working properly</p> <p>● for healthy teeth and bones</p> <p>● for insulation</p> <p>● to provide energy</p> <p>● for growth and repair</p>	if more than four lines are drawn, deduct one mark for each incorrectly drawn line minimum mark zero														
Total	6																

Part	Mark	Answer	Additional guidance
(a)	1	* switches 1 and 2 ✓	if more than one box is ticked, award no mark
(b)	1	* no because switch 1 must be on or closed	both the answer and the reason are required for the mark accept 'there is no switch in the motor section of the parallel circuit, so it cannot be isolated'
(c)	1	* it would go up	accept 'it would get hotter or very hot' <i>do not</i> accept 'it would be hot'
(d)	1	any one from * no effect * it would stay on	accept 'the motor speeds up slightly'
Total	4		

Tier 3–6 5–7	Q No 11 2	1/2k 4/4b 4/4c	use observations, measurements and other data to draw conclusions the relative positions of the Earth, Sun and planets in the solar system about the movements of planets around the Sun and to relate these to gravitational forces	Tier 3–6 5–7	Q No 11 2
Part	Mark	Answer	Additional guidance		
(a) (i)	1	* the dots for Mars, the Earth and Venus should be in a straight line, the shortest possible distance apart 			
(ii)	1	any one from * it is brightest * it looks biggest or bigger	accept 'it is brighter' accept 'it is bigger' accept 'you can see it at night'		
(b)	1	* gravity			
(c)	1	any one from * it is circular * it is always the same distance from the Earth			
(d)	1 1	* winter any one from * the Northern hemisphere is tilted away from the Sun * Britain is in the part of the Earth which is tilted away from the Sun * the Sun's rays hit the Earth at more of an angle	<i>do not accept</i> 'the Earth is tilted away from the Sun' accept 'the Sun appears lower in the sky' accept 'night is longer than day'		
Total	6				

Tier 3–6 5–7	Q No 12 3	4/3c 4/3d	how light is reflected at plane surfaces how light is refracted at the boundary between two different materials	Tier 3–6 5–7	Q No 12 3
Part	Mark	Answer	Additional guidance		
(a)	1	* Q	accept a drawing of the correct object		
(b)	1	* P	accept 'R' accept a drawing of the correct object		
(c)	1	* S	accept a drawing of the correct object		
(d)	1	* R	accept a drawing of the correct object		
Total	4				

Tier 3–6 5–7	Q No 13 4	3/1d 3/1e 3/3a BS/2b	how elements vary widely in their physical properties, including appearance, state at room temperature, magnetic properties and thermal and electrical conductivity, and how these properties can be used to classify elements as metals or non-metals how elements combine through chemical reactions to form compounds, <i>for example, water, carbon dioxide, magnesium oxide, sodium chloride, most minerals</i> , with a definite composition how metals react with oxygen, water, acids and oxides of other metals, and what the products of these reactions are recognise that there are hazards in living things, materials and physical processes, and assess risks and take action to reduce risks to themselves and others	Tier 3–6 5–7	Q No 13 4
Part	Mark	Answer	Additional guidance		
(a) (i)	1	any one from * test them in a circuit * see if they conduct electricity * add acid to see if hydrogen is produced			
(ii)	1	* lead	accept 'malleable' or 'ductile'		
(b) (i)	1	* oxygen			
(ii)	1	* lead oxide	accept 'the oxide' accept 'the mixture' <i>do not accept 'plants'</i>		
(c)	1	any one from * wear goggles * wear a lab coat * use a heat-proof mat * tie her hair back	accept any other appropriate safety measure <i>do not accept 'use a fume cupboard'</i>		
Total	5				

Tier 3–6 5–7	Q No 14 5	1/2c 1/2k 3/1a 3/2c	carry out preliminary work and to make predictions, where appropriate use observations, measurements and other data to draw conclusions how materials can be characterised by melting point, boiling point and density to relate changes of state to energy transfers	Tier 3–6 5–7	Q No 14 5
Part	Mark	Answer	Additional guidance		
(a) (i)	2	* 	one mark is for a ball of solid naphthalene one mark is for the naphthalene at the bottom of the beaker		
(ii)	2	* 	one mark is for a layer of melted wax one mark is for showing the wax floating on top of the water		
(b)	1	* <i>from liquid to solid</i>	answers must be in the correct order		
(c)	1	* B			
Total	6				

Part	Mark	Answer	Additional guidance
(a)	1 1	* in tube B: no oxygen * in tube C: no water or water vapour	accept 'no air' accept 'no moisture' accept 'it was dry' or 'it was not wet'
(b) (i)	1	* acidic	
(ii)	1	* hydrogen	
(c) (i)	1	* it increased or it was more	accept 'it was heavier'
(ii)	1	any one from * oxygen or water was added * the oxygen has mass * rust contains iron and oxygen or water * the iron reacted with oxygen or water	accept 'rust is iron oxide'
(d)	1	Answers must refer to either test-tube D or to sea water. any one from * the nail was more rusty in D than in A * it was more rusty in sea water * sea water contains salt	accept 'D was the only one which was rusty' accept 'D was very rusty'
Total	7		

Tier 3–6 5–7	Q No 16 7	2/5a 2/5c 2/5d 2/5f	about ways in which living things and the environment can be protected, and the importance of sustainable development how some organisms are adapted to survive daily and seasonal changes in their habitats how predation and competition for resources affect the size of populations, <i>for example, bacteria, growth of vegetation</i> how toxic materials can accumulate in food chains	Tier 3–6 5–7	Q No 16 7
Part	Mark	Answer	Additional guidance		
(a) (i)	1	<p>any one from</p> <ul style="list-style-type: none"> * fewer males to mate * fewer moths to breed 	<p><i>do not accept</i> 'there are no males to mate' or 'there are fewer males'</p> <p><i>do not accept</i> 'fewer moths'</p> <p>accept 'there will be fewer eggs'</p>		
(ii)	2	<p>any two from</p> <ul style="list-style-type: none"> * insecticide might enter food chains * other useful or harmless insects might be killed * predators of pests might be killed * people might eat the insecticide 	<p>accept 'other insects or bees might be killed'</p> <p><i>do not accept</i> 'other animals are killed'</p> <p>accept 'people might be poisoned'</p> <p>accept 'people might breathe it in'</p> <p>accept 'so that the apples are organic'</p>		
(b)	1	<p>any one from</p> <ul style="list-style-type: none"> * some eggs or caterpillars or pupae or moths may be eaten * some might not hatch * some might die 	<p>accept 'caterpillars get eaten'</p> <p>accept 'so that as many as possible survive'</p>		
(c) (i)	1	<p>any one from</p> <ul style="list-style-type: none"> * they cannot be seen by predators or birds * for shelter * to protect them from the cold 	<p>accept 'they are not eaten' or 'to hide'</p> <p>accept a named predator such as blue-tit</p> <p>accept 'to keep warm'</p> <p>accept 'to protect them'</p>		
(ii)	1	<p>any one from</p> <ul style="list-style-type: none"> * caterpillars are removed or killed * fewer pupae change into moths * fewer moths produce caterpillars * there will be fewer caterpillars to eat the apples 	<p>accept 'pupae can be removed or killed'</p> <p>accept 'there are fewer pupae'</p>		
Total	6				

Part	Mark	Answer	Additional guidance
(a)	1	* the leaf	answers must be in the correct order accept 'a green part' accept 'stem' or other named green part accept 'root hair'
	1	* root	
(b)	1	* cell wall	
(c) (i)	1	* A	accept 'contains genetic information' or 'controls the production of enzymes'
(ii)	1	* to control the cell	
(d) (i)	1	any one from * it has no chloroplasts or no chlorophyll	if more than one box is ticked, award no mark
(ii)	1	* respiration ✓	
Total	7		

Part	Mark	Answer	Additional guidance
(a) (i)	1 1	* only water was added * the mass of the soil did not go down much	
(ii)	2	any two from * photosynthesis took place * biomass was produced * the tree took in carbon dioxide	accept 'the plant uses light to make food' <i>do not accept</i> 'the plant made food' accept for biomass 'carbohydrate' or 'protein' or 'fat' or 'carbon compounds' or appropriate, named examples <i>do not accept</i> 'the plant took in minerals or nitrates'
(b)	2	any two from * not enough light * not enough carbon dioxide * not enough minerals * too cold or temperature too low	accept 'the amount of light' or 'no light' accept 'the CO ₂ level' or 'no carbon dioxide' accept 'the availability of nutrients' accept 'the temperature' accept 'pH' or 'quality of soil' or 'acid rain' accept 'overcrowding' or 'space'
(c)	1	any one from * the fresh mass of a plant depends on the availability of water * water can be lost as a result of evaporation * the water content can vary from day to day * dry mass is due to the manufacture of compounds or named carbon compound or biomass * water is not part of the biomass	
Total	7		

Part	Mark	Answer	Additional guidance
(a)	1	any one from * it is a good source or store of energy * it insulates the body * it is insoluble	do not accept 'it is a good store of food' do not accept 'it is a source of energy' accept 'it keeps the heat in' accept 'it stops them getting too cold' do not accept 'it keeps the body warm'
(b)	1	any one from * less heat loss * less energy needed * food reserves or fat lasts longer	
(c)	1	any one from * predators can catch them easily * habitat or roosts could be damaged * the food reserve may run out	
(d)	1	any one from * food in short supply * they lose too much heat	accept 'no food'
Total	4		

Tier 5–7	Q No 11	3/1b 4/5f	how the particle theory of matter can be used to explain the properties of solids, liquids and gases, including changes of state, gas pressure and diffusion how energy is transferred by the movement of particles in conduction, convection and evaporation, and that energy is transferred directly by radiation	Tier 5–7	Q No 11
Part	Mark	Answer	Additional guidance		
(a)	1	* conduction			
(b) (i)	1	* it rises	accept 'it forms a convection current' or 'it floats to the top'		
	1	any one from * it expands * it becomes less dense	accept 'the molecules move further apart' accept 'the particles move more quickly'		
(ii)	1	any one from * the atoms or particles in a solid cannot move around * the atoms or particles are bonded tightly * iron is not fluid	accept 'the atoms cannot move around or are fixed' accept 'particles are bonded' accept 'iron has a fixed shape' <i>do not accept 'iron is a solid'</i>		
(c) (i)	1	* evaporation	accept 'evaporating'		
(ii)	1	any one from * it gets colder * it decreases	accept 'it loses heat'		
Total	6				

Tier 5–7	Q No 12	<p>3/2d how forces generated by expansion, contraction and the freezing of water can lead to the physical weathering of rocks</p> <p>3/2e about the formation of rocks by processes that take place over different timescales, and that the mode of formation determines their texture and the minerals they contain</p> <p>3/2f how igneous rocks are formed by the cooling of magma, sedimentary rocks by processes including the deposition of rock fragments or organic material, or as a result of evaporation, and metamorphic rocks by the action of heat and pressure on existing rocks</p> <p>3/3g how acids in the environment can lead to corrosion of some metals and chemical weathering of rock, <i>for example, limestone</i></p>	Tier 5–7	Q No 12																
Part	Mark	Answer	Additional guidance																	
(a)		<p>Both the line from the name of the rock to the method of formation and to the features of the rock must be correct for the mark.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 35%; text-align: center;">how the rock was formed</th> <th style="width: 15%; text-align: center;">name of rock</th> <th style="width: 35%; text-align: center;">features of the rock</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="border: 1px solid black; padding: 5px;">layers of mud and tiny dead animals compressed and turned into rock</td> <td style="border: 1px solid black; padding: 5px;">granite</td> <td style="border: 1px solid black; padding: 5px;">large, interlocking crystals</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="border: 1px solid black; padding: 5px;">magma cooling slowly underground in the Earth's crust</td> <td style="border: 1px solid black; padding: 5px;">marble</td> <td style="border: 1px solid black; padding: 5px;">crumbly, layered, containing fossils</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="border: 1px solid black; padding: 5px;">limestone changed by heat and pressure</td> <td style="border: 1px solid black; padding: 5px;">shale</td> <td style="border: 1px solid black; padding: 5px;">hard, shiny, white with veins of colour, fizzes with acid</td> </tr> </tbody> </table>				how the rock was formed	name of rock	features of the rock	1	layers of mud and tiny dead animals compressed and turned into rock	granite	large, interlocking crystals	1	magma cooling slowly underground in the Earth's crust	marble	crumbly, layered, containing fossils	1	limestone changed by heat and pressure	shale	hard, shiny, white with veins of colour, fizzes with acid
	how the rock was formed	name of rock	features of the rock																	
1	layers of mud and tiny dead animals compressed and turned into rock	granite	large, interlocking crystals																	
1	magma cooling slowly underground in the Earth's crust	marble	crumbly, layered, containing fossils																	
1	limestone changed by heat and pressure	shale	hard, shiny, white with veins of colour, fizzes with acid																	
(b) (i)	1 1	<p>* acidic water drains through cracks</p> <p>* water reacts with limestone or calcium carbonate</p>	<p>accept 'rain is acidic'</p> <p>accept 'limestone dissolves'</p>																	
(ii)	2	<p>any two from</p> <p>* low temperatures make water freeze in cracks</p> <p>* water expands as it freezes</p> <p>* ice expanding breaks up the limestone</p>	<p>accept 'water freezes in cracks'</p> <p>accept 'ice forces the rock apart'</p>																	
Total	7																			

Part	Mark	Answer	Additional guidance
(a)	1	* they will repel or it will push the magnet away or it will push the coil	accept 'it will change the direction of the force' accept 'it will make the magnet twist around and attract' <i>do not accept</i> 'the magnet moves away'
(b) (i)	1	any one from * because the magnet is heavier or the paper clip is lighter * so the moments are equal	accept 'because the magnet is heavy'
(ii)	1	* current in the coil produces a magnetic field	accept 'the coil becomes an electromagnet' or 'the coil is magnetised'
	1	* the magnet is attracted or repelled	accept 'the field or coil exerts a force on the magnet'
(iii)	1	any one from * the straw is deflected more or moves more * the reading is higher or goes up	
	1	any one from * it increases the magnetic field * it makes the electromagnet stronger * it attracts or repels the magnet more strongly	
Total	6		

First published in 2001

© Qualifications and Curriculum Authority 2001

Reproduction, storage, adaptation or translation, in any form or by any means, of this publication is prohibited without prior written permission of the publisher, unless within the terms of licences issued by the Copyright Licensing Agency. Excerpts may be reproduced for the purpose of research, private study, criticism or review, or by educational institutions solely for educational purposes, without permission, provided full acknowledgement is given.

Produced in Great Britain by the Qualifications and Curriculum Authority under the authority and superintendence of the Controller of Her Majesty's Stationery Office and Queen's Printer of Acts of Parliament.

The Qualifications and Curriculum Authority is an exempt charity under Schedule 2 of the Charities Act 1993.

Qualifications and Curriculum Authority
83 Piccadilly
London
W1J 8QA
www.qca.org.uk/

Further teacher packs may be purchased (for any purpose other than statutory assessment) by contacting:

QCA Publications, PO Box 99, Sudbury, Suffolk CO10 2SN
(tel: 01787 884444; fax: 01787 312950)

Order ref: QCA/01/672

00–6649/7