



Mark Scheme (Results)

Summer 2021

Pearson Edexcel International Primary
Curriculum
In Science (JSC11) Paper 01 Year 6 Achievement
Test

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Using the Mark Scheme

Examiners should look for qualities to reward rather than faults to penalise. This does NOT mean giving credit for incorrect or inadequate answers, but it does mean allowing candidates to be rewarded for answers showing correct application of principles and knowledge. Examiners should therefore read carefully and consider every response: even if it is not what is expected it may be worthy of credit.

The mark scheme gives examiners:

- an idea of the types of response expected
- how individual marks are to be awarded
- the total mark for each question
- examples of responses that should NOT receive credit.

/ means that the responses are alternatives and either answer should receive full credit.

() means that a phrase/word is not essential for the award of the mark, but helps the examiner to get the sense of the expected answer.

Phrases/words in **bold** indicate that the meaning of the phrase or the actual word is **essential** to the answer. ecf/TE/cq (error carried forward) means that a wrong answer given in an earlier part of a question is used correctly in answer to a later part of the same question.

Candidates must make their meaning clear to the examiner to gain the mark. Make sure that the answer makes sense. Do not give credit for correct words/phrases which are put together in a meaningless manner. Answers must be in the correct context.

Quality of Written Communication

Questions which involve the writing of continuous prose will expect candidates to:

- write legibly, with accurate use of spelling, grammar and punctuation in order to make the meaning clear
- select and use a form and style of writing appropriate to purpose and to complex subject matter
- organise information clearly and coherently, using specialist vocabulary when appropriate.

Full marks will be awarded if the candidate has demonstrated the above abilities.

Questions where QWC is likely to be particularly important are indicated (QWC) in the mark scheme, but this does not preclude others.

Question number	Answer	Mark
1	<p>The only correct answer is A</p> <p><i>B is not correct because sand is insoluble in water</i></p> <p><i>C is not correct because flour is insoluble in water</i></p> <p><i>D is not correct because sand insoluble in water</i></p>	(1)

Question number	Answer	Mark
2	<p>The only correct answer is D</p> <p><i>A is not correct because the forehead is not most often used to take pulse rate</i></p> <p><i>B is not correct because the knee cap is not most often used to take pulse rate</i></p> <p><i>C is not correct because the nose is not most often used to take pulse rate</i></p>	(1)

Question number	Answer	Mark
3	<p>The only correct answer is A</p> <p><i>B is not correct because m is the unit for length</i></p> <p><i>C is not correct because N is the unit for force</i></p> <p><i>D is not correct because s is the unit for time</i></p>	(1)

Question number	Answer	Mark
4	<p>The only correct answer is B</p> <p><i>A is not correct because if the object is moved downwards the size would stay the same and the position of the shadow would move downwards</i></p> <p><i>C is not correct because if the object is moved towards the screen the size of the shadow would decrease</i></p> <p><i>D is not correct because if the object is moved upwards the size would stay the same and the position of the shadow would move upwards</i></p>	(1)

Question number	Answer	Mark
5	<p>The only correct answer is C</p> <p><i>A is not correct because cutting the flex with a pair of scissors when the toaster is switched on is a safety hazard</i></p> <p><i>B is not correct because pouring water onto a toaster that is switched on is a safety hazard</i></p> <p><i>D is not correct because using a knife to remove toast from a toaster when switched on is a safety hazard</i></p>	(1)

Question number	Answer	Mark
6	<p>The only correct answer is D</p> <p><i>A is not correct because a decomposers role is not to release light and not make space for growth</i></p> <p><i>B is not correct because a decomposers role is not to release light</i></p> <p><i>C is not correct because a decomposers role is not to make space for growth.</i></p>	(1)

Question number	Answer	Mark
7	<p>The only correct answer is A</p> <p><i>B is not correct because bubbles of gas are given off showing that a new material is formed when bicarbonate of soda reacts with acid</i></p> <p><i>C is not correct because bubbles of gas are given off showing that a new material is formed when bicarbonate of soda reacts with acid</i></p> <p><i>D is not correct because bubbles of gas are given off showing that a new material is formed when bicarbonate of soda reacts with acid</i></p>	(1)

Question number	Answer	Mark
8	<p>The only correct answer is A</p> <p><i>B is not correct because there is only one cell in the circuit and there should be two</i></p> <p><i>C is not correct because the switch is closed and not open</i></p> <p><i>D is not correct because the cells are facing negative to negative</i></p>	(1)

Question number	Answer	Mark
9	<p>The only correct answer is B</p> <p><i>A is not correct because seeds need water to germinate and grow</i></p> <p><i>C is not correct because seeds need nutrients to germinate and grow</i></p> <p><i>D is not correct because seeds need light to germinate and grow</i></p>	(1)

Question number	Answer	Mark
10	<p>The only correct answer is B</p> <p><i>A is not correct because weight is not an area</i></p> <p><i>C is not correct because weight is not a length</i></p> <p><i>D is not correct because weight is not a volume</i></p>	(1)

Question number	Answer	Mark																		
11	<p>All four correct scores (3) marks</p> <p>2 or 3 correct scores (2) marks</p> <p>1 correct scores (1) mark</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th colspan="2">type of change</th> </tr> <tr> <th></th> <th>reversible</th> <th>irreversible</th> </tr> </thead> <tbody> <tr> <td>candle burning</td> <td></td> <td>✓</td> </tr> <tr> <td>ice melting</td> <td>✓</td> <td></td> </tr> <tr> <td>iron rusting</td> <td></td> <td>✓</td> </tr> <tr> <td>water boiling</td> <td>✓</td> <td></td> </tr> </tbody> </table>		type of change			reversible	irreversible	candle burning		✓	ice melting	✓		iron rusting		✓	water boiling	✓		(3)
	type of change																			
	reversible	irreversible																		
candle burning		✓																		
ice melting	✓																			
iron rusting		✓																		
water boiling	✓																			

Question number	Answer	Mark
12	<div style="text-align: center;"> <div style="display: inline-block; border: 1px solid black; padding: 2px 10px;">plants</div> → <div style="display: inline-block; border: 1px solid black; padding: 2px 10px; margin-left: 20px;">slugs</div> → <div style="display: inline-block; border: 1px solid black; padding: 2px 10px; margin-left: 20px;">beetles</div> → <div style="display: inline-block; border: 1px solid black; padding: 2px 10px; margin-left: 20px;">small birds</div> </div> <p>Award 2 marks for all three organisms in the correct order</p> <p>Award 1 mark for one organism in the correct position in food chain</p>	(2)

Question number	Answer	Mark
13	<p>The only correct answer is B</p> <p><i>A is not correct because the heart rate increases by 20 bpm</i></p> <p><i>C is not correct because the heart rate does not stay at 80 bpm</i></p> <p><i>D is not correct because the heart rate does not stay at 100 bpm</i></p>	(1)

Question number	Answer	Mark
14	<p>The only correct answer is C</p> <p><i>A is not correct because the statement represents condensing</i></p> <p><i>B is not correct because the statement represents boiling or evaporating</i></p> <p><i>D is not correct because the statement represents melting</i></p>	(1)

Question number	Answer	Mark
15	<p>The only correct answer is B</p> <p><i>A is not correct because the invertebrate is arthropod X</i></p> <p><i>C is not correct because the invertebrate is arthropod X</i></p> <p><i>D is not correct because the invertebrate is arthropod X</i></p>	(1)

Question number	Answer	Mark
16	<p>The only correct answer is C</p> <p><i>A is not correct because the forces are the same size and are acting in opposite directions</i></p> <p><i>B is not correct because the forces are the same size and are acting in opposite directions</i></p> <p><i>D is not correct because the forces are the same size and are acting in opposite directions</i></p>	(1)

Question number	Answer	Mark
17	<p>The only correct answer is D</p> <p><i>A is not correct because disease is caused by micro-organisms that are not being useful</i></p> <p><i>B is not correct because food poisoning is caused by micro-organisms that are not being useful</i></p> <p><i>C is not correct because food mould is caused by micro-organisms that are not being useful</i></p>	(1)

Question number	Answer	Mark
18	<p>The only correct answer is A</p> <p><i>B is not correct because the ball falls to the ground due to the force of gravity between the Earth and the ball</i></p> <p><i>C is not correct because the ball falls to the ground due to the force of gravity between the Earth and the ball</i></p> <p><i>D is not correct because the ball falls to the ground due to the force of gravity between the Earth and the ball</i></p>	(1)

Question number	Answer	Mark
19	<p>Award 1 mark for each correct response up to a maximum of 2 marks</p> <p>Part of flowering plant</p> <p>roots</p> <p>leaves</p> <p>Function</p> <p>to attract insects</p> <p>to produce food</p> <p>to produce seeds</p> <p>to anchor the plant to the ground</p> <p>Do not award answers with more than one line from any of the boxes.</p>	(2)

Question number	Answer	Additional guidance	Mark
20	Award 1 mark for a value within the range 120 - 220		(1)

Question number	Answer	Additional guidance	Mark
21	Magnetism / use a magnet		(1)

Question number	Answer	Additional guidance	Mark
22	(oxygen) has decreased (by 4%) (1) (Oxygen) is used in respiration (1)	Accept: passes / dissolves into the blood and is carried round the body. Accept: used for energy release	(2)

Question number	Answer	Additional guidance	Mark
23(a)(i)	The earth is rotating	Do not award for 'the Earth rotating around the Sun'	(1)

Question number	Answer	Additional guidance	Mark
23(a)(ii)	sunset	Accept sun going down or sundown	(1)

Question number	Answer	Additional guidance	Mark
23(b)	the higher the position of the Sun the shorter the shadow	or reverse argument Ignore references to time of the day	(1)

Question number	Answer	Mark
24	<p>The only correct answer is C</p> <p><i>A is not correct because solid A has a lower melting point than C</i></p> <p><i>B is not correct because solid B has a lower melting point than C</i></p> <p><i>D is not correct because solid D has the lowest melting point</i></p>	(1)

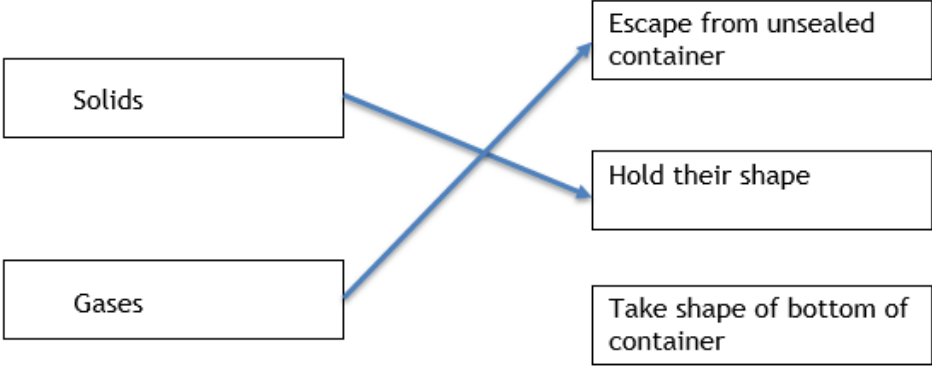
Question number	Answer	Mark
25	<p>The only correct answer is A</p> <p><i>B is not correct because pollen is transferred by the bee from anther to stigma and not petal to stigma</i></p> <p><i>C is not correct because pollen is transferred by the bee from anther to stigma and not stigma to anther</i></p> <p><i>D is not correct because pollen is transferred by the bee from anther to stigma and not stigma to petal</i></p>	(1)

Question number	Answer	Mark
26	<p>The only correct answer is B</p> <p><i>A is not correct because component B is the correct symbol for a buzzer</i></p> <p><i>C is not correct because component B is the correct symbol for a buzzer</i></p> <p><i>D is not correct because component B is the correct symbol for a buzzer</i></p>	(1)

Question number	Answer	Mark
27	<p>The only correct answer is D</p> <p><i>A is not correct because wild cats are vertebrates and their young develop inside the mother.</i></p> <p><i>B is not correct because wild cats are vertebrates and their young develop inside the mother.</i></p> <p><i>C is not correct because wild cats are vertebrates and their young develop inside the mother.</i></p>	(1)

Question number	Answer	Additional guidance	Mark
28	<p>Award 1 mark for each of the following up to a maximum of two marks</p> <p>Decrease voltage / remove one cell (1)</p> <p>add a bulb (1)</p> <p>add a buzzer(1)</p> <p>add a motor (1)</p>	<p>Accept reduce the current</p> <p>Accept add another component into the circuit</p> <p>Accept replace the bulb with one of a greater resistance</p> <p>Accept make the wires longer / thinner</p>	(2)

Question number	Answer	Additional guidance	Mark
29	Pumps blood (around the body) (1)		(1)

Question number	Answer	Mark
30	<p>Award 1 mark for the following</p> <div><p>State</p><p>Property</p><pre>graph LR; subgraph State; S[Solids]; G[Gases]; end; subgraph Property; P1[Escape from unsealed container]; P2[Hold their shape]; P3[Take shape of bottom of container]; end; S --> P2; G --> P1;</pre></div> <p>Do not award answers with more than one line from any of the boxes.</p>	(1)

Question number	Answer	Mark																				
31	<p>Award 2 marks for the following</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th colspan="4" style="text-align: center;">feature of the flower</th> </tr> <tr> <th></th> <th style="text-align: center;">light and smooth pollen grains</th> <th style="text-align: center;">petals are large and brightly coloured</th> <th style="text-align: center;">anthers and filaments hang outside the flower</th> <th style="text-align: center;">stigma inside the flower</th> </tr> </thead> <tbody> <tr> <th style="text-align: center;">insect pollinated flower</th> <td style="text-align: center;"></td> <td style="text-align: center;">✓</td> <td style="text-align: center;"></td> <td style="text-align: center;">✓</td> </tr> <tr> <th style="text-align: center;">wind pollinated flower</th> <td style="text-align: center;">✓</td> <td style="text-align: center;"></td> <td style="text-align: center;">✓</td> <td style="text-align: center;"></td> </tr> </tbody> </table> <p>Award 1 mark for one or two columns correct Award 2 marks for all three columns correct Max. 1 mark if top left box also ticked</p>		feature of the flower					light and smooth pollen grains	petals are large and brightly coloured	anthers and filaments hang outside the flower	stigma inside the flower	insect pollinated flower		✓		✓	wind pollinated flower	✓		✓		(2)
	feature of the flower																					
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insect pollinated flower		✓		✓																		
wind pollinated flower	✓		✓																			

Question number	Answer	Additional guidance	Mark
32 (a)(i)	(Type) B		(1)

Question number	Answer	Additional guidance	Mark
32 (a)(ii)	<p>Bottom of the shoe is rougher (1)</p> <p>Area of the bottom of the shoe is larger (1)</p> <p>Material the bottom of the shoe is made of less slippery material (1)</p>	<p>MUST be comparative somewhere in answer</p> <p>Accept more tread</p> <p>Accept mass / weight of the shoe is greater / shoe is heavier</p> <p>The test surface is rougher</p>	(1)

Question number	Answer	Additional guidance	Mark
33 (a)	birds passing faeces		(1)

Question number	Answer	Additional guidance	Mark
33 (b)	<p>The seed has wings (1)</p> <p>the wind / moving air catches the wings to carry the seed / the seed flies to the ground (1)</p>	<p>Accept description eg (long) flaps, large surface area</p>	(2)

SECTION B

Question number	Answer	Additional guidance	Mark
34(a)(i)	Ruler	Accept measuring tape	(1)

Question number	Answer	Additional guidance	Mark
34(a)(ii)	(They always) place the bottom edge of the coin in the same position		(1)

Question number	Answer	Additional guidance	Mark
34(b)(i)	Bar drawn 20.0 +/- 0.5 square		(1)

Question number	Answer	Additional guidance	Mark
34 (b)(ii)	The greater the distance the coin is from where the piece of plastic is clamped (1) the greater the distance the coin travels (1)	Accept opposite argument Ignore speed of the coin	(2)

Question number	Answer	Additional guidance	Mark															
34(c)	<p>Award 1 mark for the following</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Scientific Question</th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> </tr> </thead> <tbody> <tr> <td>Does the thickness of the piece of plastic affect how far the coin travels?</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>Does the size of the coin affect how far it travels?</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>Does the time of day affect how far the coin travels?</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Does the type of plastic used affect how far the coin travels?</td> <td style="text-align: center;">✓</td> <td></td> </tr> </tbody> </table>	Scientific Question	Yes	No	Does the thickness of the piece of plastic affect how far the coin travels?	✓		Does the size of the coin affect how far it travels?	✓		Does the time of day affect how far the coin travels?		✓	Does the type of plastic used affect how far the coin travels?	✓			(1)
Scientific Question	Yes	No																
Does the thickness of the piece of plastic affect how far the coin travels?	✓																	
Does the size of the coin affect how far it travels?	✓																	
Does the time of day affect how far the coin travels?		✓																
Does the type of plastic used affect how far the coin travels?	✓																	

Question number	Answer	Additional guidance	Mark
35(a)	80 (cm ³)		(1)

Question number	Answer	Additional guidance	Mark
35(b)	Volume of water that evaporates is different for each beaker (1) the amount of evaporation is linked to the temperature / how hot / cold / of the location the beaker is placed (1)	Ignore dissolving Allow the greater the temperature the greater the volume of water evaporated (2)	(2)

Question number	Answer	Additional guidance	Mark
35(c)	Heat proof gloves Use of tongs	Ignore ask for adult help Accept oven gloves, oven mitts, ignore gloves unqualified, plastic gloves	(1)

Question number	Answer	Additional guidance	Mark
36(a)	Award 2 marks for all three letters in the correct order C A B Award 1 mark for one letter in the correct place		(2)

Question number	Answer	Additional guidance	Mark
36(b)	the temperature of the water is a control variable (1)	Allow to make it a fair test Accept the type of water is the variable being tested	(1)

Question number	Answer	Additional guidance	Mark
36(c)	The test/investigation is repeated (1) to improve the reliability (of the investigation results). (1)	Do not accept accuracy	(2)