

Sparx Science

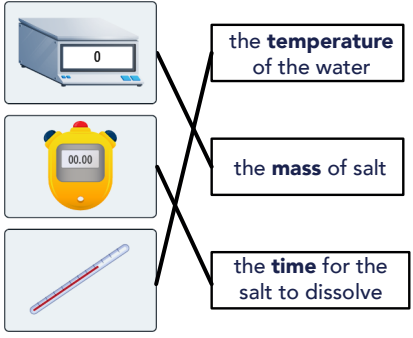
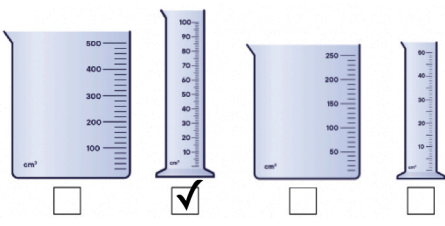
Year 7 Baseline assessment

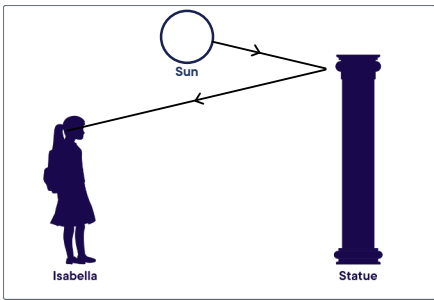
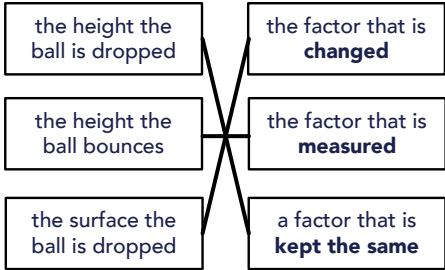
Mark Scheme

Introductory guidance

What if...?	Marking
The student gives two or more responses to a particular question part.	Ignore any incorrect statements that are not relevant to the question. Deduct one mark for each relevant statement that is scientifically incorrect. Do not award negative marks.
The student ticks more than the required number of boxes.	Deduct one mark for each incorrect answer. Do not award negative marks.
The student misspells a word.	Accept any unambiguous misspellings. Misspellings of required scientific vocabulary must be phonetically equivalent.
The student has written their answer somewhere other than the answer box or line.	Accept any unambiguous indication of the correct answer.

Question	Answer	Marks	Notes																
1a	Oak tree Sparrow Bee Cat Dandelion	2	Award TWO marks for all five living things correctly identified. If you are unable to award two marks, award ONE mark for any four living things identified correctly .																
1b	65	1																	
1c	8	1																	
1d	The bean plant gets less light	1																	
1e	bean → rabbit → fox	2	Award TWO marks for a correct and complete food chain. If you are unable to award two marks, award ONE mark for the organisms written in the correct order OR the arrows drawn from left to right.																
2a	<table><tr><th>Substance</th><th>Solid</th><th>Liquid</th><th>Gas</th></tr><tr><td>Inside bubbles</td><td></td><td></td><td>✓</td></tr><tr><td>Water</td><td></td><td>✓</td><td></td></tr><tr><td>Sand</td><td>✓</td><td></td><td></td></tr></table>	Substance	Solid	Liquid	Gas	Inside bubbles			✓	Water		✓		Sand	✓			1	Award ONE mark for all three rows of the table completed correctly .
Substance	Solid	Liquid	Gas																
Inside bubbles			✓																
Water		✓																	
Sand	✓																		
2b	7	1																	
2c	<ul style="list-style-type: none">To absorb water.To absorb nutrients.	1	Award ONE mark for any one function of the root, not related to anchoring or stabilising the plant.																
3a	<table><tr><th>Activity</th><th>Reversible</th><th>Not reversible</th></tr><tr><td>Baking a cake</td><td></td><td>✓</td></tr><tr><td>Dissolving sugar in water</td><td>✓</td><td></td></tr><tr><td>Freezing ice cream</td><td>✓</td><td></td></tr><tr><td>Frying eggs</td><td></td><td>✓</td></tr></table>	Activity	Reversible	Not reversible	Baking a cake		✓	Dissolving sugar in water	✓		Freezing ice cream	✓		Frying eggs		✓	2	Award TWO marks for all four rows of the table completed correctly. If you are unable to award two marks, award ONE mark for any three rows completed correctly.	
Activity	Reversible	Not reversible																	
Baking a cake		✓																	
Dissolving sugar in water	✓																		
Freezing ice cream	✓																		
Frying eggs		✓																	
3b	g	1																	
3c	The chocolate and pan get hot	1																	
3d	It changes from a solid to a liquid	1																	
3e	Smoke comes off the chocolate	1																	

Question	Answer	Marks	Notes																				
4a		2	Award TWO marks for correctly matching all three pieces of equipment. If you are unable to award two marks, award ONE mark for correctly matching any one piece of equipment.																				
4b		1																					
4c	As the temperature of the water increases, the time taken for the salt to dissolve decreases.	1	Award ONE mark for an answer recognising that the time taken for the salt to dissolve decreases with temperature.																				
5a	Check the equipment before he uses it	1																					
5b	<ul style="list-style-type: none"> Cell Wires 	1	Award ONE mark for both components identified correctly.																				
5c	It is an electrical insulator	1																					
5d	<ul style="list-style-type: none"> The circuit is not complete. Only one end of the nail is connected. Both ends of the nail need to be connected for the circuit to function. 	1	Award ONE mark for an answer recognising that the circuit is not closed/complete.																				
6a	<table border="1"> <thead> <tr> <th>Factor</th><th>Must be the same</th><th>Must be different</th><th>Makes no difference</th></tr> </thead> <tbody> <tr> <td>Length of the ramp</td><td>✓</td><td></td><td></td></tr> <tr> <td>Height of the ramp</td><td></td><td>✓</td><td></td></tr> <tr> <td>Material the ramp is made from</td><td>✓</td><td></td><td></td></tr> <tr> <td>Mass of the marble</td><td>✓</td><td></td><td></td></tr> </tbody> </table>	Factor	Must be the same	Must be different	Makes no difference	Length of the ramp	✓			Height of the ramp		✓		Material the ramp is made from	✓			Mass of the marble	✓			2	Award TWO marks for all four rows of the table completed correctly. If you are unable to award two marks, award ONE mark for any three rows completed correctly.
Factor	Must be the same	Must be different	Makes no difference																				
Length of the ramp	✓																						
Height of the ramp		✓																					
Material the ramp is made from	✓																						
Mass of the marble	✓																						
6b	<ul style="list-style-type: none"> millimetres metres 	1	Award ONE mark for any one sensible unit. Accept either full or abbreviated units.																				
6c	It causes the marble to slow down and come to a stop	1																					
6d	Carpet	1																					

Question	Answer	Marks	Notes											
7a	A torch	1												
7b		2	<p>Award TWO marks for the correct ray diagram where a straight arrow is drawn from the Sun to the statue and from the statue to Isabella's eye.</p> <p>If you are unable to award two marks, award ONE mark if either arrow is correctly drawn.</p>											
7c	reflects	1												
7d	The shadow gets shorter.	1	Award ONE mark for any answer recognising the length of the shadow decreases throughout the morning.											
8a	280	1												
8b	Heat the vinegar above a flame	1												
8c	The values are close together	1												
9a		2	<p>Award TWO marks for correctly matching all three factors.</p> <p>If you are unable to award two marks, award ONE mark for correctly matching any one factor.</p>											
9b	Force A is air resistance . Force B is weight .	2	<p>Award TWO marks for correctly completing both sentences.</p> <p>If you are unable to award two marks, award ONE mark any one sentence correctly completed.</p>											
9c	Surface: Grass Test number: Test 3	1	Accept the reading (21) as the test number.											
9d	42	1												
10a	<table border="1" data-bbox="323 1756 774 1924"> <thead> <tr> <th rowspan="2">Material</th><th colspan="3">Property</th></tr> <tr> <th>Flexible</th><th>Shiny</th><th>Trans-parent</th></tr> </thead> <tbody> <tr> <td>Plastic wrap</td><td>✓</td><td></td><td>✓</td></tr> </tbody> </table>	Material	Property			Flexible	Shiny	Trans-parent	Plastic wrap	✓		✓	1	Award ONE mark for both boxes ticked.
Material	Property													
	Flexible	Shiny	Trans-parent											
Plastic wrap	✓		✓											
10b	Thermal insulator	1												

Question	Answer	Mark	Notes
10c	Time (minutes)	1	Award ONE mark for both the label and units. Accept any suitable label referencing time and accept abbreviated units.
11a	<ul style="list-style-type: none"> To make his results more reliable. So he can check his results. So he can calculate an average. In case there is a problem/he made a mistake with one seed. So he can compare his results. 	1	Award ONE mark for identifying that planting multiple seeds improves the reliability of the results OR that the results can be compared OR that the accuracy of the test will be improved.
11b	Water the seeds	1	
11c	Fewest radish seeds germinated by day 7 = True No mustard seeds germinated on day 1 = Cannot tell All the cress seeds germinated by day 7 = False	2	Award TWO marks for all the conclusions correctly categorised. If you are unable to award two marks, award ONE mark for any two conclusions correctly categorised.