



**Cambridge Assessment
International Education**

Cambridge Primary Sample Test
For use with curriculum published in
September 2020

Science Paper 1
Mark Scheme
Stage 5

General guidelines on marking

Many descriptive answers can be expressed in a variety of ways. Professional judgement can be used in these cases, providing it matches the marking points and further information in the mark scheme.

Answers may have words spelt incorrectly. Credit is normally given for phonetically correct answers, unless the word has a scientifically different meaning. For example, where the answer should be antennae, credit will be given for antenna but not for anthen (too close to anther).

Only the science is being assessed, so answers do not need to be grammatically correct. Significant figures will be indicated in the question or in the mark scheme.

Unless specified all marking points are independent.

Annotations and abbreviations

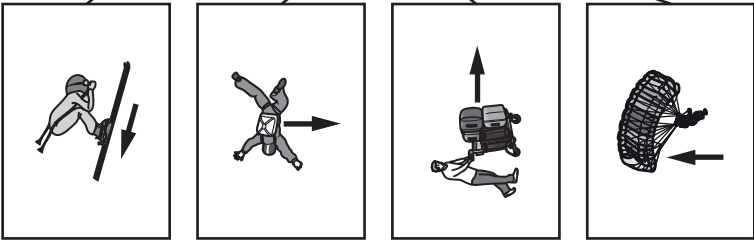
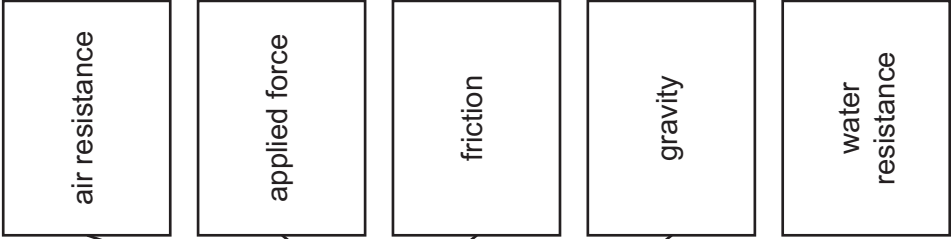
/ OR	alternate responses for the same marking point
() brackets	the words or units in brackets do not need to be stated, for example, (recycles or releases or provides) minerals = minerals scores the mark
<u>Underline</u>	exact word is required
Accept	an acceptable response
Do not accept	indicates an incorrect response that would contradict another otherwise correct alternative
Ignore	indicates an irrelevant answer that is not creditworthy. Full marks can still be achieved even with answers that are ignored.
Note	provides extra information when necessary
ecf	error carried forward; marks are awarded if an incorrect response has been carried forward from earlier working, provided the subsequent working is correct
ora	or reverse argument; for example, as mass increases, volume increases could be written as mass decreases, volume decreases

Question	Answer	Marks	Further Information
1(a)	(part X) stigma (part Y) anther	2	each correct answer = 1 mark
1(b)	any two from produce nectar scent patterns (of petals) shape / size (of petals)	2	each correct answer = 1 mark Ignore brightly coloured petals
1(c)	fertilisation fruit production germination seed production	1	more than one answer circled = 0 marks Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence

Question	Answer	Marks	Further Information															
2(a)	<table border="0"> <thead> <tr> <th>statement</th> <th>true</th> <th>false</th> </tr> </thead> <tbody> <tr> <td>the boiling point of pure water is 110 °C</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>pure water freezes at 0 °C</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>water expands when it freezes</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>water is a liquid at room temperature</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	statement	true	false	the boiling point of pure water is 110 °C	<input type="checkbox"/>	<input checked="" type="checkbox"/>	pure water freezes at 0 °C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	water expands when it freezes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	water is a liquid at room temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	<p>four correct = 2 marks</p> <p>two or three correct = 1 mark</p> <p>one correct = 0 marks</p>
statement	true	false																
the boiling point of pure water is 110 °C	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
pure water freezes at 0 °C	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
water expands when it freezes	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
water is a liquid at room temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
2(b)	circles should be drawn spread out to fill container	1	Ignore size and number of circles															
2(c)	oxygen / nitrogen / carbon dioxide / hydrogen	1	<p>Accept any named gas at room temperature</p> <p>Ignore air</p>															

Question	Answer	Marks	Further Information								
3(a)	<p>any one from</p> <p>mass of solid</p> <p>volume of water</p> <p>amount of stirring / time to stir</p> <p>temperature of water</p>	1	<p>Accept 1 g of solid / amount of solid</p> <p>Accept 30 cm³ of water / amount of water</p>								
3(b)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; padding: 5px;">dissolve</th> <th style="width: 50%; padding: 5px;">do <u>not</u> dissolve</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">A</td> <td style="text-align: center; padding: 5px;">B</td> </tr> <tr> <td style="text-align: center; padding: 5px;">C</td> <td style="text-align: center; padding: 5px;">D</td> </tr> <tr> <td style="text-align: center; padding: 5px;">E</td> <td></td> </tr> </tbody> </table>	dissolve	do <u>not</u> dissolve	A	B	C	D	E		1	<p>all correct = 1 mark</p> <p>Accept any order</p>
dissolve	do <u>not</u> dissolve										
A	B										
C	D										
E											
3(c)	<p>A mixture of a dissolved solid in a liquid is called a solution.</p> <p>A solid that dissolves in a liquid is called a solute.</p>	2	<p>each correct answer = 1</p>								

Question	Answer	Marks	Further Information
4	<p>precipitation</p> <p>condensation</p> <p>evaporation</p>	2	<p>all three correct = 2 marks</p> <p>two correct = 1 mark</p> <p>one correct = 0 marks</p> <p>Accept hail/ snow/ sleet/ rain for precipitation</p>
Question	Answer	Marks	Further Information
5(a)	30(%)	2	<p>correct answer = 2 marks</p> <p>if answer is incorrect accept 70 for 1 mark</p> <p>or</p> <p>8 + 15 + 25 + 12 + 4 + 6 for 1 mark</p>
5(b)	<p>sewage</p> <p>farming</p> <p>air</p> <p>factories</p> <p>boats</p> <p>litter</p> <p>drilling oil</p>	1	<p>all correct order = 1 mark</p> <p>ecf from (a)</p>
5(c)	<p>any one from</p> <p>kills animals / plants / fish</p> <p>damages beaches</p>	1	<p>Accept any sensible answer</p>

Question	Answer	Marks	Further Information
<p>6</p>	<p style="text-align: center;">force diagram</p>  <p style="text-align: center;">force</p>  <p>The diagrams are connected to the labels as follows: Diagram 1 (sled) connects to 'applied force' and 'friction'. Diagram 2 (person) connects to 'applied force'. Diagram 3 (trolley) connects to 'gravity'. Diagram 4 (parachute) connects to 'air resistance' and 'water resistance'.</p>	<p>3</p>	<p>four correct = 3 marks</p> <p>two or three correct = 2 marks</p> <p>one correct = 1 mark</p> <p>If two lines from one force diagram and one is incorrect = 0 marks for that force diagram</p>

Question	Answer	Marks	Further Information
7(a)	number of seeds germinated	1	
7(b)	put the same number of seeds in each dish	1	Do not accept repeat the investigation / to make it more reliable
7(c)	A condition needed for these seeds to germinate is warmth . The evidence in the table is (idea that) more / most seeds germinated in warmth . A condition not needed for these seeds to germinate is light . The evidence in the table is (idea that) seeds in dish C (in the dark) germinated .	2	1 mark for identifying warmth and giving reason 1 mark for identifying light and giving reason
Question	Answer	Marks	Further Information
8(a)	The magnet lifts the iron because iron is a magnetic material.	1	
8(b)	There is a force pulling the iron to the magnet.	1	Accept attraction
8(c)	A different magnet holds less iron because it is weaker .	1	Accept higher level answers in terms of field strength Ignore references to electromagnets Ignore smaller magnet

Question	Answer	Marks	Further Information												
9(a)	satellite	1	Accept named satellite e.g. Glory												
9(b)	Moon	1													
Question	Answer	Marks	Further Information												
10(a)	A B C D E	1	more than one answer circled = 0 marks Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence												
10(b)	<p>loudness of sound</p> <p>surface</p> <table border="1"> <caption>Loudness of sound for different surfaces</caption> <thead> <tr> <th>Surface</th> <th>Loudness</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>8</td> </tr> <tr> <td>B</td> <td>3</td> </tr> <tr> <td>C</td> <td>9</td> </tr> <tr> <td>D</td> <td>2</td> </tr> <tr> <td>E</td> <td>1</td> </tr> </tbody> </table>	Surface	Loudness	A	8	B	3	C	9	D	2	E	1	3	both axes correctly labelled = 1 mark all bars correct = 2 marks three or four correct = 1 mark one or two correct = 0 marks Accept a tolerance of \pm half a small square
Surface	Loudness														
A	8														
B	3														
C	9														
D	2														
E	1														
10(c)	<p>Sound is made when an object vibrates.</p> <p>Loud and quiet describe the volume of a sound.</p> <p>High and low describe the pitch of a sound.</p>	2	each correct answer = 1 mark												

Question	Answer	Marks	Further Information
11	<p>any three from</p> <p>sharp claws (because it needs to) hold onto prey/grip prey</p> <p>sharp teeth (because it needs to) catch prey/eat prey/bite prey</p> <p>strong legs (because it needs to) run fast</p> <p>camouflage (because it needs to) hide from prey</p> <p>eyes at front of head (because it needs to) see in 3D/judge distance</p> <p>moveable ears/good hearing (because it needs to) detect prey</p> <p>good sense of smell (because it needs to) detect prey</p>	3	<p>1 mark for each correct adaptation linked to the correct explanation</p> <p>Accept named teeth with correct use of teeth</p> <p>Accept muscular legs to run fast</p>