



Cambridge Assessment
International Education

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

Science Paper 2
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

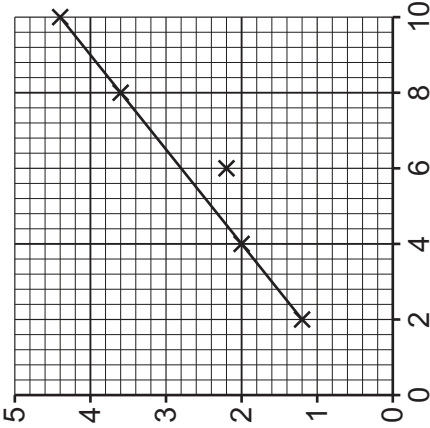
Question	Answer	Marks	Further Information
1(a)	The direction the Earth moves around the Sun is anticlockwise . The shape of the orbit is called (a slight) ellipse .	2	each correct sentence = 1 mark
1(b)	365 (days)	1	Accept 365 ^{1/4} /365.256 (days)
1(c)	any two from oxygen carbon dioxide nitrogen	1	two correct = 1 mark Accept other named correct gases
Question	Answer	Marks	Further Information
2(a)	P takes food from the mouth to the stomach Q digests food/absorbs food R egestion/point where waste/faeces leaves the body	3	each correct answer = 1 mark Accept alternative names for faeces
2(b)	stay healthy	1	Accept specific examples, e.g. to maintain a healthy weight/to have sufficient energy/to avoid (deficiency) diseases/to grow properly

Question	Answer	Marks	Further Information																				
3(a)	(force X) upthrust (force Y) gravity	2	each correct answer = 1 mark Accept buoyancy Accept weight																				
3(b)	boat sinks	1																					
Question	Answer	Marks	Further Information																				
4(a)	<table border="1"> <thead> <tr> <th>property</th> <th>solids</th> <th>liquids</th> <th>gases</th> </tr> </thead> <tbody> <tr> <td>fixed shape</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>easily compressed</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>able to flow</td> <td></td> <td>✓</td> <td>✓</td> </tr> <tr> <td>particles in the model are touching</td> <td>✓</td> <td>✓</td> <td></td> </tr> </tbody> </table>	property	solids	liquids	gases	fixed shape	✓			easily compressed			✓	able to flow		✓	✓	particles in the model are touching	✓	✓		3	1 mark for each correct column
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4(b)	the particles get closer together / the particles touch	1	Accept move more slower																				

Question	Answer	Marks	Further Information
5(a)	<p style="text-align: center;"> A B C D E </p>	1	<p>more than one answer circled = 0 marks</p> <p>Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence</p>
5(b)	<p style="text-align: center;"> A B C D E </p>	1	<p>more than one answer circled = 0 marks</p> <p>Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence</p>

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6(a)		2	<p>four correct = 2 marks</p> <p>two or three correct = 1 mark</p> <p>one correct = 0 marks</p> <p>if two lines from one adaptation and one is incorrect = 0 marks for this adaptation</p>															
6(b)	<table border="1"> <thead> <tr> <th>plant</th> <th>description</th> <th>type of seed dispersal</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>seeds are large and light weight so they float</td> <td>(water)</td> </tr> <tr> <td>B</td> <td>seeds have tiny hooks on them so they attach to things</td> <td>animal</td> </tr> <tr> <td>C</td> <td>seeds have wings and are lightweight so they move in air</td> <td>wind</td> </tr> <tr> <td>D</td> <td>seeds are found inside fruits so they are eaten</td> <td>animal</td> </tr> </tbody> </table>	plant	description	type of seed dispersal	A	seeds are large and light weight so they float	(water)	B	seeds have tiny hooks on them so they attach to things	animal	C	seeds have wings and are lightweight so they move in air	wind	D	seeds are found inside fruits so they are eaten	animal	3	each correct answer = 1 mark
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Question	Answer	Marks	Further Information
7(a)	30	1	<p>Accept correct answer anywhere but answer in table takes precedence</p> <p>Accept a tolerance on measure of 1 mm</p> <p>Check correct measurement on actual printed paper</p>
7(b)	D	1	<p>more than one answer = 0 marks</p> <p>Accept ecf from (a) if measured distance for E is less than 22 mm</p>
7(c)	A	1	<p>more than one answer = 0 marks</p> <p>Accept ecf from (a) if measured distance for E is more than 36 mm</p>
7(d)	repeat the investigation	1	

Question	Answer	Marks	Further Information
8(a)	height of ramp	1	<p>Accept number of books</p> <p>Ignore just ramp</p>
8(b)	<p>force (needed to pull object) in N</p>  <p>height of ramp in cm</p>	3	<p>both axes correctly labelled including units = 1 mark</p> <p>three correct points = 1 mark</p> <p>Accept tolerance of \pm half a small square</p> <p>straight line through most of the points = 1 mark</p> <p>Ignore extrapolations of line</p>
8(c)	higher the ramp the greater the force needed	1	<p>Accept reverse argument</p> <p>answer must be comparative</p>
8(d)	The result that does not fit the pattern is 2.2 N .	1	<p>Accept 2.2 at 6 cm circled on the graph but answer line takes precedence</p>

Question	Answer	Marks	Further Information
9(a)	<p style="text-align: center;">Quiz</p> <ol style="list-style-type: none"> 1. Dissolving is a reversible process. True 2. A solution is a liquid that dissolves a solid. False 3. A solvent is a solid that dissolves in a liquid. False 4. Water is a liquid used to dissolve solids. True 5. A mixture is made when a solid dissolves in a liquid. True 	2	<p>four correct = 2 marks three correct = 1 mark one or two correct = 0 marks</p>
9(b)	<p>any two from (gently) heat the liquid so (most) of the liquid evaporates leave (in a warm place) so crystals form</p>	2	

Question	Answer	Marks	Further Information
10(a)	oboe	1	
10(b)	440 (units)	1	
10(c)	guitar	1	
10(d)	When the gong is hit hard it makes a loud sound. When the gong is hit with less force it makes a quiet(er) / soft(er) sound.	1	both correct = 1 mark