



**Cambridge Assessment
International Education**

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

Science Paper 2
Mark Scheme
Stage 4

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

Underline exact word is required

Accept an acceptable response

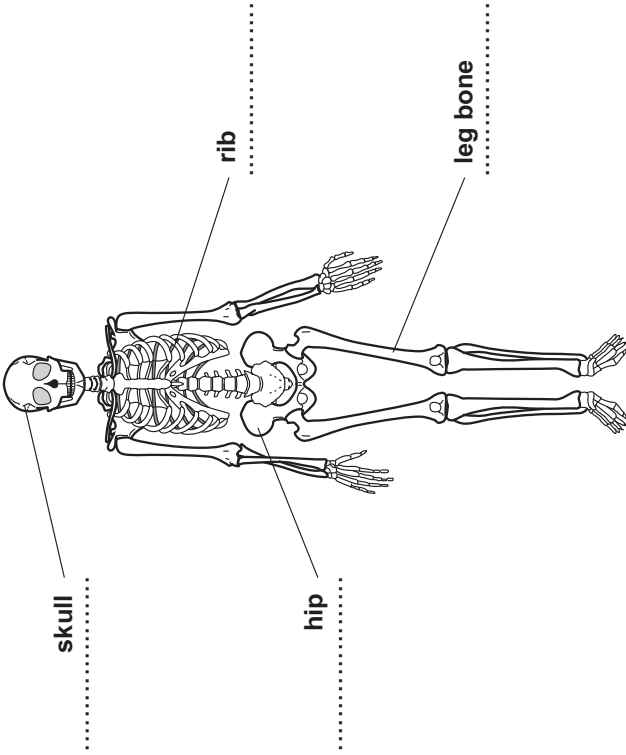
Do not accept indicates an incorrect response that would contradict another otherwise correct alternative

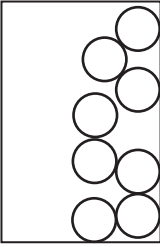
Ignore indicates an irrelevant answer that is not creditworthy. Full marks can still be achieved even with answers that are ignored.

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

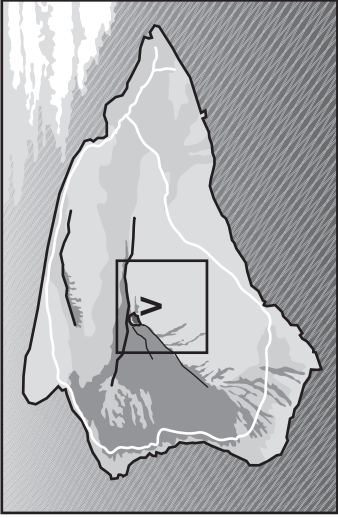
ora or reverse argument; for example, as mass increases, volume increases could be written as mass decreases, volume decreases


Question	Answer	Marks	Further Information
1(a)	 <p>skull</p> <p>rib</p> <p>hip</p> <p>leg bone</p>	2	<p>four correct = 2 marks</p> <p>two or three correct = 1 mark</p> <p>one correct = 0 marks</p> <p>Accept cranium for skull</p> <p>Accept pelvis for hip</p> <p>Accept femur or thigh bone for leg bone</p> <p>Accept ribcage for rib</p>
1(b)	<p>exoskeleton pair of hands pairs of muscles skin</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>
Question	Answer	Marks	Further Information
2(a)	Light from the lamp travels in straight lines to the person.	1	
2(b)	(idea that) light from the car/headlights is reflected off the helmet and clothing	1	Do not accept bounces


Question	Answer	Marks	Further Information															
3(a)		1	<p>particles with larger gaps between them compared to the solid model but with some still touching = 1 mark</p> <p>Ignore the number of particles drawn</p>															
3(b)	<p>particles do <u>not</u> move</p> <p>particles move in a solid and in a liquid</p> <p>particles only move in a liquid</p> <p>particles only move in a solid</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>															
3(c)	<table border="0"> <thead> <tr> <th>statement</th> <th>true</th> <th>false</th> </tr> </thead> <tbody> <tr> <td>solids have a fixed shape</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>liquids have a fixed shape</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>solids can be compressed</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>liquids can be compressed</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table>	statement	true	false	solids have a fixed shape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	liquids have a fixed shape	<input type="checkbox"/>	<input checked="" type="checkbox"/>	solids can be compressed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	liquids can be compressed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2	<p>first two correct = 1 mark</p> <p>last two correct = 1 mark</p>
statement	true	false																
solids have a fixed shape	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
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liquids can be compressed	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
3(d)	<p>flowing / flows</p> <p>(idea that) the sand grains act like particles / sand is made up of particles</p>	2	<p>each correct answer = 1 mark</p> <p>Accept (sand) is made up of small particles</p>															

Question	Answer	Marks	Further Information
4(a)	transferred to the environment/ air	1	Accept movement/ moves into / goes into the environment
4(b)	wind	1	Accept movement of air
Question	Answer	Marks	Further Information
5	<p>The flatfish has a body the same colour as sand because it is camouflaged/ blends in /is hard to see / hides from its prey / hides from predators.</p> <p>The flatfish has two eyes on top of its head because it can see food /predators /in 3D.</p>	2	each correct sentence = 1 mark
Question	Answer	Marks	Further Information
6(a)	A B C D	1	more than one answer circled = 0 marks Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence
6(b)	(copper) is a (good electrical) conductor	1	

Question	Answer	Marks	Further Information
7	<p>the rubber balls move <input type="checkbox"/></p> <p>the sugar cubes move <input type="checkbox"/></p> <p>the top piece of wood moves <input type="checkbox"/></p>	1	all three ticked = 1 mark
Question	Answer	Marks	Further Information
8(a)	plant/producer	1	Accept named plant, e.g. weed
8(b)	<p>carnivore and herbivore</p> <p>herbivore and predator</p> <p>herbivore and prey</p> <p>predator and prey</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>

Question	Answer	Marks	Further Information
9(a)		1	letter V anywhere in the square marked on the map
9(b)	<p>a break between the land and sea</p> <p>a break in the Earth's crust</p> <p>a break in the Earth's core</p> <p>a break in the Earth's mantle</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>

Question	Answer	Marks	Further Information														
10(a)	measuring tape ruler  thermometer	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)	<table border="1"> <thead> <tr> <th>time in minutes</th> <th>(heart rate in bpm)</th> </tr> </thead> <tbody> <tr> <td>(0)</td> <td>50</td> </tr> <tr> <td>(1)</td> <td>60</td> </tr> <tr> <td>(2)</td> <td>80</td> </tr> <tr> <td>(3)</td> <td>100</td> </tr> <tr> <td>(4)</td> <td>100</td> </tr> <tr> <td>(5)</td> <td>100</td> </tr> </tbody> </table>	time in minutes	(heart rate in bpm)	(0)	50	(1)	60	(2)	80	(3)	100	(4)	100	(5)	100	2	correct heading = 1 mark Do not accept just time in the heading all numbers correct = 1 mark Do not accept bpm next to numbers
time in minutes	(heart rate in bpm)																
(0)	50																
(1)	60																
(2)	80																
(3)	100																
(4)	100																
(5)	100																
10(c)	As the length of time Angeliqe exercises increases her heart rate increases / goes up / is higher and then stays the same. This is because her body needs more energy .	1	both sentences correct = 1 mark Accept oxygen														

Question	Answer	Marks	Further Information
11		2	<p>1 mark for smaller shadow</p> <p>1 mark for any change in position of shadow</p>

Question	Answer	Marks	Further Information
12(a)	<p>any one from</p> <p>Does the lamp not work? / Does the lamp work?</p> <p>Does the lamp not come on? / Does the lamp come on?</p>	1	<p>Accept any correct question to determine if the material is an electrical insulator</p> <p>question mark not required</p>
12(b)	<p>any one from</p> <p>do not touch the lamp</p> <p>do not look directly at the lamp</p> <p>be careful when connecting crocodile clips</p>	1	<p>Accept any sensible safety precaution</p> <p>Ignore wear goggles / wear lab coat / tie hair back</p>

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