

Cambridge Primary Checkpoint

SCIENCE**0846/02**

Paper 2

April 2020

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme is published as an aid to teachers and learners, to indicate the requirements of the examination. However, we have not been able to adjust it to reflect the full range of answers that would have been seen as a part of the normal moderation and marking process, and it does not necessarily contain all the possible alternatives that might have arisen.

Cambridge will not enter into discussions about the mark scheme.

This document has **12** pages. Blank pages are indicated.

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
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

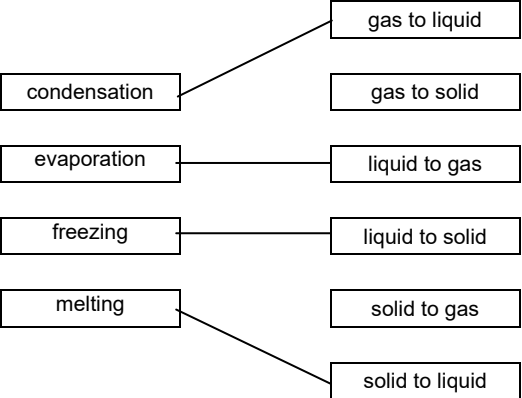
Question	Answer	Marks	Further Information
1(a)	reproduction / reproduce	1	
1(b)	<p style="text-align: center;">to collect light</p> <p style="text-align: center;">to collect water</p> <p style="text-align: center;">to help the tree grow</p> <p style="text-align: center;">to look pretty</p> <p style="text-align: center;">to make many seeds</p>	1	more than one answer circled = 0 marks

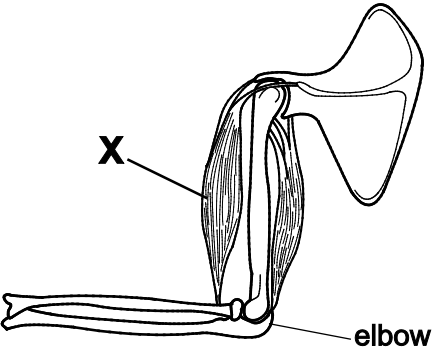
Question	Answer	Marks	Further Information																							
2	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">material</th> <th colspan="3">at room temperature material is a</th> </tr> <tr> <th>solid</th> <th>liquid</th> <th>gas</th> </tr> </thead> <tbody> <tr> <td>(carbon dioxide)</td> <td></td> <td></td> <td>(✓)</td> </tr> <tr> <td>gasoline</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>mercury</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>nitrogen</td> <td></td> <td></td> <td>✓</td> </tr> </tbody> </table>	material	at room temperature material is a			solid	liquid	gas	(carbon dioxide)			(✓)	gasoline		✓		mercury		✓		nitrogen			✓	3	<p>each correct row = 1 mark</p> <p>more than one tick for each material = 0 marks for that row</p>
material	at room temperature material is a																									
	solid	liquid	gas																							
(carbon dioxide)			(✓)																							
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nitrogen			✓																							

Question	Answer	Marks	Further Information
3	<p>We must recycle less/ more of our rubbish.</p> <p>We must increase/ reduce energy consumption.</p> <p>We must drop/ pick up litter.</p> <p>We must destroy/ protect habitats.</p> <p>We must clean pollute rivers.</p>	2	<p>all five correct = 2 marks</p> <p>three or four correct = 1 mark</p> <p>one or two correct = 0 marks</p>

Question	Answer	Marks	Further Information
4	<p>any two from</p> <p>thunder is always after lightning</p> <p>(idea of) the time difference between thunder and lightning varies</p> <p>the time for the thunder decreases then increases</p>	2	<p>each correct answer = 1 mark</p> <p>Accept any specific examples e.g. the shortest time difference between the lightning and thunder was at 11:09</p> <p>Accept the storm is moving closer then further away</p>

Question	Answer	Marks	Further Information
5	<p>A stem</p> <p>B leaf</p> <p>C root</p>	1	<p>all correct = 1 mark</p>

Question	Answer	Marks	Further Information
6	<p style="text-align: center;">process change of state</p> 	4	<p>every correct match = 1 mark</p> <p>if a process has been matched to more than one change of state then = 0 marks for that process</p>

Question	Answer	Marks	Further Information
7(a)	muscle(s)	1	Accept correctly named muscle
7(b)		1	

Question	Answer	Marks	Further Information
8(a)	does not dissolve (in water)	1	Ignore does not mix with the water
8(b)	any one from (idea that) the orange juice does not leak out/the plastic holds the orange juice the plastic does not dissolve into the orange juice	1	
8(c)	any one from non-poisonous does not break if dropped low density/light (weight) can be moulded into shape	1	Accept it is see-through
8(d)	it can break easily/shatters if dropped	1	Accept heavier

Question	Answer	Marks	Further Information										
9(a)	<table border="0"> <thead> <tr> <th>stage</th> <th>description</th> </tr> </thead> <tbody> <tr> <td>fertilisation</td> <td>insects move from flower to flower</td> </tr> <tr> <td>germination</td> <td>happens in the fruit</td> </tr> <tr> <td>seed production</td> <td>ovum and pollen meet</td> </tr> <tr> <td>pollination</td> <td>shoot and root begin to grow</td> </tr> </tbody> </table>	stage	description	fertilisation	insects move from flower to flower	germination	happens in the fruit	seed production	ovum and pollen meet	pollination	shoot and root begin to grow	3	<p>four correct = 3 marks</p> <p>two or three correct = 2 marks</p> <p>one correct = 1 mark</p>
stage	description												
fertilisation	insects move from flower to flower												
germination	happens in the fruit												
seed production	ovum and pollen meet												
pollination	shoot and root begin to grow												
9(b)	<p>(seed) dispersal</p> <p>eat the seeds/move the seeds from one place to another/seeds stick to their fur/(idea of) of egestion of seed</p>	2	each correct answer = 1 mark										

Question	Answer	Marks	Further Information
10(a)	A B C D (E)	1	more than one circled = 0 marks
10(b)	(A) B C D E	1	more than one circled = 0 marks
10(c)	light intensity meter	1	Accept other correct named pieces of equipment that may vary depending on location

Question	Answer	Marks	Further Information
11(a)	(plate B) (idea of) less fat	1	if plate A chosen = 0 marks Ignore healthier Accept more vitamins / more minerals Accept named vitamins e.g. contains vitamin C
11(b)	high in sugar	1	Accept medium salt

Question	Answer	Marks	Further Information										
12	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="padding: 5px;">The Earth spins on its axis. ✓</td> <td style="padding: 5px;">The Earth only spins in the morning.</td> <td style="padding: 5px;">The Earth orbits the Sun. (✓)</td> <td style="padding: 5px;">The Earth spinning on its axis causes day and night. ✓</td> <td style="padding: 5px;">The Earth takes 24 hours to orbit the Sun.</td> </tr> <tr> <td style="padding: 5px;">The Earth takes a year to spin on its axis.</td> <td style="padding: 5px;">The Earth moves very close to the Sun and then stops.</td> <td style="padding: 5px;">The Earth takes a year to orbit the moon.</td> <td style="padding: 5px;">The Earth takes 24 hours to spin on its axis. ✓</td> <td style="padding: 5px;">The Earth spins to the left and then to the right.</td> </tr> </table>	The Earth spins on its axis. ✓	The Earth only spins in the morning.	The Earth orbits the Sun. (✓)	The Earth spinning on its axis causes day and night. ✓	The Earth takes 24 hours to orbit the Sun.	The Earth takes a year to spin on its axis.	The Earth moves very close to the Sun and then stops.	The Earth takes a year to orbit the moon.	The Earth takes 24 hours to spin on its axis. ✓	The Earth spins to the left and then to the right.	3	each correct tick = 1 mark if more than three ticks are used, follow the guidance: four ticks, three correct = 2 marks four ticks, two correct = 1 mark five ticks, three correct = 1 mark other combinations of four or five ticks = 0 marks six or more ticks = 0 marks
The Earth spins on its axis. ✓	The Earth only spins in the morning.	The Earth orbits the Sun. (✓)	The Earth spinning on its axis causes day and night. ✓	The Earth takes 24 hours to orbit the Sun.									
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Question	Answer	Marks	Further Information
13(a)	3	1	Accept rabbit, weasel and owl
13(b)	2	1	Accept weasel and owl
13(c)	2	1	Accept rabbit and weasel

Question	Answer	Marks	Further Information
14(a)	air vibrate(s)/ air vibration	1	
14(b)	blow(s) harder	1	

Question	Answer	Marks	Further Information
15(a)	dissolves	1	
15(b)	colourless	1	Accept clear/transparent/white Ignore the same colour as water
15(c)	salt is soluble in water/salt is dissolved in the water	1	Accept idea that the salt passes through the (filter paper) with the water Accept because the salt has dissolved Do not accept because salt is very small it will go through the filter
15(d)	any two from heat the solution evaporate water a (white) solid is formed	2	Accept put the dish in the sun Accept boil Accept salt is left behind/salt is formed Accept heat to get a (white) residue = 2 marks

Question	Answer	Marks	Further Information
16(a)	cm	1	Accept mm
16(b)	faster it falls/quicker it falls/less time it takes (to fall)	1	Accept shorter the time
16(c)	4 (cm)	1	Accept 2.4
16(d)	<p>any two from</p> <p>number of paperclips / mass of model seed</p> <p>material of model seed</p> <p>amount of wind</p> <p>length of drop</p> <p>length of seed / width of seed</p> <p>shape of wings</p> <p>number of wings</p>	2	Accept other valid answers

Question	Answer	Marks	Further Information
17	Light comes from the Sun . This light hits the Earth and is reflected . This light reaches the astronaut on the Moon. The astronaut sees the Earth because the light enters her eyes .	2	three correct = 2 marks one or two correct = 1 mark