



**Cambridge Assessment
International Education**

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

Science Paper 2
Mark Scheme
Stage 3

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.

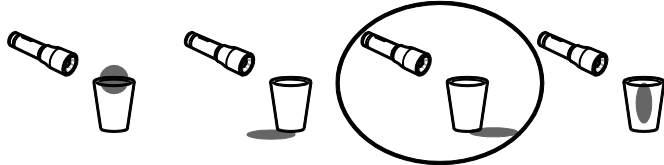
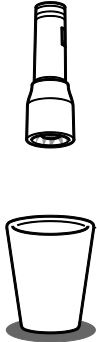
Answers may have words spelt incorrectly. Credit is normally given for phonetically correct answers, unless the word has a scientifically different meaning. For example, where the answer should be antennae, credit will be given for antenna but not for anthen (too close to anther).

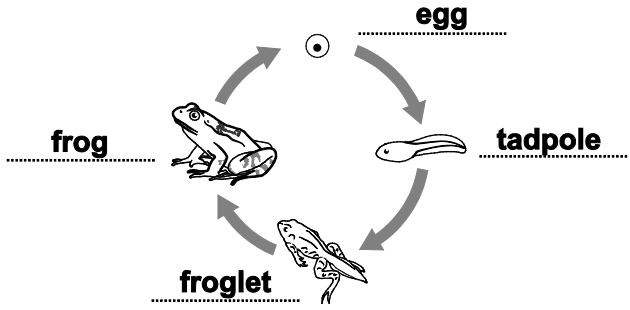
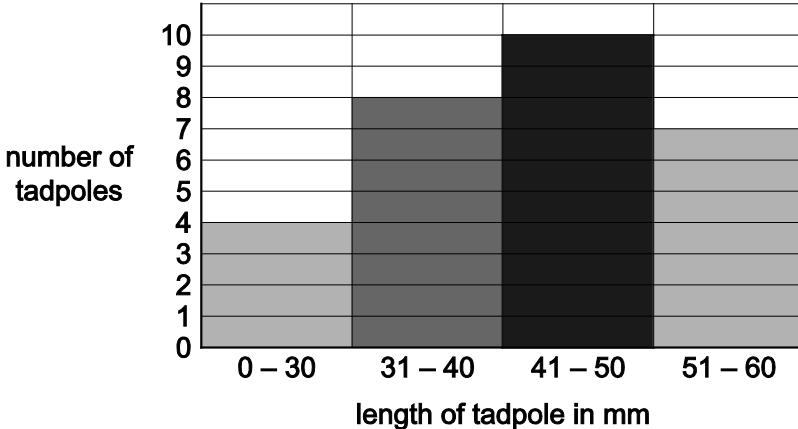
Only the science is being assessed so answers do not need to be grammatically correct. Significant figures will be indicated in the question or in the mark scheme.

Unless specified all marking points are independent.

Annotations and abbreviations

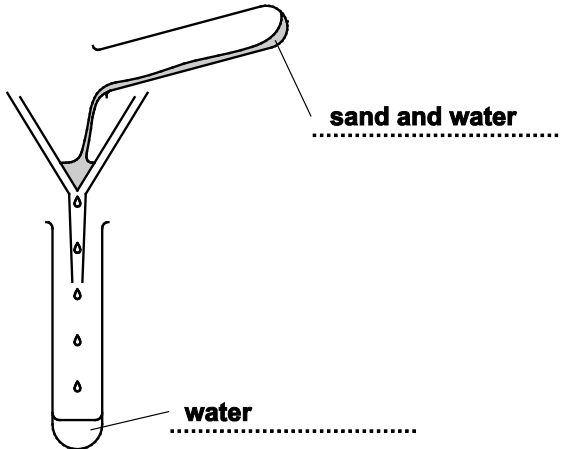
/ OR	alternate responses for the same marking point
() brackets	the words or units in brackets do not need to be stated, for example, (recycles or releases or provides) minerals = minerals scores the mark
<u>Underline</u>	exact word is required
Accept	an acceptable response
Do not accept	indicates an 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)	balance forcemeter magnet ruler	1	more than one answer circled = 0 marks Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence
1(b)	friction gravity magnetism mass	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)		1	more than one answer circled = 0 marks Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence
2(b)		1	Ignore the size of the shadow

Question	Answer	Marks	Further Information										
3(a)	 <p>The diagram illustrates the life cycle of a frog in a circular flow. At the top is an egg. An arrow points clockwise to a tadpole. Another arrow points clockwise to a froglet. A final arrow points clockwise to a frog. From the frog, an arrow points back to the egg, completing the cycle.</p>	1	all correct = 1 mark										
3(b)	 <p>The bar chart shows the number of tadpoles for four different length ranges in millimeters. The vertical axis is labeled 'number of tadpoles' and ranges from 0 to 10. The horizontal axis is labeled 'length of tadpole in mm' and has four categories: 0-30, 31-40, 41-50, and 51-60. The bars represent the following counts: 0-30 mm has 4 tadpoles, 31-40 mm has 8 tadpoles, 41-50 mm has 10 tadpoles, and 51-60 mm has 7 tadpoles.</p> <table border="1"> <thead> <tr> <th>length of tadpole in mm</th> <th>number of tadpoles</th> </tr> </thead> <tbody> <tr> <td>0 – 30</td> <td>4</td> </tr> <tr> <td>31 – 40</td> <td>8</td> </tr> <tr> <td>41 – 50</td> <td>10</td> </tr> <tr> <td>51 – 60</td> <td>7</td> </tr> </tbody> </table>	length of tadpole in mm	number of tadpoles	0 – 30	4	31 – 40	8	41 – 50	10	51 – 60	7	1	both bars correct = 1 mark
length of tadpole in mm	number of tadpoles												
0 – 30	4												
31 – 40	8												
41 – 50	10												
51 – 60	7												
3(c)	Most of the tadpoles have a length of 41 mm to 50 mm.	1	both numbers correct, either order ecf from bar chart										

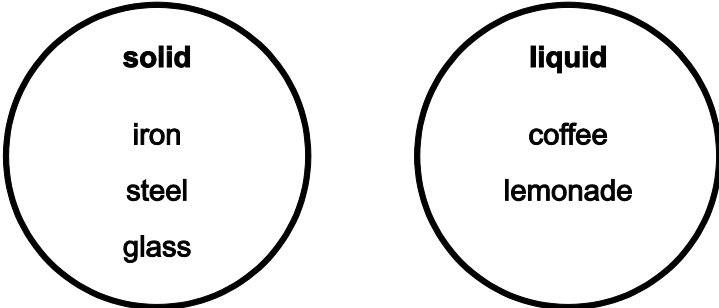
Question	Answer	Marks	Further Information
4(a)	pick the dull ones out/ pick the shiny ones out	1	
4(b)	sieve	1	Accept pick the small ones out /pick the large ones out

Question	Answer	Marks	Further Information										
5	<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">material</th> <th style="text-align: left;">use</th> </tr> </thead> <tbody> <tr> <td style="border: 1px solid black; padding: 5px;">natural gas</td> <td style="border: 1px solid black; padding: 5px;">to build houses and roads</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">metal</td> <td style="border: 1px solid black; padding: 5px;">for cooking and heating</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">oil</td> <td style="border: 1px solid black; padding: 5px;">to make car bodies and jewellery</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">stone</td> <td style="border: 1px solid black; padding: 5px;">to make gasoline, medicines and plastic</td> </tr> </tbody> </table>	material	use	natural gas	to build houses and roads	metal	for cooking and heating	oil	to make car bodies and jewellery	stone	to make gasoline, medicines and plastic	2	<p>four lines correct = 2 marks</p> <p>one, two or three lines correct = 1 mark</p> <p>if two lines from a material, and one is incorrect = 0 marks for this material</p>
material	use												
natural gas	to build houses and roads												
metal	for cooking and heating												
oil	to make car bodies and jewellery												
stone	to make gasoline, medicines and plastic												

Question	Answer	Marks	Further Information
6(a)	The animal is a bird because it has feathers/wings/a beak	1	bird and feature needed for one mark Accept lays eggs any incorrect feature = 0 marks
6(b)	This animal is a type of insect because it has six legs / three body parts / an exoskeleton / antennae	1	insect and feature needed for one mark any incorrect feature = 0 marks Ignore named insects e.g. ant
Question	Answer	Marks	Further Information
7(a)		2	each correct label = 1 mark Accept wet sand Accept filtrate
7(b)	Sand does not dissolve in the water. Wet sand contains a small amount of water. Wet sand can be dried by heating .	2	each correct answer = 1 mark Accept allowing the water to evaporate

Question	Answer	Marks	Further Information												
8(a)	<p>any two from</p> <p>put the magnet near the object</p> <p>if it attracts it is magnetic</p> <p>if it does not attract it is not magnetic</p>	2	<p>Accept it is magnetic if it sticks to the magnet</p> <p>Accept it does not stick to the magnet</p>												
8(b)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">magnetic objects</th> <th style="text-align: left;"><u>not</u> magnetic objects</th> </tr> </thead> <tbody> <tr> <td>spoon</td> <td>egg cup</td> </tr> <tr> <td>key</td> <td>plastic toy</td> </tr> <tr> <td>paper clip</td> <td>chalk</td> </tr> <tr> <td></td> <td>pen</td> </tr> <tr> <td></td> <td>rock</td> </tr> </tbody> </table>	magnetic objects	<u>not</u> magnetic objects	spoon	egg cup	key	plastic toy	paper clip	chalk		pen		rock	1	<p>all correct any order = 1 mark</p> <p>Accept shortened names e.g. cup/toy</p> <p>Accept correct answer anywhere in the question but answer in the table takes precedence</p>
magnetic objects	<u>not</u> magnetic objects														
spoon	egg cup														
key	plastic toy														
paper clip	chalk														
	pen														
	rock														

Question	Answer	Marks	Further Information
9	any number between 13 and 29 inclusive	1	

Question	Answer	Marks	Further Information
10(a)	 <p>solid iron steel glass</p> <p>liquid coffee lemonade</p>	1	all correct, any order = 1 mark
10(b)	more than two colours / all different colours	1	

Question	Answer	Marks	Further Information						
11(a)	<p>any one from</p> <p>large leaves / many leaves</p> <p>spread out</p> <p>upright</p>	1	Accept it has flowers						
11(b)	<table border="1"> <tr> <td>plant after 10 days</td> </tr> <tr> <td>(healthy)</td> </tr> <tr> <td>not healthy</td> </tr> <tr> <td>not healthy</td> </tr> <tr> <td>not healthy</td> </tr> <tr> <td>not healthy</td> </tr> </table>	plant after 10 days	(healthy)	not healthy	not healthy	not healthy	not healthy	2	<p>four correct = 2 marks</p> <p>two or three correct = 1 mark</p> <p>one correct = 0 marks</p>
plant after 10 days									
(healthy)									
not healthy									
not healthy									
not healthy									
not healthy									

Question	Answer	Marks	Further Information
12(a)	(idea that) Mike turns / spins / rotates	1	
12(b)	size / shape	1	

Question	Answer	Marks	Further Information
13(a)	What is the temperature of the floor? What colour is the car? What is the size of the floor? What distance does the car travel?	1	more than one answer circled = 0 marks Accept any indication of the correct answer, e.g. ticking or underlining but circling takes precedence
13(b)	to compare the measurements	1	