



**Cambridge Assessment**  
International Education

# **Cambridge Primary Progression Test**

## **Science 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.

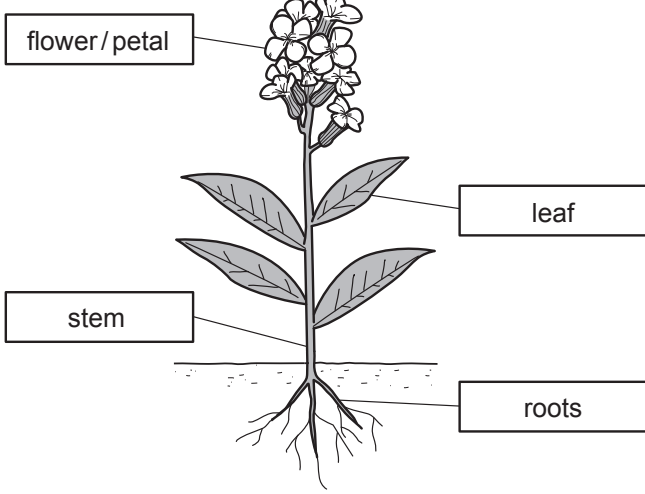
Significant figures will be indicated in the question or in the mark scheme.

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
<b>Accept</b>	an acceptable response
<b>Do not accept</b>	indicates an incorrect response that would contradict another otherwise correct alternative
<b>Ignore</b>	indicates an irrelevant answer that is not creditworthy. Full marks can still be achieved even with answers that are ignored.
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

## Stage 3 Paper 1 Mark scheme

Question	1		
Part	Mark	Answer	Further Information
	1		<p>all correct = 1 mark</p> <p><b>Do not accept</b> stalk for stem</p>
<b>Total</b>	<b>1</b>		

Question	2																						
Part	Mark	Answer	Further Information																				
	3	<table border="1"> <thead> <tr> <th rowspan="2">material and object</th> <th colspan="3">property of material</th> </tr> <tr> <th>is it flexible?</th> <th>is it hard?</th> <th>is it transparent?</th> </tr> </thead> <tbody> <tr> <td>glass window</td> <td><b>no</b></td> <td><b>yes</b></td> <td><b>yes</b></td> </tr> <tr> <td>wool clothes</td> <td><b>yes</b></td> <td>(no)</td> <td><b>no</b></td> </tr> <tr> <td>plastic bag</td> <td><b>yes</b></td> <td><b>no</b></td> <td>(yes)</td> </tr> </tbody> </table>	material and object	property of material			is it flexible?	is it hard?	is it transparent?	glass window	<b>no</b>	<b>yes</b>	<b>yes</b>	wool clothes	<b>yes</b>	(no)	<b>no</b>	plastic bag	<b>yes</b>	<b>no</b>	(yes)	<p>seven correct = 3 marks</p> <p>five or six correct = 2 marks</p> <p>three or four correct = 1 mark</p> <p>one or two correct = 0 marks</p>	
material and object	property of material																						
	is it flexible?	is it hard?	is it transparent?																				
glass window	<b>no</b>	<b>yes</b>	<b>yes</b>																				
wool clothes	<b>yes</b>	(no)	<b>no</b>																				
plastic bag	<b>yes</b>	<b>no</b>	(yes)																				
<b>Total</b>	<b>3</b>																						

Question	3		
Part	Mark	Answer	Further Information
(a)	1	forcemeter	<b>Accept</b> Newton meter
(b)	2	(decrease) take the bag off / (put hand under bag and) push bag up  (increase) add another bag / pull the bag (downward)	any correct decrease, e.g. take something out of the bag / idea of using a lighter bag = 1 mark  <b>Ignore</b> smaller bag  any correct increase, e.g. put something into the bag / idea of using heavier bag = 1 mark  <b>Ignore</b> larger bag
<b>Total</b>	<b>3</b>		

Question	4		
Part	Mark	Answer	Further Information
	2	<b>any two from</b>  nutrition / eat / feed  growth / get bigger  movement / swim  reproduction / produces offspring / has babies / lays eggs	<b>Accept</b> respire <b>Accept</b> excrete <b>Accept</b> sensitivity  <b>Ignore</b> breathe
<b>Total</b>	<b>2</b>		

Question	5		
Part	Mark	Answer	Further Information
(a)	1	E	
(b)	2	A, B and E	<p>all <b>three</b> correct in any order = 2 marks</p> <p><b>two</b> correct and <b>one</b> incorrect = 1 mark</p> <p><b>one</b> correct = 0 marks</p> <p><b>two</b> correct and <b>two</b> or <b>three</b> incorrect = 0 marks</p>
<b>Total</b>	<b>3</b>		

Question	6		
Part	Mark	Answer	Further Information
(a)	1	use force	<p><b>Accept</b> push</p> <p><b>Ignore</b> move forward</p>
(b)	2	<p><b>any two from</b></p> <p>use more force</p> <p>lift her feet up / have less friction</p> <p>make the slide smooth(er) / make the slide slippery</p> <p>make her clothes smooth(er)</p> <p>make the slide steeper</p>	<p><b>Accept</b> push harder / get someone to push her</p> <p><b>Ignore</b> shuffle forward</p> <p><b>Accept</b> any method of making the slide smoother or slippery, e.g. add oil</p> <p><b>Accept</b> any method of making the clothes smoother, e.g. wear silk</p> <p><b>Accept</b> use a taller slide</p>
<b>Total</b>	<b>3</b>		

Question	7		
Part	Mark	Answer	Further Information
(a)	1	touch	<b>Accept</b> feel(ing)
(b)	1	(pattern) for other letters / (pattern) for the alphabet	<b>Accept</b> (pattern) for all the letters
<b>Total</b>	<b>2</b>		

Question	8		
Part	Mark	Answer	Further Information
(a)	1	<p>to answer questions</p> <p><b>to make a fair test</b></p> <p>to make a prediction</p> <p>to observe</p> <p>to present results</p>	<p>more than one answer circled = 0 marks</p> <p><b>Accept</b> any indication of the correct answer, e.g. underlining or ticking</p>
(b)	1	<p>changes colour</p> <p>changes mass</p> <p><b>changes shape</b></p> <p>changes taste</p> <p>changes weight</p>	<p>more than one answer circled = 0 marks</p> <p><b>Accept</b> any indication of the correct answer, e.g. underlining or ticking</p>
<b>Total</b>	<b>2</b>		

Question	9		
Part	Mark	Answer	Further Information
	2	aluminium <input type="checkbox"/> copper <input type="checkbox"/> iron <input checked="" type="checkbox"/> plastic <input type="checkbox"/> steel <input checked="" type="checkbox"/> wood <input type="checkbox"/>	each correct tick = 1 mark  <b>three</b> ticks, two correct = 1 mark  <b>two</b> incorrect ticks = 0 marks
<b>Total</b>	<b>2</b>		

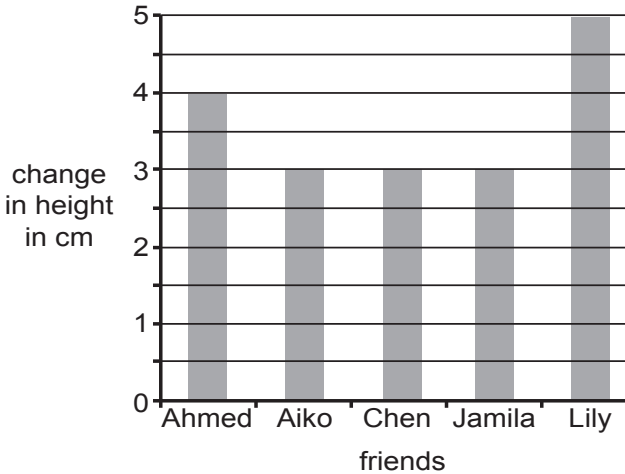
Question	10						
Part	Mark	Answer	Further Information				
(a)	2	<table border="1"> <thead> <tr> <th>healthy</th> <th>can damage our health</th> </tr> </thead> <tbody> <tr> <td>(apple) <b>banana</b> <b>chicken</b> <b>rice</b></td> <td><b>cake</b> <b>chocolate</b> <b>fried potato</b></td> </tr> </tbody> </table>	healthy	can damage our health	(apple) <b>banana</b> <b>chicken</b> <b>rice</b>	<b>cake</b> <b>chocolate</b> <b>fried potato</b>	<b>six</b> correct = 2 marks  <b>four</b> or <b>five</b> correct = 1 mark  <b>three</b> or less correct = 0 marks
healthy	can damage our health						
(apple) <b>banana</b> <b>chicken</b> <b>rice</b>	<b>cake</b> <b>chocolate</b> <b>fried potato</b>						
(b)	2	sugar fat	<b>Accept</b> salt / additives / colourings / nuts				
(c)	1	vitamins / minerals	<b>Accept</b> named examples  <b>Accept</b> fibre				
<b>Total</b>	<b>5</b>						

Question	11		
Part	Mark	Answer	Further Information
(a)	1	A B C D <b>E</b>	more than one answer = 0 marks  <b>Accept</b> any indication of the correct answer, e.g. underlining and ticking
(b)	1	<b>A and B</b> B and C B and D C and D D and E	more than one answer = 0 marks  <b>Accept</b> any indication of the correct answer, e.g. underlining and ticking
<b>Total</b>	<b>2</b>		

Question	12		
Part	Mark	Answer	Further Information
	2	Water travels up the plant through the <b>stem</b> .  If the plant does not get water it will <b>wilt / die</b> .	each correct sentence = 1 mark
<b>Total</b>	<b>2</b>		

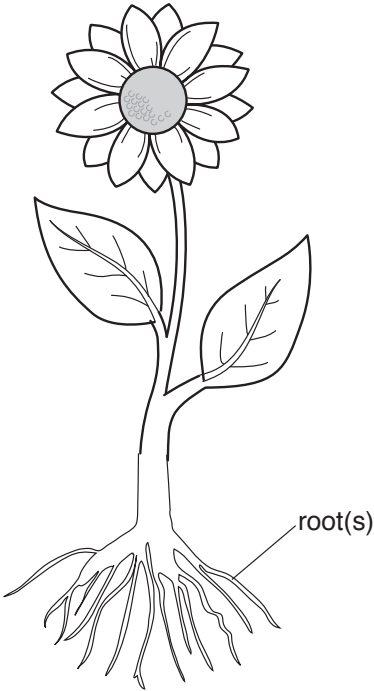


Question	13													
Part	Mark	Answer		Further Information										
(a)	1	gets longer / stretches / thinner		<b>Accept</b> any change of shape that shows there has been an increase in length or decrease in width										
(b)	1	<table border="1"> <thead> <tr> <th>rubber band</th> <th>number of masses added</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><b>2</b></td> </tr> <tr> <td>2</td> <td><b>3</b></td> </tr> <tr> <td>3</td> <td><b>2</b></td> </tr> <tr> <td>4</td> <td><b>3</b></td> </tr> </tbody> </table>		rubber band	number of masses added	1	<b>2</b>	2	<b>3</b>	3	<b>2</b>	4	<b>3</b>	<b>all correct = 1 mark</b>  <b>Do not accept</b> any words next to the numbers in the table
rubber band	number of masses added													
1	<b>2</b>													
2	<b>3</b>													
3	<b>2</b>													
4	<b>3</b>													
(c)	1	<p>the highest mass is 2</p> <p>the lowest mass is 3</p> <p>the total mass is 6</p> <p><b>the masses are different</b></p> <p>the masses are the same</p>		more than one answer = 0 marks  <b>Accept</b> any indication of the correct answer, e.g. ticking or underlining										
<b>Total</b>	<b>3</b>													

Question	14									
Part	Mark	Answer			Further Information					
(a)	1	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Rajiv</td> <td>boy</td> <td><b>110</b></td> <td><b>114</b></td> <td><b>4</b></td> </tr> </table>			Rajiv	boy	<b>110</b>	<b>114</b>	<b>4</b>	all correct = 1 mark
Rajiv	boy	<b>110</b>	<b>114</b>	<b>4</b>						
(b)	1	Lily			Accept ecf from 1(a)					
(c)	1	(boys) are taller			assume answer refers to boys but <b>accept</b> ora if girls are specified, e.g. girls are shorter					
(d)	2	Bars drawn at 3 (Chen), 3 (Jamila) and 5 (Lily) 			all correct = 2 marks  one or two correct = 1 mark  Ignore any bar drawn for Rajiv					
<b>Total</b>	<b>5</b>									

Question	15				
Part	Mark	Answer			Further Information
(a)	1	is it strong? / strength			Accept all are strong / the others are weak
(b)	1	<b>A, C, D, F and G</b>			all correct = 1 mark  Accept all except <b>B</b> and <b>E</b>
<b>Total</b>	<b>2</b>				

## Stage 3 Paper 2 Mark scheme

Question	1		
Part	Mark	Answer	Further Information
	1		roots drawn <b>and</b> labelled = 1 mark  <b>Accept</b> any roots drawn from bottom of stem
<b>Total</b>	<b>1</b>		

Question	2		
Part	Mark	Answer	Further Information
	2	<b>push pull</b> (push) <b>pull pull pull</b>	<b>five</b> correct = 2 marks  <b>three</b> or <b>four</b> correct = 1 mark  <b>one</b> or <b>two</b> correct = 0 marks
<b>Total</b>	<b>2</b>		

Question	3		
Part	Mark	Answer	Further Information
(a)	1	<b>blue</b> green red white yellow	more than one answer circled = 0 marks  <b>Accept</b> any indication of the correct answer, e.g. underlining or ticking
(b)	1	flower leaf root <b>stem</b>	more than one answer circled = 0 marks  <b>Accept</b> any indication of the correct answer, e.g. underlining or ticking
(c)	1	root	<b>Accept</b> root hairs
<b>Total</b>	<b>3</b>		

Question	4		
Part	Mark	Answer	Further Information
(a)	1	faster / increases	<b>Accept</b> higher / greater / accelerates
(b)	1	friction	
<b>Total</b>	<b>2</b>		

Question	5		
Part	Mark	Answer	Further Information
(a)	1	strongest / very strong	<b>Ignore</b> hard / does not dissolve in water  <b>Do not accept</b> high melting point / conducts heat
(b)	2	high melting point  good heat conductor	each reason = 1 mark  <b>Accept</b> does not dissolve in water  <b>Ignore</b> strong / hard
(c)	2	<b>D</b> (circled, written or ticked)  soft <b>or</b> does not dissolve in water	second mark is dependent on the correct choice of material ( <b>D</b> )
<b>Total</b>	<b>5</b>		

Question	6		
Part	Mark	Answer	Further Information
(a)	1	The tallest plant is <b>10</b> cm from the window.	
(b)	1	This plant grows the tallest because it gets <b>most light / most sun / most sunlight.</b>	<b>Accept</b> more sun, etc.  <b>Ignore</b> it is closest to the window  <b>Do not accept</b> just light / sun / sunlight unqualified
<b>Total</b>	<b>2</b>		

Question	7		
Part	Mark	Answer	Further Information
(a)	1	The ball that is thrown down with the biggest force is ball <b>A</b> .  I know this because it <b>bounces higher / makes a bigger splash</b> .	
(b)	2	(idea that there is) friction  (idea that) friction acts against movement  <b>or</b>  ball absorbs water so ball becomes heavier	reason = 1 mark  explanation = 1 mark  <b>Accept</b> higher level answers, e.g. energy is lost = 1 mark energy is lost to the water = 2 marks
<b>Total</b>	<b>3</b>		

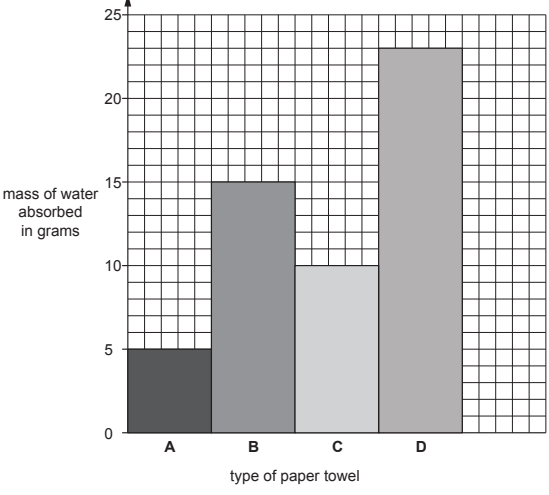
Question	8		
Part	Mark	Answer	Further Information
	3	<p>attracted to a magnet <input checked="" type="checkbox"/></p> <p>hard <input checked="" type="checkbox"/></p> <p>high melting point <input checked="" type="checkbox"/></p> <p>low boiling point <input type="checkbox"/></p> <p>pink <input type="checkbox"/></p> <p>weak <input type="checkbox"/></p>	<p>each correct tick = 1 mark</p> <p><b>four ticks three</b> correct = 2 marks</p> <p><b>four ticks two</b> correct = 1 mark</p> <p><b>three ticks incorrect</b> = 0 marks</p>
<b>Total</b>	<b>3</b>		

Question	9		
Part	Mark	Answer	Further Information
(a)	2	The balloon <b>starts to move / moves.</b>  This happens because <b>air is pushed out / air leaves (the balloon) / there is a force.</b>	each correct sentence = 1 mark  <b>Accept</b> idea of pressurised air
(b)	1	(idea that it) will move less / not move	<b>Accept</b> have less force  <b>Accept</b> moves slower
(c)	1	colour  <b>distance</b>  smell  taste  temperature	more than one answer = 0 marks  <b>Accept</b> any indication of the correct answer
<b>Total</b>	<b>4</b>		

Question	10		
Part	Mark	Answer	Further Information
	3	gold – <b>shiny / solid / hard</b>  salt – <b>dissolves (in water) / (forms) crystals / white / solid</b>  wool – <b>flexible / can be made into fibres / soft / solid / stretchy</b>	<b>Accept</b> conducts heat / conducts electricity / flexible / strong / non-magnetic  <b>Ignore</b> gold colour / expensive  <b>Ignore</b> edible  <b>Ignore</b> colour
<b>Total</b>	<b>3</b>		

Question	11		
Part	Mark	Answer	Further Information
(a)	1	60 70 80 90 <b>100</b>	more than one answer circled = 0 marks  <b>Accept</b> any indication of the correct answer, e.g. underlining or ticking
(b)	2	<b>any two from</b> exercise for the same length of time exercise for the same distance take the pulse rate at the same time after exercise same (type of) exercise	each correct answer = 1 mark  <b>Accept</b> same (amount of) time  <b>Accept</b> examples of same type of exercise, e.g. both run
(c)	1	<b>once a day</b>  once an hour  once a month  once a week  once a year	more than one answer circled = 0 marks  <b>Accept</b> any indication of the correct answer, e.g. underlining or ticking
<b>Total</b>	<b>4</b>		



Question	12		
Part	Mark	Answer	Further Information
(a)	1	Correct bar drawn  <p>mass of water absorbed in grams</p> <p>type of paper towel</p>	no need for the bar to be coloured in
(b)	1	D B C A	all correct = 1 mark
<b>Total</b>	<b>2</b>		

Question	13		
Part	Mark	Answer	Further Information
(a)	2	butterfly    duck    eagle	any order  all correct = 2 marks  two correct = 1 mark
(b)	1	(animals that have) no legs	
<b>Total</b>	<b>3</b>		

Question	14		
Part	Mark	Answer	Further Information
(a)	1	nose	
(b)	1	wilted / lost water	<b>Accept</b> drooped <b>Accept</b> dehydrated
(c)	1	water the plant	<b>Ignore</b> put it in the sun / put it in the light / feed it
<b>Total</b>	<b>3</b>		