

Cambridge Primary Checkpoint

SCIENCE**0097/02**

Paper 2

May 2026

MARK SCHEME

Maximum Mark: 40

Published

Before they start marking, examiners complete a standardisation process. They review a range of candidate responses and discuss the mark scheme in detail to agree which answers can and cannot be accepted. Examiners award marks where it is clear that candidate responses have met the requirements of the mark scheme. These requirements may vary between different components or different versions of the same component, depending on the exact requirements of the question and the candidate responses seen during the standardisation process.

Sometimes, our mark schemes may allow marks to be awarded to responses which contain elements that are factually incorrect or for content not covered by the curriculum. We do this in response to the demands of a specific question to support candidates and make sure that our assessments are fair. However, these allowances should not be used as a guide for teaching and learning.

We cannot discuss the mark scheme with schools, and we recommend that schools read the mark scheme together with the assessment material and End of Series Report for Teachers.

This document has **22** pages. Any 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
<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)	prediction	1	Accept any indication of the correct mark, e.g. ticking or underlining, but circling takes precedence more than one answer circled = 0 marks
1(b)	lung(s)	1	Ignore air sacs or alveoli
1(c)	it produces mucus (to trap bacteria)	1	Accept mucus in any part of the respiratory system, e.g. mucus in the trachea Accept cilia or nose hair or white blood cells or antibodies or (idea of) good bacteria or (reflex of) coughing or sneezing Ignore just 'blood cells' or the immune system or just 'hairs' or saliva Do not accept mucus/cilia/white blood cells/antibodies/(good) bacteria in any part of the body outside the respiratory system, e.g. mucus in the oesophagus Do not accept skin or (stomach) acid or tears

Question	Answer	Marks	Further Information															
2	<table><tr><th>pulling force P in N</th><th>force F in N</th><th>what happens to the box</th></tr><tr><td>10</td><td>(10)</td><td>(the box) does not move</td></tr><tr><td>20</td><td>(20)</td><td>(the box) does not move</td></tr><tr><td>30</td><td>21–29</td><td>(the box just starts to move)</td></tr><tr><td>40</td><td>(30)</td><td>(idea that box) moves easily</td></tr></table>	pulling force P in N	force F in N	what happens to the box	10	(10)	(the box) does not move	20	(20)	(the box) does not move	30	21–29	(the box just starts to move)	40	(30)	(idea that box) moves easily	3	rows one and two correct = 1 mark row three correct = 1 mark row four correct = 1 mark rows one and two: Accept stationary or still or nothing or stays put or no speed or 0 speed or stays the same speed or constant speed Ignore (forces will be) balanced Do not accept moves at the same speed or travels at the same speed or goes at the same speed row three: Accept any number in the inclusive range 21–29 row four: Accept just ‘moves’ or moves (but not much) or keeps moving or it slides or goes towards P or it is dragged across the surface or it is pulled along or moves faster or speeds up or (starts to move) more quickly or accelerates Ignore just ‘starts to move’ or starts to be pulled or gets easier to pull or starts to move slowly Ignore direction of movement Ignore answers just about forces e.g. just ‘it is pulled’ or just ‘it is dragged’
pulling force P in N	force F in N	what happens to the box																
10	(10)	(the box) does not move																
20	(20)	(the box) does not move																
30	21–29	(the box just starts to move)																
40	(30)	(idea that box) moves easily																

Question	Answer	Marks	Further Information
3(a)	sodium bicarbonate	1	Accept (bi)carbonate (of sodium/soda) or sodium (bicarbonate) Do not accept extra substances, e.g. water or lemon or juice
3(b)	bubbles temperature	2	each correct answer = 1 mark Ignore carbon dioxide or gas Accept °C or °C or degrees C or centigrade or Celsius Ignore just 'C' or just ° or degrees or 0° or K or F Ignore heat or energy or thermometer
3(c)	chemical	1	Accept irreversible Do not accept physical or reversible

Question	Answer		Marks	Further Information									
4	<table><tr><td>Moon</td><td>appearance</td></tr><tr><td>waxing crescent</td><td></td></tr><tr><td>first quarter Moon</td><td></td></tr><tr><td>waning gibbous</td><td></td></tr><tr><td>third quarter Moon</td><td></td></tr></table>	Moon	appearance	waxing crescent		first quarter Moon		waning gibbous		third quarter Moon		2	all four correct = 2 marks two or three correct = 1 mark one correct = 0 marks Accept answers drawn on diagram, but table takes precedence Accept dark part of moon hatched or striped to indicate shading Note there must be a clear contrast between the lit and unlit parts of the Moon with waxing crescent look for darker shading on the right with more shaded than not shaded and correct crescent shape by eye first quarter Moon look for darker shading on the right with half shaded by eye waning gibbous look for darker shading on the left with more not shaded than shaded and correct crescent shape by eye third quarter Moon look for darker shading on the left with half shaded by eye
Moon	appearance												
waxing crescent													
first quarter Moon													
waning gibbous													
third quarter Moon													

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5(b)	observing over time	1	Accept any indication of the correct mark, e.g. ticking or underlining, but circling takes precedence more than one answer circled = 0 marks
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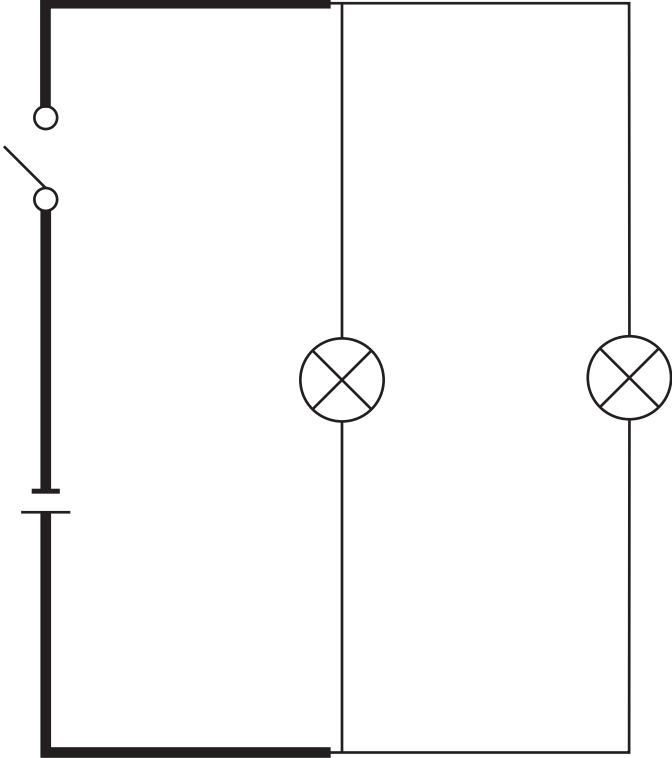
5(c)	the toxic substance transfers to animals that eat the weed(s)/plant(s)/crop(s) eagles eat animals which contain the toxic substance	2	each correct answer = 1 mark Accept consume for eats Accept herbivores or named animals e.g. rabbit or mouse for animals Ignore organisms for animals Accept substance or toxin or poison or chemical or spray or weedkiller or herbicide or pesticide for toxic substance Ignore food chains Accept animals eat the toxic/contaminated/infected weed(s)/plant(s)/crop(s) Ignore the animals eat the toxic substance Do not accept carnivores for animals Do not accept eagles eat the weed(s)/plant(s)/crop(s) or toxic substance Accept carnivore for eagle Note eagles eat animals that eat weed(s)/plant(s)/crop(s) = 1 mark Note eagles eat animals that eat the toxic weed(s)/plant(s)/crop(s) = 2 marks Note the prey of the eagles eats the toxic weed(s)/plant(s)/crop(s) = 2 marks Ignore toxic substance passes through food web/chain or weeds/plants/crops absorb the toxic substance or bioaccumulation or biomagnification or eagles get sprayed
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Question	Answer				Marks	Further Information
6		boiling only	evaporation only	both boiling and evaporation	2	all 3 columns correct = 2 marks 1 or 2 columns correct = 1 mark
	change of state			✓		
	only happens on the surface		✓			
	makes bubbles	✓				
	only happens at one temperature	✓				

Question	Answer	Marks	Further Information
7(a)	sand organic	1	both correct for the mark Note any order Accept named organic matter, e.g. humus or manure or compost Accept for one of the answers: air or oxygen or water or moist(ure) or minerals or silt or lime Ignore clay or pH or nutrients or mud or loam or gas or (other) named gases, e.g. carbon dioxide

7(b)	any two from	1	both correct for the mark Do not accept use same type of soil or use same type of compost Ignore just observation of difference, e.g. B has more seeds Accept pot for container Accept same type of container or containers are the same/identical Ignore use the same container (for both soils) Accept makes the seeds identical/same or same size of seed or same shape of seed Ignore use the same seed(s) Accept same amount of seeds or same mass of seeds Accept a stated number, e.g. use 10 seeds Accept use same depth of soil or use same surface area soil Accept use same amount of water Accept use same amount of (sun)light
	use same size container		
	use same type of seed		
	use same number of seeds		
	use same spacing of seeds		
	use same amount of soil		
	use same volume of water		
	use same temperature		
	use same light intensity		
	use same place		

Question	Answer	Marks	Further Information								
8(a)	<table><tr><th>component</th><th>symbol</th></tr><tr><td>cell</td><td></td></tr><tr><td>lamp</td><td></td></tr><tr><td>open switch</td><td></td></tr></table>	component	symbol	cell		lamp		open switch		2	all three correct = 2 marks one or two correct = 1 mark Note connecting wires are not required, e.g.  is correct for the lamp Accept + or – anywhere on cell, e.g.  Do not accept lines through the cell or the lamp or the open switch, e.g.    Do not accept battery symbol, e.g.  Accept for lamp  Do not accept for lamp  Accept filled in circles or no circles for switch Accept for open switch, e.g.   Ignore for open switch  Do not accept closed switch for open switch, e.g. 
component	symbol										
cell											
lamp											
open switch											

8(b)		2	Note series circuit = 0 marks evidence of lamps in parallel using symbols for one cell, one (open/closed) switch and two lamps from (a) = 1 mark switch in the correct place, anywhere along the thicker connecting wires lines on diagram, to turn on both lamps at the same time = 1 mark Note the switch must not be across the junction Accept ecf from part (a) Accept lines through symbols (even if drawn without the lines through the symbols in (a)), e.g.  Accept for lamp  Ignore (small) gaps in the circuit Ignore extra branches
8(c)	(the lamps stay the) same (brightness)	1	Accept does not change Ignore equal to each other or it will still be bright or they stay bright or nothing (happens)

Question	Answer	Marks	Further Information
9	any two from bacteria fungi viruses	2	each correct answer = 1 mark Ignore named bacteria or fungi or viruses or parasites, e.g. E. coli or ringworm or HIV Accept yeasts or moulds Accept for one of the answers: protozoa or protist or amoeba Ignore parasite or vector or pathogen or mosquito or insect or germs or named disease

Question	Answer	Marks	Further Information
10(a)	fossil	1	Accept shell or ammonite Ignore just 'cast' or trace or (sedimentary/metamorphic) rock Do not accept igneous (rock)
10(b)	(idea that the real process) takes a longer period of time	1	Accept named amount of time longer than a day, e.g. takes years Accept ora, e.g. he made this quick(er) or he does it quickly Note for other differences the answer must be comparative: Accept other differences, e.g. minerals replace bones (instead of glue) or no rotting or rock forms around shell (rather than being pushed into it) or he is not burying it or (idea of) there is no erosion/weathering (as he has removed the shell) or he is only showing part of the process Ignore he didn't make his from a living thing Ignore non comparative statements, e.g. he uses glue or he uses artificial materials or he removes the shell

Question	Answer			Marks	Further Information
11(a)	solid	how much solid dissolves in hot water in g	how much solid dissolves in cold water in g	1	all correct for the mark Do not accept units in body of table
	A	40	32		
	B	85	68		
	C	64	25		
	D	42	37		
11(b)	16 (°C)			1	Accept 16.0 (°C) Do not accept –16 (°C)
11(c)	(idea that end of the) thermometer is not in the water			1	Accept liquid for water Accept the thermometer is in the air Ignore she is holding the thermometer in the wrong way or needs to add more water to the beaker or the thermometer needs to go down or she has not put the thermometer in fully

11(d)	particles have less/low energy particles move slow(er) or particles spread slow(er)	2 each correct answer = 1 mark Note answer must be about cold water, e.g. just ‘particles have more energy in hot water’ or ‘particles move faster in hot water and the opposite in cold water’ is not sufficient Accept molecules for particles throughout answer Accept kinetic/thermal/heat energy for energy Accept particles do not get enough energy or particles gain less energy Ignore less heat or particles are cold Ignore particles do not gain energy Accept particles will not move fast(er) or particles separate slow(er) or particles scatter slow(er) or particles mix slow(er) or particles mix less well or particles collide less Accept less space between particles Ignore particles will not spread out Note maximum 1 mark if any reference to: particles break down slower or melting, e.g. it changes from a solid to a liquid
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Question	Answer	Marks	Further Information
12(a)	The independent variable is weight The dependent variable is time The control variable is height	2	all three correct = 2 marks one or two correct = 1 mark Accept amount of newtons Ignore mass or object Accept how long (it takes) or amount of seconds or how fast (the object falls) or speed Ignore how the weight affects the time it takes Accept amount of metres/centimetres or distance (it falls to path) or where object dropped from or size of object or shape of object or material of object Ignore bridge

12(b)	(risk) object falling on someone on the path and (reduces the risk) stop people walking under the bridge or (risk) Youssef falling off the bridge and (reduces the risk) do not lean too far	1	both required for the mark Note mark answers anywhere in the response space Note risk and how to reduce the risk must match Ignore just 'someone could get hurt' Accept (idea that he) drops from somewhere people cannot walk under, e.g. use a private place or sensible alternatives, e.g. shout a warning or use a sign or check surroundings Ignore he can drop the object on his foot Accept (idea of) not standing too close to the edge or not leaning on bridge/railing or holding on (to the bridge/railings) Ignore just 'someone could get hurt' or slip on stairs/steps/bridge or don't climb on the top of the bridge Ignore just 'be careful' or get an adult to do it or do it with an adult
12(c)	use a stopwatch	1	Accept stopclock or timer or (timer on a) mobile phone or smart watch Accept other more accurate timing device, e.g. chronometer Ignore just 'watch' or time or camera Do not accept clock

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13	<table><tr><th>rock</th><th>description</th><th>type of rock</th></tr><tr><td>granite</td><td>no layers contains large crystals</td><td>igneous</td></tr><tr><td>gneiss</td><td>contains wide layers harder than sandstone</td><td>metamorphic</td></tr><tr><td>sandstone</td><td>made of small grains easily crumbles</td><td>sedimentary</td></tr></table>	rock	description	type of rock	granite	no layers contains large crystals	igneous	gneiss	contains wide layers harder than sandstone	metamorphic	sandstone	made of small grains easily crumbles	sedimentary	2	all three correct = 2 marks one or two correct = 1 mark Accept phonetic spellings Ignore extrusive or intrusive Accept metaphoric or sedimentary Do not accept sedimentation or sediment Do not accept metamorphism Do not accept sedimentation or sediment
rock	description	type of rock													
granite	no layers contains large crystals	igneous													
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