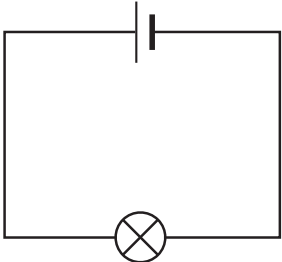
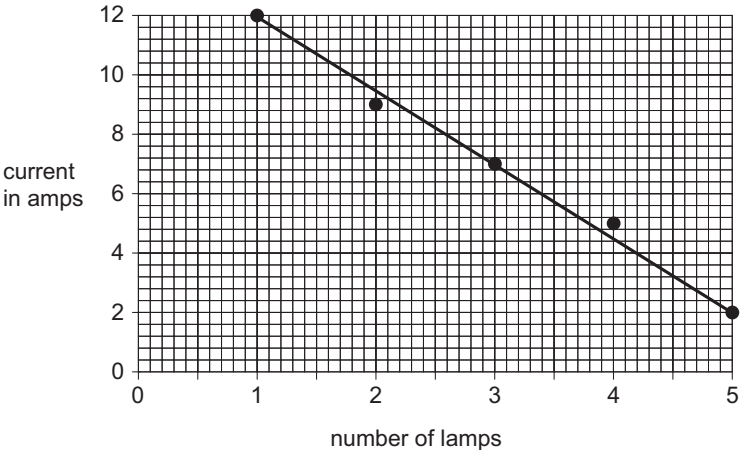


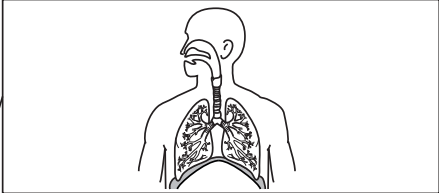

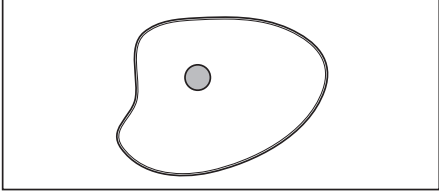
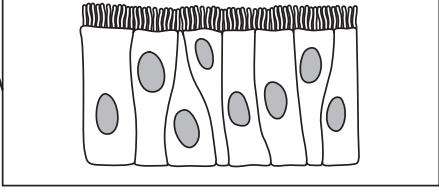
Question	Answer	Marks	Further Information
1(a)	(1) excretion (2) growth or growing (3) reproduction or reproducing (4) sensitivity (5) respiration or respiring	4	each correct answer = 1 mark Accept breeding Accept irritability Do not accept breathing Ignore nutrition
1(b)	(idea that) no respiration or no excretion or no nutrition or no growth or no sensitivity or no (independent) movement	1	Accept no reproduction without a host cell Accept do not show all the characteristics of living organisms

Question	Answer	Marks	Further Information
2(a)	(idea that) gases have (large) spaces between particles (so can be squeezed closer together) (idea that) particles in solids are tightly packed (so no space to squeeze them closer together)	2	each correct answer = 1 mark Accept gases have larger spaces between particles / ora = 2 marks Accept particles in solids are more tightly packed / ora = 2 marks
2(b)	(idea that) particles in solids cannot move freely (other than to vibrate) (idea that) particles in gases move freely and/or quickly (so can fill the container)	2	each correct answer = 1 mark Accept (idea that) particles in a solid can only vibrate but particles in a gas can move from one location to another = 2 marks

Question	Answer	Marks	Further Information
3	(Gas A is) oxygen (Gas B is) hydrogen (Gas C is) carbon dioxide	3	each correct answer = 1 mark Accept O ₂ or O Accept H ₂ or H Accept CO ₂
Question	Answer	Marks	Further Information
4(a)		2	Accept symbol for battery of cells Accept cell either way round two correct symbols = 1 mark complete circuit with no breaks = 1 mark
4(b)	ammeter	1	
4(c)	amp(s) or ampere(s)	1	Accept A Accept any indication of the correct answer, e.g. writing next to question, but answer in table takes precedence

Question	Answer	Marks	Further Information												
4(d)	 <p>The graph shows a linear decrease in current as the number of lamps increases. The data points are approximately as follows:</p> <table border="1" data-bbox="451 324 1190 771"> <thead> <tr> <th>Number of lamps</th> <th>Current in amps</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12</td> </tr> <tr> <td>2</td> <td>9</td> </tr> <tr> <td>3</td> <td>7</td> </tr> <tr> <td>4</td> <td>5</td> </tr> <tr> <td>5</td> <td>2</td> </tr> </tbody> </table>	Number of lamps	Current in amps	1	12	2	9	3	7	4	5	5	2	3	<p>Accept ecf from (c) for unit</p> <p>both axes labels correct = 1 mark</p> <p>all points plotted correctly ($\pm 1/2$ square) = 1 mark</p> <p>Accept plots shown as small cross, dot or dot with circle</p> <p>straight line of best fit for their plots judged by eye = 1 mark</p>
Number of lamps	Current in amps														
1	12														
2	9														
3	7														
4	5														
5	2														
4(e)	(idea that) as the number of lamps increases the current decreases / ora	1													

Question	Answer	Marks	Further Information
5(a)(i)	condensation	1	
5(a)(ii)	<p>any two from</p> <p>(idea that) less water vapour inside the beaker</p> <p>(idea that) rate of evaporation is very low</p> <p>(idea that) rate of condensation is very low</p> <p>(idea that) the temperature difference between the water vapour and the plastic sheet is very small</p>	2	<p>each correct answer = 1 mark</p> <p>Accept no water vapour inside the beaker</p> <p>Accept no evaporation</p> <p>Accept no condensation</p>
5(b)	<p>any two from</p> <p>(the model) does not show water run-off</p> <p>(the model) does not show groundwater</p> <p>(the model) does not show clouds</p> <p>(the model) does not show flowing water, e.g. rivers, streams, etc.</p>	2	<p>each correct answer = 1 mark</p> <p>Accept does not show aquifers or does not show water underground</p>

Question	Answer	Marks	Further Information
6	<p style="text-align: center;">description</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 200px;">group of cells working together to do the same function</div> <div style="border: 1px solid black; padding: 5px; width: 200px;">group of tissues working together to do the same function</div> <div style="border: 1px solid black; padding: 5px; width: 200px;">group of organs working together</div> </div> <p style="text-align: center;">diagram</p> <div style="display: flex; flex-direction: column; align-items: center;">     </div>	2	<p>all three lines correct = 2 marks</p> <p>one or two lines correct = 1 mark</p> <p>if two lines from one description and one is incorrect = 0 marks for that description</p>

Question	Answer	Marks	Further Information
7	<p>any three from</p> <p>in the air the stone falls faster than the feather / ora</p> <p>in the vacuum the stone and feather fall at the same speed</p> <p>in the air the feather experiences more air resistance than the stone / ora</p> <p>in the vacuum there is no air resistance</p>	3	<p>each correct answer = 1 mark</p> <p>Accept in the air the stone takes less time to fall to the bottom than the feather / ora</p> <p>Accept in the vacuum the stone and feather take the same time to fall to the bottom</p> <p>Accept in the air and in the vacuum the stone takes the same time to fall</p>

Question	Answer	Marks	Further Information
8(a)	gravity	1	Accept gravitational force
8(b)	(diagram) C (explanation idea that) has gravity from both the Sun and Moon pulling in same direction	2	each correct answer = 1 mark
8(c)	C (idea that) the Moon is in the Earth's shadow	2	each correct answer = 1 mark Accept any indication of the correct answer, e.g. ticking or underlining, but circling takes precedence

Question	Answer	Marks	Further Information
9(a)(i)	decomposition	1	Accept decay or rotting Ignore moldy
9(a)(ii)	microorganism(s) or decomposer(s)	1	Accept bacteria or fungi
9(b)(i)	thermometer	1	Accept temperature probe
9(b)(ii)	(idea that) the temperature in composter B is still increasing	1	
9b(iii)	(idea that) need to keep recording temperature until the temperature starts decreasing	1	Ignore repeat investigation
9(iv)	spot anomalies or check results or more reliable	1	Accept more valid results or able to calculate an average or to be sure of the results or compare results or more consistent Ignore get more accurate results Do not accept fair test

Question	Answer	Marks	Further Information
10	(powders) D and F (D) changes colour (F) makes a gas	3	both letters needed any order for the mark each correct explanation = 1 mark Accept makes a new substance as an alternative to makes a gas
Question	Answer	Marks	Further Information
11	(description) rice moves (explanation idea that) sound waves travel in the air and make the rubber sheet vibrate	2	each correct answer = 1 mark Accept (idea that) particles in the air vibrate and make the rubber sheet vibrate
Question	Answer	Marks	Further Information
12(a)	high melting point good conductor of electricity	2	each correct answer = 1 mark
12(b)	any two from dull brittle low density	2	each correct answer = 1 mark Accept poor ductility