

# Year 8 Sc1/Biology Test Mark Scheme (Levels 3-6)

Question	Level	Answers	Mark Scheme
1	3	<b>a</b> They will all be subject to the same conditions (temperature, draughts, etc).	<b>1 mark</b> – accept equivalent answers.
	4	<b>b</b> Use a hairdryer/fan/put in a warm place or by an open or sunny window.	<b>1 mark</b>
	5	<b>c i</b> Whether the leaves have a waxy surface, or information about the conditions in which the plant normally lives.	<b>1 mark</b>
	5	<b>ii</b> Wax is waterproof, so a waxy surface should lose less water, or a plant that lives in dry conditions will be adapted to lose less water.	<b>1 mark</b> – the reason must correspond with the information suggested in part i. Give credit if the answer is written in part i.
	4	<b>d</b> So that no water is lost from the pot/so that he is only looking at water lost by the plant itself.	<b>1 mark</b> – accept equivalent answers.
	4	<b>e</b> All his plants should have a similar number of leaves (or total leaf area).	<b>1 mark</b> – accept any other sensible factor.
	6	<b>f</b> The stems of Danny’s plant might also lose water.	<b>1 mark</b> – accept arguments about surface areas of leaves.
	6	<b>g i</b> Because a big leaf might lose more water than a very small one, even if it was more waterproof.	<b>1 mark</b> – accept equivalent answers.
	6	<b>ii</b> Divide the mass of water lost by the original mass or surface area of the leaf.	<b>1 mark</b> – accept equivalent answers.
2	3	<b>a i</b> 4, 2, 3, 1	<b>1 mark</b> – all must be in the correct order for the mark.
	4	<b>ii</b> The one with the biggest area with no bacteria around it is the best at killing bacteria.	<b>1 mark</b> – accept equivalent answers.
	3	<b>b</b> 17, 14, 11, 8	<b>1 mark</b> – accept +/- 1 mm on each measurement. Only ½ mark if one mistake, no marks if two or more are wrong.

Question	Level	Answers	Mark Scheme
2 (cont)	5	<b>c i</b> 1 part disinfectant to 4 parts water.	<b>1 mark</b> – accept equivalent answers.
	5	<b>ii</b> This is the weakest one that still kills the same amount of bacteria.	<b>1 mark</b> – accept equivalent answers.
	5	<b>iii</b> It would be a waste of money, or it might irritate your skin more than necessary if you came into contact with it.	<b>1 mark</b> – accept any other sensible reasons.

Level	Marks available	Cumulative level	Threshold level
3	3	3	2
4	4	7	5
5	5	12	10
6	3	15	13

# Sc1/Chemistry Test Mark Scheme (Levels 3-6)

Question	Level	Answers	Mark Scheme
1	3	<b>a i</b> So he only measured the water that was absorbed by the rocks, not water that was resting on the outside; or to dry them.	<b>1 mark</b> – accept equivalent answers.
	4	<b>ii</b> To give time for the water to soak into the rocks.	<b>1 mark</b> – accept equivalent answers.
	5	<b>b</b> 0.0, 1.9, 0.9, 0.9	<b>1 mark</b> for all correct, ½ mark if there is one mistake, no marks if there are two or more errors.
	4	<b>c</b> X – Rock A did not absorb any water, and texture X has no gaps.	<b>1 mark</b> for both X and reason. No marks if X is given with an incorrect reason. Accept equivalent answers.
	6	<b>d</b> Use a displacement can or measuring cylinder; measure the volume of water displaced.	<b>2 marks</b> – 1 mark for each point. Accept equivalent answers.
	6	<b>e i</b> Plot a scatter graph or bar chart (accept ‘plot a graph’ if part <b>ii</b> of the answer makes it clear that a scatter or bar graph is meant). <b>ii</b> The points will form a line; a steady increase.	<b>1 mark</b>  <b>1 mark</b>
2	3	<b>a i</b> Bunsen burner	<b>1 mark</b>
	3	<b>ii</b> Clamp and stand, or test tube holder.	<b>1 mark</b>
	3	<b>b</b> They would see bubbles.	<b>1 mark</b>
	4	<b>c</b> The more salt you add, the higher the boiling point gets.	<b>1 mark</b>
	5	<b>d i</b> Use a thermometer with a finer scale, or use a data logger and temperature probe.	<b>1 mark</b> – accept any answer that shows pupils know that a more accurate way of measuring the temperature is needed.
	6	<b>ii</b> Any three masses intermediate between the ones used (e.g. 1.5 g, 2.5 g, 3.5 g).	<b>1 mark</b> – units are not needed. If any of the suggested masses are above 5 g, no marks should be awarded.
6	<b>e</b> As not all the salt dissolved, the boiling point corresponds to a point with less than 5 g of salt added.	<b>1 mark</b> – accept equivalent answers.	

**Year 8****Sc1/Chemistry Test Mark Scheme (Levels 3-6)  
(continued)**

<b>Level</b>	<b>Marks available</b>	<b>Cumulative level</b>	<b>Threshold level</b>
3	4	4	3
4	3	7	5
5	2	9	8
6	6	15	13

# Year 8 Sci/Physics Test Mark Scheme (Levels 3-6)

Question	Level	Answers	Mark Scheme
1	3	<b>a</b> The wax will melt.	<b>1 mark</b> – accept equivalent answers.
	4	<b>b</b> conductivity, or conduction	<b>1 mark</b>
	4	<b>c</b> Same size blob of wax, or same distance from heat source to wax, or same size flame on all rods.	<b>1 mark</b>
	3	<b>d</b> Materials written in correct column of table.	<b>1 mark</b>
	3	Times written against correct materials.	<b>1 mark</b>
	5	<b>e</b> Bar chart	<b>1 mark</b>
	4	<b>f</b> Heat travels fastest through copper and slowest through glass.	<b>1 mark</b> – ½ mark for each part of the conclusion. Accept equivalent answers.
	5	<b>g</b> All the rods are getting the same amount of heat, or the surrounding temperature is the same for all the rods.	<b>1 mark</b> – accept any other sensible advantages.
	6	<b>h i</b> You get more results for each rod, so you can check that your results are accurate.	<b>1 mark</b>
6	<b>ii</b> Plot a line graph. Any explanation that shows that the pupil understands the idea of continuous data.	<b>1 mark</b> – only if the explanation is correct.	
2	5	<b>a i</b> One from: the effect of length of string on frequency/loudness, the effect of tension on frequency/loudness.	<b>1 mark</b>
	4	<b>ii</b> Length or tension or size of pluck, depending on the investigation suggested above.	<b>1 mark</b> – the factor must be one that would be controlled in the investigation suggested in part i.
	4	<b>b i</b> 2	<b>1 mark</b>
	6	<b>ii</b> $2 / 0.01 = 200 \text{ Hz}$ .	<b>1 mark</b> – only the numerical answer is necessary for the mark to be awarded.
	5	<b>c</b> Any sensible answer, such as it is easier to measure the length of the string, or you know what the tension is because you can count the masses, etc.	<b>1 mark</b>

**Year 8****Sci/Physics Test Mark Scheme (Levels 3-6)  
(continued)**

<b>Level</b>	<b>Marks available</b>	<b>Cumulative level</b>	<b>Threshold level</b>
3	3	3	2
4	5	8	6
5	4	12	10
6	3	15	13