



2010 Science

Standard Grade Foundation

Finalised Marking Instructions

© Scottish Qualifications Authority 2010

The information in this publication may be reproduced to support SQA qualifications only on a non-commercial basis. If it is to be used for any other purposes written permission must be obtained from the External Print Team, Centre Services, Dalkeith.

Where the publication includes materials from sources other than SQA (secondary copyright), this material should only be reproduced for the purposes of examination or assessment. If it needs to be reproduced for any other purpose it is the centre's responsibility to obtain the necessary copyright clearance. SQA's External Print Team, Centre Services, at Dalkeith may be able to direct you to the secondary sources.

These Marking Instructions have been prepared by Examination Teams for use by SQA Appointed Markers when marking External Course Assessments. This publication must not be reproduced for commercial or trade purposes.

2010 Science – Standard Grade

Foundation Level

Marking Scheme

Please note that **FRACTIONAL** marks should **NOT** be awarded for responses to questions on this paper.

Please note that where a question specifies circling or underlining, other forms of clearly indicating a response are acceptable.

				Space for Notes	
1	(a)	94 and 90	both required, any order	PS1	
	(b)	food and enzymes and digestion	all required, any order	PS1	
2		Lung cancer, heart disease, bronchitis	All three correct 2 marks Two correct 1 mark any order	KU2	
3	(a)	Any one from Metal Garden waste Plastic Cardboard Ashes Food Clothes		KU1	<u>Not</u> : glass or paper (given) <u>Not</u> : named plastic or metal <u>Not</u> : named objects only eg cans Ignore additional information eg metal (cans)
	(b)	<u>Idea</u> that it can be used again		KU1	

				Space for Notes	
4	paired bladders egg wrack	smooth fronds toothed wrack		PS2	Full answers as shown
5	(a) 3 (Food mixer)			KU1	
	(b) 2 (Oven)			KU1	
6	(a) 25			PS1	
	(b) 20			PS1	<u>Accept:</u> correct answer from space for working <u>Ignore:</u> transcription error
7	(a) 2			KU1	
	(b) 4			KU1	

			Space for Notes
8	<p>(a) Meat (or alternative eg chicken, fish, protein, beans) Bread or Cereals (or carbohydrates eg pasta, wheat, starch) 1 mark each</p>	KU2	<u>Not:</u> sugar fats water
	<p>(b) Obesity, anorexia, heart disease, bulimia, high blood pressure</p>	KU1	
9	<p>(a) 1 and 4</p>	PS1	
	<p>(b) <u>The idea of</u> investigating the height the tennis ball is dropped from eg if the height makes any difference</p>	PS1	
10	<p>(a) Stays the same</p>	PS1	
	<p>(b) 200</p>	PS1	<u>Accept:</u> correct answer from space for working <u>Ignore:</u> transcription error
11	<p>(a) A (water and shelter)</p>	KU1	
	<p>(b) 4</p>	KU1	

			Space for Notes	
12	(a)	4	KU1	
	(b)	2	KU1	
13		C (tobacco smoke)	KU1	
14	(a)	(Crude) oil	KU1	
	(b)	Idea that fossil fuels are finite/will run out/are non-renewable	KU1	<u>Not</u> : less pollution
	(c)	Oxygen	KU1	
15		Pattern dial Metal canister spray trigger 3 correct, 2 marks 2 correct, 1 mark	PS2	

				Space for Notes
16	(a)	1 Are slow (moving) 2 Have no defences/defenceless both ideas required	PS1	
	(b)	43	PS1	
	(c)	Unpleasant substance or Tastes bad	PS1	
	(d)	Do not have to use (toxic) pesticides	PS1	
17	(a)	2	PS1	
	(b)	Iron	PS1	
	(c)	150 2 marks 75(%) 1 mark	PS2	<u>Accept:</u> correct answer from space for working <u>Accept:</u> 75 from space for working for 1 mark <u>Ignore:</u> transcription errors
18	(a)	Electrical conductivity	KU1	
	(b)	Strength	KU1	
	(c)	Thermal conductivity	KU1	

				Space for Notes
19	<p>(a) Any two from</p> <p>Wind Waves Geothermal Tidal Biomass or example Hydro(electricity)</p> <p style="text-align: right;">Any two, 1 mark each</p>		KU2	Accept “water” but <u>not</u> with waves or tidal or hydro eg waves and water 1 mark only
	(b)	(i)	<u>Idea of</u> as light intensity increases, voltage increases (or vice versa)	PS1
		(ii)	28	PS1
		(iii)	40	PS1
20	<p>Germany 580 France 520 UK 370 Italy 280</p> <p style="text-align: right;">All correct, 2 marks 6, 7, 8 correct, 1 mark</p>		PS2	Ignore: units added to table
	(b)	<p>3 bars with correct labels, 2 marks 1, 2 bars with correct labels, 1 mark No labels, zero marks accept errors carried forward from part (a)</p>		PS2

			Space for Notes
21	B	KU1	
22	Triangles	KU1	
23	(a) Crabeater seal and emperor penguin both required	KU1	
	(b) Any one from Icefish Toothfish	KU1	
	(c) Either Plankton → krill → toothfish → emperor penguin or Plankton → squid → toothfish → emperor penguin	KU 1	
	(d) Sun (light)	KU1	

			Space for Notes
24	(a)	<u>Idea of</u> as age increases, (daily) energy needs increase	PS1
	(b)	Any value between 1900 and 2100	PS1
25		<u>Idea of</u> as distance (between birds' nests) increases, number of nests attacked (by weasels) decreases (or vice versa)	PS1

[END OF MARKING INSTRUCTIONS]