External Assessment Report 2014

Subject(s)	Biology
Level(s)	Intermediate 1

The statistics used in this report are prior to the outcome of any Post Results Services requests

This report provides information on the performance of candidates which it is hoped will be useful to teachers/lecturers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published question papers and marking instructions for the examination.

Comments on candidate performance

General comments

The number of presentations at Intermediate 1 was significantly lower than in previous years, as centres presented candidates for the new National Qualifications. A higher proportion of candidates at Intermediate 1 were from S5 and S6 than last year, and presentations from FE colleges remained relatively low.

The 2014 paper was very similar in format to recent years in terms of question types, and it assessed candidates' knowledge and understanding and problem solving/practical abilities across all Units.

Overall, there was a slight improvement in the average candidate performance in this year's examination, with the overall mean mark being slightly higher than in previous years. The Grade Boundary was adjusted accordingly.

In both Section A and Section B, a significant number of candidates performed less well in questions requiring knowledge and understanding of course content.

The recent trend of fewer candidates leaving questions unanswered was sustained.

Feedback suggests that this year's Intermediate 1 question paper was fair, balanced and accessible to all candidates. This was borne out by the very low number of candidates scoring very poorly; this suggests that almost all candidates had undertaken an appropriate level of course.

Areas in which candidates performed well

Candidates performed well in response to the following questions.

Section A

Question 1:	Almost every candidate knew that eating a balanced diet is an example of a physical aspect of health.
Question 12:	Most candidates were able to interpret data in a table and select the correct conclusion.
Question 23:	Almost every candidate knew that the process by which green plants make their own food is known as photosynthesis.

Section B

Question 3(a)(i):	Almost every candidate knew the function of the heart.
Question 6(a):	Most candidates were able to complete a summary table using information provided with branching key.

Question 9(a): The majority of candidates were able to interpret an experimental set up and correctly identify the conditions where dough would rise most, and the reason is the presence of yeast.

Question 10(a)(i), (ii): Almost every candidate was able to extract the relevant information from a written passage.

Question 11(a)(iii): Most candidates were able to interpret information in a table to provide a conclusion on the best conditions for root growth.

Areas which candidates found demanding

Section A

Question 10: Most candidates were unable to interpret a line graph to indicate where the greatest number of organisms, other than bacteria, would be present in river water.

Question 24: Most candidates did not indicate sand and perlite both improve the drainage of soil.

Section B

Question 2(a)(ii): Most candidates were unable to correctly calculate a ratio.

Question 7(b): Very few candidates were able to identify the concentration of antifungal cream that would be used in a control set-up of an investigation.

Question 7(c): Few candidates were unable to provide a valid conclusion from experimental data contained in a line graph.

Question 8(a)(ii): Most candidates were unable to calculate the percentage of water in milk, given the percentages of other substances present.

Question 11(a)(ii): Most candidates were unable to accurately plot the change in root length from data provided in a table of results.

Advice to centres for preparation of future candidates

Centres should be encouraged by the performance of those candidates who performed well in this year's examination.

Overall, as in most previous years, centres have presented candidates appropriately, with their skills and abilities being well suited to this course. Few candidates performed very poorly.

There is continuing evidence that the learning activities undertaken by candidates have met the requirements of the course.

Knowledge and Understanding, however, continues to be an area where some candidates do not perform well, despite many performing well in Practical Abilities/Problem Solving questions. As in previous years, questions involving calculations continue to be challenging for many candidates

Centres are encouraged to enhance liaison between staff delivering this course and colleagues responsible for related areas of the curriculum, such as Mathematics and numeracy across the curriculum.

Questions requiring Problem Solving skills, and those in a context of Practical Abilities, continued to be generally well answered. Improvement in the standard of presentation of data, such as in drawing pie charts in particular, has been sustained. However the overall standard of plotting line graphs continues to be variable.

Centres should focus on maintaining high expectations with respect to accuracy in plotting points and emphasising the importance of the inclusion of units, where appropriate, when labelling axes.

Many candidates found it challenging to draw appropriate conclusions from information provided. Centres should emphasise to candidates that any conclusion has to be drawn only from the available data. SQA past examination papers and marking instructions should assist in this process.

The area where most candidates did not gain a mark was in the identification of the conditions required for a control within an investigation. Centres are reminded that they should explain clearly that that all independent variables, except for the one under investigation, must be controlled within experimental contexts.

Centres are advised to encourage both staff and candidates to use information on SQA's website, including past examination papers and marking instructions, to assist in this preparation.

Statistical information: update on Courses

Number of resulted entries in 2013	6109

Number of resulted entries in 2014	578

Statistical information: Performance of candidates

Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum Mark 75				
A	22.3%	22.3%	129	53
B	27.2%	49.5%	157	44
C	22.8%	72.3%	132	36
D	9.2%	81.5%	53	32
No award	18.5%	-	107	-

General commentary on grade boundaries

- While SQA aims to set examinations and create marking instructions which will allow a competent candidate to score a minimum of 50% of the available marks (the notional C boundary) and a well prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary), it is very challenging to get the standard on target every year, in every subject at every level.

- Each year, SQA therefore holds a grade boundary meeting for each subject at each level where it brings together all the information available (statistical and judgemental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the management team at SQA.

- The grade boundaries can be adjusted downwards if there is evidence that the exam is more challenging than usual, allowing the pass rate to be unaffected by this circumstance.

- The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual, allowing the pass rate to be unaffected by this circumstance.

- Where standards are comparable to previous years, similar grade boundaries are maintained.

- An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions, and the mix of questions, are different. This is also the case for exams set in centres. If SQA has already altered a boundary in a particular year in, say, Higher Chemistry, this does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related, as they do not contain identical questions.

- SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as arrangements evolve and change.