

Examiners' Report Summer 2007

GCSE

GCSE Science (2101) Internal Assessment Activities (Units 5002-5004)

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Report on the Moderation of Internal Assessment Activities

Introduction

In this first year of examinations for the new style GCSE Science, the vast majority of centres should be commended for the way they have approached the conduct and assessment of the internal assessment activities (IAAs).

These new internal assessments are unlike previous examinations in a number of ways. For example, all teachers in a department can have access to the IAAs in advance, and decide when, or if, to set a specific task for their candidates when they are ready to take it. There is no single day prescribed by Edexcel for candidates to take the IAAs.

Centres are reminded that they do have the option for candidates to take these assessments in their normal classroom or science laboratory, under controlled conditions during normal lesson times, (in order to minimise the impact on other colleagues) but it is equally acceptable for candidates to take the assessment tasks under formal examination conditions, if that is more appropriate to the ethos of the centre. These IAAs are designed to be used for ‘assessment for learning’, and teachers may wish to allow candidates to see their marked scripts, so that errors may be discussed. It is important that candidates do not amend the scripts in any way however, as they will eventually be needed for moderation purposes. Please note that candidates must not take their completed assessment activity out of the direct supervision of the teacher.

The completed assessment tasks must be kept in a secure location, until the work is sent for moderation. When preparing the work to send to the moderator, centres are reminded that in addition to the work of the asterisked candidates (shown on the Optems form), moderators also need to see the work of both the highest scoring and of the lowest scoring candidate, in each of the three Edexcel Devised Assessment Activities (units 5002, 5003 and 5004).

It would also be extremely helpful to the moderator, if the work is arranged by topic order - i.e. all topic 1 scripts together, etc, rather than arranging the work by candidate order.

Application of mark schemes

The rubric attached to each of the mark schemes does give important guidance on how the IAAs should be marked. In particular, centres are reminded that teachers should award one tick per mark (as is common practice in all current Edexcel science written examinations) in order to facilitate mark aggregation by both the teacher, and the moderator. The practice by some teachers, of circling the marks awarded on the scripts, or inserting numbers for partial success, is not to be recommended because of the confusion it causes to both teachers and moderators.

Centres are reminded that teachers should adhere to the revised mark schemes. In cases where teachers find answers which they genuinely believe are acceptable, but which are not to be found on the mark schemes, they should award the mark(s). However, in this case it is essential that teachers annotate the candidate scripts to explain to the moderator, the reason why marks have been awarded. If it is clear to the moderator why marks have been awarded, it is more likely that the centre’s marks will be agreed.

Teachers should watch out for the letters OWTTE in the mark scheme, which stand for “or words to that effect”. Where acceptable, alternative responses are seen, these should be credited, and the scripts appropriately annotated.

The assessment of the quality of written communication (QWC) was variable. Edexcel has issued guidance on the assessment of QWC, which indicates that candidates should be assessed on their ability to present information in an appropriate form, ensuring the accuracy of spelling, punctuation, and grammar, and their use of a suitable style of writing. The award of three marks should only be given when candidates use scientific terms appropriately, their sentences contain verbs, and their answers are well structured using a suitable narrative. It was not unusual to see teachers awarding marks of 1, and sometimes 0, for respectably written responses where the handwriting was poor, but the quality of spelling punctuation and grammar would have been accepted for 2 marks. It was not unusual for teachers to be over influenced by the standard of handwriting, and awarding marks of 1 or 0, where the quality of spelling, punctuation and grammar warranted 2 marks.

Teachers are reminded than when making an assessment of QWC, they should bear in mind the ability of the national cohort, and not just the candidates in their care.

Internal standardisation

In addition, teachers are reminded of the need for internal standardisation of the marked scripts, before external moderation commences. This year, the general standard of marking was very good, with most teachers being able to apply the revised mark schemes accurately. There were some instances however, where internal moderation had not taken place, and usually in these centres some errors in marking were found.

The most common error was a clerical one, involving mistakes in transcribing marks from the back of the paper to the front, or between the student's IAA and the Optems form. In some instances, the QWC mark (Quality of written communication) was either not counted, or was counted twice.

General

Graphs are an area of weakness for many candidates. Several candidates did not realise what is meant by the term "line of best-fit", and a number of candidates were unable to scale axes properly. Axes were frequently scaled in such a way that the graph took up only a small part of the graph paper available, and in some cases axes were the wrong way round.

Overall, each of the twelve topics for GCSE Science resulted in a similar spread of achievement, though it was evident that some topics were more favoured than others. The majority of candidates scored between 15 and 25 marks in the IAAs, and very few marks of less than 10 were seen. The most able candidates were able to show their academic capability, though it was very rare to see a maximum mark of 30. The most popular topics were as follows:

Biology	topic 1 - Environment and topic 2 - Genes.
Chemistry	topic 5 - Patterns in Properties and topic 6 - Making Changes.
Physics	topic 10 - You're in Charge.

However, moderators did see work from all twelve topics. As expected candidates usually scored highly in the first one or two (low demand) questions, but it was fairly common to see candidates starting to struggle with the more difficult questions towards the end of each topic which required extended writing, often where thought provoking issues in "How Science Works" were being tested.

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Raw Mark Grade Boundaries for GCSE Science Internal Assessment Units

5001	Max mark	A*	A	B	C	D	E	F	G
	18	15	14	12	11	9	7	5	3

Please note that the above final grade boundaries for grades A* and A are different to the indicative grade boundaries published previously.

5002	Max mark	A*	A	B	C	D	E	F	G
	30	25	24	21	18	14	11	8	5

5003	Max mark	A*	A	B	C	D	E	F	G
	30	25	24	21	18	14	11	8	5

5004	Max mark	A*	A	B	C	D	E	F	G
	30	24	23	20	17	14	11	8	5

Uniform Mark Grade Boundaries - All Units

Max UMS	A*	A	B	C	D	E	F	G
40	36	32	28	24	20	16	12	8

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