

Moderation Feedback – Central

Assessment Panel:

Biology

Qualification area

**Subject(s) and Level(s)
included in this report**

Biology Standard Grade Practical Abilities

Central Moderation

General comments on central moderation activity

The problems experienced in previous years were still in evidence despite being emphasised in past Senior Moderators Reports.

Evidence submitted by centres was generally complete and as requested with the sample containing the broad spectrum of grades as per the sampling format given in the Guidelines to Centres.

Disappointingly, there was very little evidence of internal moderation and consequently an increase in Arithmetic errors. This resulted in the number of centres being 'Not Accepted' increasing.

The dating of the reports submitted would suggest that many centres are only doing two investigations in the two years of the course and only giving candidates these two opportunities.

The moderation team was encouraged to write comments to centres that would improve the evidence provided and make the moderation process more helpful and informative.

Specific issues identified

Techniques

A substantial number of centres had candidates that failed to successfully master techniques such as:

- ◆ Using a Biological Key - this technique can be tested under test/exam conditions as it is in many test papers.
- ◆ Setting Up a Choice Chamber - Several centres in the sample appear not to cover this technique with all of the candidates failing to gain marks for this technique. With the mark being given for setting up the choice chamber it does not necessitate anyone handling live organisms, though this would be preferable.

Investigations

Greater use of the 'Teacher's Comments' would assist moderation as there are increased number of centres failing to award marks in the Generative Phase without explanation.

The Generative Phase

A large number of candidates would benefit from more guidance in this section that would allow them to perform better throughout the rest of the investigation.

(If a candidate is helped and no mark awarded the guidelines recommend that a short comment is included on the last page under 'Teacher's Comments'.)

In particular, a number of candidates have difficulty identifying the 'dependent' and 'independent' variables.

Experimental Skills

Many candidates were awarded marks for listing three variables rather than all the variables that they must control to ensure valid results.

Specifically, several candidates stated in their aim that they intended to study the 'rate' of something and then failed to control time.

Recording and Reporting

RR1 Consistent application of the criteria was a problem with centres awarding marks where the axis were not labelled correctly, or, penalising the unit mark when it did not appear in the heading but was in the table.

RR2 The appropriate form of graph still causes problems with a number of centres accepting line graphs for discontinuous variables.

RR3 A small number of centres are awarding marks where important information is given elsewhere in the Report. This is a stand alone section where the marks are awarded for information written/drawn in this section.

General points covering the Investigation

Several centres submitted two investigations for all candidates where both booklets covered **discontinuous variables** and subsequently, two bar graphs.

The latest guidelines to the centres emphasised that at least one continuous variable investigation should be presented.

In a small number of centres no mark was awarded for Objectives E2b, E3b and E4a – teacher observation awarded marks – without ‘Teacher Comment’.

A small number of candidates received a mark for EE2 by circling ‘A’ when the evidence did not support the hypothesis or no hypothesis was given in G3.

Where internal moderation is carried out it should be clear what the final decision is and where help is given to candidates to allow them to progress a short note in the appropriate ‘Teacher’s Comments’ should be made.

There was evidence that some centres tolerate poor experimental procedure:

- ◆ Candidates doing inappropriate work without guidance eg the catalase experiment where the variable changed was the number of drops of detergent added to the hydrogen peroxide.
- ◆ Water baths used as a means of controlling temperature but do not allow equilibration before starting the experiment and then leaving them for a short time making the assumption that solutions used reach the water bath temperature immediately.
- ◆ Several centres are allowing candidates to ‘pool’ the results or do the work in groups which is not permissible.

Feedback to centres

Centres should ensure that they are using the latest set of guidelines for assessment.

Internal moderation should continue to be encouraged with the proviso that changes in marks and final decisions are obvious to the moderation team.

Candidates should be given the opportunity to attempt all techniques and several investigations in their two years of Standard Grade work where possible incorporating the practical assessment into the course work eg Doing the 'Catalase' investigation at the appropriate time – During 'Investigating Enzymes' topic and 'Dough' or Washing Powders during 'Biotechnology'.