



**Standard Grade 2012
Internal Assessment Report
Biology — Practical Abilities**

The purpose of this report is to provide feedback to centres on verification in Standard Grade qualifications in this subject.

Standard Grade

Titles/levels of Standard Grade qualifications verified:

Biology — Practical Abilities

General comments

All of the centres sampled were Accepted on the evidence provided.

All of the centres provided the required sample evidence and in the majority of cases some form of internal verification was evident.

The majority of centres used appropriate practical investigations and applied the marking instructions accurately and consistently.

Administration of assessments

Having commented on the increased use of internal verification as an example of good practice in previous internal assessment reports, fewer centres in this year's sample appeared to be carrying out this highly recommended practice. Even fewer centres made use of the comment box at the end of the investigation booklet to explain why marks had not been awarded.

While the majority of candidates from the centres sampled completed all 10 techniques, there were instances where candidates were losing out on a grade having failed to complete one or more of the techniques.

Areas of good practice

In general, centres applied the published practical investigation guidelines and marking instructions both consistently and accurately.

There is evidence that allowing candidates more than two opportunities to carry out and write-up investigations improves the candidate average grade. As does including practical techniques in classroom practice so that candidates have several opportunities over the two years of the Course to master these techniques.

Internal verification, in which any change to the original marking is clearly illustrated, is highly recommended and was used by many centres in this year's sample.

Specific areas for improvement

Carrying out Techniques falls into two groups, those that relate to fieldwork and those that relate to lab work. It was originally anticipated that assessment of these techniques would occur naturally during on-going class work, thus allowing candidates several opportunities to demonstrate mastery of them. When the

majority of the sample of candidates from a centre fails to gain marks for a particular technique, it suggests that the centre is not assessing the technique. It has been noted in previous years that Technique 10 has regularly been missed by centres and centres are reminded that 'Setting up a choice chamber' does not require the handling of live animals.

There were a number of candidates who lost marks in the generative phase (G1–G4). To overcome this, it is suggested that, prior to carrying out the investigation, teachers support candidates by:

- ◆ stimulating class/group discussion
- ◆ using leading questions/general statements to introduce the broad area for investigation
- ◆ directing candidates to relevant investigable aspects
- ◆ raising awareness of specific problems, eg timing, availability/suitability of apparatus before starting the investigation

In the generative phase of the investigation the discussion should ensure that candidates are aware of both the dependent and independent variables and all of the variables over which they will have control. In this phase the candidates should only be allowed to proceed if they have a workable and safe hypothesis. (Centre staff can provide assistance with this, with an appropriate mark deduction.) Where centre staff have given additional assistance to enable candidates to safely complete the investigation they can 'note' this in the 'comments' box at the end of the published write-up booklet.

All candidates should be aware of the importance of control experiments and independent repetition of practical work.

The investigation is an opportunity for candidates to become familiar with, and correctly use, scientific language and this should be encouraged. Terms such as 'mass' and 'volume' are more appropriate than 'amount' and previous internal assessment reports have actively encouraged centre staff to promote the use of the correct language.