

Examiners' Report/ Principal Examiner Feedback

June 2011

360Science

GCSE Science
Multiple Choice Paper B1a (5005)

GCSE Biology
Multiple Choice Paper B1a (5025)

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Publications Code UG028743

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5005 Science/ 5025 Biology (B1a) Examiners' Report

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Foundation tier

Overall the candidates performed well in this paper with the majority of the candidates able to access at least half of the questions. It was pleasing to note that the candidates performed well on the recall questions related to food chains and genes, although only 24% of candidates were able to identify how energy is lost at each level in the food pyramid. Application questions were less well accessed by foundation tier candidates, especially relating to the growth of crop plants where only 40% of candidates could recognise why identical crop plants were used. On the crossover questions, higher tier candidates consistently scored higher than foundation tier candidates indicating that the tiering of the examination was at the correct level. As has been mentioned previously, candidates struggle with the topic of classification and in particular binomial names; this is likely to be the fact that the terms used may not have been seen before and the candidates are unable to apply the knowledge of other binomial names. The use of a Punnett square for questions 22–24 caused significant difficulties for foundation tier candidates with only 46% of candidates able to recognise inheritance patterns, and only 11% able to accurately work out percentage chances; this may be the mathematical element involved in these calculations.

Higher tier

The candidates accessed the higher tier paper well. All higher tier candidates performed significantly better on the crossover questions than on the foundation paper indicating that the tiering of the examinations is successful. The genetic inheritance section was poorly answered with only 50% of candidates able to identify inheritance patterns and 58% able to identify what was meant by the term homozygous. The interpretation of a pie chart seemed to confuse several candidates as 52% believed that percentages of pollution would also increase above 100%. It was pleasing to note that candidates were correctly able to identify Darwin's theory of evolution and come to conclusions based on the theory with 72% of candidates gaining the correct answer. Disappointing, however, was the correct classification identification based on binomial names with only 20% of candidates able to successfully identify the order, family and genus of *Homo sapiens*. Questions on cloning caused a few problems with 55% of candidates able to correctly identify the order of events and only 34% able to come to ethical conclusions based on information given.

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