

Examiners' Report/
Principal Examiner Feedback

November 2011

360Science

GCSE Science
Multiple Choice Paper B1a (5005)

GCSE Biology
Multiple Choice Paper B1a (5025)

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November 2011

Publications Code UG029778

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Overall the paper performed well and candidates were able to access the questions at the correct level of their ability. The crossover questions are testament to this in that they all showed significantly higher levels of attainment for the Higher tier candidates compared to the Foundation tier candidates.

Foundation tier

The simple interpretation of data at the start of the paper was accessible by all but the weakest candidates and resulted in 93% of the F-tier candidates achieving the correct response. The use of a pooter was well accessed with 77% of candidates able to correctly identify the reason for the gauze. It was pleasing to note that the mathematical skills at this level were good enough to complete simple area calculations. Once again the identification of a simple pyramid of biomass proved difficult for the F-tier candidates. The section on gene therapy was less well done with only 35% of candidates able to correctly identify specific genetic disorders and only 32% of candidates able to give the definition of an allele as an alternative form of the same gene. The interpretation of a Punnett square was accessed by foundation candidates very well with 76% of candidates able to correctly identify the person with a recessive genetic disorder. Interpretation of graphical data was well handled by the crossover candidates with 73% of higher tier candidates and 62% of foundation tier candidates able to take correct readings and apply their knowledge. It was also pleasing to note that cloning was understood by foundation and higher tier candidates even when this was not related to the cloning of mammals showing that candidates are getting better at the application of How Science Works rather than relying on recall.

Higher tier

It was disappointing to note that only 55% of candidates were able to differentiate as to why there is less energy available when farming cattle than there is when growing crops due to energy being lost at each trophic level. This is covered in the topic of environment and is also a Key Stage 3 skill. Simple genetic crosses are generally well understood and in previous examination series have been well answered, in this series the candidates had to relate the crosses to an unknown genetic disorder. This caused them to perform less well with only 28% of candidates able to correctly identify heterozygous carriers and 32% able to interpret a genetic cross diagram. It is the application of skills that we are looking for in the higher part of the paper. The higher level interpretation skills at the top end of the paper showed candidates are improving consistently in this area.

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