Examiners' Report/
Principal Examiner Feedback

June 2010

360Science

GCSE Science
Multiple Choice Paper B1a (5005)

GCSE Biology
Multiple Choice Paper B1a (5025)

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5005 Science/ 5025 Biology Examiners' Report
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Foundation tier

Overall the paper was accessed well at foundation tier. Areas of difficulty which were surprising were often on items of recall. Only 44% of foundation candidates were able to accurately describe natural selection with 37% of candidates believing that survival of the fittest being as a result of genetic modification. Once again simple mathematical calculations were not completed well with only 59% of candidates able to calculate a haploid number when given the diploid number despite being told it is half the number of chromosomes. Interpretation of food chains was completed well although when this was related to the predator-prey graph only 38% of candidates were able to correctly interpret the information. It is clear that candidates find classification difficult with only 6% able to identify the phylum of mammals as being Chordata, classification is a continuing problem especially at foundation level. The crossover questions discriminated well between foundation and higher tier candidates with a distinctly higher proportion of higher tier candidates gaining marks in these questions. Genetic crosses and the use of terms such as heterozygous are not well accessed by candidates at foundation level with only 30% of candidates able to correctly predict probable outcomes.

Higher tier

The crossover questions were well accessed by higher tier candidates with over 60% of the higher tier able to answer most of the questions in this section correctly. One area where they were unable to access was with the classification of mammals with only 8% of candidates able to correctly identify the phylum of mammals as being Chordata. There was an improvement in the identification of genus and species of mammals with 60% of candidates able to correctly identify the genus and species of *Panthera leo.* Candidates still find the interpretation of genetic cross diagrams a challenge with only 55% of candidates able to calculate probable outcomes correctly. Survival of the fittest and natural selection proved to be a problem with only 54% of candidates able to identify statements related to natural selection. It must be noted that 81% of candidates were able to correctly identify a mutation and also identify that they are not always harmful. The A/A* questions at the top end proved to be a problem. Candidates were able to interpret information from graphs and diagrams well but knowledge of the role of minerals in plant growth was limited with only 19% of candidates able to identify that magnesium is essential for chlorophyll production. Overall candidates performed well across the higher tier paper and particularly well on the crossover questions.

Grade Boundaries – June 2010

Multiple Choice Papers – GCSE Science

Raw Mark Grade Boundaries

5005/5025	Max mark	A*	A	B	C	D	E	F	G
H	24	20	18	15	12	9	7		
F	24				16	13	10	7	4

5006/5026	Max mark	A*	A	B	C	D	E	F	G
H	24	20	17	14	12	9	7		
F	24				15	13	11	9	7

5007/5035	Max mark	A*	A	B	C	D	E	F	G
H	24	20	17	14	11	8	6		
F	24				16	13	10	8	6

5008/5036	Max mark	A*	A	B	C	D	E	F	G
H	24	19	17	14	12	9	7		
F	24				16	13	10	8	6

5009/5045	Max mark	A*	A	B	C	D	E	F	G
H	24	16	14	12	11	8	6		
F	24				14	12	10	8	6

5010/5046	Max mark	A*	A	B	C	D	E	F	G
H	24	19	17	14	12	8	6		
F	24				14	12	10	8	6

Uniform Mark Grade Boundaries for these units

	Max UMS	A*	A	B	C	D	E	F	G
H	40	36	32	28	24	20	18		
F	27				24	20	16	12	8

Note: On higher tier papers, the "allowed" grade E is calculated as half a grade width