

Examiners' Report/ Principal Examiner Feedback

March 2010

GCSE

360Science

GCSE Science
Multiple Choice Paper B1a (5005)

GCSE Biology
Multiple Choice Paper B1a (5025)

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5005 Science/ 5025 Biology (B1a) Examiners' Report

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Foundation Tier

Overall the questions were answered to a reasonable level and most areas of the specification were accessed although there were indications that candidates rushed through early questions without reading the question correctly.

A very disappointing 53% of candidates only managed to interpret the food chain for the cane toad correctly with 41% of candidates believing that the food chain started with the cane toad. Mathematical questions once again were poorly answered with only 28% of candidates able to multiply by 50. Questions related to reproduction and natural selection were answered more effectively with 65%-80% of candidates getting the correct responses. The understanding of dominant and recessive alleles is limited with only 36% of candidates able to recall that some recessive alleles will be passed onto offspring.

The crossover questions were accessed better by the higher tier candidates than by the foundation tier candidates as expected with 70%-80% of higher tier candidates able to correctly answer questions about the human genetic code as opposed to 50% of foundation candidates. Foundation candidates continue to struggle with interpreting Punnett square diagrams and percentage outcomes with only 31% of foundation candidates correctly identifying the Punnett square or the percentage outcome of a Punnett square

Higher Tier

Candidates accessed the early questions in the paper well and showed a good understanding of the human genome project and the interpretation of Punnett square. Phenotype and genotype are still terms which the candidates need to understand with a disappointing 38% of candidates able to correctly identify the genotype of a person with Cystic Fibrosis. Graph interpretation is good with 61% of candidates able to correctly interpret the graph about fertilisers. It is also encouraging to see that candidates are becoming more aware of the mineral requirements of plants especially nitrates for protein formation where 65% of candidates accessed the correct answer. Genetic modification of plants remains a problem even with the higher tier candidates. For B1a, candidates must be aware of a simple outline of how to genetically modify a crop plant involving the use of enzymes (specific names not required) for both removing and inserting genes. Organic farming methods were less well understood than in the past with 64% of candidates believing that you gain a higher crop yield with organic produce, only 23% of candidates accessed the correct answer. Natural selection and classification questions were accessed well with up to 80% of candidates able to correctly identify the hierarchy of classification. The difference between haploid and diploid cells is less well understood with only 36% of candidates able to correctly distinguish between haploid gametes and diploid body cells.

Grade Boundaries - March 2010

Multiple Choice Papers - GCSE Science

Raw Mark Grade Boundaries

5005/5025	Max mark	A*	A	B	C	D	E	F	G
H	24	19	17	15	13	9	7		
F	24				16	13	10	8	6

5006/5026	Max mark	A*	A	B	C	D	E	F	G
H	24	18	16	14	12	9	7		
F	24				16	13	11	9	7

5007/5035	Max mark	A*	A	B	C	D	E	F	G
H	24	16	13	10	8	5	3		
F	24				16	13	10	8	6

5008/5036	Max mark	A*	A	B	C	D	E	F	G
H	24	18	15	12	10	6	4		
F	24				18	15	12	10	8

5009/5045	Max mark	A*	A	B	C	D	E	F	G
H	24	19	17	15	14	11	9		
F	24				19	16	14	12	10

5010/5046	Max mark	A*	A	B	C	D	E	F	G
H	24	18	16	14	12	8	6		
F	24				15	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

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