**Science Targeted Feedback Analysis**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Year 12 Biology**

**Test 1 Inheritance and Variation**

MCQ: \_\_\_\_\_\_\_\_ /20 Written: \_\_\_\_\_\_ /35 Total: \_\_\_\_\_\_\_\_\_ / 55

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|  | Protein synthesis involves transcription of a gene into messenger RNA in the nucleus, and translation into an amino acid sequence at the ribosome (SU) | Variations in the genotype of offspring arise as a result of the processes of meiosis, including crossing over and random assortment of chromosomes, and fertilisation, as well as a result of mutations (SU) | Mutations in genes and chromosomes can result from errors in DNA replication or cell division, or from damage by physical or chemical factors in the environment (SU) | Frequencies of genotypes and phenotypes of offspring are determined by patterns of inheritance, including dominance, autosomal and sex‐linked alleles, multiple alleles and polygenes (SU) | Select, construct and use appropriate representations, including Punnett squares to communicate conceptual understanding, solve problems and make predictions (SIS) |  |
| Reflection |
| Qu 1 |  |  |  |  |  |  |
| Qu2 |  |  |  |  |  |  |
| Qu3 |  |  |  |  |  |  |
| Qu4 |  |  |  |  |  |  |
| Qu5 |  |  |  |  |  |  |
| Qu6 |  |  |  |  |  |  |
| Qu7 |  |  |  |  |  |  |
| Qu8 |  |  |  |  |  |  |
| Qu9 |  |  |  |  |  |  |
| Qu10 |  |  |  |  |  |  |
| Qu11 |  |  |  |  |  |  |
| Qu12 |  |  |  |  |  |  |
| Qu13 |  |  |  |  |  |  |
| Qu14 |  |  |  |  |  |  |
| Qu15 |  |  |  |  |  |  |
| Qu16 |  |  |  |  |  |  |
| Qu17 |  |  |  |  |  |  |
| Qu18 |  |  |  |  |  |  |
| Qu19 |  |  |  |  |  |  |
| Qu20 |  |  |  |  |  |  |

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|  | The genetic code is a base triplet code; genes include ‘coding’ and ‘non‐coding’ DNA, and many genes contain information for protein production (SU) | Protein synthesis involves transcription of a gene into messenger RNA in the nucleus, and translation into an amino acid sequence at the ribosome (SU) | Variations in the genotype of offspring arise as a result of the processes of meiosis, including crossing over and random assortment of chromosomes, and fertilisation, as well as a result of mutations (SU) | Mutations in genes and chromosomes can result from errors in DNA replication or cell division, or from damage by physical or chemical factors in the environment (SU) | Frequencies of genotypes and phenotypes of offspring are determined by patterns of inheritance, including dominance, autosomal and sex‐linked alleles, multiple alleles and polygenes (SU) | Select, construct and use appropriate representations, including Punnett squares to communicate conceptual understanding, solve problems and make predictions (SIS) |  |
| Reflection |
| Qu21 |  |  |  |  | /2 |  |  |
| Qu22 |  |  |  | /3 |  |  |  |
| Qu23 |  |  |  |  | /2 |  |  |
| Qu24 | /3 |  |  |  |  |  |  |
| Qu25 |  | /7 |  |  |  |  |  |
| Qu26 |  |  |  |  |  | /8 |  |
| Qu27 |  |  | /10 |  |  |  |  |