 Province of the

EASTERN CAPE

EDUCATION

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT**

**(SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET ANSWER SHEET**

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| --- | --- | --- | --- | --- | --- |
| **SUBJECT** | LIFE SCIENCES | **GRADE** | 12 | **DATE** | 02 April 2020 |
| **TOPIC** | TYPES OF DOMINANCE | **TERM 1**  **REVISION** |  | **TERM 2 CONTENT** | 🗸 |

**LEARNER ACTIVITY: MONOHYBRID CROSSES**

1. In humans, the allele for blue (**b**) eyes is recessive to the allele for brown (**B**) eyes. A man, heterozygous for brown eyes marries a woman with blue eyes. Show how the possible genotypes, phenotypes and ratio of individuals with brown and blue eyes in the F1-generation may be obtained. (6)

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1. In rabbits the dominant allele (**B**) produces black fur and the recessive allele (**b**)

produces white fur. Study the table below showing the genotypes of four rabbits.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rabbit | 1 | 2 | 3 | 4 |
| Genotype | BB | Bb | Bb | bb |

* 1. What are the phenotypes for rabbits 2 and 4 respectively (2)

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* 1. State the genotypic ratio that is shown in the table above. (1)

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* 1. If rabbits 1 and 4 were mated and had 12 offspring, how many of these would you expect to be black? (1)

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* 1. Rabbit 2 was allowed to breed with rabbit 3. Use a genetic cross to show the possible phenotypes and genotypes of the F1 generation for fur colour. (6)

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TOTAL = 16

TYPICAL EXAM QUESTIONS: DO Q 2.4 P2 NOV 2018;

Q 1.4 NOV 2017

**LEARNER ACTIVITY: TYPES OF DOMINANCE**

1. Study the diagrams below and answer the questions:

|  |  |  |  |  |  |  |  |  |  |
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| |  | | --- | |  | | KEY: Black fish (B) x Grey fish (G) | | |  |  | | --- | --- | | **Type of dominance** |  | | **Description** |  | | **Crossing** |  | |
| |  | | --- | |  | | KEY: Red bird (A) x Blue bird (a) | | |  |  | | --- | --- | | **Type of dominance** |  | | **Description** |  | | **Crossing** |  | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | white  red  pink | | Key: Red flower (R)x White flower (W) | | |  |  | | --- | --- | | **Type of dominance** |  | | **Description** |  | | **Crossing** |  | |

**TOTAL 15**