 Province of the

EASTERN CAPE

EDUCATION

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET**

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| **SUBJECT** | LIFE SCIENCES | **GRADE** | 12 | **DATE** | 27 August 2020 |
| **TOPIC** | Introduction to Evolution, evidence and variation | **50 marks** |  | **TERM 3 CONTENT** | 🗸 |
| **TIME ALLOCATION** | 50 minutes | **TIPS TO KEEP HEALTHY**  1. **WASH YOUR HANDS** thoroughly with soap and water for at least 20 seconds. Alternatively, use hand sanitizer with an alcohol content of at least 60%.  2. **PRACTICE SOCIAL DISTANCING** – keep a distance of 1m away from other people.  3. **PRACTISE GOOD RESPIRATORY HYGIENE**: cough or sneeze into your elbow or tissue and dispose of the tissue immediately after use.  4. **TRY NOT TO TOUCH YOUR FACE.** The virus can be transferred from your hands to your nose, mouth and eyes. It can then enter your body and make you sick.  5. **STAY AT HOME.** | | | |
| **INSTRUCTIONS** | Use Mind the Gap Study Guide and read:  Study the notes provided with this lesson  Answer the questions on the Worksheets below |

**QUESTION 1**

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| --- | --- | --- | --- |
| 1.1 | 1.1.1 Both A and B 🗸🗸  1.1.2 None 🗸🗸 |  | **(4)** |
| 1.2  1.2.1 Biogeography🗸  1.2.2 Homologous structures🗸  1.2.3 Biological evolution🗸  1.2.4 Chromosomal mutation 🗸  1.2.5Palaeontology🗸  1.2.6 Biodiversity🗸 **(6)**  1.3 (a) Hypothesis is a tentative explanation about what is observed in nature around us🗸  that needs to be tested🗸and a theory is an explanation for something that has been  observed in nature🗸and which can be supported by facts, laws and tested hypotheses🗸 (4)  (b) A species is a group of organisms sharing similar characteristics🗸 and interbreed  randomly to produce fertile offspring🗸 and a population is a group of organisms  of the same species🗸 occupying the same area at the same time 🗸 (4)  **(8)**  **[18]**  **QUESTION 2**  2.1  2.1.1 (a) Hyracotherium🗸  (b) Sinohippus🗸 (2)  2.1.2 44🗸 mya🗸 (44-44,5) (2)  2.1.3 55🗸/50/46 million years🗸 (2)  2.1.4 Equus equus🗸 (1)  2.1.5 There has been an increase in height over time🗸 (1)  **(8)**  2.2.  2.2.1 Phylogenetic tree/ cladogram (1)  2.2.2 An exoskeleton 🗸 (1)  2.2.3 (a) S🗸  (b) T🗸 (2)  2.2.4 (a) Trilobites🗸  (b) Helmetids🗸 OR (b) Tegopeltids🗸  (c) Tegopeltids🗸 (c) Helmetids🗸  (d) Naraoids🗸 (4)  **(8)**  2.3  2.3.1 Accepted 🗸 (1)  2.3.2 -The bacteria🗸 /single-cell organisms appear in the oldest rock layers🗸 /strata  -multi-celled🗸 /complex organisms appear later in Palaeozoic era🗸  -older era🗸 is equivalent to older rock strata🗸 Any (2)  2.3.3 It would indicate that complex organism did not evolve from simple  organisms 🗸 therefore the theory will be rejected 🗸  **OR**  It would mean that first protists and dinosaurs co-existed🗸 therefore dinosaurs did not  evolve from protists🗸 (2)  2.3.4 Invertebrates have soft bodies 🗸 which decay easily 🗸/ not fossilise  **OR**  Some invertebrates may have had an exoskeleton🗸which decays easily🗸/ does not  fossilise  **OR**  Earlier fossils of invertebrates🗸 might not yet have been discovered🗸 (2)  2.3.5 Biogeography🗸  Modification by descent/homologous structure🗸  Genetics🗸 Any 2 (2)  **(9)**  2.4  2.4.1 Discontinuous 🗸 (1)  2.4.2 - There are distinct categories of the phenotypes🗸/ An individual is type A or B or AB or O,  - there are no intermediate phenotypes🗸 (2)  2.4.3 Blood type🗸 (1)  2.4.4 Increase the sample🗸  Conduct investigation in another group of people🗸 Any (1)  2.4.5 Mutation🗸  Random fertilisation🗸  Random mating🗸/outbreeding Any 2 (2)  **(7)**  **[32]**  **TOTAL = 50** | | | |