 Province of the

EASTERN CAPE

EDUCATION

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

**HOME SCHOOLING SELF-STUDY WORKSHEET**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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 lessonAnswer the questions on the Worksheets below |

**QUESTION 1**

|  |  |  |  |
| --- | --- | --- | --- |
| 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**2.12.1.1 (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)**2.32.3.1 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)**2.42.4.1 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** |