 Province of the

EASTERN CAPE

EDUCATION

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

**HOME SCHOOLING SELF-STUDY WORKSHEET**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SUBJECT** | LIFE SCIENCES | **GRADE** | 12 | **DATE** | 2June 2020 |
| **TOPIC** | RESPONDING TO THE ENVIRONMENT: EAR FUNCTION, HEARING AND BALANCE |  |  | **TERM 2 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 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1.1 | Indicate whether each of the statements in **COLUMN I** applies to **A ONLY**, **B ONLY**, **BOTH A AND B** **or** **NONE** of the items in **COLUMN II.** Write **A only**, **B only**, **both A and B,** or **none** next to the question number (1.2.1 to 1.2.3) in the ANSWER SHEET. | | | | |  |  |
|  |  |  | | | |  |  |
| |  |  |  |  | | --- | --- | --- | --- | | 1.1. | Involved in the hearing process | A:  B: | Auditory nerve  Cochlea | | 1.2 | Interprets impulses that are formed in response to the change in position of the head | A:  B: | Cerebrum  Cerebellum | | 1.3 | Sensing the speed and direction at which the head moves | A:  B: | macula  Crista | | 1.4 | Pressure waves generated | A:  B: | Endolymph  Perilymph | |  |  |  |  |   **( 4 X 2) (8)** | | | | | | | |
|  |  | |  |  | |  | |
| 2 | Study the diagram below and answer questions that follow: | | | | |  | |
|  |  | |  |  | |  | |
|  | **E**  **D**  **C** | | | | |  | |
|  |  | |  | | |  | |
|  | 2.1 | | Identify receptors A and B | | | (2) | |
|  |  | |  | | |  | |
|  | 2.2 | | State the part of the brain interpreting impulses from: | | |  | |
|  |  | |  | | |  | |
|  |  | | 1. Nerve branch C | | | (1) | |
|  |  | | 1. Nerve branch D | | | (1) | |
|  |  | |  | | |  | |
|  | 2.3 | | Explain the consequence of damage to each of the following parts | | |  | |
|  |  | |  | | |  | |
|  |  | | 1. Part A | | | (4) | |
|  |  | | 1. Part B | | | (4) | |
|  |  | | 1. Nerve E | | | (4) | |
|  |  | |  | | | **(16)** | |
|  |  | |  | | |  | |
| **QUESTION 3** | | | | | |  |  |
| 3.1 | The following questions are based on a diagram of a human ear | | | |  | | |
| **G**  **H** | | | | | | | |
|  | 3.1. | How does part D allow effective hearing? | | | (3) | | |
|  |  |  | | | |  |  |
|  | 3.2 | Explain how swelling due to inflammation of part F will influence the pressure waves created on the inner ear | | | | (5) | |
|  |  |  | | | |  |  |
|  | 3.3 | Explain why a person becomes dizzy immediately after jumping off a merry go round? | | | | (4) | |
|  |  |  | | | |  |  |
|  | 3.4 | Describe the sequence of events that occurs in the hearing process once part E vibrates | | | | (4) | |
|  |  |  | | | | **(16)** | |
|  |  | **TOTAL MARKS** | | | | **40** | |