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| **SUBJECT** | LIFE SCIENCES | **GRADE** | 12 | **DATE** | 3 June 2020 |
| **TOPIC** | RESPONDING TO THE ENVIRONMENT: CAUSES AND TREATMENT OF HEARING DEFECTS memo |  |  | **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 lessonAnswer the questions on the Worksheets below |

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| **QUESTION 1** |  |
|  |  |  |
| 1.1 | Round window✓ | (1) |
|  |  |  |
| 1.2 | Grommet✓ | (1) |
|  |  |  |
| 1.3 | Cochlear implant✓ | (1) |
|  |  |  |
| **QUESTION 2** |  |
|  |  |  |
| 2.1 | (a) A✓- tympanic membrane✓ | (2) |
|  |  |  |
|  | (b) E✓ – cochlear implant✓ | (2) |
|  |  |  |
| 2.2 | F✓- auditory nerve✓ | (2) |
|  |  |  |
|  | G✓- Eustachian Tube✓ | (2) |
|  |  |  |
| 2.3 | (a) B✓ and C✓ | (2) |
|  |  |  |
|  | (b) E✓ and F✓ | (2) |
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| 2.4 | Immediately when the wax blocking the auditory canal is removed✓,  vibrations will be transmitted to the tympanic membrane✓, causing the tympanic membrane to vibrate, ✓ Any 2) | (2) |
|  |  |  |
| 2.5 | Vibrations will not be transmitted through the middle ear to the inner ear ✓Pressure waves will not generated in the cochlear✓The organ of Corti will not be stimulated✓No impulse transmission to the cerebrum✓No hearing will occur✓ (Any 4) | (4) |
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| **QUESTION 3** |  |
|  |  |  |
| 3.1 | 19/357 X 3600 = 190 ✓ |  |
|  |  |  |
|  | 18/357 X 3600 = 180 ✓ |  |
|  |  |  |
|  | 320/357 X 3600 = 3230✓ |  |
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| **Lowest frequency of sound heard by Pabalelo** |
|  |  |   |
|  | NOTE: if slice proportion is not correctly labelled no mark for proportion |  |
|  |  |  |
|  | If correct proportion is only for 1 or 2 slices **✓** | (7) |
|  |  |  |
| 3.2  | Hazel ✓ | (1) |
|  |  |  |
| 3.3 | Hazel cannot detect low sound wave frequency below 20Hz and also cannot detect very high sound wave frequencies above 20000 Hz ✓unlike Pabalelo and Nkunzi who can detect very small and very high sound frequencies ✓ | (2) |
|  |  |  |
| 3.4 | The sound produced by bats is at a very high frequency✓ way above the highest frequency that can be detected by humans✓ / Sound produced by bats is beyond our edible range✓✓ | (2) |
|  |  | **(33)** |