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| **L3 Cambridge Technical Unit 1 Body Systems and the Effects of Physical Activity** | **Unit Navigator** | | | |
| In this unit you will develop a knowledge and understanding of the body systems, how they are structured and the functions they perform. You will also learn the effects that exercise has on each system and why. The aims are as follows:  **LG1**: Knowledge  **LG2**: Application  **LG3**: Skills | | | | |
| Assessment Grades |  | | | |
| **Lesson Title.** | **Learning Goals/Outcomes/Content** |  |  |  |
| **1-2. The axial and appendicular skeleton** | LG1 - To know the axial and appendicular skeleton, their components, function and bone types.  LG2 – To be able to give examples of parts of the axial and appendicular skeleton and the functions they perform |  |  |  |
| **3-4. Classification of joints** | LG1 - To know the classification of joints  LG2 – to be able to give examples of synovial joints, their structure and function |  |  |  |
| **5. The vertebral column** | LG3 - To demonstrate an understanding of the structure and function of the vertebral column |  |  |  |
| 6-7.  **The impact of activity on the skeletal system** | LG1 - To know the short and long term effects of exercise on the skeletal system  LG3 – to demonstrate an understanding of how and why exercise impacts the skeletal system |  |  |  |
| **8-9. The muscular system** | LG1 - To know the 3 different types of muscle  LG1 – to know the names and locations of skeletal muscles  LG3 – to demonstrate an understanding of how muscles work to create movement  LG2 – To be able to give specific sporting examples of types of muscular contractions. |  |  |  |
| **10-11. Muscle fibre types and performance** | LG1 - To know the structure of different muscle fibre types.  LG2 – To be able to give specific examples from sport of the use of muscle fibres  LG3 – To demonstrate a knowledge of the impact that exercise has on the muscular system |  |  |  |
| **12. The Cardiovascular system** | LG1 - To know the structure of the heart  LG2 – To be able to explain the functions of components of the heart  LG1 – To know what heart rate, stroke volume and cardiac output are |  |  |  |
| **13-14. Blood vessels and blood** | LG1 - To know how blood vessels are structured  LG1 - To know the function of different types of blood vessels  LG2 - To apply knowledge of function of blood vessels to explain why they are structured differently  LG1 – to know the structure and function of blood |  |  |  |
| **15. The impact of activity on the cardiovascular system** | LG3 - To demonstrate an understanding of the vascular shunt mechanism  LG3 **–** To demonstrate an understanding of how and why exercise impacts the cardiovascular system |  |  |  |
| **16-17. The respiratory system** | LG1 - To know the structure and function of the respiratory system  LG1 - To know the mechanics of breathing  LG2 - To apply knowledge of the mechanics of breathing to be able to explain how it changes during exercise |  |  |  |
| **18-19. Gaseous exchange** | LG1 - To know what gaseous exchange is  LG2 – To be able to explain when and why gaseous exchange takes place  LG1 – To know the different respiratory volumes  LG2 – To be able to explain why the respiratory volumes change during exercise |  |  |  |
| **20. The impact of physical activity on the respiratory system** | LG3 **–** To demonstrate an understanding of how and why exercise impacts the respiratory system |  |  |  |
| **21-22. Energy Systems** | LG1- To know the 3 energy systems and how they produce energy  LG2 – To be able to explain how the body uses the system to produce energy and for how long |  |  |  |
| **23. The energy continuum** | LG1 - To know what the energy continuum shows  LG2 – To be able to explain how intensity and duration of exercise determines the predominant system  LG3 – To demonstrate an understanding of how each system recovers and why these are different |  |  |  |
| **24, 26, 28, 30, 32. System revision** | LG2 - To be able to apply knowledge of the unit to revision questions |  |  |  |
| **25, 27, 29, 31, 33. System test** | LG3 – To demonstrate understanding of topics taught in this system to complete an end of system test |  |  |  |
| **34. Exam Completion** | LG3 – To demonstrate understanding of topics taught in this unit to complete an end of unit test |  |  |  |
| **35. Exam Review** | LG3 – To skilfully evaluate the unit covered and identify areas of strength/weakness |  |  |  |

**Links:**

LG1: Basic knowledge of the body systems and effects of exercise contributes to other topics and units, such as how to warm up and cool down in Unit 2

LG2: Application is a vital skill at Level 3 OCR, but also in understanding how the systems work to enable the body to continue exercising

LG3: Revision and analysis skills are crucial for pupils to be able to identify errors and learn from mistake to ensure a stronger future grade