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| **What will we be learning?**  **Unit 1 - Body systems and the effects of physical activity** | **Why this? Why now?**  This unit is externally assessed in January of Year 12 so studying this unit in the Autumn term prepares students for this examination. | **Key Words:**  Body system  Skeletal  Muscular  Cardio-vascular  Respiratory  Structure  Function  Short term exercise  Long term exercise |
| **What will we learn?**  The following body systems and the short and long-term effects of exercise on them:   * **LO1 - Skeletal system** * **LO2 - Muscular system** * **LO3 - Cardiovascular system** * **LO4 - Respiratory system** * **LO5 - Energy systems** | |
| **What opportunities are there for wider study?**  Careers/degree courses   * Sports science * Physiotherapy * PE teacher   Further reading:  [Human body systems: Overview, anatomy, functions | Kenhub](https://www.kenhub.com/en/library/anatomy/human-body-systems)  [Effects Of Exercise On The Body - Short & Long Term - TeachPE.com](https://www.teachpe.com/anatomy-physiology/effects-of-exercise?msclkid=e3a0c09ad13211ecb409f270d87eaa50) | |
| **How will I be assessed?**   * End of unit tests * Mock exam | |

**CAM TECH – SPORT**

**UNIT 1**

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| **SKELETAL SYSTEM**   * Parts of the skeleton * Functions of the skeletal system * Types of bones * Classification of joints * Synovial joints – types, structure and functions * Joint movements * Vertebral column – structure and function * Impact of exercise – short term, long term, how a warm up and cool down help |  |
| **MUSCULAR SYSTEM**   * Main muscles at synovial joints * Muscle function and contraction * Muscle fibre type and impact on performance * Impact of exercise – short term and long term |  |
| **CARDIOVASCULAR SYSTEM**   * The heart – structures and their roles * Stroke volume, heart rate and cardiac output * Blood vessels * Blood – components and functions * Vascular shunt mechanism and pre-capillary sphincters * Impact of exercise – short term, long term and how a warm-up helps |  |
| **RESPIRATORY SYSTEM**   * The lung – structures and their roles * Mechanics of breathing and respiratory muscles used * Gaseous exchange * Tidal volume, breathing frequency and minute ventilation * Blood – components and functions * Impact of exercise – short term and long term |  |
| **ENERGY SYSTEMS**   * ATP-PC system * Lactic acid system * Aerobic system * Energy continuum * The recovery process |  |