

## **Year 12 Level 3 BTEC National Sport Summer Work**

Both the single and the double awards for the Level 3 BTEC SPORT course require you to complete two core units, in addition to optional units.

UNIT 1 is a core unit focusing on the Principles of Anatomy and Physiology in Sport. The unit comprises of five learning outcomes which focus on the understanding of what happens during sport and exercise, therefore it is essential you have both a good understanding and basic knowledge of the different body systems. Within this unit, you will be assessed through written coursework including the following topics in relation to sports performance:

- The skeletal system
- The muscular system
- The respiratory system
- The cardiovascular system
- The energy system

In order to develop your knowledge in these topic areas you are required to complete a PowerPoint presentation on the five topic areas focusing on the short and long terms effects of exercise on each body system.

This work will help to form part of your research for studying each topic area in detail for the coming academic year. This is also an opportunity for you to demonstrate your current knowledge and understanding of anatomy and physiology.

### **You must cover the following areas within each topic in your presentation:**

- **The skeletal system** (structure, functions, bone types, additional factors affecting the skeletal system, adaptations of the skeletal system to exercise).
- **The muscular system** (types of muscle, functions, types of contraction, additional factors affecting the muscular system, adaptations to the muscular system to exercise).
- **The respiratory system** (structure, gaseous exchange, additional factors affecting the respiratory system, adaptations of the respiratory system to exercise).
- **The cardiovascular system** (structure, functions, additional factors affecting the cardiovascular system, adaptations of the cardiovascular system due to exercise).
- **The energy system** (different energy systems, additional factors affecting the energy systems, adaptations of the energy systems to exercise).

### **For each of the five topic areas you should:**

1. Have a title slide to introduce the body system.

2. Explain each body system.

#### **Example questions you could use to help you explain include:**

- What is it?
- What is its purpose/role?
- Why is it needed for sports performance?
- Where is its location?

3. Diagrams to show structure/ location.
4. Discuss how each body system is effected when exercising for short and long periods of time.

Please send your completed PowerPoint presentations to Miss Hendle by Monday 10<sup>th</sup> September 2018 via email to [jhendle@carshaltonboys.org](mailto:jhendle@carshaltonboys.org).

If you have any questions or concerns, please do not hesitate to contact by email.

Good Luck.

Miss Hendle