

## **Anatomy and Physiology in Sport – Research Tasks**

**Student Name:**

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### **Task 1: Introduction to Anatomy & Physiology**

Objective: Understand what anatomy and physiology mean in a sports context.

Task:

- Define the terms “anatomy” and “physiology”.
- Explain how they relate to performance in sport.
- Find 2 examples of sports where an understanding of A&P is crucial and explain why.

### **Task 2: The Muscular System in Sport**

Objective: Identify key muscles and understand their role in movement.

Task:

- List five major muscle groups used in sport (e.g. quadriceps, hamstrings).
- Choose one sport and identify the primary muscles used in that sport.
- Research and explain how those muscles contribute to performance.

### **Task 3: The Skeletal System and Movement**

Objective: Understand how bones and joints contribute to movement.

Task:

- Name the main types of joints (e.g. ball-and-socket, hinge) and give a sporting example for each.
- Describe how the skeletal system supports movement in one chosen sport.

### **Task 4: The Cardiovascular System and Sport**

Objective: Understand the function of the heart and blood vessels in sports performance.

Task:

- Label a diagram of the heart (print one or draw it).
- Research how aerobic and anaerobic sports place different demands on the cardiovascular system.
- Provide examples of one sport that relies heavily on each.

### **Task 5: The Respiratory System in Action**

Objective: Understand how oxygen is delivered to muscles.

Task:

- Describe the pathway of air from the nose/mouth to the alveoli.

- Explain how breathing changes during intense exercise.
- Identify a sport where respiratory efficiency is especially important and explain why.

## **Task 6: Energy Systems in Sport**

Objective: Explore the body's energy systems (ATP-PC, glycolytic, aerobic).

Task:

- Name the three energy systems.
- Match each energy system to a type of sport or activity (e.g. sprinting, 400m run, marathon).
- Explain how each system contributes to performance.

## **Task 7: Applying Knowledge to Athletic Performance**

Objective: Make connections between body systems and sports performance.

Task:

- Choose an elite athlete or sports team.
- Research how knowledge of anatomy and physiology helps them train effectively and avoid injury.
- Write a short summary (150–200 words).

## **Extension Task (Optional)**

Create a poster or presentation showing how different body systems work together to allow peak performance in your favourite sport.

