



**PRE-ENROLMENT  
LEARNING PACK**

**Macclesfield  
College**



Macclesfield  
College

## **LEVEL 3 SPORT**

**2020 - 2022**



**INITIAL ASSESSMENT**

**ANATOMY AND PHYSIOLOGY**

**THE SKELETAL SYSTEM**

# Unit 1 Anatomy

## Unit introduction

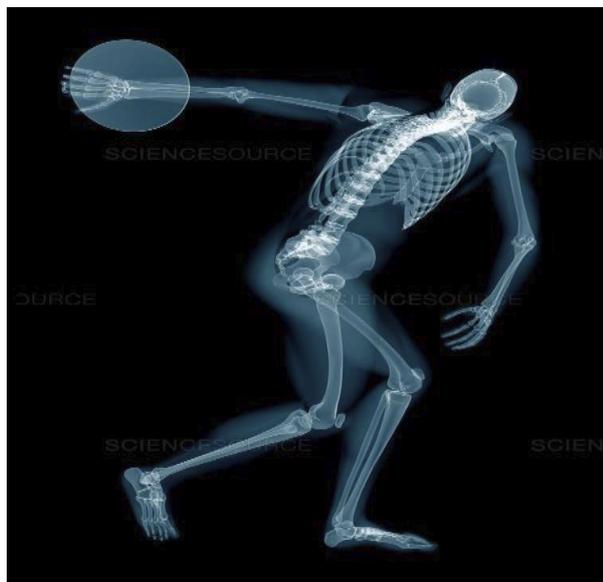
The human body is made up of many different systems that work together and allow us to take part in a huge variety of sport and exercise activities. An athlete can go from rest to all-out sprinting in a matter of seconds, whereas an endurance athlete can continue exercising for many hours at a time.

The skeletal and muscular systems work together to allow our bodies to perform a vast range of different movements. Our cardiovascular and respiratory systems act as a delivery service, working together to supply oxygen and nutrients to the body which in turn is used to produce energy for muscular contraction.

In order to appreciate how each of these systems function, you will study the structure of the skeletal, muscular, cardiovascular and respiratory systems. The human anatomy of these systems is very different but in terms of operation, each system is implicitly linked. Having an understanding of these body systems is imperative in the sport and active leisure industries in order to begin to appreciate how the body functions and how it copes with the many different stresses of exercise.

The unit starts by exploring the structure and function of the skeletal system which includes the different bones of the skeleton and the different types of joints. The muscular system is then studied, including the major muscles of the body, muscle movement, the different types of muscle and muscle fibre types. The structure of the heart and blood vessels is covered, together with the function of the cardiovascular system.

The unit goes on to explore the structure of the respiratory system and the function, including the mechanics of breathing. The final part of the unit explores the three different energy systems and the sports in which they are predominantly used.



## **Assignment 1: The Skeletal System (P1, P2).**

### **Know the structure and function of the skeletal system**

#### **Scenario**

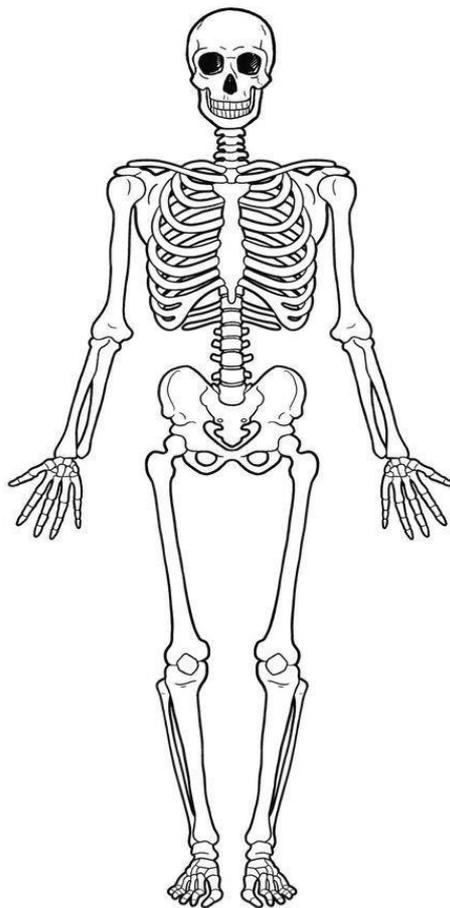
As a sports therapist you regularly apply anatomical knowledge to sports and exercise activities. Conduct practical and laboratory-based activities to explore the anatomy and physiology of the body systems.

**P1 - Describe the structure and function of the skeletal system**

**P2 - Describe the different classifications of joints**

**Task one: In the diagram below can you label the following?**

Using TWO different colours can you colour in the axial skeleton and the appendicular skeleton?

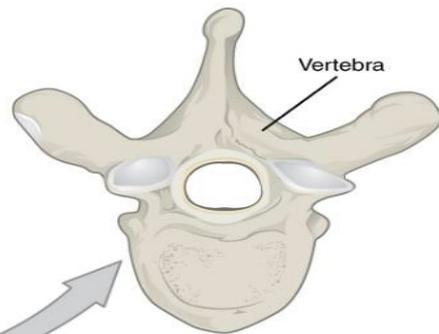
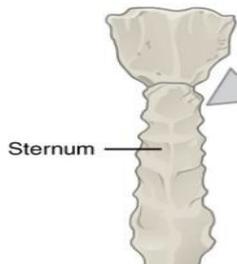


**Task two: In the diagram below can you identify the different types of bones?**

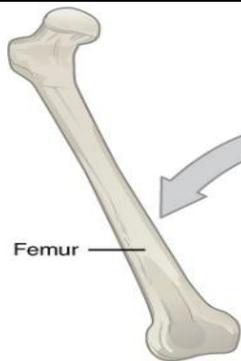
Types of bone - long bones, short bones, flat bones, irregular bones, sesamoid bones.

Type of bone: ..... Bone

Type of bone: ..... Bone

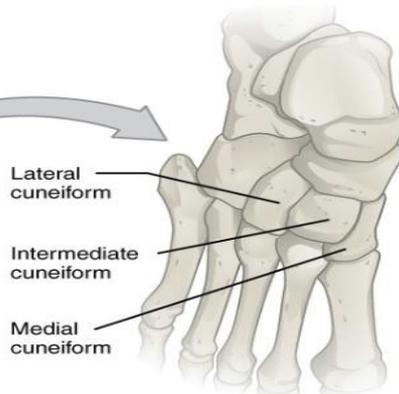


Type of bone: ..... Bone



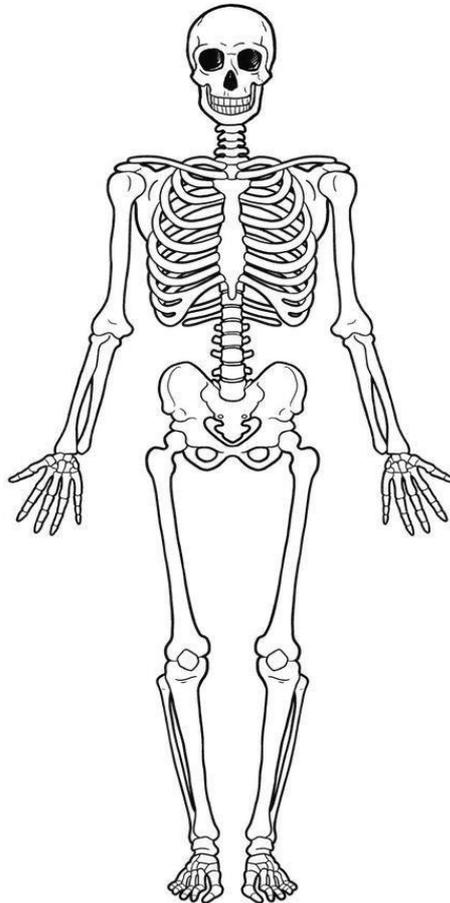
Type of bone: ..... Bone

Type of bone: ..... Bone



**Task Three: In the diagram below can you label the major bones?**

Major bones - cranium, clavicle, ribs, sternum, humerus, radius, ulna, scapula, ilium, pubis, ischium, carpals, metacarpals, phalanges, femur, patella, tibia, fibula, tarsals, metatarsals, vertebral column - cervical, thoracic, and lumbar vertebrae, sacrum, coccyx



#### **Task Four: Function of the skeletal system**

The main functions of the skeletal system: support; protection; attachment for skeletal muscle; source of blood cell production; store of minerals Joints: fixed; slightly moveable; synovial/freely moveable (types, structures, movement at each joint)

**Describe each function and its importance to the body.**

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**Task Five: Different types of bones have specific purposes and are located in different parts of the body. Complete the table below.**

Bone type	Name of bone	Location	Main purpose
Irregular	Vertebra		
	Carpals	Wrist	
Long			Blood Production
Flat			Protection

**Task Six: What kind of joint is this? Label three bones in the wrist.**



**Task Seven: Give an example of each type of joint and where it is found in the body.**

Type of Joint	Name of joint	Location of joint
Hinge		
Pivot		
Gliding		
Saddle		

**Task eight: Name a ball and socket joint in the body. In a named sport, give reasons why a ball and socket joint might be important for good performance in that sport.**

# Sporting History

## Introduction

Over the past 200 years sport has been on an upward trajectory, since the industrial revolution the way in which we all access sport has been consistently changing. The introduction of less working hours and better lifestyles led to an influx of working-class people accessing sport for the first time. Throughout your course you will complete units that discuss the current and historic issues in sport along with its development and its effects on the community.

## Netflix

Head to Netflix and find a series called *The English Game*. I want you too watch this series and consider how football has changed since these times and some of the background issues that are shown throughout the series such as poverty, discrimination and gender inequalities. The power of sport that is shown in this series is something that is still true to this day.



## Your Turn

Pick a sport of your choice (not football) now create a poster that highlights how that sport has developed over the years up to current times.

Does this sport have a rich past?

Is it a sport accessed by all?

Have the rules changed dramatically since the sport was introduced?

These are some of the questions you can research along with numerous other factors.

## Pick a Movie/Series

In your opinion what is the best sporting movie/series you have seen? Make a note of this for discussion in your first class, how does your movie identify social issues or challenge the norm of a modern society (when the movie was produced)