

**EXTENDED  
CERTIFICATE IN  
SPORT  
BTEC LEVEL 3**

## COURSE INFORMATION

### Course being studied

BTEC National Extended Certificate in Sport

### Units studied

Unit 1: Anatomy and Physiology

Unit 2: Fitness Training for programming for Health, Sport and Well being

Unit 3: Professional Development in the Sports Industry

These unit are mandatory and are required to complete the course. **Unit 1** and **Unit 2** are externally assessed. They are worth 33% each. **Unit 3** and **Unit 5** are internally assessed and are worth 17% each

### Additional unit required to complete the course

Unit 5: Application of Fitness testing

### Grading criteria

The criteria for each unit varies between a pass to a distinction, a combination of grades can be achieved,

### **Important information regarding mandatory units!**

You must pass all the mandatory units at a pass or above to complete the course

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### Course Expectations

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- 100% attendance to lessons
- Excellent behaviour towards the learning environment
- Positive contributions to class discussions
- Participate in presentations and work as a team when required

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### Assessment Expectations

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All learner work must be submitted on the given deadline day. If not the grade will be capped at pass level regardless of criteria.

All learners work needs to have the name and assignment title in the header and page numbers in the footer.

All learners need to have a submitted their work with a signed declaration form, this form states that is your own work!

## UNIT 1 ANATOMY AND PHYSIOLOGY

### Anatomy and Physiology

*This section focuses on the impact of physical activity on the systems of the body and on young people's participation and performance in physical activity as part of a balanced, active and healthy lifestyle.*

*Candidates will develop their knowledge and understanding of anatomical and physiological factors affecting body and mind readiness. This will lead to an improvement in the effectiveness and efficiency of their performance in roles such as performer, leader/coach and official.*

*The application of the knowledge gained will enable candidates to evaluate lifestyle choices critically in relation to their impact on body systems and lifelong participation in physical activity.*

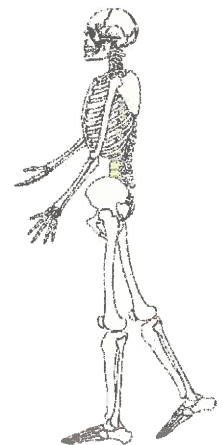
### The skeletal and muscular systems

**A general overview of the skeletal system is required and should include reference to the functions of the skeleton, the axial and appendicular skeleton and types of bone and cartilage.**

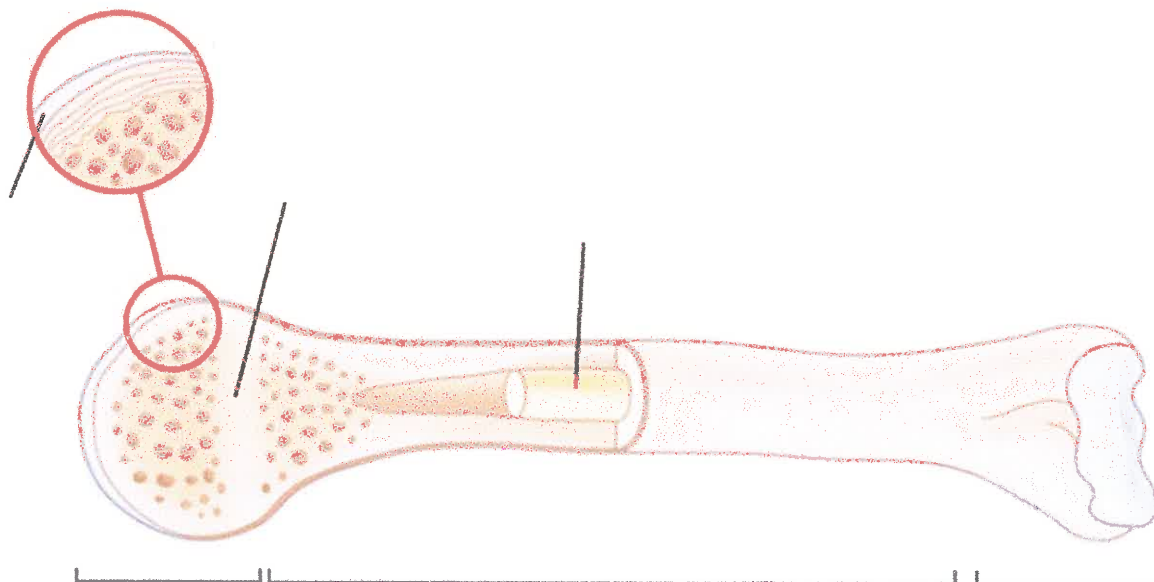
**Name the functions of the skeletal system**



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**Label the structure of the long bone below**



Long bone is one of five types of bone found in the skeleton. Identify and give examples of the other four types of bone

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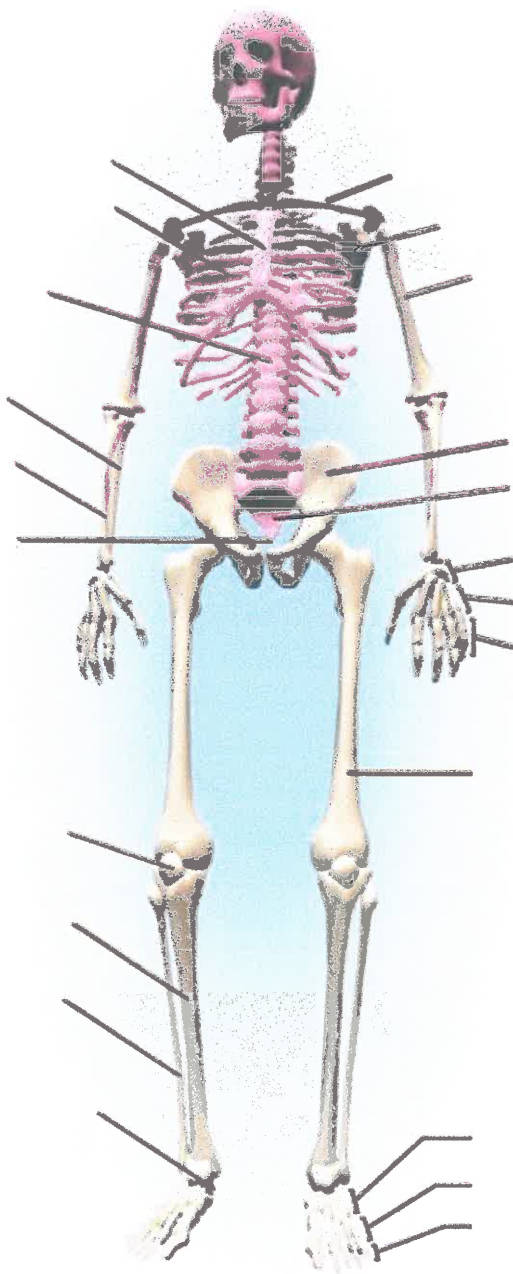
Articular cartilage is one of the three types of cartilage found in the human body. Identify, outline the function and give examples of the other two types of cartilage.

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Label the skeleton below and fill in the key to indicate the Axial and Appendicular skeleton



**KEY TERMS**

**Appendicular skeleton**

The bones of the upper and lower limbs and their girdles that join to the axial skeleton.

**Axial skeleton**

This forms the long axis of the body and includes the bones of the skull, spine and rib cage.

**Ligament**

A tough band of fibrous, slightly elastic connective tissue that attaches one bone to another. It binds the ends of bones together to prevent dislocation.


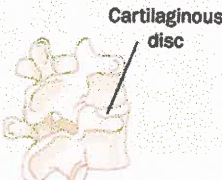
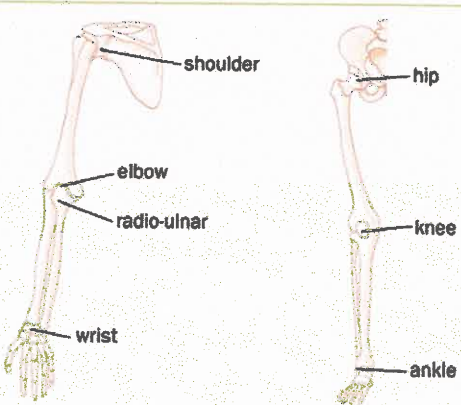
**Tendon**

A very strong connective tissue that attaches skeletal muscle to bone.

Key

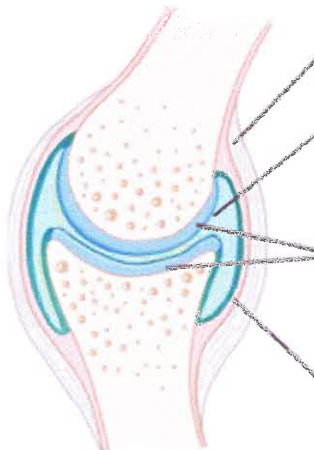


Using the table and pictures below name the 3 classes of joint found in the body and state the differences between them

Class of joint	Mobility	Stability	Examples from the skeleton	Diagram
Fibrous				
Cartilaginous				
Synovial				

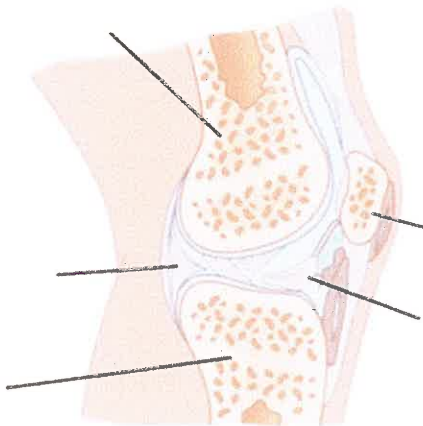
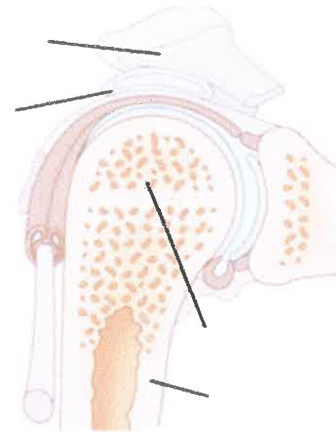
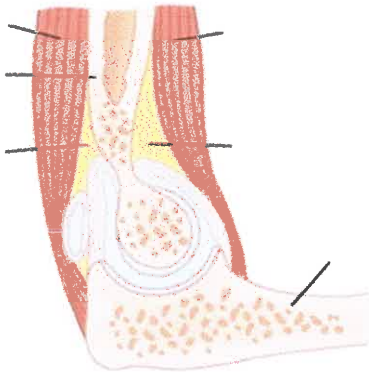
Fill in the table below showing the four main distinguishing features of a synovial joint

Feature	Structure	Function
Ligament		
Synovial fluid		
Articular cartilage		
Joint Capsule		





Label three of the most commonly identifiable synovial joints



**KEY TERMS**

**Bursa (pl. bursae)**

A flattened fibrous sac lined with synovial fluid that contains a thin film of synovial fluid. Its function is to prevent friction at sites in the body where ligaments, muscles, tendons or bones might rub together.

**Meniscus (pl menisci)**

A wedge of white fibrocartilage that improves the fit between adjacent bone ends, making the joint more stable and reducing wear and tear on joint surfaces.

**Pad of fat**

A fatty pad that provides cushioning between the fibrous capsule and a bone or muscle.

Synovial joints require a fine balance between stability and mobility. From your knowledge of the general structure of synovial joints:

1. List two features that increase joint stability, giving a specific function for each.

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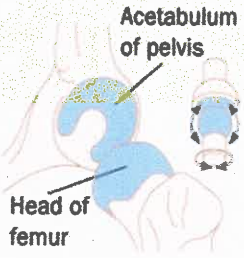
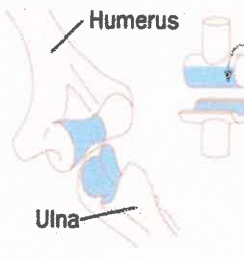
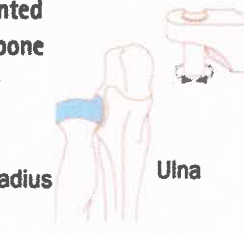
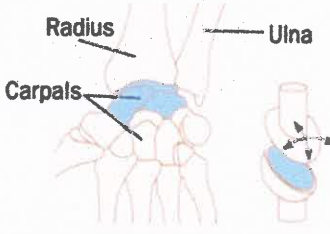
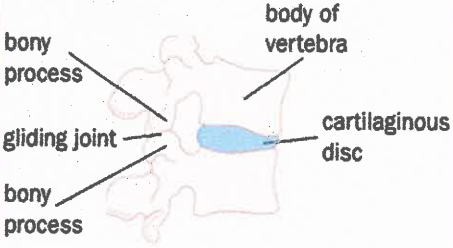
2. List two features that increase joint mobility, giving a specific function for each.

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The table below shows the mobility at the 5 different types of synovial joint. Fill in the two blank columns

Type of Synovial Joint	Examples from the skeleton	Description	Mobility
		<p>A ball shaped head of one bone articulates with a cup like socket of an adjacent bone.</p>  <p>Acetabulum of pelvis Head of femur</p>	<p>Movement can occur in three planes. This joint allows the greatest range of movement.</p>
		<p>A cylindrical protusion of one bone articulates with a trough-shaped depression of an adjacent bone.</p>  <p>Humerus Ulna</p>	<p>Movement is restricted to one plane. This joint allows bending and straightening only.</p>
		<p>A rounded or pointed structure of one bone articulates with a ring-shaped structure of an adjacent bone.</p>  <p>Radius Ulna</p>	<p>Movement is restricted to one plane. This joint allows rotation about its longitudinal axis only.</p>
		<p>Similar to a ball and socket joint but with much flatter articulating surfaces forming a much shallower joint.</p>  <p>Radius Ulna Carpals</p>	<p>Movement can occur in two planes. This joint allows the second greatest range of movement.</p>
		<p>Articulating surfaces are almost flat and of a similar size.</p>  <p>bony process body of vertebra gliding joint bony process cartilaginous disc</p>	<p>Gliding allows movement in three planes, but it is severely limited.</p>



## UNIT 5 APPLICATION OF FITNESS TESTING

For EACH of the following Fitness Tests

SIT AND REACH

1RM TEST

GRIP DYNAMOMETER

MULTI STAGE FITNESS TEST

HARVARD STEP TEST

SKINFOLD CALIPERS

BODY MASS INDEX

1. Identify what aspect of fitness it measures
2. The Test Protocol for the Test
3. The Equipment required for the test
4. What is the test measured in

SIT AND REACH

1RM TEST

GRIP DYNAMOMETER

MULTI STAGE FITNESS TEST

HARVARD STEP TEST

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