

**CTEC Sport Extended Certificate Summer task**

**Unit 1 Body Systems and the effects of physical activity**

**Task 1**

Answer the question below based on the content of the taster session.

During a football match a player will use all three energy systems. For example, during periods of high intensity work such as sprinting up and down the pitch continuously for 30 seconds the player will be using the lactic acid system. Explain, using a sporting example, why a player would use the following systems.

**(a) ATP-PC system**

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..... **[3]**

**(b) Aerobic system**

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..... **[3]**

**Task 2**

Produce a presentation that you can deliver in your first few lessons in September that you could do to the coaches at Stevenage FC about the different types of energy systems and how they can be utilised and trained for in sport. You need to include information on the following:

The three energy systems, i.e.

- ATP-PC/alactic system
- lactic acid system
- aerobic system
- type of reaction (aerobic or anaerobic)
- chemical or food fuel
- amount of ATP produced
- by-products

The recovery process for each energy system, i.e.

- processes involved
- timescales for full recovery

Using a range of sporting examples from a range of sports produce an energy continuum and identify how intensity and duration of exercise determines which energy system is predominant.

### Task 3

To support the KS4 GCSE and CNAT pupils at Nobel produce a booklet about the skeletal system. You need to include information and labelled diagrams on the following:

#### 1.1 The axial and appendicular skeletons.

Axial skeleton, i.e.

- cranium
- sternum
- ribs
- vertebral column, i.e.
  - o cervical vertebrae
  - o thoracic vertebrae
  - o lumbar vertebrae
  - o sacrum
  - o coccyx

Appendicular skeleton, i.e.

- scapula
- clavicle
- humerus
- radius
- ulna
- carpals
- metacarpals
- phalanges
- ilium
- ischium
- pubis
- femur
- patella
- tibia
- fibula
- tarsals
- talus
- metatarsals

#### 1.2 The functions of the skeleton and the link to types of bone, i.e.

- functions, i.e.
  - o shape
  - o support
  - o protection
  - o movement
  - o blood cell production
  - o mineral storage

- types of bone, i.e.
  - o long
  - o short
  - o flat
  - o irregular
  - o sesamoid

### 1.3 Classifications of joints, i.e.

- fixed/fused
- slightly movable/cartilaginous
- freely movable/synovial

### 1.4 The types of synovial joint, i.e.

- hinge
- ball and socket
- pivot
- condyloid
- saddle
- gliding

### 1.5 Structures and functions (what they do) of synovial joints, i.e.

- structure, i.e.
  - o articular/hyaline cartilage
  - o ligaments
  - o synovial membrane
  - o synovial fluid
  - o menisci
  - o pads of fat
  - o bursae
  - o joint capsule
- functions, i.e.
  - o stability
  - o mobility

### 1.7 Structure and function of the vertebral column

## CTEC Sport Diploma Summer task

### Unit 13 Health and Fitness Testing for Sport and Exercise

#### Task 1

Produce a PowerPoint presentation about how you would test each component of fitness. You must include the component of fitness, a description of how the tests are conducted and the advantages and disadvantages of each test.

1.1 Fitness tests for different fitness components, i.e.

- agility
- balance
- speed
- reaction time
- power
- cardio – respiratory endurance
- flexibility
- muscular endurance
- maximum strength
- body composition

1.2 Advantages/disadvantages of each identified fitness test, i.e.

- cost (e.g. high, low)
- availability (e.g. equipment, space, facilities)
- time (e.g. short, lengthy)
- ease/practicality (e.g. ease of use/implementation)
- knowledge (e.g. specialist, basic)
- accuracy (e.g. of measurement of results)
- validity (e.g. how well they test the fitness component)
- reliability (e.g. if they can be repeated with the same outcome)

#### Task 2

Below is a table of test results. They are for clients that have visited your physical testing sessions. Client A is a 16 year old girl who has aspirations of playing national standard netball. She is a wing attack. Client B is a 17 year old boy and is currently a county level footballer who has aspirations to play at the highest level he can. He plays central midfield.

	Press up	Sit up	30m sprint	Hand Grip	Sit and reach	MSFT	Vertical Jump
Client A	31	32	5.3	21	19cm	6.2	41
Client B	32	50	4.6	34	21cm	12.1	47

You need to interpret and compare these results and display them in an appropriate way. You then need to write a written report about their strengths and areas to develop that are relevant to the level, sport and position they play. Below is the unit content that may help you with your content.

5.1 Interpret fitness testing results, i.e.

- place results in context (e.g. relative to previous results, normative data, personal ability/expectation)

5.2 Give feedback to clients, i.e.

- display results in an appropriate way (e.g. chart, graph, diagram, list)
- method of feedback (e.g. verbal, written, individual, group)