Learning Outcomes

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<th>Learning Outcomes</th>
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<td>1. Demonstrate an understanding of three key aspects of sports science</td>
<td>1.1 Explain what is meant by the term ‘sports nutrition’, including its importance within the study of sports science</td>
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<td>1.2 Explain what we meant by the term ‘skills acquisition’, including its importance within the study of sports science</td>
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<td>1.3 Explain what we meant by the term ‘sports psychology’, including its importance within the study of sports science</td>
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<td>2. Demonstrate an understanding of sports physiology</td>
<td>2.1 Explain the main functions of the skeletal system, identifying the main bones</td>
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<td>2.2 Explain the main functions of the muscular system, identifying the main muscles in the body</td>
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<td>3. Demonstrate an understanding of biomechanics of sports and exercise</td>
<td>3.1 For a chosen skill, identify the main performance indicators which are the core elements leading to a successful performance</td>
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<td>3.2 With reference to specific sporting examples, discuss the importance of the correct analysis of team and individual performances</td>
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Assessment Methodology

A series of short-answer questions to cover the assessment criteria, equivalent to 1000–1500 words.

Indicative Content

Please note that the indicative content supplied below is intended as a suggested guide only. It is not meant to be a prescriptive, exhaustive or fully delivered content list.

Learning Outcome 1

Nutrition

Macronutrients (carbohydrates, proteins, fats); micronutrients (vitamins, minerals); fibre; nutritional requirements (essential and non-essential); common terminology (Recommended Daily Allowance, Optimum Level, Estimated Average Requirements); standard abbreviations (RDA, SI, EAR)

Energy: measures (calories, joules, kilocalories, kilojoules); sources, e.g. fats, carbohydrates, proteins

Hydration: signs and symptoms (dehydration, hyper-hydration, hypo-hydration); fluid intake

Diet: balanced diet (carbohydrates, fats, proteins, water, fibre, vitamins, minerals)

Skill Acquisition

Characteristics of skilled performance: definitions of skill; skill as an act/task and skill as a cognitive skill; perceptual skills; motor skills; gross-fine; discrete-serial continuous; internally-externally paced; open-closed; implications for coaching indicator of quality performance; learned behaviour
Learning theories: definition of learning; definition of performance; phases of learning: Fitts and Posner’s (1977) three-stage model; characteristics of each stage

Planning sessions: factors in session planning, e.g. goals, nature of the task, environmental factors, individual differences of the learner; learning styles (e.g. visual, auditory, kinaesthetic, Kolb’s learning styles)

**Sports Psychology**

Personality: definitions; types (type A and type B); theories, e.g. Marten’s schematic view

Motivation: definition; types (intrinsic, extrinsic); theories, e.g. need achievement theory, attribution theory, achievement goal theory

Aggression: definition; Gill’s criteria for aggressive behaviour; types of aggressive behaviour (hostile and instrumental aggression, assertion)

Arousal: definition; relationship between arousal level and performance

Stress: definition; eustress and distress; symptoms of stress on the body

Anxiety: definition; types (state, trait)

Leadership: e.g. qualities, styles (autocratic, democratic, consultative)

**Learning Outcome 2**

Structure of skeletal system: axial skeleton; appendicular skeleton; types of bone (long bones, short bones, flat bones, irregular bones, sesamoid bones); location of major bones (cranium, clavicle, ribs, sternum, humerus, radius, ulna, scapula, ilium, pubis, ischium, carpals, metacarpals, phalanges, femur, patella, tibia, fibula, tarsals, metatarsals, vertebral column, vertebrae – cervical, thoracic, lumbar; sacrum, coccyx)

Main function: protection of organs, stability and structure, movement (allied with muscle activity)

Muscular system: major muscles (biceps, triceps, deltoids, pectoralis major, rectus abdominis, rectus femoris, vastus lateralis, vastus medialis, vastus intermedius, semimembranosus, semitendinosus, biceps femoris, gastrocnemius, soleus, tibialis anterior, erector spinae, teres major, trapezius, latissimus dorsi, obliques, gluteus maximus); location; function; origins; insertions

Main function: movement, location of energy substrates (glycogen), site of aerobic and anaerobic activity

**Learning Outcome 3**

Identify technical requirements of sports: technical and tactical requirements: technical, e.g. passing, shooting, dribbling; tactical, e.g. attack, defence

Physical fitness requirements: components (cardiovascular fitness, muscular endurance, muscular strength, flexibility, body composition)

Skill-related fitness requirements: components of skill-related fitness (agility, power, speed, balance, coordination, reaction time)

Psychological requirements: required for selected sports, e.g. arousal, confidence, aggression, relaxation

Analysis of sports performance: analysis of sports performance: technical analysis, e.g. skills; tactical analysis; notational analysis; accurate recording and further analysis against models

Notational analysis: different methods of analysis; influence on team and individual performances