

WJEC Sport Unit 1 Fitness for Sport Curriculum Summary

Name of unit	Unit 1: Fitness for Sport
Why do we study this unit?	This unit introduces learners to the adaptations that take place in the body following exercise, how training can lead to improvements in fitness and the planning of training programmes. The aim of this unit is to develop the knowledge, understanding and skills needed to plan training programmes to improve the fitness of individuals.
By the end of the unit, students will be able to....	Students will understand the structure, functions and adaptations to the body's systems in relation to sport, exercise and physical activity. They will know and apply the importance of the components of fitness for different physical activities and understand the role of training in achieving improvements in fitness.
Links to previous units	
Key vocabulary	Structure, Functions, Effects, Adaptations, Cardio vascular, Cardio respiratory, Muscular skeletal, Synovial joints, Muscle fibre, Characteristics, systemic, Pulmonary, Comparisons, Factors, Principles, Training methods, Target setting.
Week and summary topic	Knowledge and skills learned
1:The structure of body systems	<p>Learners should know the structure of the following body systems:</p> <ul style="list-style-type: none"> ● Cardio-vascular system – location of atria, ventricles, vena cava, aorta, pulmonary artery, pulmonary vein ● Cardio-respiratory system – location of larynx, trachea, bronchus, bronchioles, alveoli, lungs, diaphragm, intercostal muscles ● Synovial joints to include ball and socket, hinge and pivot joints ● Muscular-skeletal system – location of major muscle groups (biceps, triceps, deltoids, pectoralis major, quadriceps, hamstrings, gastrocnemius, trapezius, latissimus dorsi, abdominals, gluteus maximus) and main bones (cranium, ribs, scapula, humerus, radius,

	<p>ulna, pelvis, femur, patella, tibia, fibula, vertebral column)</p> <ul style="list-style-type: none"> ● Muscle fibre types: slow/fast type I, type II.
<p>2: The functions of body systems</p>	<p>Learners should know and understand the functions of the following body systems:</p> <ul style="list-style-type: none"> ● Cardio-vascular system (systemic circulatory system) – transport of nutrients and oxygen, removal of waste products, regulation of body temperature (vasodilation and vasoconstriction) and blood pressure ● Cardio-respiratory system (pulmonary circulatory system) – inspiration of oxygen and expiration of carbon dioxide and water through breathing, gaseous exchange, diffusion ● Muscular-skeletal system – types of movement (flexion, extension, adduction, abduction, rotation, circumduction), antagonistic action at the knee and elbow (synergist, fixator, prime mover/agonist, antagonist), muscle attachment, protection and structure and shape of the body ● Characteristics of the muscle fibre types - slow/fast type I, type II, linked to aerobic and anaerobic sports and activities ● Characteristics of energy systems - ATP-PC, anaerobic and aerobic in relation to the nutrients used and waste products produced at different intensities and duration.
<p>3: The short-term effects of exercise on body systems</p>	<p>Learners should know and understand the following short-term effects of exercise on body systems resulting from different intensities of exercise:</p> <ul style="list-style-type: none"> ● Cardio-vascular system – including changes in cardiac output, heart rate, stroke volumes and temperature ● Energy systems, production of waste products ● Muscular-skeletal system changes to elasticity of muscles and transport of nutrients to the working muscles ● Cardio-respiratory system including changes in breathing frequency/rate, tidal volume and minute ventilation.
<p>4: The long-term adaptations from exercise on the body systems</p>	<p>Learners should know and understand the long-term adaptations on the body systems resulting from different intensity, duration and method of training:</p> <ul style="list-style-type: none"> ● Cardio-vascular system changes to cardiac values, capillarisation, blood pressure, cardiac hypertrophy ● Energy systems; energy system thresholds and training zones ● Muscular skeletal system to include increases in bone density, hypertrophy, elasticity of muscles ● Cardio-respiratory system changes to respiratory values and capillarisation, hypertrophy of muscles.

<p>5: The components of health and fitness required for different physical activities</p>	<p>Learners should know and understand the components of health and fitness, their definitions and examples of related sporting activities. Components of health and fitness:</p> <ul style="list-style-type: none"> ● Agility ● Balance ● Cardiovascular endurance ● Co-ordination ● Flexibility ● Muscular endurance ● Muscular strength ● Power and speed ● Reaction time.
<p>6: Measuring health and fitness</p>	<p>Learners should know a fitness test related to each component of health and fitness:</p> <ul style="list-style-type: none"> ● Agility – Illinois agility ● Balance – stork stand ● Cardio-vascular endurance – multistage fitness test/cooper 12- minute run ● Co-ordination – alternate hand throw ● Flexibility – sit and reach ● Muscular endurance – sit up/press up ● Muscular strength – hand grip/rep max ● Power – vertical jump test, standing broad jump ● Reaction time – ruler drop ● Speed – 30m/50m/ sprint. Learners should know and understand the importance of the validity and reliability of testing and the impact this has on being able to make comparisons with previous test results or normative data.
<p>7. Why fitness testing is important</p>	<p>Learners should know and understand why fitness testing is important and the role fitness testing plays in improvement of performance. The reasons for testing are to:</p> <ul style="list-style-type: none"> ● Carry out comparisons against normative data ● Identify a performer's strengths and weaknesses ● Provide a baseline for future comparisons ● Provide important information for the coach ● Provide information that assists in team selection ● Set goals or targets
<p>8. Factors that need to be considered before training</p>	<p>Learners should know and understand the following factors that must be considered before starting any training:</p> <ul style="list-style-type: none"> ● Personal factors – health, fitness, age, gender, lifestyle, time available for training and cost of training ● Environmental factors – facilities and equipment available and required for training ● Structure and function of warm-up and cool down
<p>9. The principles of</p>	<p>Learners should know and understand the following principles</p>

training	<p>of training and how they should be applied to different training programmes:</p> <ul style="list-style-type: none"> ● Specificity ● Overload ● Progression ● Variance .
10. Training methods	<p>Learners should know the following methods of training and understand the relationship between the method of training and the components of health and fitness:</p> <ul style="list-style-type: none"> ● Continuous training ● Interval training – weight training, circuit training, plyometric training, flexibility training and fartlek training.
11. Target setting	<p>Learners should know and understand the reasons why setting short term targets and long-term goals is of benefit to a performer before they start any training programme. To include:</p> <ul style="list-style-type: none"> ● Benefits of setting goals on health, wellbeing and performance ● Exercise adherence ● Greater concentration on training by the performer ● Greater effort made by the performer during training ● Improved focus for the performer ● Improved motivation for the performer ● Target setting objectives: specific, measurable, agreed/achievable, realistic and time phased (SMART).