



West Park School

Physical Education

BTEC Examination Summer 2025

In readiness for your BTEC examination in **Physical Education** you must **LEARN** and **REVISE** the following content and skills:

Learning Outcome A

Topic	Area
The importance of <u>Components of Fitness</u> for participating in sport.	<ul style="list-style-type: none">• Aerobic endurance – events/sports lasting more 30 minutes• Muscular endurance – events/sports lasting more 30 minutes• Muscular strength – activities requiring force, e.g. Throwing events• Speed – activities requiring fast movement, e.g. Sprinting• Flexibility – activities requiring a wide range of movement around a joint, e.g. Gymnastics, martial arts• Body composition – low body fat, e.g. Gymnastics, high muscle mass, e.g. Sprinters• Power – activities requiring explosive movement, e.g. Gymnastics, basketball• Agility – activities requiring quick changes of direction, e.g. Dodging the opposition in a team game, freestyle skiing• Reaction time – any activity where a quick decision or response to a stimulus is needed• Balance – an activity requiring the control of the distribution of weight or to remain upright and steady• Coordination – any activity requiring the movement of two or more body parts and can include the use of sporting
The <u>Fitness Training Principles</u> and how to apply them to improve fitness	<p><u>FITT Principles:</u></p> <ol style="list-style-type: none">1. Frequency2. Intensity3. Time4. Type <p><u>Additional Training Principles (SPORRVIA):</u></p> <ol style="list-style-type: none">1. Specificity2. Progressive Overload3. Reversibility4. Rest & Recovery5. Variation6. Individual Differences7. Adaptations

<u>Exercise Intensity</u>	<p><u>Intensity:</u></p> <ul style="list-style-type: none"> • Measure heart rate (HR) • How to work out Maximum Heart Rate (MHR) – $220 - \text{Age} = \text{MHR}$ <p><u>Target zones and training thresholds:</u></p> <ul style="list-style-type: none"> • Calculate training zones • Apply Maximum Heart Rate to training • Aerobic training zone – low & high threshold • Anaerobic training zone – low & high threshold • The Borg (6–20) <u>Rating of Perceived Exertion</u> (RPE) Scale • $\text{RPE} \times 10 = \text{Heart Rate (HR)}$. • The relationship between RPE and heart rate where: $\text{RPE} \times 10 = \text{HR (bpm)}$. • Calculate 1 Rep Max for strength and 15 Rep Max for muscular endurance. <p><u>Technology to measure exercise intensity:</u></p> <ul style="list-style-type: none"> • Heart rate monitors • Smart watches • Apps.
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Learning Outcome B

Topic	Area
The importance of <u>Fitness Testing</u> and requirements	<ul style="list-style-type: none"> • Reasons for fitness Testing • Pre-Test Procedures • Reliability & validity of tests – factors affecting reliability • Practicality – cost, time, number of participants
<u>Fitness Test Methods</u>	<p><u>The fitness Tests for all the Components of Fitness:</u></p> <ul style="list-style-type: none"> • Aerobic endurance – Multi-stage Fitness Test, Yoyo Test, Harvard Step Test, 12 minute Cooper Run • Muscular endurance – One Minute Press Up Test, One Minute Sit Up Test, Timed Plank Test • Muscular strength – Grip Dynamometer, 1 Rep Max • Speed – 30 Meter Sprint Test, 30 Meter Flying Sprint Test • Flexibility – Sit & Reach Test, Calf Muscle Flexibility Test, Shoulder Flexibility Test • Body composition – Body Mass Index (BMI), Bioelectrical Impedance Analysis Test, Waist to Hip Ratio • Power – Vertical Jump Test, Standing Long/Broad Jump, Margaria-Kalamen Power Test • Agility – Illinois Agility Test, T-Test • Reaction time – Ruler Drop Test, Online Reaction Time Test • Balance – Stork Stand Test, Y-Balance Test • Coordination – Alternate-Hand Wall-Toss Test, Stick Flip Co-ordination Test

<u>Interpretation of Fitness Test Results</u>	<ul style="list-style-type: none"> • Comparison to normative published data. • Analyse and evaluate test results. • Recommendations for improvements to fitness performer based on test results.
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Learning Outcome C

Topic	Area
<u>Requirements for Fitness Training Methods</u>	<ul style="list-style-type: none"> • 4 Stages of a Warm-up • How to complete a Cool Down
<u>Fitness Training Methods</u>	<p><u>The Fitness Training for all the following Components of Fitness:</u></p> <ul style="list-style-type: none"> • Aerobic endurance – Continuous, Interval, Fartlek & Circuit Training • Muscular endurance – Free Weights & Resistance Machines, Circuit Training – low weight, high repetitions • Muscular strength – Free Weights & Resistance Machines – high weight, low repetitions • Speed – Acceleration Sprints, Interval Training, Resistance Drills • Flexibility – Static Active, Static Passive, PNF • Agility – SAQ Training • Power – Plyometrics • Balance – Exercises requiring support • Co-ordination – Exercises requiring the movement of two or more body parts • Reaction Time – Exercises responding to a stimulus
<u>Additional Requirements</u>	The advantages & disadvantages of each Method of Training
<u>Provision</u>	<p>The definitions, examples & advantages/disadvantages of the:</p> <ul style="list-style-type: none"> • Public Sector • Private Sector • Voluntary Sector
<u>The long-term effects of training on the body systems</u>	<ul style="list-style-type: none"> • Aerobic Endurance – Cardiac hypertrophy, decreased resting heart rate, strength of respiratory muscles, capillarisation around the alveoli • Flexibility – Increased range of movement at a joint, increased flexibility of ligament & tendons, Increased muscle length • Muscular Endurance – Capillarisation around muscle tissues, increased muscle tone • Strength & Power – Muscular hypertrophy, increased tendon & ligament strength, increased bone density • Speed – Increased tolerance to lactic acid

Learning Outcome D

Topic	Area
<u>Personal Information</u>	<ul style="list-style-type: none">• Aims of the training programme• Objectives of the training programme• Lifestyle & physical activity history• Attitudes and personal motivation for training
<u>Fitness Test Design</u>	<ul style="list-style-type: none">• Use of personal information• Selection of appropriate activities and components of fitness• Application of FIT principles to training
<u>Motivational Techniques</u>	<ul style="list-style-type: none">• Definition of <u>motivation</u>• Types of motivation – intrinsic & extrinsic• Setting goals to motivate people – <u>SMARTER</u> targets• Short-term & long-term goals• Influence of Goal Setting• Benefits of <u>motivation</u> on performance