

## A Level Topics

**At A level** we teach the following modules over the course of the year. Each module draws on prior learning from Year's 10 and 11 builds on understanding from the BTEC programme of study. Each module develops and deepens the Core knowledge that will underpin all areas of the curriculum at KS3 and KS4

Topic	Rationale	Knowledge acquisition	Key vocabulary	Skills and enrichment
Component 01 Physiological factors affecting performance: 1.1a Skeletal and muscular systems	To acquire knowledge of the science behind physical activity including the structure and function of key systems in the human body, the forces that act upon us and	Joints, movements and muscles	Bones, joints, Ligament,, Tendons, Muscles	
		Functional roles of muscles and type of contraction	Agonist, antagonist, fixator, isotonic, concentric, eccentric, isometric,	
		Analysis of movement	Joint type, movement, agonist and antagonist muscles, muscle contraction	
		Skeletal muscle contraction	Motor neuron, action potential, neurotransmitter, 'all or none' law	
		Muscle contraction during exercise of differing intensities and during recovery	Slow oxidative, fast oxidative glycolytic, fast glycolytic	
Component 02 Psychological factors affecting performance: 2.1 Skill acquisition	To acquire knowledge of the underlying psychological factors that influence our performance by applying theories to practical examples.	Classification of skills	Difficulty (simple/complex) , environmental influence (open/closed) , pacing (self-paced/externally paced), muscular involvement (gross/fine), continuity (discrete, serial & continuous), organisation (low/high)	
		Types and methods of practice	part practice, whole practice, whole/part-whole practice, progressive/part practice, massed practice, distributed practice, fixed practice, varied practice	
		Transfer of skills	Positive, negative, proactive, retroactive, bilateral	
		Principles and theories of learning movement skills	operant conditioning, cognitive theory of learning, Bandura's theory of social/observational learning	
		Stages of learning	Cognitive, associative, autonomous.	
		Guidance & feedback	verbal guidance, visual guidance, manual guidance, mechanical guidance, intrinsic, extrinsic, positive, negative, knowledge of performance, knowledge of results	
Component 01 Physiological factors affecting performance: 1.1b Cardiovascular and respiratory systems	To acquire knowledge of the science behind physical activity including the structure and function of key systems in the human body	Cardiovascular system at rest	Heart rate, stroke volume, cardiac output, Cardiac cycle, diastole, systole	
		Cardiovascular system during exercise of differing intensities and during recovery	Redistribution of cardiac output, vascular shunt mechanism, vasomotor centre, pre-capillary sphincters	
		Respiratory system at rest	Tidal volume, minute ventilation, alveoli, external intercostal,	

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Topic	Rationale	Knowledge acquisition	Key vocabulary	Skills and enrichment
		Respiratory system during exercise of differing intensities and during recovery	Sternocleidomastoid, pectoralis minor, internal intercostal, rectus abdominis, neural and chemical control, pressure gradient, dissociation of oxyhaemoglobin	
Component 02 Psychological factors affecting performance: 2.2 Sports psychology	To acquire knowledge of the underlying psychological factors that influence our performance by applying theories to practical examples.	Personality	trait – extroversion/introversion, stable/unstable, type a/type b , social learning – interactionist	
		Attitudes	cognitive , affective, behavioural, persuasive communication, cognitive dissonance	
		Motivation	Intrinsic, extrinsic	
		Arousal	drive theory , inverted U theory, catastrophe theory	
		Anxiety	State, trait, somatic, cognitive, optimal functioning	
		Aggression	Instinct, social learning, frustration-aggression hypothesis, aggressive cue hypothesis	
		Social Facilitation	introverts/extroverts, beginners/experts, simple/complex skills, gross/fine skills	
		Group and Team Dynamics in sport	Forming, storming, norming, performing, Steiner's model of group effectiveness, Ringelmann effect and social loafing.	
Component 01 Physiological factors affecting performance: 1.2a Diet and nutrition and their effect on physical activity and performance	To acquire knowledge of the science behind physical activity including the adaptations we make to our bodies through diet	Diet and nutrition	Components of a balanced diet, Energy balance	
		Ergogenic aid	Pharmacological aids, Physiological aids, nutritional aids	
Component 01 Physiological factors affecting performance: 1.2b Preparation and training methods in relation to improving and maintaining physical activity and performance	To acquire knowledge of the science behind physical activity including the adaptations we make to our bodies through training regimes	Aerobic training	VO2 Max, HIIT, Direct gas analysis , physiological adaptations	
		Strength training	Explosive, static, dynamic, fibre type, cross sectional area, physiological adaptations	
		Flexibility training	Proprioceptive neuromuscular facilitation (PNF), ballistic, physiological adaptations	
		Periodisation of training	Periodisation, macrocycle, mesocycle, microcycle, preparatory, competitive, transition	

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		Impact of training on lifestyle disease	Cardiovascular, respiratory, chronic obstructive pulmonary disease	
Component 01 Physiological factors affecting performance: 1.3a Biomechanical principles, levers, and the use of technology	To acquire knowledge of the science behind physical activity including the forces that act upon us and technology	Biomechanical principles	Newton's Laws, Force	
		Levers	Load, Fulcrum, effort arm, load arm, class	
		Analysing movement through the use of technology	Limb kinematics, force plates, wind tunnels	
Component 03 Content of socio-cultural issues in physical activity and sport: 3.1 Sport and Society	To acquire knowledge of how physical activity and sport have developed through time and the factors that shape contemporary sport	Emergence and evolution of modern sport	Social and cultural factors, amateurism and professionalism, gender, 20 <sup>th</sup> Century	
		Sport in 21 <sup>st</sup> Century	Globalisation of sport	
		Global sporting events	Modern Olympic Games, Political exploitation	
Component 04 Performance in physical activity – Evaluation and Analysis of Performance for Improvement (EAPI)	Applying knowledge from sport and all theory components to analyse and improve sporting performance in a chosen activity.	Analysis of sporting performance in relation to strengths and weaknesses and evaluation of overall success of performance	Skills, tactics, fitness	
		Identification and justification of a priority weakness to improve sports performance	Limitations affecting performance in relation to fitness, skill or tactic.	
		Design and implementation of development plan	Progressive practices, coaching points, adaptations	
		Evaluation and reflection of sports performance and development plan	Adenosine Triphosphate and energy systems Adenosine Triphosphate and energy systems	
Component 01 Physiological factors affecting performance: 1.1c Energy for Exercise	To acquire knowledge of the science behind physical activity including the structure and function of key systems in the human body	Adenosine Triphosphate and energy systems	Adenosine Triphosphate, coupled reaction, Adenosine diphosphate	
		Energy systems and ATP resynthesis	ATP-PC, Glycolytic, Aerobic, enzyme, yield, by-products	
		ATP resynthesis during exercise of differing intensities and durations	Energy continuum, intensity, duration, interplay, intermittent	

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		The recovery process	Excess post exercise Oxygen Consumption (EPOC),	
Component 02 Psychological factors affecting performance: 2.1 Skill acquisition: 2.2 Sports psychology	To acquire knowledge of the underlying psychological factors that influence our performance by applying theories to practical examples.	Memory models		
		Attribution	Weiner's model of attribution	
		Confidence and self-efficacy in sports performance	Vealey's model of sports confidence, Bandura's theory of self-efficacy	
		Leadership in sport	Emergent or prescribed leaders, styles, theories of leadership, Chelladurai's multi-dimensional model of sports leadership.	
		Stress management to optimise performance	Cognitive stress management techniques, somatic stress management techniques	
Component 01 Physiological factors affecting performance: 1.1d Environmental effects on body systems	To acquire knowledge of the science behind physical activity including the structure and function of key systems in the human body	Exercise at altitude	Partial pressure, acclimatisation, altitude,	
		Exercise in heat	Cardiovascular drift	
Component 01 Physiological factors affecting performance: 2.1c injury prevention and rehabilitation of injury	To acquire knowledge of the science behind physical activity including the adaptations we make to our bodies through training regimes	Acute and chronic injuries	Acute, chronic,	
		Injury prevention	Intrinsic, extrinsic	
		Responding to injuries and medical conditions in a sporting context	SALTAPS, PRICE, Recognise and Remove, 6 R's	
		Rehabilitation of injury	Contrast therapies	
Component 03 Content of socio-cultural issues in physical activity and sport 3.2 Contemporary issues in physical activity and sport	To acquire knowledge of how physical activity and sport have developed through time and the factors that shape contemporary sport	Ethics and deviance in sport	Drugs, doping, violence, gambling	
		Commercialisation and media	Spectatorship, media interest, professionalism, advertising, sponsorship, golden triangle	
		Routes into sporting excellence in the UK	UK Sport, National Institutes,	
		Modern technology in sport	Elite participation, General Participation, Fair outcomes, Entertainment	
Component 01 Physiological factors affecting performance:	To acquire knowledge of the science behind physical	Linear motion	Quantities of linear motion, distance, displacement, speed, velocity	

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Topic	Rationale	Knowledge acquisition	Key vocabulary	Skills and enrichment
1.3b Linear motion, angular motion, fluid mechanics and projectile motion	activity including the forces that act upon us and	Angular motion	Axes, longitudinal, frontal, transverse, moment of inertia, angular velocity, angular momentum, distribution of mass, conservation of angular momentum, Newton's analogues	
		Fluid mechanics	Air resistance, drag, frontal-cross sectional area, streamlining	
		Projectile motion	Parabolic, non-parabolic, Bernoulli's principle, Magnus Force	
Component 04 Performance in physical activity – Evaluation and Analysis of Performance for Improvement (EAPI)	Applying knowledge from sport and all theory components to analyse and improve sporting performance in a chosen activity	Analysis of sporting performance in relation to strengths and weaknesses and evaluation of overall success of performance	Skills, tactics, fitness	
		Identification and justification of a priority weakness to improve sports performance	Limitations affecting performance in relation to fitness, skill or tactic.	
		Design and implementation of development plan	Progressive practices, coaching points, adaptations	
		Evaluation and reflection of sports performance and development plan	Physiological, psychological and socio-cultural issues in physical activity and sport affecting performance	