

TOPIC	RAG RATE		
	Green	Amber	Red
<p>Applied Exercise Physiology (Mrs Doble) <i>This section focuses on how understanding the body and its systems can help lead to a healthy and active lifestyle and is limited to the following topics.</i></p>			
<p>– definitions of health and fitness and the relationship between them</p>			
<p>– consideration of the problems associated with trying to define health and fitness</p>			
<p>– components of health-related fitness – stamina, muscular endurance, strength, speed, power, flexibility</p>			
<p>– components of skill-related fitness – reaction time, agility, co-ordination and balance</p>			
<p>– effect of lifestyle choices on health and fitness.</p>			
<p>– the seven classes of food and their exercise-related function – fats, proteins, carbohydrates, vitamins, fibre, minerals and water</p>			
<p>– the need for a balanced diet and the energy balance of food</p>			
<p>– the performer’s use of nutritional information based on their activity, difference in diet composition between endurance athletes and power athletes</p>			
<p>– definitions of obesity and the limitations in trying to define it</p>			
<p>– percentage body fat/body composition and Body Mass Index (BMI) as measures of nutritional suitability.</p>			
<p>• Pulmonary function</p>			
<p>– mechanics of breathing</p>			
<p>– lung volumes and capacities and interpretations from spirometer readings regarding rest and exercise</p>			
<p>– gas exchange systems at alveoli and muscles</p>			
<p>– principles of diffusion, partial pressures, difference in oxygen and carbon dioxide content between alveolar air and pulmonary blood</p>			
<p>– role of blood carbon dioxide in changing breathing rate.</p>			

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• Transport of blood gases			
– roles of haemoglobin and myoglobin			
– transport of oxygen – Bohr shift			
– pulmonary and systematic circulation related to the various blood vessels (arteries/arterioles/ capillaries/venules and veins)			
– generation of blood pressures/velocities – venous return mechanism			
– redistribution of blood/vascular shunting			
– arterio-venous oxygen difference (A-VO ₂ diff)			
• Cardiac function			
– cardiac cycle			
– cardiac output, stroke volume and heart rate and the relationship between them			
– heart rate range in response to exercise hormonal and nervous effects on heart rate			
– role of blood carbon dioxide in changing heart rate			
– cardiac hypertrophy leading to bradycardia/ athlete's heart			
– Starling's law of the heart			
– cardio-vascular drift.			
• Analysis of movement in specified sporting actions (including planes and axes)			
– shoulder and elbow action in – push-ups, over-arm throwing, forehand racket strokes			
– hip, knee and ankle action in – running, kicking, jumping, squats			
– types of joint, articulating bones, joint actions, main agonists and antagonists, types of muscle contraction: isotonic (concentric and eccentric) and isometric related to the above sporting actions.			
• Levers – three classes of levers and examples of their use in the body related to the above specified sporting actions			

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– relationship of levers to effective performance			
– mechanical advantages and disadvantages and range and speed of movement.			
Applied Exercise Physiology in practical situations (Mrs Doble)	Green	Amber	Red
• Principles of training – concepts of specificity, progression, over-training, overload, reversibility and tedium, FITT principles			
• Calculating working intensities for optimal gains through heart rate and Borg scale, weights – one rep max			
• Fitness testing – reasons for testing, principles of maximal and sub-maximal tests, limitations of testing, specific test protocols, issues relating to validity and reliability • Physiological and psychological value of a warmup and cool-down; types of stretching exercises, active, passive, static and ballistic; principles of safe practice			
• Training methods – continuous, intermittent, circuit, weights, plyometrics and mobility training; explanation of the principles of each method, specific examples, advantages and disadvantages.			

Skill Acquisition (Mr Phillips) <i>This section focuses on how skill is acquired and the impact of psychological factors on their performance.</i>	Green	Amber	Red
• Characteristics and definitions of skill			
• Difference between motor and perceptual abilities			
• Difference between skill and ability			
• Types of skill – cognitive, perceptual and psychomotor			
• Classification of skill			
– use of skill continua (open – closed, discrete – serial – continuous, gross – fine, self paced – externally paced).			
• Information processing			
– input – senses, receptors, proprioception, perception, selective attention			
– memory – functions and characteristics of short-term sensory store, short-term memory and long-term memory; strategies to improve memory, chunking, chaining, mental rehearsal and practice			
– decision making – reaction time, simple reaction time, choice reaction time, response time, movement time and the relationship between them			
– anticipation temporal and spatial			
– factors affecting reaction time, Hick’s law, psychological refractory period, single channel hypothesis			
– motor programmes and sub routines			
– open and closed-loop control			
– factors affecting the efficiency of the components of the information processing system and strategies for improvement.			
• Learning and performance			
– learning – stages of learning, use of guidance, how feedback differs between the different stages of learning			
– learning plateaus – causes and solutions			
– motivation – intrinsic, extrinsic, tangible and intangible			
– learning theories – operant conditioning, positive and negative reinforcement and punishment			
– cognitive/insight theories			
– Bandura’s observational model of learning, social learning theory			

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– motor learning –Schmidt’s schema theory (recall, recognition, initial conditions, response specifications, sensory consequences, response outcomes)			
– transfer of learning (positive, negative, zero, bilateral, proactive and retroactive)			
– impact of practice on improving learning – goal setting – benefits and types, principles of effective goal setting.			
Skill Acquisition in practical situations (Mr Phillips) <i>Candidates should be able to understand the advantages and disadvantages of the following factors and explain how to improve performance.</i>	Green	Amber	Red
• Factors to consider when developing skill and planning training/coaching sessions			
• Teaching styles – command, reciprocal, discovery and problem solving			
• Methods of presenting practice – whole, part and whole-part, progressive part and whole-part whole			
• Types of practice – massed, distributed, variable and mental practice			
• Methods of guidance – verbal, visual, manual and mechanical			
• Feedback – types of feedback, Knowledge of Performance, Knowledge of Results, terminal, concurrent, delayed, positive and negative, intrinsic, extrinsic.			

Opportunities for Participation (Mr Bartlett) Section 1 <i>introduces some of the concepts, categorisations and benefits of physical activity to both the individual and society. Candidates should be able to understand:</i>	Green	Amber	Red
<ul style="list-style-type: none"> • the characteristics and objectives of <ul style="list-style-type: none"> – play – physical education – leisure and recreation – active leisure – outdoor and adventurous activities – sport 			
<ul style="list-style-type: none"> • the relationships between these concepts, and be able to compare and contrast one concept with another 			
<ul style="list-style-type: none"> • the benefits of play, physical education, active leisure, outdoor and adventurous activities and sport to the individual and to society. 			
Opportunities for Participation (Mr Bartlett) Section 2 focuses on the current provision for active leisure. Candidates should be able to understand:	Green	Amber	Red
<ul style="list-style-type: none"> • the characteristics and goals of the public, private and voluntary sectors 			
<ul style="list-style-type: none"> • the advantages and disadvantages of the public, private and voluntary sector provision 			
<ul style="list-style-type: none"> • the concept of 'best value' in relation to public sector provision. 			
Opportunities for Participation (Mr Bartlett) Section 3 <i>considers the role of schools and national governing bodies in creating opportunities for increasing participation.</i>	Green	Amber	Red
<ul style="list-style-type: none"> • the historical, social and cultural factors contributing towards the development of the current provision of physical education (including the influence of the English public schools on the emergence of rational recreation (including games) and the concept of fair play) 			
<ul style="list-style-type: none"> • how the development of physical activity within state elementary schools from the early 20th century from the concepts of military drill to post World War II provision and the emphasis on movement have helped increase participation 			
<ul style="list-style-type: none"> • the characteristics of each of the Key Stages of the National Curriculum for Physical Education and the relevance of each in relation to increasing opportunity for participation 			
<ul style="list-style-type: none"> • the factors influencing provision in schools and the impact this has on pupils' experiences 			
<ul style="list-style-type: none"> • the effects of developing school-club links 			

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<ul style="list-style-type: none"> initiatives such as Physical Education School Sport and Club Link Strategy (PESSCLS), School Sports Co-ordinator, Sports Colleges, Active Sports, Sports Leaders UK, the TOPS programme, Whole Sport plans designed to encourage the development of school-club links and explain the potential benefits to the government (individuals or community) 			
<ul style="list-style-type: none"> the role of national governing bodies, Sport England and Youth Sports Trust in increasing participation. 			
<p>Opportunities for Participation (Mr Bartlett) <i>Section 4 considers the potential barriers to participation and possible solutions for various target groups. Candidates should be able to understand:</i></p>	Green	Amber	Red
<ul style="list-style-type: none"> the terms equal opportunity, discrimination, stereotyping, inclusiveness and prejudice and give possible examples of each in sport 			
<ul style="list-style-type: none"> the barriers to participation and possible solutions to overcome them for the following target groups: <ul style="list-style-type: none"> disability socio-economic class ethnic group gender 			
<ul style="list-style-type: none"> the solutions to overcome discrimination in sport to raise participation. 			