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| **TOPIC** | **R** | **A** | **G** |
|  |  |  |  |
| **Health, exercise and fitness** |  |  |  |
| – definitions of health and fitness and the relationship between them |  |  |  |
| – consideration of the problems associated with trying to define health and fitness |  |  |  |
| – components of health-related fitness – stamina, muscular endurance, strength, speed, power, flexibility |  |  |  |
| – components of skill-related fitness – reaction time, agility, co-ordination and balance |  |  |  |
| – effect of lifestyle choices on health and fitness. |  |  |  |
|  |  |  |  |
| **Nutrition** |  |  |  |
| – the seven classes of food and their exercise-related function – fats, proteins, carbohydrates, vitamins, fibre, minerals and water |  |  |  |
| – the need for a balanced diet and the energy balance of food |  |  |  |
| – the performer’s use of nutritional information based on their activity, difference in diet composition between endurance athletes and power athletes |  |  |  |
| – definitions of obesity and the limitations in trying to define it |  |  |  |
| – percentage body fat/body composition and Body Mass Index (BMI) as measures of nutritional suitability |  |  |  |
|  |  |  |  |
| **Pulmonary function** |  |  |  |
| – mechanics of breathing |  |  |  |
| – lung volumes and capacities and interpretations from spirometer readings regarding rest and exercise |  |  |  |
| – gas exchange systems at alveoli and muscles |  |  |  |
| – principles of diffusion, partial pressures, difference in oxygen and carbon dioxide content between alveolar air and pulmonary blood |  |  |  |
| – role of blood carbon dioxide in changing breathing rate. |  |  |  |
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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-VO2 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. |  |  |  |
|  |  |  |  |
| **TOPIC** | **R** | **A** | **G** |
| **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 |  |  |  |
| – relationship of levers to effective performance |  |  |  |
| – mechanical advantages and disadvantages and range and speed of movement. |  |  |  |
|  |  |  |  |
| **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 |  |  |  |
| – motor learning –Schmidt’s schema theory |  |  |  |
| **TOPIC** | **R** | **A** | **G** |
| (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. |  |  |  |
|  |  |  |  |
| **Opportunities for Participation:** |  |  |  |
| • the characteristics and objectives of |  |  |  |
| – play |  |  |  |
| – physical education |  |  |  |
| – leisure and recreation |  |  |  |
| – active leisure |  |  |  |
| – outdoor and adventurous activities |  |  |  |
| – sport |  |  |  |
| • the relationships between these concepts, and be able to compare and contrast one concept with another |  |  |  |
| • the benefits of play, physical education, active leisure, outdoor and adventurous activities and sport to the individual and to society. |  |  |  |
|  |  |  |  |
| **Current provision for active leisure.** |  |  |  |
| • the characteristics and goals of the public, private and voluntary sectors |  |  |  |
| • the advantages and disadvantages of the public, private and voluntary sector provision |  |  |  |
| • the concept of ‘best value’ in relation to public sector provision. |  |  |  |
|  |  |  |  |
| **Role of schools and national governing bodies in creating opportunities for increasing participation.** |  |  |  |
| • the historical, social and cultural factors contributing towards the development of the current provision of physical education |  |  |  |
| – Influence of the English public schools on the emergence of rational recreation |  |  |  |
| – The concept of fair play |  |  |  |
| • development of physical activity within state elementary schools from the early 20th century the concepts of to and the emphasis on movement have helped increase participation |  |  |  |
| – military drill |  |  |  |
| – post World War II provision |  |  |  |
| – the emphasis on movement |  |  |  |
| • 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 |  |  |  |
| • the factors influencing provision in schools and the impact this has on pupils’ experiences |  |  |  |
| • the effects of developing school-club links 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) |  |  |  |
| **TOPIC** | **R** | **A** | **G** |
| • the role of national governing bodies, Sport England and Youth Sports Trust in increasing participation. |  |  |  |
|  |  |  |  |
| **Potential barriers to participation and possible solutions for various target groups.** |  |  |  |
| • the terms equal opportunity, discrimination, stereotyping, inclusiveness and prejudice and give possible examples of each in sport |  |  |  |
| – disability |  |  |  |
| – socio-economic class |  |  |  |
| – ethnic group |  |  |  |
| – gender |  |  |  |
| • the solutions to overcome discrimination in sport to raise participation. |  |  |  |