

PE

Exam	Duration	Marks available	% of GCSE	Topics/ content
Physical Education Component 1: Fitness and Body Systems	1 hour 45 minutes	90	36%	<ol style="list-style-type: none"> 1. Applied anatomy and physiology 2. Movement analysis 3. Physical training 4. Use of Data
Physical Education Component 2: Health and Performance	1 hour 15 minutes	70	24%	<ol style="list-style-type: none"> 1. Health, fitness and well-being 2. Sport psychology 3. Socio-cultural influences 4. Use of Data
PEP		20	10%	<ol style="list-style-type: none"> 1. Aim and planning 2. Carrying out and monitoring 3. Evaluation
Three practical activities		105	30	

Before revising, students should complete personal learning checklists for their subjects. These ask students to RAG rate both the topics/ content of their exams and also the skills they are required to use. Doing this will help them to identify priorities and make effective use of their revision time.

Personal Learning Checklists

Health, Fitness and Well-being (Paper 2: Health and Performance)	
RAG This Column using Highlighter Pen	
Physical, emotional and social health	<p>Physical: how increasing physical ability, through improving components of fitness can improve health/reduce health risks and how these benefits are achieved</p> <p>Emotional: how participation in physical activity and sport can improve emotional/psychological health and how these benefits are achieved</p> <p>Social: how participation in physical activity and sport can improve social health and how these benefits are achieved</p>
Lifestyles	Lifestyle choices in relation to: diet; activity level; work/rest/sleep balance; and recreational drugs (alcohol, nicotine)
Impact of lifestyle choices	Positive and negative impact of lifestyle choices on health, fitness and well-being, e.g. the negative effects of smoking (bronchitis, lung cancer)
Sedentary lifestyle	A sedentary lifestyle and its consequences: overweight; overfat; obese; increased risk to long-term health, e.g. depression, coronary heart disease, high blood pressure, diabetes, increased risk of osteoporosis, loss of muscle tone, posture, impact on components of fitness
Balanced diet and role of nutrients	The nutritional requirements and ratio of nutrients for a balanced diet to maintain a healthy lifestyle and optimise specific performances in physical activity and sport

	<p>Role of macronutrients: (carbohydrates, proteins and fats) for performers/players in physical activities and sports, carbohydrate loading for endurance athletes, and timing of protein intake for power athletes</p> <p>Role of micronutrients: (vitamins and minerals), water and fibre for performers/players in physical activities and sports</p>
Dietary manipulation for sport (carb-loading and hydration)	<p>The correct energy balance to maintain a healthy weight</p> <p>Hydration for physical activity and sport: why it is important, and how correct levels can be maintained during physical activity and sport</p>
Optimum weight due to physical characteristics and variations according to role in physical activity	<p>The factors affecting optimum weight: sex; height; bone structure and muscle girth</p> <p>The variation in optimum weight according to roles in specific physical activities and sports</p>
PARQs	<p>The use of a PARQ to assess personal readiness for training and recommendations for amendment to training based on PARQ</p>
Warm ups and cool downs	<p>The purpose and importance of warm ups and cool downs to effective training sessions and physical activity and sport</p> <p>Phases of a warm up and their significance in preparation for physical activity and sport</p> <p>Activities included in warm ups and cool downs</p>
Components of fitness and the relative importance of these components in physical activity and sport	<p>Cardiovascular fitness (aerobic endurance), strength, muscular endurance, flexibility, body composition, agility, balance, coordination, power, reaction time, and speed</p>
Fitness tests – theory and practice	<p>Theory: the value of fitness testing; the purpose of specific fitness tests; the selection of the appropriate fitness test for components of fitness; and the rationale for selection</p> <p>Practical: the test protocol</p> <p>Fitness testing: cardiovascular fitness – Cooper 12 minute tests (run, swim), Harvard Step Test; strength – grip dynamometer; muscular endurance – one-minute sit-up, one-minute press-up; speed – 30m sprint; power – vertical jump; flexibility – sit and reach</p> <p>Collection and interpretation of data from fitness test results</p> <p>Theory: analysis and evaluation of fitness test results against normative data tables</p>
Principles of training	<p>Individual needs, specificity, progressive overload, FITT (frequency, intensity, time, type), overtraining, reversibility, thresholds of training (aerobic target zone: 60–80% and anaerobic target zone: 80%–90%, calculated using Karvonen formula)</p>
Methods of training for specific components of fitness, physical activity and sport	<p>Continuous, Fartlek, circuit, interval, plyometrics, weight/resistance. Fitness classes for specific components of fitness, physical activity and sport (body pump, aerobics, pilates, yoga, spinning)</p> <p>The advantages and disadvantages of different training methods</p>
Applying the methods of training to a PEP	<p>Factors to consider when deciding the most appropriate training methods and training intensities for different physical activities and sports (fitness/sport requirements, facilities available, current level of fitness)</p>

Goal setting SMART targets and the value of each principle in improving and/or optimising performance	The use of goal setting to improve and/or optimise performance Principles of SMART targets (specific, measurable, achievable, realistic, time-bound) Setting and reviewing targets to improve and/or optimise performance
Sports psychology, practicing use of data	Interpretation and analysis of graphical representation of data associated with feedback on performance
Factors impacting on participation in physical activity and the impact on participation rates, considering personal factors	Gender, age, socio-economic group, ethnicity, disability
Commercialisation and the media	The relationship between commercialisation, the media and physical activity and sport
Advantages and disadvantages of commercialisation	The advantages and disadvantages of commercialisation and the media for: the sponsor; the sport; the performer; the spectator
Sporting behaviours	Sportsmanship, gamesmanship, and the reasons for, and consequences of, deviance at elite level
Deviance in sport	Review performance-enhancing drugs. Consider other types of deviancy in sport
Identification of injury, treatment and common sports injuries	Concussion, fractures, dislocation, sprain, torn cartilage and soft tissue injury (strain, tennis elbow, golfers elbow, abrasions) RICE (rest, ice, compression, elevation)
Injury prevention in sport and physical activity	Injury prevention through: correct application of the principles of training to avoid overuse injuries; correct application and adherence to the rules of an activity during play/participation; use of appropriate protective clothing and equipment; checking of equipment and facilities before use, all as applied to a range of physical activities and sports
Performance enhancing drugs – types, advantages and disadvantages	Performance-enhancing drugs (PEDs) and their positive and negative effects on sporting performance and performer lifestyle, including: anabolic steroids; beta blockers; diuretics; narcotic analgesics; peptide hormones (erythropoietin (EPO); growth hormones (GH)); stimulants; blood doping
Classification of skills using continua	Open–closed, basic (simple)–complex, and low organisation–high organisation continua
Forms of practice – theory and practical application	Massed, distributed, fixed and variable
Forms of practice – theory and practical application	Application of knowledge of practice and skill classification to select the most relevant practice to develop a range of skills
Types of guidance – theory and practical application	Visual, verbal, manual and mechanical Advantages and disadvantages of each type of guidance
Types of guidance – practical application	Appropriateness of types of guidance in a variety of sporting contexts when used with performers of different skill levels
Mental preparation for performance	Warm up, mental rehearsal
Types of feedback	intrinsic, extrinsic, concurrent, terminal

Skeletal system – functions applied to performance in physical activities and sports	<p>Explanation of function applied to physical activity</p> <p>Protection of vital organs, muscle attachment, joints for movement, platelets, red and white blood cell production, storage of calcium and phosphorus</p>
Skeletal system – classification of bones and how function of bone type is relevant to performance in physical activities and sports	Long (leverage), short (weight bearing), flat (protection, broad surface for muscle attachment), irregular (protection and muscle attachment) applied
<p>Skeletal system – structure of the skeletal system</p> <p>Role of ligaments/tendons</p>	<p>Identification of bones: Cranium, clavicle, scapula, five regions of the vertebral column (cervical, thoracic, lumbar, sacrum, coccyx), ribs, sternum, humerus, radius, ulna, carpals, metacarpals, phalanges (in the hand), pelvis, femur, patella, tibia, fibula, tarsals, metatarsals, phalanges (in the foot).</p> <p>Relevance to participation in physical activity and sport</p>
<p>Movement possibilities at joints dependent on joint classification</p> <p>Examples of physical activity and sporting skills and techniques that utilise these movements in different sporting contexts.</p>	Flexion, extension, adduction, abduction, rotation, circumduction, plantar-flexion, dorsiflexion
Muscular system – classification and their roles when participating in physical activity and sport Characteristics and location	Voluntary muscles of the skeletal system, involuntary muscles in blood vessels, cardiac muscle forming the heart,
Muscular system (voluntary) – location and role	Deltoid, biceps, triceps, pectoralis major, latissimus dorsi, external obliques, hip flexors, gluteus maximus, quadriceps, hamstrings, gastrocnemius and tibialis anterior
Muscular system – antagonistic muscle pairs	<p>Definitions of terms (agonist and antagonist)</p> <p>Gastrocnemius and tibialis anterior acting at the ankle plantar flexion to dorsiflexion; and quadriceps and hamstrings acting at the knee, biceps and triceps acting at the elbow, and hip flexors and gluteus maximus acting at the hip – all flexion to extension</p>
Muscular system – fast and slow twitch muscle fibres and how fibre type impacts on their use in physical activities	type I, type IIa and type IIx
Lever systems and their use in physical activity and sport	First, second and third class levers
Mechanical advantage in sport and physical activity	In relation to loads, efforts and range of movement of the body's lever systems and the impact on sporting performance

<p>Classification of joints and their impact on the range of possible movements</p> <p>Planes and axes – generalised movement patterns</p>	<p>Pivot (neck – atlas and axis), hinge (elbow, knee and ankle), ball and socket (hip and shoulder), condyloid (wrist)</p> <p>Sagittal plane about the frontal axis when performing front and back tucked or piked somersaults</p> <p>Frontal plane about the sagittal axis when performing cartwheels</p> <p>Transverse plane about the vertical axis when performing a full twist jump in trampolining</p>
<p>Cardiovascular system – function applied to performance in physical activities</p> <p>Structure of the cardiovascular system applied to performance in physical activities</p>	<p>Transport of oxygen, carbon dioxide and nutrients, clotting of open wounds, regulation of body temperature</p> <p>Atria, ventricles, septum, tricuspid, bicuspid and semi-lunar valves, aorta, vena cava, pulmonary artery, pulmonary vein, and their role in maintaining blood circulation during performance in physical activity and sport</p>
<p>Cardiovascular system – arteries, capillaries and veins</p>	<p>Structure of arteries, capillaries and veins and how this relates to function and importance during physical activity and sport in terms of: blood pressure; oxygenated; deoxygenated blood and changes due to physical exercise</p>
<p>Cardiovascular system – function and importance of components of blood for physical activity and sport</p>	<p>Red and white blood cells, platelets and plasma</p>
<p>Respiratory system – composition of air</p>	<p>Composition of inhaled and exhaled air and the difference between the two at rest and when exercising</p>
<p>Respiratory system – location of main components and the role in movement of oxygen and carbon dioxide into and out of the body</p>	<p>Lungs, bronchi, bronchioles, alveoli, diaphragm</p> <p>How Cardiovascular system and Respiratory system work together (p34/5)</p>
<p>Respiratory system – structure and function of alveoli</p>	<p>Structure of alveoli</p> <p>Process of gas exchange</p> <p>Impact of varying intensities of exercise (aerobic and anaerobic)</p>
<p>Energy sources</p> <p>Aerobic and anaerobic exercise</p>	<p>Fats as a fuel source for aerobic activity, carbohydrates as a fuel source for aerobic and anaerobic activity</p> <p>The use of glucose and oxygen to release energy aerobically with the production of carbon dioxide and water, the impact of insufficient oxygen on energy release, the by-product of anaerobic respiration (lactic acid)</p>

<p>Short term effects of exercise and the relevance of this to the player/performer</p>	<p>Muscular: lactate accumulation, muscle fatigue CV: heart rate, stroke volume and cardiac output Respiratory: on depth and rate of breathing</p>
<p>Long term training effects on the cardio-respiratory system</p>	<p>Review cardio-respiratory system</p>
<p>Long term training effects on the musculo-skeletal system</p>	<p>Benefits to the cardio-respiratory system: decreased resting heart rate; faster recovery; increased resting stroke volume and maximum cardiac output; increased size/strength of heart; increased capillarisation; increase in number of red blood cells; drop in resting blood pressure due to more elastic muscular wall of veins and arteries; increased lung capacity/volume and vital capacity; increased number of alveoli; increased strength of diaphragm; and external intercostal muscles</p>
<p>Cardiovascular system – vascular shunting</p>	<p>Impact on performance in different types of activities</p> <p>Review musculo-skeletal system</p> <p>Benefits to the musculo-skeletal system: increased bone density; increased strength of ligaments and tendons; muscle hypertrophy; the importance of rest for adaptations to take place; and time to recover before the next training session</p> <p>Impact on performance in different types of activities</p> <p>The mechanisms required (vasoconstriction, vasodilation) and the need for redistribution of blood flow (vascular shunting) during physical activities compared to when resting</p>