

GCSE PE – Paper 1 revision checklist

<u>Topic</u>	<u>Examples</u>			
Bones and where to find them	<i>Cranium, vertebrae, ribs, sternum, clavicle, scapula, pelvis, Humerus, ulna, radius, carpals, metacarpals, phalanges, femur, patella, tibia, fibula, tarsals and metatarsals</i>			
Functions of the skeleton	<i>Support, posture, protection, movement, blood cell production, storage of minerals</i>			
Types of synovial joint	Ball and socket joints (shoulder and hip), Hinge joints (knee and elbow) and their articulating bones (the bones that meet at that joint)			
Types of movement at the joints	Hinge joints: flexion and extension Ball and socket: flexion, extension, rotation, abduction, adduction and circumduction			
Components of a joint	<i>Ligament, cartilage, tendons, synovial fluid</i>			
Muscles and where to find them	<i>Deltoid, trapezius, latissimus dorsi, pectorals, biceps, triceps, abdominals, quadriceps, hamstrings, gluteals, gastrocnemius</i>			
The roles of muscle in movement	<i>Agonist, antagonist, fixator</i>			
Lever systems	<i>1st class – neck, 2nd class – ankle, 3rd class – elbow and mechanical advantage</i>			
Planes of movement and axes of rotation	Planes of movement: Frontal, transverse, sagittal Axes of rotation: frontal, transverse and longitudinal			
Structure and function of the cardiovascular system	Double circulatory system (systemic and pulmonary), types of blood vessel (arteries, capillaries and veins,			
	Pathway of blood through the heart: atria, ventricles, bicuspid valve, tricuspid valve, semilunar valve, septum, aorta, pulmonary artery, vena cava, pulmonary vein			
	<i>Heart rate, stroke volume, cardiac output and role of red blood cells</i>			
Structure and function of the cardiovascular system	Pathway of air through the respiratory system: nose, mouth, trachea, bronchi, bronchiole, alveoli			
	<i>Diaphragm and intercostal muscles Breathing rate, tidal volume and minute ventilation</i>			
	<i>Gaseous exchange and alveoli</i>			
Aerobic and anaerobic exercise	<i>Definition of aerobic and anaerobic exercise along with practical examples related to duration (how long) and intensity (how hard)</i>			
Short-term effects of exercise	<i>Muscle temperature, heart rate, stroke volume, cardiac output, redistribution of blood flow during exercise (vasodilate and vasoconstrict), respiratory rate, tidal volume, minute ventilation,</i>			

	<i>oxygen to the working muscles and lactic acid production.</i>			
Long-term (training) effects of exercise	<i>Bone density, hypertrophy of muscle, muscular strength, muscular endurance, resistance to fatigue, hypertrophy of heart, resting heart rate, resting stroke volume, cardiac output, rate of recovery, aerobic capacity, respiratory muscles, tidal volume and minute volume during exercise, capillarisation.</i>			
Components of fitness	<i>Cardiovascular endurance/stamina, muscular endurance, speed, strength, power, flexibility, agility, balance, co-ordination, reaction time</i>			
Fitness Tests	<i>Cooper 12 minute run, multi-stage fitness test (bleep test), press-up test and sit up test. 30m sprint, grip dynamometer, 1RM, standing jump/vertical jump, sit and reach test, Illinois agility test, standing stork test, wall throw, reaction time ruler test</i>			
Principles of training	<i>Specificity, overload, progression, reversibility</i>			
Optimising training	<i>Applying FITT to training programmes</i>			
	<i>Types of training: continuous, fartlek, interval (circuit training, weight training, plyometrics, HIIT)</i>			
	<i>Key components of a warm up: pulse raising, mobility, stretching, dynamic movements, skill rehearsal</i>			
	<i>Key benefits to a warm up: warm up the muscles, prepare the body, body temperature, heart rate, flexibility of muscles and joints, pliability of ligaments and tendons, blood flow and oxygen to muscles, speed of muscle contraction</i>			
	<i>Key components of a cool down: low intensity exercise and stretching</i>			
	<i>Key benefits to a cool down: lowers heart rate, helps transition back to a resting state, lowers temperature, circulates blood and oxygen, reduces breathing rate, increases removal of lactic acid, reduces risk of muscle soreness and stiffness, aids recovery by stretching muscles</i>			
Prevention of injury	<i>Risk of injury, protective equipment, correct clothing/footwear, appropriate level of competition, lifting and carrying equipment safely, use of warm up and cool down.</i>			
	<i>Potential hazards in a sports hall, fitness centre, playing field, artificial outdoor areas, swimming pool</i>			