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| **GCSE PE – Year 10 June Revision Checklist** |
| **Topic Area** | **Learner Must:** | **Red** | **Amber** | **Green** |
| **1.1. a. The structure and function of the skeletal system** |
| Location of major bones  | • know the name and location of the following bones in the human body: - cranium - vertebrae - ribs - sternum - clavicle - scapula - pelvis - humerus - ulna - radius - carpals - metacarpals - phalanges - femur - patella - tibia - fibula - tarsals - metatarsals |  |  |  |
| Functions of the skeleton  | • understand and be able to apply examples of how the skeleton provides or allows: - support - posture - protection - movement - blood cell production - storage of minerals |  |  |  |
| Types of synovial joint | • know the definition of a synovial joint. • know the following hinge joints: - knee - articulating bones - femur, tibia - elbow - articulating bones - humerus, radius, ulna. • know the following ball and socket joints: - shoulder - articulating bones - humerus, scapula - hip - articulating bones - pelvis, femur.  |  |  |  |
| Types of movement at hinge joints and ball and socket joints  | • know the types of movement at hinge joints and be able to apply them to examples from physical activity/sport: - flexion - extension• know the types of movement at ball and socket joints and be able to apply them to examples from physical activity/sport: - flexion - extension - rotation - abduction - adduction - circumduction |  |  |  |
| Other components of joints  | • know the roles of: ligament, cartilage and tendons |  |  |  |
| **1.1. b. The structure and function of the muscular system** |
| Location of major muscle groups  | • know the name and location of the following muscle groups in the human body and be able to apply their use to examples from physical activity/sport: - deltoid - trapezius - latissimus dorsi - pectorals - biceps - triceps - abdominals - quadriceps - hamstrings - gluteals - gastrocnemius |  |  |  |
| The roles of muscle in movement  | • know the definitions and roles of the following and be able to apply them to examples from physical activity/sport: - agonist - antagonist - fixator - antagonistic muscle action |  |  |  |
| **1.1. c. Movement analysis** |
| Lever systems  | • know the three classes of lever and their use in physical activity and sport: – 1st class - neck – 2nd class - ankle – 3rd class - elbow• know the definition of mechanical advantage.  |  |  |  |
| Planes of movement and axes of rotation  | • know the location of the planes of movement in the body and their application to physical activity and sport: - frontal - transverse - sagittal. • know the location of the axes of rotation in the body and their application to physical activity and sport: - frontal - transverse - longitudinal |  |  |  |
| **1.1. d. The cardiovascular and respiratory systems** |
| Structure and function of the cardiovascular system  | • know the double-circulatory system (systemic and pulmonary). • know the different types of blood vessel: - arteries - capillaries - veins• understand the pathway of blood through the heart: - atria - ventricles - bicuspid, tricuspid and semilunar valves - septum and major blood vessels: - aorta - pulmonary artery - vena cava - pulmonary vein. • know the definitions of: - heart rate - stroke volume - cardiac output. • know the role of red blood cells |  |  |  |
| Structure and function of the respiratory system  | • understand the pathway of air through the respiratory system: - mouth - nose - trachea - bronchi - bronchiole - alveoli. • know the role of respiratory muscles in breathing: - diaphragm - intercostals. • know the definitions of: - breathing rate - tidal volume - minute ventilation. • understand about alveoli as the site of gas exchange |  |  |  |
| Aerobic and anaerobic exercise  | • know the definitions of: - aerobic exercise - anaerobic exercise. • be able to apply practical examples of aerobic and anaerobic activities in relation to intensity and duration |  |  |  |
| **1.1. e. Effects of exercise on body systems** |
| Short-term effects of exercise  | • understand the short-term effects of exercise on: - muscle temperature - heart rate, stroke volume, cardiac output - redistribution of blood flow during exercise - respiratory rate, tidal volume, minute ventilation - oxygen to the working muscles - lactic acid production. • be able to apply the effects to examples from physical activity/sport. • be able to collect and use data relating to short-term effects of exercise |  |  |  |
| Long-term (training) effects of exercise  | • understand the long-term effects of exercise on: - bone density - hypertrophy of muscle - muscular strength - muscular endurance - resistance to fatigue - hypertrophy of the heart - resting heart rate and resting stroke volume - cardiac output - rate of recovery - aerobic capacity - respiratory muscles - tidal volume and minute volume during exercise - capilliarisation. • be able to apply the effects to examples from physical activity/sport. • be able to collect and use data relating to long-term effects of exercise |  |  |  |
| **1.2. a. Components of fitness** |
| Components of fitness | Know the following components of fitness: • cardiovascular endurance/stamina - know the definition of cardiovascular endurance/stamina - be able to apply practical examples where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o Cooper 12 minute run/walk test o multi-stage fitness test • muscular endurance - know the definition of muscular endurance - be able to apply practical examples where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o press-up test o sit-up test • speed - know the definition of speed - be able to apply practical examples where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o 30m sprint test • strength - know the definition of strength - be able to apply practical examples of where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o grip strength dynamometer test o 1 Repetition Maximum (RM) • power - know the definition of power - be able to apply practical examples of where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o ‘standing jump’ or ‘vertical jump’ tests • flexibility - know the definition of flexibility - be able to apply practical examples of where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o ‘sit and reach’ test • agility - know the definition of agility - be able to apply practical examples of where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o Illinois agility test • balance - know the definition of balance - be able to apply practical examples of where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o ‘stork stand’ test • co-ordination - know the definition of co-ordination - be able to apply practical examples of where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o ‘wall throw’ test • reaction time - know the definition of reaction time - be able to apply practical examples of where this component is particularly important in physical activity and sport - know suitable tests for this component, including: o reaction time ruler test • be able to collect and use data relating to the components of fitness |  |  |  |
| **1.2. b. Applying the principles of training** |
| Principles of training | • know the following definitions of principles of training and be able to apply them to personal exercise/training programmes: - specificity - overload - progression - reversibility |  |  |  |
| Optimising training | • know the definition of the elements of FITT (Frequency, Intensity, Time, Type) and be able to apply these elements to personal exercise/training programmes. • know different types of training, definitions and examples of: - continuous - fartlek - interval o circuit training o weight training o plyometrics o HIIT (High Intensity Interval Training• understand the key components of a warm up and be able to apply examples: - pulse raising - mobility - stretching - dynamic movements - skill rehearsal. • know the physical benefits of a warm up, including effects on: - warming up muscles/preparing the body for physical activity - body temperature - heart rate - flexibility of muscles and joints - pliability of ligaments and tendons - blood flow and oxygen to muscles - the speed of muscle contraction. • understand the key components of a cool down and be able to apply examples: - low intensity exercise - stretching. • know the physical benefits of a cool down, including: - helps the body’s transition back to a resting state - gradually lowers heart rate - gradually lowers temperature - circulates blood and oxygen - gradually reduces breathing rate - increases removal of waste products such as lactic acid - reduces the risk of muscle soreness and stiffness - aids recovery by stretching muscles |  |  |  |
| **1.3. c. Preventing injury in physical activity and training** |
| Prevention of injury  | • understand how the risk of injury in physical activity and sport can be minimised and be able to apply examples, including: - personal protective equipment - correct clothing/footwear - appropriate level of competition - lifting and carrying equipment safely - use of warm up and cool down. • know potential hazards in a range of physical activity and sport settings and be able to apply examples, including: - sports hall - fitness centre - playing field - artificial outdoor areas - swimming pool |  |  |  |