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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 |  |  |  |