**Specification for Theory in new GCSE (Year 9)**

**3.1 The human body and movement in physical activity and sport**

**3.1.1 Applied A & P**

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| ***3.1.1.1*** | ***Structure and functions of the musculoskeletal system*** |
| Bones | Identify locations of:   * Head/Neck (Cranium/Vertebrae) * Shoulder (Scapula/Humerus) * Elbow (Humerus/Radius/Ulna) * Knee (Femur/Patella/Tibia * Ankle (Tibia/Fibula/Talus) |
| Muscles | Identify locations of:   * Latissimus Dorsi * Deltoid * Rotator Cuffs * Pectorals * Biceps * Triceps * Abdominals * Hip Flexors * Gluteals * Hamstring Group * Quadriceps Group * Gastrocnemius * Tibialis Anterior   Role of Tendons (Muscle to bone) |
| Types of freely moveable joints that allow different movements | Identification of the types of joints with reference to the following:  •• elbow, knee and ankle – hinge joint  •• hip and shoulder – ball and socket. |
| How joints differ in design to allow certain types of movement at a joint | Understand that the following types of movement are linked to the appropriate joint type, which enables that movement to take place:  •• flexion/extension at the shoulder, elbow, hip and knee  •• abduction/adduction at the shoulder  •• rotation of the shoulder  •• plantar flexion/dorsiflexion at the ankle.  Application to specific sporting actions is in movement analysis |
| How the major muscles and muscle groups of the body work antagonistically on the major joints of the skeleton to affect movement in physical activity at the major movable joints | With reference to the shoulder, elbow, hip, knee and ankle joints:  •• major muscle groups operating at these joints (see above)  •• the action of prime movers (agonists)/  antagonists  •• bones located at the joint (see above)  •• how these muscle groups work isometrically and isotonically (concentric/eccentric).  The difference between concentric and eccentric (isotonic) contractions. |
| **3.1.2** | **Movement Analysis** |
| ***3.1.2.1*** | ***Lever systems, examples of their use in activity and the mechanical advantage they provide in movement*** |
| Analysis of basic movements in sporting  examples | Types of movement:  •• flexion/extension at the shoulder, elbow, hip and knee  •• abduction/adduction at the shoulder  •• rotation of the shoulder  •• plantar flexion/dorsiflexion at the ankle.  This section links specific sporting actions to the types of movement.  Applied anatomy and physiology links the joint type to the type of movement only. This should include but not be limited to the following sporting actions:  •• elbow action in push-ups/football throw in  •• hip, knee and ankle action in running, kicking, standing vertical jump, basic squats  •• shoulder action during cricket bowling  (overarm rotation). |

**3.1.3 Physical Training**

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| ***3.1.3.1*** | ***The relationship between health and fitness and the role that exercise plays in both*** |
| Health & Fitness | Definitions |
| Relationship between heath & fitness | Relationship between the two  Decreased fitness due to poor health, ie poor health can result in an inability to train, lowers fitness. |
| ***3.1.3.2*** | ***The components of fitness, benefits for sport and how fitness is measured and improved*** |
| The components of fitness | Define:   * Agility * Balance * Cardiovascular endurance (aerobic power) * Co-ordination * Flexibility * Muscular Endurance * Power/Explosive strength (anaerobic power) * Reaction time * Strength (Maximal, static, dynamic and explosive) * Speed |
| Linking sports and physical activity to the required components of fitness | Understand and justify why the components of fitness (as stated above) may or may not be needed when performing certain physical activities and sports. |
| Reasons for and limitations of fitness testing | Reasons for fitness testing:   * Identify strengths/weaknesses on performance & success of training programme * Monitor improvement * Show a starting level of fitness * Inform training requirements * Compare against norms of the group/national average * Motivate/set goals * Provide variety to a training programme   Limitations   * Not sport specific * Don’t replicate movements * Don’t replicate competitive conditions * Many don’t use direct measuring/sub-maximal – therefore inaccurate/some need motivation/some have questionable reliability * Must be carried out with the correct procedures |
| Measuring the components of fitness | Knowledge of main procedures of tests used:   * Agility – Illinois * Balance – Stork * CE – Multi stage fitness test * Co-ordination – wall toss * Flexibility – Sit & reach * Muscular endurance – Sit up bleep * Power/ES – Vertical jump * Reation time – Rule drop * Maximal strength – 1 rep max * Speed – 30 metre sprint test * Strength – Grip dynamometer   Testing procedures (how each test is carried out) and includes reference to how test is organised in relation to:   * The facilities and equipment needed * Procedures that have to be followed * Measurements that are used to score the performance * Way conclusions are drawn from the score/results. |
| ***3.1.3.3*** | ***Principles of training and their application to personal exercise/training programmes*** |
| Types of training | Understand the distinctions between different types of training.  Circuit training – consider space available, equipment available, number of circuit stations, work:rest ratio, the content/demand of the circuit can be altered in order to improve different  components of fitness.  Continuous training – sustained exercise at a constant rate (steady state) without rests, involving aerobic demand for a minimum of 20 minutes, eg running, swimming, rowing, cycling.  Fartlek training – varying speed, terrain and work:rest ratios.  Interval training/high intensity interval training – periods of exercising hard, interspersed with periods of rest or low intensity exercise.  Static stretching – a way to stretch to increase flexibility, held (isometric) for up to 30 seconds, using correct technique, advisable to avoid over stretching.  Weight training – choice of weight/exercise depends on fitness aim, eg strength/power training or muscular endurance, the importance of safe practice/lifting technique, the need for  spotters.  Plyometric training – use of plyometric exercises, eg bounding, depth jumping, to increase power.  Basic physiological understanding (eccentric contraction followed by larger concentric contraction).  Any training (and practice) method must take  account of the following:  •• the training purpose(s), training thresholds/ training targets/training zones (see calculating intensities below)  •• rest/recovery. |

**3.2 Socio-cultural influences and well-being in physical activity and sport**

**3.2.1 Sport Psychology**

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| ***3.2.1.1*** | ***Classification of skills (basic/complex, open/closed)*** |
| Skill & Ability | Definitions of both |
| Skill | Basic definition of the following skill classifications:   * Basic/Complex * Open/Closed * Self Paced/Externally Paced * Gross/Fine   Taught to choose & justify the appropriate classification in relation to sporting examples. |
| Definitions of types of goals | Basic definitions of the following types of goals:   * Performance goals (Personal performance/no social comparison) * Outcome goals (Winning/result)   Appropriate performance and/or outcome targets for sporting examples.  Performance and outcome goals can be combined. However, it is generally accepted that outcome goals should be avoided as they rely on factors that cannot be controlled, eg other performers.  Beginners prefer to avoid outcome goals because failure can demotivate/winning may be unrealistic |
| ***3.2.1.2*** | ***The use of goal setting and SMART targets to improve and/or optimise performance*** |
| The use of SMART targets to improve and/or optimise performance | Specific/Measureable/Accepted/Realistic/Timebound |
| ***3.2.1.4*** | ***Guidance and feedback on performance*** |
| Identify examples of and evaluate the effectiveness of the use of types of guidance, with reference to beginners and elite level performers | Evaluate following types with specific links:   * Visual * Verbal * Manual * Mechanical   Identify & justify what types of guidance are appropriate for beginners and/or elite level performers. This should include examples. |
| Identify examples of, and evaluate, the effectiveness of the use of types of feedback,  with reference to beginners and elite level  performers | Evaluation of the use of the following types of feedback with specific links to beginners and to elite level performers:  •• positive/negative  •• knowledge of results/knowledge of performance  •• extrinsic/intrinsic.  Students need to be taught what each type of feedback entails and be able to choose and justify which types of feedback are appropriate for a beginners and/or an elite level performers. |
| ***3.2.1.5*** | ***Mental preparation for performance*** |
| Definition of intrinsic & extrinsic motivation, as used in sporting examples | Intrinsic is from within – for pride/self-satisfaction/personal achievement.  Extrinsic is:   * from another source/person * Tanglible * Intangibe   Explain with examples linking to sporting examples. |
| Evaluation of the merits of intrinsic & extrinsic motivation in sport | Intrinsic is generally deemed more effective  Overuse of extrinsic can undermine the strength of intrinsic  Performer can become reliant on extrinsic  Intrisic – more likely to lead to continued effort/participation  Extrinisic – result in feelings of pride/self-satisfaction. |

**3.2.2 Cultural influences**

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| ***3.2.2.2*** | ***Commercialisation of physical activity and sport*** |
| Commercialisation | Definition of commercialisation  The relationship between sport, sponsorship and the media |
| Types of sponsorship and the media | Definition of sponsorship and the media  Types of sponsorhip:   * Financial * Clothing and equipment (including footwear) * Facilities   Types of media:   * Television * Radio * The press * The internet * Social media |
| Positive and negative impacts of sponsorship and the media | The positive and negative impacts of commercialised activity (sponsorship and the media) on the following:   * Performer * Sport * Official * Audience/spectator * Sponsor/company   Students should be taught to justify why the impact is positive and/or negative. |
| Positive and negative impacts of technology | The positive and negative impacts of technology on the following:   * Performer * Sport * Official * Audience/spectator * Sponsor/company   Students should be taught to justify why the impact is positive or negative.  Teaching should make students aware of examples of technology used in sport (eg Hawkeye, Television match official). However, the focus should be on technology generically, not on specifc types of tech (eg hawkeye, TV official) |
| ***3.2.2.3*** | ***Ethical and socio-cultural issues in physical activity and sport*** |
| Conduct of performers | Definitions of the following terms:  •• etiquette  •• sportsmanship  •• gamesmanship  •• contract to compete.  Students should be taught sporting examples of  these terms. |

**3.2.3 Health, fitness and well-being**

**3.2.3.1 Physical, emotional and social health, fitness and well-being**

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| ***3.2.3.1*** | ***Physical, emotional and social health, fitness and well-being*** |
| Linking participation in physical activity, exercise and sport to health, well-being and fitness, and how exercise can suit the varying needs of  different people | Reasons for participation in physical activity, exercise and sport, and how performance in physical activity/sport can increase health, wellbeing and fitness.  Physical health and well-being:  •• improves heart function  •• improves efficiency of the body systems  •• reduces the risk of some illness  •• able to do everyday tasks  •• to avoid obesity.  Mental health and well-being:  •• reduces stress/tension  •• release of feel good hormones (serotonin)  •• able to control emotions.  Social health and well-being:  •• opportunities to socialise/make friends  •• cooperation  •• teamwork  •• have essential human needs (food, shelter,  clothing).  Fitness:  •• improves fitness  •• reduces the chances of injury  •• can aid in the physical ability to work, eg on  your feet all day/manual labour. |
| ***3.2.3.2*** | ***The consequences of a sedentary lifestyle*** |
| Somatotypes | Definitions of the following body types:  •• endomorph  •• mesomorph  •• ectomorph.  Students should be taught to identify the most  suitable body type for particular sports (or  positions within a sport) and justify their choice. |