

Subject: GCSE PE

Year: 10

| <u>Autumn HT 1 - The structure and function of the Skeletal and Muscular Systems</u> | <u>Autumn HT 2 - Muscular Systems Continued, Movement Analysis and Components of Fitness</u> | <u>Spring HT 1 – Components of Fitness continued, coursework write up and Training Methods</u> | <u>Spring HT 2 – Applying the Principles of Training and coursework write up</u> | <u>Summer HT 1 – Preventing Injury in Physical Activity and Training</u> | <u>Summer HT 2 – The Cardiovascular, Respiratory Systems, Aerobic & Anaerobic exercise</u> |
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| <ul style="list-style-type: none"> • Location of the major Bones in the body; Cranium, Vertebrae, Ribs, Sternum, Clavicle, Scapula, Humerus, Ulna, Radius, Carpals, Metacarpals, Phalanges, Pelvis, Femur, Patella, Tibia, Fibula, Tarsals, Metatarsals • Function of the Skeleton; Support, Posture, Protection, Movement, Blood Cell Production, Storage of Minerals • Types of Synovial Joint • Types of movement at Hinge joints and Ball and Socket joints; Flexion, Extension, Abduction, Adduction, Rotation, Circumduction • Other components of Joints; Ligaments, Cartilage, Tendons • Location of the major muscle groups; Trapezius, | <ul style="list-style-type: none"> • The roles of Muscles in movements; Agonist, Antagonist, Fixator <p><u>COURSEWORK PIECE</u></p> <ul style="list-style-type: none"> • Movement analysis preparation. Model examples and planning • Movement analysis write up, application of movement analysis to chosen sport/activity and skill. • Lever Systems and their use in Physical activity and Sport; 1st class, 2nd Class, 3rd Class, Mechanical Advantage • Planes of movement; Frontal, Transverse, Sagittal • Axes of Rotation; Frontal, Transverse, Longitudinal • Know the following components of fitness: cardiovascular endurance/stamina: Cooper 12 minute run/walk test multi-stage fitness test • Speed:30m sprint test | <p><u>COURSEWORK PIECE</u></p> <ul style="list-style-type: none"> • Applying the components of fitness to chosen sport/activity. • Ranking the COF from 1-10 • Justification of ranking in relation to chosen sport/activity. • Write up of Fitness Analysis • Identifying strengths and weaknesses from COF table • Preparation and write up of Fitness Evaluation. • Know different types of training, definitions and examples of: continuous, fartlek - interval, circuit training, weight training, plyometrics, HIIT (High Intensity Interval Training). • Key components of a warm up and be able to apply examples: pulse raising, mobility, stretching, dynamic movements, skill rehearsal • Physical benefits of a warm up, including effects on: warming up muscles/preparing the | <ul style="list-style-type: none"> • Principles of training and be able to apply them to personal exercise/training programmes: specificity, overload, progression, reversibility. • FITT (Frequency, Intensity, Time, Type) and be able to apply these elements to personal exercise/training programmes. <p><u>COURSEWORK PIECE</u></p> | <ul style="list-style-type: none"> • How the risk of injury in physical activity and sport can be minimised and be able to apply examples, including: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - sports hall - fitness centre - playing field - artificial outdoor areas - swimming pool. | <ul style="list-style-type: none"> • Double-circulatory system (systemic and pulmonary). x know the different types of blood vessel: • The pathway of blood through the heart: <ul style="list-style-type: none"> - atria - ventricles - bicuspid, tricuspid and semilunar valves - septum and major blood vessels: <ul style="list-style-type: none"> - aorta - pulmonary artery - vena cava - pulmonary vein. • The definitions of: <ul style="list-style-type: none"> - heart rate - stroke volume - cardiac output. • The role of red blood cells • The pathway of air through the respiratory system: <ul style="list-style-type: none"> - mouth - nose - trachea - bronchi - bronchiole - alveoli • The role of respiratory muscles in breathing: <ul style="list-style-type: none"> - diaphragm - intercostals • The definitions of: <ul style="list-style-type: none"> - breathing rate - tidal volume - minute ventilation |

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| <p>Deltoid, Latissimus Dorsi, Bicep, Tricep, Pectorals, Abdominals, Gluteals, Quadricep, Hamstring, Gastrocnemius</p> | <ul style="list-style-type: none"> • Strength: grip strength dynamometer test 1 Repetition Maximum (RM) • Power: 'standing jump' or 'vertical jump' tests • Flexibility - Know the definition of flexibility: 'sit and reach' test • Agility : Illinois agility tes • Balance: 'stork stand' test • Co-ordination: 'wall throw' test • Reaction time: reaction time ruler test • Collect and use data relating to the components of fitness | <p>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.</p> <ul style="list-style-type: none"> • Key components of a cool down and be able to apply examples: low intensity exercise stretching • Physical benefits of a cool down, including: <ul style="list-style-type: none"> - 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 | | <ul style="list-style-type: none"> • Alveoli as the site of gas exchange. • Definitions of: <ul style="list-style-type: none"> - aerobic exercise - anaerobic exercise. • Practical examples of aerobic and anaerobic activities in relation to intensity and duration. |
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Ludus Admirandus