PE Department - Year 10 GCSE

	The aim of the 1 st year of the GCSE PE is to introduce some of the simpler aspects of the course which may have previously been covered at some level in Core PE lessons as well as other subjects such as science and maths. The content covered during Year 1 also focuses on content which is also crucial for the NEA controlled assessment which will allow work on this to be started early in the second year of the GCSE course. Much of the content of this year's content is also the foundation of some of the more advanced topics covered in Year 2.								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2			
	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:			
Curriculum Map	Health, Fitness & Well-Being (Paper 2)	Applied Anatomy & Physiology (Paper 1)	Movement Analysis (Paper 1)	Applied Anatomy & Physiology (Paper 1)	Physical Training (Paper 1)	Physical Training (Paper 1)			
Why Now?	Builds on topics and language used in Key Stage 3 PE lessons and some content that is included in other subject areas (e.g. science) Underpins many other topics that will make the basis of other parts of the PE GCSE	Form the foundation for other aspects of the course and is largely a retrieval based aspect of the course including bones and muscle terminology.	Links to previously taught content from the applied anatomy & physiology unit (including muscular & skeletal identification)	Links again to previous anatomy & physiology content but mathematical analysis of spirometer trace means it is beneficial to teach this later in Year 10.	A practical aspect of the course which links to previous learning from Autumn 1 and previous Health & Fitness lessons in Core PE. Also closely related to NEA controlled assessment work.	Further links to the NEA controlled assessment and topics taught in Summer 1. Some aspects also covered previously in Core PE lessons (Warm-ups/cool-downs)			
Fundamental Concepts	Health & Fitness, Sedentary Lifestyles, Somatotypes, Energy & Diet	Skeletal System, Muscular System, Joints of the Body & Muscular Movement	Levers, Mechanical Advantage, Analysis of Movement & Planes/Axes	Cardiac System, Respiratory System, Gaseous Exchange, Aerobic/Anaerobic & Recovery	Health & Fitness, Component of Fitness & Fitness Testing	Principles of Training, Calculating Intensities, Warm-Ups & Cool-Downs			
Students will	 Health and fitness: physical, mental & social health. <i>Physical health and wellbeing.</i> <i>Mental health and wellbeing.</i> <i>Social health and wellbeing.</i> <i>Social health and wellbeing.</i> <i>Fitness.</i> Consequences of a sedentary lifestyle. <i>Possible consequences of a sedentary lifestyle.</i> Obesity. <i>Definition of obesity.</i> <i>Obesity and how it may affect performance in physical activity and sport.</i> Somatotypes. <i>Definitions of the different body types.</i> Energy use. Balanced Diet. Nutrients. A balanced diet contains 55–60% carbohydrate, 25–30% fat, 15–20% protein. Water Balance & Dehydration. <i>Definition of dehydration.</i> <i>Results of dehydration.</i> 	 Skeletal System – Structure & Functions How the skeletal system provides a framework for movement. Functions of the skeletal system. Functions should be applied to performance in physical activity. Muscular System - Muscles of the Body. Identification of the muscles within the body. Structure of a Synovial Joint. Identification of the structure of a synovial joint. Types of Freely Moveable Joints. Identification of the types of joints. Muscular Movement & Antagonistic Pairs With reference to the shoulder, elbow, hip, knee and ankle joints. How the muscle groups work isometrically and isotonically (concentric/ eccentric). The difference between concentric and eccentric (isotonic) contractions. 	 Classifications of Levers Identification of first, second and third class lever systems. Positioning of: • fulcrum • load (resistance) • effort. Mechanical Advantage/Disadvantage. Mechanical advantage = effort arm ÷ weight (resistance) arm. Analysis of Basic Sport Movements Types of movement: • flexion/extension • abduction/adduction • rotation circumduction • plantar flexion/dorsiflexion. Planes and Axes. Planes (frontal, transverse, sagittal) and axes (longitudinal, transverse, sagittal). 	 The Pathway of Air & Gaseous Exchange. Identification of the pathway of air. Gas exchange at the alveoli. Blood Vessels. Structure of arteries, capillaries and veins. Structure of the Heart & Cardiac Cycle (Pathway of Blood). Structure of the heart. Pathway of the blood. Cardiac Output & Stroke Volume (including the effects of exercise). Cardiac output, stroke volume and heart rate. Cardiac output (Q) = stroke volume x heart rate Mechanics of Breathing & Interpretation of a Spirometer Trace. Inhaling (at rest) Exhaling (at rest) Identification of the following on a spirometer trace • tidal volume • expiratory reserve volume • residual volume Aerobic & Anaerobic Exercise. Definition of the terms: • aerobic exercise • anaerobic exercise. Recovery/EPOC. Definition of the term EPOC (oxygen debt). The Short & Long Term Effects of Evercise 	 Relationship Between Health & Fitness. Decreased fitness because of ill health. The Components of Fitness. Definitions of the components. Linking Sports to Components of Fitness. Understand and justify why the components of fitness are used. Fitness Testing - Reasons for and limitations. Reasons for fitness testing: • to identify strengths and/or weaknesses in a performance. Measuring the components of fitness. Knowledge of the main procedures of the tests. Methods of Data Collection Understanding of how test scores are measured/recorded. 	 Principles of Training & Overload. Key principles of training. SPORT to include: • specificity • progressive overload • reversibility • tedium. Key principles of overload. FITT to include: • frequency • intensity • time • type. Applications of the Principles of Training. How the principles of training can be applied to bring about improvements in fitness. Types of Training - Advantages & Disadvantages for different sports. Understand the distinctions between different types of training. Calculating Training Intensity Definition of training threshold. Calculate the aerobic/anaerobic training zone. Injury Prevention The training type/intensity should match the training functions between differentsity should match the training seasonal Aspects How high altitude training is carried out. Warming-Up & Cooling-Down The constituent parts of warming up and cooling down. 			
Language for Life (Key terms/Vocabula ry)	Physical health, mental health, social health, fitness, sedentary lifestyle, obese, somatotype, ectomorph, endomorph, mesomorph, calorie, balanced diet, nutrition, hydration, dehydration, rehydration.	Musculoskeletal, articulating bones, synovial joints, extension, flexion, abduction, adduction, rotation, plantarflexion, dorsiflexion, tendon, prime mover, antagonistic isotonic, isometric, cardio-respiratory.	Levers, fulcrum, load, effort, load arm, effort arm, mechanical advantage, plane, frontal plane, transverse plane, sagittal plane, axis, sagittal axis, transverse axis, longitudinal axis.	Gaseous exchange, oxy/haemoglobin, alveoli, capillaries, diffusion, inhalation & exhalation, ERV, IRV, RV, TV, VC, de/oxygenated, pulse, backflow, diastole/systole, cardiac cycle, blood pressure, vasoconstriction/dilation, SV, Q, an/aerobic, lactic acid, EPOC, DOMS, fatigue, hypertrophy	Health, fitness, agility, balance, cardiovascular endurance, coordination, fatigue, flexibility, muscular endurance, power, reaction time, strength, speed, qualitative data, quantitative data.	Principles of training, specificity, progressive-overload, reversibility, tedium, FITT principle., training thresholds, aerobic training zone, anaerobic training zone, repetitions, sets, DOMS			
Extended writing Opportunities	6-9 mark exam questions, NEA Controlled Assessment	6-9 mark exam questions, NEA Controlled Assessment	6-9 mark exam questions, NEA Controlled Assessment	6-9 mark exam questions, NEA Controlled Assessment	6-9 mark exam questions, NEA Controlled Assessment	6-9 mark exam questions, NEA Controlled Assessment			
Maths Across the Curriculum	Calorie counting exercises, plotting of body types on somatotype charts, BMI calculations.	Angles of movement around joints (e.g. flexion and extension).	Calculation of mechanical advantage, measuring distance of effort/load arms.	Reading of spirometer trace graphs, calculation of figures based on spirometer trace, diffusion gradients, stroke volume/BPM/cardiac output (Q) calculations.	Fitness testing procedures, normative data comparison charts, use of different measuring tools, use of quantitative/qualitative data for exam questions.	Training zone calculations, training threshold calculations, reps/sets and progressive overload.			
Links to careers/	Dietician, Exercise Nutritionist, Personal/Physical Trainer, PE	Physiotherapist, Biomechanics Specialist, Team Doctor/Physio, First Aider, Personal/Physical	Biomechanics Specialist, Team Doctor/Physio, First Aider, Personal/Physical Trainer, PE	Sports Doctor, Medical Doctor, Cardio-Respiratory Specialist, Biomechanics Specialist Team	Fitness Testing Specialist, Personal/Physical Trainer, PE Teacher, Sports Locturer	Sports Team Coach/Manager, Personal/Physical Trainer, PE Teacher, Sports Locturor			

aspirations		Trainer, PE Teacher, Sports Lecturer	Teacher, Sports Lecturer	Doctor/Physio, First Aider, Personal/Physical Trainer, PE Teacher, Sports Lecturer		
Cultural Capital	Talk/demonstration from Miss Frost (School Canteen) on healthy lifestyle and balanced diets.	Possible talk from school first aider or completion of basic first aid for sports course.	Links to GCSE Science (physics) and the calculation of mechanical advantage.	Possible use of university facilities to complete gas & fitness testing	Fitness testing by an outside company (E.g. Project MVP) or completed as a group on school-site.	Visit to local gymnasium to observe the work being done
Practical Application of Skills	Application to NEA controlled assessment, personal health & dietary requirements, counting/measuring of dietary intake.	Application to NEA controlled assessment, identifying/recovery from injury & rehabilitation processes.	Application to NEA controlled assessment.	Ability to interpret graphs in other numerical subjects, designing of training programmes.	Application to NEA controlled assessment, fitness testing protocols/procedures,	Creation of training programme for NEA controlled assessment, analysis of ads/disadvantages of training types.