

Intent – Physiological factors affecting performance, focusses on developing the learner’s knowledge of the Science behind physical activity. This includes the structure and function of key systems in the human body, the forces that act upon us and the adaptations we make to our bodies through diet and training regimes. Through the study of this component, learners will gain a deeper understanding of the key systems in the body and how they react to changes in diet and exercise.

IMPLEMENTATION

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	
End point	<p>By the end of term 1 students will be able to:</p> <ol style="list-style-type: none"> Be able to demonstrate knowledge and understanding of the key roles the skeletal and muscular system play in the performance of PA and sport. Be able to apply the following at AO1, AO2 and AO3 to exam questions <ul style="list-style-type: none"> Joint, muscles and movement patterns Planes of movement Roles of muscles Types of muscular contraction Movement analysis Motor units Types of muscle fibre Be able to demonstrate knowledge and understanding of the key roles of the 	<p>By the end of term 2 students will be able to:</p> <ol style="list-style-type: none"> Be able to demonstrate knowledge and understanding of the key roles of the cardiovascular and respiratory system at rest, during exercise and recovery, interpret data and graphs. Be able to apply the following at AO1, AO2 and AO3 to exam questions <ul style="list-style-type: none"> Heart rate, stroke volume and cardiac output Neural, hormonal and intrinsic control of HR Vascular shunt mechanism 	<p>By the end of term 3 students will be able to:</p> <ol style="list-style-type: none"> Be able to demonstrate knowledge and understanding of how diet, nutrition and ergogenic aids affect the body’s ability to exercise. Be able to apply the following at AO1, AO2 and AO3 to exam questions <ul style="list-style-type: none"> Components of a healthy, balanced diet 	<p>By the end of term 4 students will be able to:</p> <ol style="list-style-type: none"> Be able to perform calculations, draw and interpret diagrams and graphical data Be able to demonstrate knowledge and understanding of the new biomechanical technologies used to analyse and enhance performance. Be able to apply the following at AO1, AO2 	<p>By the end of term 5 students will be able to:</p> <ol style="list-style-type: none"> From watching a performance of their choice (from sport available), evaluate an individual’s performance and propose a viable development plan to improve that performance using 		
	<p>L1 – Major muscles and bones of the body</p> <p>L2+3 – Joints, movements and muscles – shoulder</p> <p>L4 – Joints, movements and muscles – elbow</p> <p>L5+6 - Joints, movements and muscles – wrist and hip</p> <p>L7- Joints, movements and muscles – knee</p> <p>L8- Joints, movements and muscles – ankle</p> <p>L9 – Assessment – J, M + M</p> <p>L10 – DIRT</p> <p>L11+12 - Types of contraction and movement analysis</p> <p>L13 – Movement analysis</p> <p>L14+15 – Structure + role motor unit</p> <p>L16 – Muscle fibres</p> <p>L17+18 – Muscle fibres types</p> <p>L19 – Assessment Mus/ske sys</p> <p>L20 – DIRT</p> <p>L21 – Cardiac cycle structure</p> <p>L22 – Conduction system</p> <p>L23 – Conduction system linked to the cardiac cycle</p> <p>L24 – CV system at rest – diastole and systole</p>	<p>L25 – HR, SV + Q at rest and exercise</p> <p>L26 – HR, SV + Q at exercise and recovery</p> <p>L27 – Redistribution of Q</p> <p>L28 – Vascular shunt mechanism</p> <p>L29 – Mechanisms of venous return</p> <p>L30 – Regulation of HR – neural, hormonal and intrinsic factors</p> <p>L31 – Regulation of HR – neural, hormonal and intrinsic factors</p> <p>L32 - Assessment CV system</p> <p>L33 - DIRT</p> <p>L34 - Respiratory system structure</p> <p>L35+36 – Mechanics of breathing during rest, exercise and recovery</p> <p>L37 – External + internal respiration</p> <p>L38+39 – Breathing frequency, tidal volume and minute vent at rest and response to exercise and recovery.</p> <p>L39+40 – Regulation of breathing during exercise – neural + chemical control</p> <p>L40+41 – Regulation of breathing during exercise – neural + chemical control</p> <p>L41 – Effects of different intensities of ex + recovery on gaseous exchange at alveoli</p> <p>L42 – Effects of different intensities of ex + recovery on gase/exc at alveoli and muscles</p> <p>L43 – Effects of different intensities of ex + recovery on gaseous exchange at alveoli</p> <p>L44 – Ox haemoglobin dissociation curve</p> <p>L45 – Assessment Resp system</p>	<p>L46 – DIRT</p> <p>L47 – Diet and Nutrition, energy intake, expenditure +balance</p> <p>L48 – Legal Ergogenic aids</p> <p>L49 – Non – legal Ergogenic aids</p> <p>L50+51 – Aerobic training</p> <p>L52+53- Strength training</p> <p>L54 - Flexibility training</p> <p>L55- Flexibility training</p> <p>L56– Periodisation of Training</p> <p>L57 – Impact of training on lifestyle diseases</p> <p>L58 – Assessment Exe Physio</p> <p>L59 - DIRT</p> <p>L60 – Newtons Laws of Motion and calculations</p> <p>L61+62 - Forces</p> <p>L63 – Free body diagrams</p>	<p>L64 - Levers</p> <p>L65 – Centre of mass and stability</p> <p>L66 – Analysis through the use of technology</p> <p>L67 – Assessment Biomechanics</p> <p>L68 - DIRT</p> <p>L69 – Revision for mocks</p> <p>L70 – Revision for mocks</p> <p>L71 – Revision for mocks</p> <p>L72 – Revision for mocks</p> <p>L73 – Revision for mocks</p> <p>L74 – Prep for EAPI</p> <p>L75 – Prep for EAPI</p>	<p>L76 – Prep for EAPI</p> <p>L77 – Prep for EAPI</p> <p>L78 – Prep for EAPI</p> <p>L79 – Prep for EAPI</p> <p>L80 – Prep for EAPI</p>		
	Holiday- 1 week						
	Holiday- 2 weeks						
	Holiday- 1 week						
	Holiday- 2 Weeks						
	Holiday- 1 Week						
	<p>AS PE bridge project to prepare students for study in year 13 and A2 PE. Project includes:</p> <ol style="list-style-type: none"> Preparation and training methods Diet and ergogenic aids Skeletal and muscular systems Cardiovascular and respiratory systems <p>Biomechanical principles</p>						

	<p>cardiovascular system at rest, during exercise and recovery, interpret data and graphs.</p> <p>4. Be able to apply the following at AO1, AO2 and AO3 to exam questions</p> <ul style="list-style-type: none"> • Cardiac cycle and conduction system 	<ul style="list-style-type: none"> • Role of the vasomotor centre, arterioles and pre-capillary sphincters • Mechanisms of venous return • Breathing frequency, tidal volume and minute ventilation • Mechanics of breathing • Neural and chemical control of breathing • Gaseous exchange 	<ul style="list-style-type: none"> • Energy intake and energy expenditure • Energy balance in physical activity and performance • Pharmacological aids • Physiological aids • Nutritional aids • Be able to demonstrate knowledge and understanding of the key fitness components and role of training plays to improve and maintain physical activity and performance. Including the principles training programme are designed upon and how to plan a personal health and fitness programme. <p>3. Be able to apply the following at AO1, AO2 and AO3 to exam questions</p> <ul style="list-style-type: none"> • Periodisation cycles • Phases of training • Tapering training to optimise performance • Affecting factors, evaluation methods, types of training and physiological adaptations. • Lifestyle diseases of the cardiovascular and respiratory system. <p>4. Be able to demonstrate knowledge and understanding of the underlying biomechanics principles related to Newton's laws of motion and force and how they affect, and how they can be manipulated to maximise performance.</p> <p>5. Be able to apply the following at AO1, AO2 and AO3 to exam questions</p> <ul style="list-style-type: none"> • Newton's first, second and third law. 	<p>and AO3 to exam questions</p> <ul style="list-style-type: none"> • Calculations of force, momentum, acceleration and weight • Free body diagrams and resultant motion • Limb kinematics • Force plates • Wind tunnels <p>4. From watching a performance of their choice (from sport available), evaluate an individual's performance and propose a viable development plan to improve that performance using knowledge gained from Year 12.</p>	<p>knowledge gained from Year 12.</p>	
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			<ul style="list-style-type: none"> • Net force, balanced and unbalanced • Weight, reaction, friction and air resistance 			
Progress and Assessment	End of topic tests. Tests will always contain previously taught units also.	End of topic tests. Tests will always contain previously taught units also. PPE – this will be an accumulation of other papers too.	End of topic tests. Tests will always contain previously taught units also. PPE – this will be an accumulation of other papers too.	End of topic tests. Tests will always contain previously taught units also. PPE – this will be an accumulation of other papers too.	Exam practice questions, showing annotations regarding exam technique.	
Key Vocabulary/ Literacy	Each topic will have key words, these will link to the mark scheme and making sure marks are attained by applying key words. Knowing what the question is asking by being able to recognise command words for AO1, AO2 and AO3. Helping with structuring answers from the jump from GCSE to a level especially for final question in the paper.	Each topic will have key words, these will link to the mark scheme and making sure marks are attained by applying key words. Knowing what the question is asking by being able to recognise command words for AO1, AO2 and AO3. Helping with structuring answers from the jump from GCSE to a level especially for final question in the paper.	Each topic will have key words, these will link to the mark scheme and making sure marks are attained by applying key words. Knowing what the question is asking by being able to recognise command words for AO1, AO2 and AO3. Helping with structuring answers from the jump from GCSE to a level especially for final question in the paper.	Verbal application of knowledge across all papers. Knowing how to respond at an AO3 level throughout all aspects of EAPI.		
Connected Knowledge	Character and culture: Understanding the positive links of taking part in physical activity and positive mental health. Links to Science, VCERT And GCSE PE: Body system – skeletal, muscular, cardiovascular.	Character and culture: Understanding the positive links of taking part in physical activity and positive mental health. Links to VCERT And GCSE PE: Importance of warm-up/cool downs. Respiratory system, effects of exercise on the body	Character and culture: Understanding the positive links of taking part in physical activity and positive mental health. Links to VCERT And GCSE PE: Diet, lifestyle choices, methods of training	Character and culture: Understanding the positive links of taking part in physical activity and positive mental health. Links to VCERT And GCSE PE: Biomechanic - forces	Character and culture: Understanding the positive links of taking part in physical activity and positive mental health. Links to VCERT And GCSE PE:	
Impact	<p>Be prepared to successfully complete Paper 1 by the end of the course.</p> <p>Enabling pupils to critically analyse and evaluate their physical performance and apply their experience of practical activity in developing their knowledge and understanding of the subject.</p> <p>Allowing learners to explore an activity in detail as a performer or coach.</p> <p>Prepare learners for the further study of PE or sports science courses as well as other related subject areas such as psychology, sociology and biology. Learners will also develop the transferable skills that are in demand by further education, Higher Education and employers in all sectors of industry.</p>					