

### Year 13 Curriculum Grid



# **A LEVEL PE**



Year/Term	Unit	Intent	Skills
Overall	Exercise Physiology and Biomechanical Movement	Students should understand the adaptations to the body systems through training or lifestyle, and how these changes affect the efficiency of those systems.  Students should develop knowledge and understanding of motion and forces, and their relevance to performance in physical activity and sport.  Students should have a knowledge and use of biomechanical definitions, equations, formulae, and units of measurement and demonstrate the ability to plot, label and interpret biomechanical graphs and diagrams.	
Autumn 1	Diet and nutrition and their effect on physical activity and performance	<ul> <li>Understand the exercise-related function of food classes.</li> <li>Positive and negative effects of dietary supplements/manipulation on the performer.</li> </ul>	<ul> <li>Analysing</li> <li>Evaluating</li> <li>Thinking Critically</li> <li>Learning independently</li> <li>Communicating effectively</li> <li>Debating</li> <li>Researching</li> <li>Writing extensively</li> <li>Comparing</li> <li>Working in groups</li> </ul>
Autumn 2	Preparation and training methods in relation to maintaining physical activity and performance	Students should understand quantitative methods, the types and use of data for planning, monitoring, and evaluating physical training, and to optimise performance.  • Understanding of the key terms relating to laboratory conditions and field tests.  • Physiological effects and benefits of a warm-up and cool down.  • Principles of training.  • Application of principles of periodisation.	<ul> <li>Analysing</li> <li>Evaluating</li> <li>Thinking Critically</li> <li>Learning independently</li> <li>Communicating effectively</li> <li>Debating</li> <li>Researching</li> <li>Writing extensively</li> <li>Comparing</li> </ul>



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	Injury prevention and the rehabilitation of injury	<ul> <li>Training methods to improve physical fitness and health.</li> <li>Types of injury.</li> <li>Understanding different methods used in injury prevention, rehabilitation, and recovery.</li> <li>Physiological reasons for methods used in injury rehabilitation.</li> <li>Importance of sleep and nutrition for improved recovery.</li> </ul>	Working in groups
Spring	Biomechanical movement	Students should develop knowledge and understanding of motion and forces, and their relevance to performance in physical activity and sport.  Students should have a knowledge and use of biomechanical definitions, equations, formulae, and units of measurement and demonstrate the ability to plot, label and interpret biomechanical graphs and diagrams.  Newton's Three Laws of linear motion applied to sporting movements.  Definitions, equations, and units of example scalars.  Centre of mass.  Factors affecting stability.	<ul> <li>Analysing</li> <li>Evaluating</li> <li>Thinking Critically</li> <li>Learning         independently</li> <li>Communicating         effectively</li> <li>Debating</li> <li>Researching</li> <li>Writing extensively</li> <li>Comparing</li> <li>Working in groups</li> </ul>
		<ul> <li>Three classes of lever and examples of their use in the body during physical activity and sport.</li> <li>Mechanical advantage and mechanical disadvantage of each class of lever.</li> </ul>	
Summer	Linear motion	<ul> <li>An understanding of the forces acting on a performer during linear motion.</li> <li>Definitions, equations, and units of vectors.</li> </ul>	<ul><li>Analysing</li><li>Evaluating</li><li>Thinking Critically</li></ul>



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Angular motion	<ul> <li>Definitions, equations, and units of scalars.</li> <li>The relationship between impulse and increasing and decreasing momentum in sprinting through the interpretation of force/time graphs.</li> </ul>	<ul> <li>Learning independently</li> <li>Communicating effectively</li> <li>Debating</li> <li>Researching</li> <li>Writing extensively</li> <li>Comparing</li> </ul>
Projectile motion	<ul> <li>Application of Newton's laws to angular motion.</li> <li>Definitions and units for angular motion.</li> <li>Conservation of angular momentum during flight, moment of inertia and its relationship with angular velocity.</li> </ul>	Working in groups
Fluid mechanics	<ul> <li>Factors affecting horizontal displacement of projectiles.</li> <li>Factors affecting flight paths of different projectiles.</li> <li>Vector components of parabolic flight.</li> </ul>	
	<ul> <li>Dynamic fluid force.</li> <li>Factors that reduce and increase drag and their application to sporting situations.</li> <li>The Bernoulli principle applied to sporting situations.</li> </ul>	