

YEAR 13 A-LEVEL PE REVISION TIMETABLE

Physiological factors affecting performance  
KWI

Week	Topic Area	Key Words	Exam Questions. What did you do? Any improvements?	Any questions for KWI?
1 25 <sup>th</sup> Nov	Vascular Shunt Mechanism			
2 2 <sup>nd</sup> Dec	Force: Net force, balanced and unbalanced forces. Weight, reaction, friction & air resistance and how they affect sports performance			
3 9 <sup>th</sup> Dec	Vasomotor Control Cardiac Control Respiratory Control			
4 16 <sup>th</sup> Dec	<p><b>Respiratory System At Rest</b></p> <p><b>Respiratory System During Different Exercise Intensities &amp; Recovery</b></p>	<ul style="list-style-type: none"> <li>• Relationship between &amp; resting values for breathing frequency, tidal volume, minute ventilation and methods of calculating all three.</li> <li>• Mechanics of breathing at rest and muscles involved; diaphragm &amp; external intercostals.</li> <li>• Gaseous exchange at the alveoli and muscles.</li> <li>• Effect of different intensities of exercise and recovery on breathing frequency, tidal volume, minute ventilation and methods of calculating all three.</li> <li>• Mechanics of breathing during different intensities of exercise &amp; recovery to include additional muscles.</li> <li>• Regulation of breathing during different intensities of exercise &amp; recovery, neural and chemical control.</li> </ul>		

		<ul style="list-style-type: none"> <li>Effect of different intensities of exercise &amp; recovery on gas exchange at alveoli and muscles; changes in pressure gradient &amp; dissociation of oxyhaemoglobin.</li> </ul>		
5 23 <sup>rd</sup> Dec	<p><b>Biomechanical Principles</b></p> <p><b>Levers</b></p> <p><b>Analysis Through Use Of Technology</b></p>	<ul style="list-style-type: none"> <li>Newton's Laws Of Motion.</li> <li>Force: New: Net force, balanced and unbalanced force, weight, reaction, friction, air resistance, factors affecting friction and air resistance &amp; manipulation in sporting performance.</li> <li>Free body diagrams showing vertical &amp; horizontal forces acting on a body at an instant in time and the resulting motion</li> <li>Calculations of force, momentum, acceleration and weight.</li> <li>Definition of centre of mass. Factors affecting the position of CoM.</li> <li>Relationship between CoM and stability.</li> <li>Load, effort, fulcrum, effort arm, load arm.</li> <li>1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> class levers. Mechanical advantage of a 2<sup>nd</sup> class lever.</li> <li>Definitions &amp; use of limb kinematics, force plates and wind tunnels.</li> <li>How each type of technology may be used to optimise performance in sport.</li> </ul>		
6 30 <sup>th</sup> Dec	<b>Environmental effects on the body</b>	<p>Altitude</p> <p>Heat effects</p>		
7 6 <sup>th</sup> Jan	<p><b>Aerobic Training</b></p> <p><b>Strength Training</b></p>	<ul style="list-style-type: none"> <li>Definitions, affecting factors, methods of evaluating, methods of training to include HIIT (New). Use of target heart rates as an intensity guide. Adaptations to include CV, respiratory, muscular and metabolic. Activities in which aerobic capacity is key.</li> </ul>		

	<p><b>Flexibility Training</b></p>	<ul style="list-style-type: none"> <li>• Types of strength to include strength endurance, maximal, explosive/elastic and static and dynamic. Affecting factors, methods of evaluating all types, methods of training. Adaptations to include muscle and connective tissue, neural and metabolic. Activities in which strength is key.</li> <li>• Types of flexibility to include static and dynamic. Affecting factors, methods of evaluating. Methods of training to include passive, static, dynamic, ballistic, PNF and isometric. Adaptations to muscle and connective</li> <li>• tissue and activities in which flexibility is key.</li> </ul>		
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Mocks Begin – depending when the exam is, use this time to recap the topics you find difficult and to revisit exam questions and 20 markers

