

Meden School Curriculum Planning							
Subject	A Level	Year Group	12	Sequence No.	15-23	Topic	Cardiovascular system during exercise of differing intensities and during recovery

Retrieval	Core Knowledge	Student Thinking
What do teachers need to <b>retrieve</b> from students before they start teaching <b>new content</b> ?	What <b>specific ambitious knowledge</b> do teachers need to teach students in this sequence of learning?	What real life examples can be applied to this sequence of learning to <b>development of our students thinking, encouraging them to see the inequalities around them</b> and 'do something about them!'
<p><b>Students own knowledge and understanding of sport</b></p> <p>- students prior sporting experience, through playing or spectating or teaching, may have developed some level of knowledge in aspects of topics covered in this unit.</p> <p><b>KS4 Curriculum</b></p> <p>- students can choose a fitness programme during their Core PE lessons where their work will be related to the cardiovascular system</p> <p>- Students will have some understanding of the cardiovascular system from Science lessons</p> <p><b>KS3 Curriculum</b></p> <p>- Students are introduced to the cardiovascular system during PE lessons in KS3. In particular during Fitness and ME in PE lessons,</p>	<p>Learners will know key terms and develop their knowledge and understanding of the cardiovascular system during exercise and during recovery.</p> <p>The will analyse the effects of different exercise intensities and recovery on the following and compare how these differ to at rest:</p> <ul style="list-style-type: none"> <li>• heart rate</li> <li>• stroke volume</li> <li>• cardiac output</li> </ul> <p>Students then will be able to apply methods of calculating the above to a range of sporting examples. Knowledge and understanding of the recovery system and how the body returns to its pre-exercise state will also be developed across a wide range of sporting examples.</p> <p>Students will then be able to explain the redistribution of cardiac output during exercise of differing intensities and during recovery, making reference to the following:</p> <ul style="list-style-type: none"> <li>• vascular shunt mechanism</li> <li>• role of the vasomotor centre</li> <li>• role of arterioles</li> </ul>	<p>Each week, a key theme will run through all PE lessons linked to real life examples. These will be linked to the particular learning outcome the students are on at the time and will be consistent across the department. The aim will be for students to develop their thinking, recognise the inequalities within sport (linked to the topic) and do something about them. In the 'teaching' lessons, students will be provided with a starter to challenge stereotypes in sport and then an activity linked to heading being covered where they can 'do something about them.'</p> <ol style="list-style-type: none"> <li><b>1. Physical Activity Government Guidelines and Recommendations</b> - students should have 60 minutes of moderate to high intensity exercise every day. Do they get this? How?</li> <li><b>2. Barriers to Participation for Children and Teenagers</b></li> <li><b>3. Solutions to the Barriers</b></li> <li><b>4. Current Issues in Sport/Sport in the News</b> - Linked to the impact of PE on Mental, Physical or Social Health</li> <li><b>5. Physical Benefits of Sport and PE on the Body</b></li> <li><b>6. Social Benefits of Sport and PE on the Body</b></li> </ol>

<p>students will relate this to the cardiovascular system.</p> <ul style="list-style-type: none"> <li>- Regularly performed a wide range of sports and will have knowledge of the individual skills needed for those sports. They will be able to identify them and will have understanding on how they are performed.</li> <li>- Boys and Girls all do the same sports on the curriculum to challenge stereotypes and raise awareness of opportunities for them to get involved e.g. Mansfield Rugby Club for Girls</li> </ul> <p><b>Extra Curricular/Clubs</b></p> <ul style="list-style-type: none"> <li>- Students will have their own knowledge of the sports they regularly participate within and will be able to relate to these within their work</li> <li>- All students will be given a breadth of extra curricular opportunities to allow them to perform further in the key sports discussed in this topic</li> <li>- Students will have viewed sports that will be discussed and may understand how the body performs it</li> <li>- Ideally, students will compete in sport outside of school</li> </ul>	<ul style="list-style-type: none"> <li>• role of pre-capillary sphincters</li> </ul> <p>Following on from that students will be able to describe the different mechanisms of venous return during exercise of differing intensities and during recovery, and relate this to how it aids in performing sporting and physical activities.</p> <p>In this unit, students will also discuss the regulation of heart rate during exercise. They will compare and contrast how the following factors, both aid and hinder the regulation of heart rate at rest, during exercise and during recovery. They will look at how these factors differ in their impact from one sport to the next.</p> <ul style="list-style-type: none"> <li>• neural factors</li> <li>• hormonal factors</li> <li>• intrinsic factors.</li> </ul> <p>Learners understanding of the cardiovascular, respiratory and neuromuscular systems will also be applied to altitude training and exercise in the heat to show how these types of training can affect the body systems.</p>	<ol style="list-style-type: none"> <li><b>7. ME in PE – Couch to 5km and Meden Park Run Challenge</b> – Students are introduced to two free activities that they can get involved in. Designed to improve physical, social and mental health within PE</li> <li><b>8. Popularity of Sport in the UK</b> – what are the current trends for the most popular sport in the UK. Why are they the most popular sports?</li> <li><b>9. Emerging/Growing Sports in the UK</b> – which sports are new to the UK? How can we make them more popular?</li> <li><b>10. National Governing Bodies</b> – What is their role within a sport? What are the key NGB’s for each sport?</li> <li><b>11. Major Sporting Events</b> – What are they? When and where do they occur?</li> <li><b>12. Olympic Creed and Olympic Values</b></li> <li><b>13. Current Issues in Sport/Sport in the News</b> – Linked to new sports, growing sports or a major sporting event occurring</li> <li><b>14. ME in PE – Couch to 5km and Meden Park Run Challenge</b> – Students are introduced to two free activities that they can get involved in. Designed to improve physical, social and mental health within PE</li> <li><b>15. Sporting Values – Excellence</b> – Linked to Role Models and demonstrating excellence within a sport</li> <li><b>16. Sporting Values - Tolerance and Respect</b></li> <li><b>17. Sporting Values – Fair play</b></li> <li><b>18. Sporting Values – Teamwork and Inclusion</b></li> <li><b>19. Sporting Values - Citizenship</b></li> <li><b>20. ME in PE – Couch to 5km and Meden Park Run Challenge</b> – Students are introduced to two free activities that they can get involved in. Designed to</li> </ol>
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