

The following resources have been put together by BioLAB to assist VCE Physical Education students review and study content from Units 1-4.

Many of these resources have been designed to be easily uploaded to your school learning management system (Compass or similar) and downloaded by students. Each resource has been designed to be a discrete learning task that can be completed by students in approximately 1-1.5 hours.

Resources can be downloaded in two different file formats: Digital (Word docx) or Printable (pdf). All **LINKS** in this document can be accessed by pressing CTRL and clicking on link.

Fitness Components

This task is designed to focus on Fitness Components and Training content in VCE PE Unit 3. The resource will guide you through a short exercise circuit with exercise instructions from Collingwood Magpies netball captain Madison Browne. Madison has used her knowledge of the human anatomy, fitness components and training to ensure she is able to prepare herself for the sport of Netball.

WORKSHEET **VIDEO**

Lactate and Fatigue

This task provides students with real world data collected from a lactate test supervised by the BioLAB and Deakin staff. The resource will allow students to revise and apply their knowledge of metabolic by-products with real athlete data and graphs.

WORKSHEET **DATA**

Performance Enhancement

This task will explore the different ways athletes enhance their cardiorespiratory system using legal and illegal methods.

Whether we look at an elite cyclist training for the Tour De France or a person rehabilitating from cardiac surgery, both are using methods to achieve the same goal: optimal performance of the cardiovascular and respiratory systems

WORKSHEET



These online lessons are a little more comprehensive and have been designed to address specific outcomes and key knowledge areas within the identified unit of study.

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Metabolic Madness Online

To understand respiratory gas exchange and fuel utilisation in the human body.

Lesson Links
<u>Pre Task worksheet</u>
<u>Metabolic Madness lesson video</u>
<u>Athlete data excel spreadsheet</u>
<u>Student workbook</u>
<u>Post task worksheet</u>
Research articles- <u>Animal Vs Humans</u> , <u>Cycling</u> & <u>Energy</u> .

Eye in the Sky Online

To understand how data collected using technology can improve performance.

Resource Links
<u>Eye in the Sky lesson video</u>
<u>Team GPS data</u>
<u>Team analysis workbook</u>
<u>Individual GPS reports</u>
<u>Individual athlete workbook</u>

BioLAB have created a series of podcasts that focus on difficult concepts in the VCE curriculum. These podcasts are designed for VCE Physical Education students and teachers who want to revise their understanding of key concepts.

Nutrition & Hydration for Performance with Geelong Cats player Harry Taylor

In this podcast, our first guest of the series, long-time BioLAB ambassador and Geelong Football Club legend Harry Taylor, gives us a detailed insight into the nutrition & hydration strategies that he and the football club use for optimal performance and recovery. We talk about what fuelling an AFL player before, during and after a game entails, what happens when you get it wrong, how Harry prepared his body for AFL, managing hydration and some advice on career pathways. [LISTEN](#) [WATCH](#)

Lactate and Lactate Inflection Point

In this episode, we will be discussing the key differences between lactic acid and lactate, what lactate threshold and lactate inflection point means and what to look for in a graph. This is relevant for both Unit's 3 and 4 for VCE PE, as we look at relative contribution of fuels at particular intensities, by-products, fatigue and fatiguing factors as well as training to improve performance. [LISTEN](#)

Innovative Technology in Sport

This next podcast in our VCE PE series explores the rapid and often exponential increases in science and technology, leading to further understanding of human biology and mechanics. In relation to sport and human performance, this new and emerging field of sports technology is aiding the optimisation of peak human performance. [LISTEN](#)

Energy Systems

In this episode, we focus on the three energy systems. We discuss what fuels them, what ATP is and why we need it and the constant interplay of all three systems to supply us with the energy we need. [LISTEN](#) [RESPIRATION FLOWCHART](#)

Exercise and Brain Health

In this podcast, we primarily focus on the physiological benefits of physical activity. Physical activity is an incredibly important health tool that is used in the treatment and prevention of many diseases, including psychiatric diseases. There is a multitude of research showing that in addition to the physical benefits of exercise including, improved cardiopulmonary and muscle function, physical activity improves our quality of life. So, what are the underlying physiological changes that take place during or after exercise? Can they improve our mental health? Have a listen to find out! [LISTEN](#) [REVISION CARDS](#)