

Applied Anatomy and Physiology with Exercise Physiology

Tutor: Tim Richardson (see Tim's profile at end)

- A quality assured, power-packed day with a supremely experienced and knowledgeable presenter
 - increased knowledge and confidence – whether starting out or upskilling
 - stacks of powerful tips, tools, techniques and ideas to equip, motivate and inspire
 - links to exam questions and essential exam technique throughout

Session 1: 9.30-10.45 Year One A&P: Muscular Skeletal Review

- Movement at ball and socket joints; get to grips with planes of mov^t – *mannikin movements*
- Eccentric contraction essentials – *getting students' heads around it!*
- Skeletal muscle contraction - structure and role of motor units
- All or none law - *not for weaklings!*
- Muscle fibre types: structure and function exercise with recruitment explanation

Year one Exercise Physiology

- Ergogenic aids: legal v illegal supplementation
- Energy intake, expenditure and balance
- Training methods: Periodisation – *train to the peak and control the taper*

Break: 10:45-11.00

Session 2: 11.00-12.15 Year One A&P: Cardiovascular & Respiratory Systems

- Vascular shunt mechanism - *role play exercise*
- Mechanics of breathing: *Singalong 12 days of Christmas!*
- Gaseous exchange: *M&M partial pressure sweet sort*
- Regulation, regulation, regulation – cardiac, respiratory and vascular regulation

Year two A&P: Energy for exercise:

- ATP-PC (phosphocreatine), Glycolytic & Aerobic Energy Systems
- *The Saga of the Citric Acid Family* (Aerobic Glycolysis role play)

Lunch: 12.15-1.00

Session 3: 1.00-1.45 Year Two A&P: Recovery and Altitude

- How the body returns to its pre-exercise state – implications for training.
- Altitude and acclimatisation – *M&Ms again*
- Cardiovascular Drift – when and why?

Year two Exercise Physiology: Injury Prevention and Rehabilitation

- Acute v Chronic Injury – *group categorisation exercise*
 - increments in terms of severity

Stretch / Screen Break: 1:45-1.50

Session 4: 1.50-2.35 Exam focus – Synoptic

- Sample questions and mark schemes
- Planning & preparation for student success
- Applying the Assessment Objectives (AO1, AO2, AO3) - *Apples and Pears*
- Grading a marked exemplar script

Stretch / Screen Break: 2:35-2:45

Session 5: 2:45-3.15 Exam focus – teaching ideas

- Exam question rotation - *Pass the Pen*
- Examples (AO2) - *Tennis and Detonation*
- Stimulus Identification Question Focus
- Comparing – activity to help secure a max in these questions

3.15-3.30 - chat will remain open

Tim Richardson:

- head of academic PE & Sports Science, and assistant Deputy Head - Co-Curriculum at Lord Wandsworth College, Hampshire
- >20 years' experience teaching A-Level PE
- A highly experienced A-Level PE senior examiner with a major awarding body
- subject expert and trainer for major awarding body
- waited 30 years to watch Liverpool lift the Premier League trophy - in an empty stadium!



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