



Sports Science and Physical Education

INDUSTRY FOCUS AREA:	Health
VICTORIAN CURRICULUM LINKS:	Y7 – 10 Health and PE, VCE Physical Education, Digital Technologies, Personal & Social Capability
TECHNOLOGY USED:	Motion capture technology, movement analysis equipment, wearable technology, light sensor motion equipment, VO2 max, HR monitors.
YEAR LEVEL:	All
DURATION:	1 Day
LEVEL:	Intermediate
MAX STUDENTS:	50

Introduction

Fading are the days where training was simply running around the field hoping to improve. Technology is infiltrating even grass roots sports to help players make training and development more targeted to their individual needs. Collecting accurate data of an individual's movement, fitness, and abilities provides valuable information to improve movement and performance. Using a scientific approach and cutting-edge technology, collected data can be interpreted and analysed to assess physiological function and maximise biomechanical performance in a range of different sporting and clinical scenarios.

Program Summary

This program provides flexibility for teachers, coaches, athletes, and students to utilize the movement analysis and VO2 max equipment at the Tech School to fit in with current programs. This program will challenge students to work in a group to explore the structure and function of the musculoskeletal and cardiorespiratory system. Students will use digital technology to understand how to collect and analyse data relating to human biomechanics. Students will experience and use the VO2 max testing equipment and understand the application of cardiorespiratory function testing.

Taking part in this program, students will collaboratively:

- Understand how to use technology to measure cardiorespiratory fitness.
- Collect and interpret movement data using movement capture technology.
- Experience virtual reality anatomy programs to explore and understand the human body.

Career Links:

Careers: Exercise physiologist, physiotherapist, occupational therapist, sports scientist, prosthetist, sports management and fitness industries.

Informers: Teacher

Papi, E; Koh, W & McGregor, A. (2017) Wearable technology for spine movement assessment: A systematic review. Journal of Biomechanics. (64) p186 – 197.

