



VCE Physics – Unit 3

Detailed Study 3.2 – Investigating materials and their use in structures

Structures and Materials Workshop 2009

The University of Ballarat is pleased to offer this opportunity to schools again in 2009. As in the past, sessions will be conducted at the University by Trevor Gourley, Lecturer in Civil Engineering.

Contact Stephanie Davison on 5327 9373 or s.davison@ballarat.edu.au to make a booking. Places are limited, so please book early. A Booking Form is attached.

Dates/Session Times 2009

Workshops will be held on the following dates and times

Tuesday 31 March; 9.30 – 12.00 or 12.30 – 3.00
Friday 3 April; 9.30 – 12.00
Tuesday 28 April; 9.30 – 12.00 or 12.30 – 3.00
Friday 15 May; 9.30 – 12.00 or 12.30 – 3.00
Friday 22 May; 9.30 – 12.00 or 12.30 – 3.00
Tuesday 2 June; 9.30 – 12.00 or 12.30 – 3.00

A minimum of **2 ½ hours** is required to participate in the entire session.

Please note that small classes will be asked to share a session with other schools.

Sessions are open to all VCE Unit 3 Physics classes and they are **FREE** of charge.

Session Outline

Practical Activity: Equilibrium in a simple beam.

Practical Activity: Investigation of Young's Modulus

Demonstration: Tensile and Compressive strength in concrete beams.

Recommended Prior Knowledge

Although not essential, students will gain more from this activity if they have some prior exposure to the following concepts;

- Stress and Strain
- Tensile and Compressive stresses
- Young's Modulus
- Brittle fracture and Ductile failure
- Beams and Cantilevers
- Equilibrium of forces
- Centre of gravity

Need more reasons to visit the University of Ballarat?

We can also arrange

- **UB Library Workshop** - a good way to unwind after a few hours on the bus. An interactive team-based challenge requiring students to navigate around the library locating all sorts of things - many related to the workshop and others just there for fun. Duration 45 – 60 minutes
- **General Campus Tours** – tailor-made tour of educational, recreational and student services facilities on campus with one of our Student Recruitment team members. Ideal opportunity for students to get a glimpse of uni life. Duration 30 – 45 minutes
- **Tours of Residential Facilities** – can be added to General Campus Tour or taken alone. Guided by Student Recruitment team. Duration 15-30 minutes

Please notify Stephanie at the time of making your Structures and Materials booking if you would like to add one of these tours to your itinerary.