

# PrimeSCI! @Australian Synchrotron

## SECONDARY SCHOOL HOLIDAY SCIENCE WORKSHOPS

**Tuesday 8 - Thursday 10 July 2025**

The PrimeSCI! Synchrotron Education Team is excited to welcome you to the ANSTO Australian Synchrotron! Learn how the Australian Synchrotron combines science and technology to produce cutting edge research.

### Interactions of Light and Matter

How can waves explain the behaviour of light? How are light and matter similar?

These questions will be answered in the hands-on physics lab session where students can take part in experiments using specialised equipment to learn about the diffraction of light (both single and double slit diffraction and interference), the photoelectric effect and emission spectra.

The program also includes a tour of the Australian Synchrotron where participants will learn about the important research outcomes achieved at this state-of-the-art facility. (4.5hrs)

**Years 11 - 12 (Taught at Year 12 curriculum level)**

**Tuesday 8 July 2025**

10:00am - 2:30pm

### Synchrotron and its Applications

How do particle accelerators work? Curious about the Synchrotron research being conducted locally?

These questions and more will be answered in the hands-on physics lab session where students can take part in experiments using specialised equipment to learn about the behaviour of electrons in electric and magnetic fields.

The program also includes a tour of the Australian Synchrotron where participants will learn what makes the facility so unique. (4.5 hrs)

**Years 10 - 12 (Taught at Year 11 curriculum level)**

**Wednesday 9 July 2025**

10:00am - 2:30pm

### Colours of Light

**NEW FOR 2025!**

Light is something we often take for granted, yet our perception of it can dramatically shape how we understand the world. In this hands-on workshop, students explore how light and colour influence what we see—and how scientists use these properties to analyse materials.

Students begin by revealing hidden messages using complementary colours and coloured filters. They then investigate how light interacts with substances using spectroscopy and apply Beer's Law to calculate dye concentrations in water.

A key component of the workshop is the experimental application of colorimetry and UV-visible spectroscopy, including the use of a calibration curve to determine the concentration of ions or complexes in a water sample.

The program includes a guided tour of the Australian Synchrotron, where students will see how advanced light-based techniques contribute to real-world scientific discoveries. (3 hrs)

**Years 9 - 12 (Taught at Year 11 curriculum level)**

**Thursday 10 July 2025**

9:00am - 12:00pm

**Book online at:**

**<https://events.humanitix.com/primesci-synchrotron-workshops-july-2025>**

### Funded Places

*A limited number of **fully funded places** are available for participants to attend the **PrimeSCI! Synchrotron Tours and Lab Sessions**, who would not be able to attend without financial support. You are **NOT** required to complete the Humanitix Registration form.*

Please complete the Equity Access form at **<https://forms.gle/pdfUWfRuhfwf8dn26>**

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## SECONDARY SCHOOL HOLIDAY SCIENCE

### Enrolment Fee:

\$54.00 per participant for 4.5 hour program (plus \$0.50 Humanitix fee)

\$44.50 per participant for S&iA lab only (plus \$0.50 Humanitix fee)

\$44.50 per participant for 3 hour program (plus \$0.50 Humanitix fee)

Visitor information will be provided once registered.

### Funded Places:

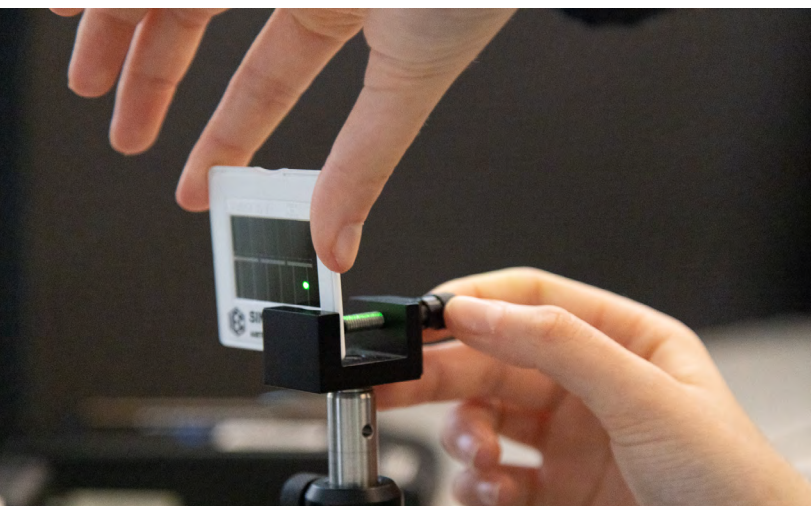
Complete the Equity Access form at <https://forms.gle/pdfUWfRuhfwf8dn26>

### Please note:

#### The Workshops will be held at:

NCSS Building, ANSTO Australian Synchrotron, 800 Blackburn Road, Clayton VIC 3800

Parking is accessed via the the Blackburn Road entry, opposite the Heart Hospital.



PrimeSCI!

[www.swinburne.edu.au/primesci](http://www.swinburne.edu.au/primesci)

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