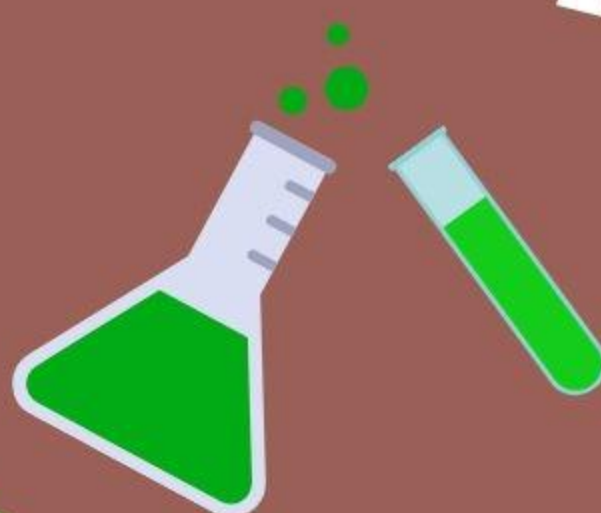




ARC TRAINING CENTRE FOR  
GREEN CHEMISTRY  
IN MANUFACTURING

# GREEN CHEMISTRY INCURSION GRADE 6 - YEAR 9



BIODEGRADABLE WATER BOTTLES

Plus two bonus teaching kits

 Flexible class duration

 All equipment provided

 Interactive hands-on activity

For more information contact  
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# Green Chemistry Outreach Program

presented by the



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## What is Green Chemistry?

Green chemistry uses principles that are designed to protect and benefit people and the planet. It's about finding innovative ways to reduce waste, conserve energy, and develop safer chemicals of equal or superior performance and are cost effective.

Green chemistry principles also include circular economy considerations such as the use of more sustainable or renewable feedstocks.

## Who are we?

The ARC Training Centre for Green Chemistry in Manufacturing is an interdisciplinary research and training environment centred on green and sustainable chemistry. The Centre, comprising of university, industry, government authorities and key industry bodies, aims to transform and revitalise Australian Manufacturing through the adoption of green and sustainable chemical technologies.

Our Outreach program has been designed by our PhD and Postdoctoral cohort according to the 5E model of Engage, Explore, Explain, Elaborate, and Evaluate. We want to share our passion for sustainability and STEM with school students and encourage thinking about climate change, the environment and the role that we can all play.

## What are we offering?

- An incursion-based green chemistry experience for Grade 6 - Year 9 students
- Delivery of an interactive, hands-on activity by our PhD researchers with all equipment provided
- Two additional activities and teacher resources supplied as a kit that can be used as a school resource
- All provided at no cost



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## **Incursion activity presented in-person by our Centre PhD researchers**

### Biodegradable Water Bottles

The biodegradable water bottle green experiment is a fun and engaging experiment for students to be introduced to sustainable chemistry practices and laboratory skills. Through this experiment, students can learn about green chemistry principles, the environmental impact of traditional plastic water bottles, and the importance of developing sustainable alternatives.

Age groups: Grade 6 to Year 9

Duration: 45 minutes

Numbers: Each session can cater up to 30 students

States: Vic and SA. Kits containing teacher notes and resources can be sent to schools in other states or a visit can be arranged if there is interest from a number of schools.

## **Teacher Resource Kit (additional experiments supplied as a kit)**

Each kit contains most of the equipment required as well as teacher notes, presentation slides and questions designed to assist the students to explore aspects of green chemistry and sustainability.

### Experiment 1: Polymer Pasta

This experiment will engage students in making polymers using coloured pasta. The students will work with monomers, the units that make up polymers, and build different types of polymers using cross-linkers to make more complex structures.

Age groups: Grade 6 to Year 9

Duration: 45 minutes

Numbers: Each kit can cater up to 30 students

### Experiment 2: Making a Sustainable Soap

In this experiment, students will learn how to create a soap formulation containing natural additives and fragrances and compare it to a commercial soap.

Age groups: Grade 6 to Year 9

Duration: 45 minutes

Numbers: Each kit can cater up to 30 students