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Chemistry, Sustainable Development, Cross-curriculum Priorities, Systems Thinking

Learning areas:

Science, Integrated STEM

Addressing the Sustainable Development Goals in Schools with Chemistry Education

This interactive workshop will introduce a research-informed thematic approach to teaching Chemistry and materials with authentic contexts (biodegradable plastics, e-waste, novel battery technologies and more), empowering students to make a difference on sustainable development in their schools and community.

Considerable attention in the chemistry education research community has recently focussed on promoting a systems thinking perspective in chemical science practice, as a means to address the complex nature of challenges like sustainability in a global, holistic way. This workshop will outline classroom activities that directly relate to critical challenges, such as those highlighted by the United Nations Global Goals for sustainable development (SDGs).

A logical place for teachers and students to start is to recognise the "material basis of society", acknowledging that understanding the properties of chemicals and their past, current and future uses is central to overcoming the 21st century challenges of sustainability.

The workshop will include hands-on practical activities that demonstrate contemporary chemical science research in the classroom, and participants will be provided with student and teacher resources. How the SDGs can be incorporated into the upper primary and secondary classroom will be described. Personal protective equipment will be provided.