 Resources for Indigenous perspectives in Chemistry

The following resources support the teaching of various outcomes in the Stage 6 Chemistry syllabus[[1]](#footnote-1).

Module 3: Reactive chemistry

* Content: Chemical Reactions
* Inquiry question: What are the products of a chemical reaction?
* Indigenous perspective: Investigate the chemical processes that occur when Aboriginal and Torres Strait Islander Peoples detoxify poisonous food items

Module 5: Equilibrium and acid reactions

* Content: Solution Equilibria
* Inquiry question: How does solubility relate to chemical equilibrium?
* Indigenous perspective: Investigate the use of solubility equilibria by Aboriginal and Torres Strait Islander Peoples when removing toxicity from foods, for example, toxins in cycad fruit

Module 6: Acid/base reactions

* Content: Quantitative Analysis
* Inquiry question: How are solutions of acids and bases analysed?
* Indigenous perspective: Explore acid/base analysis techniques that are applied by Aboriginal and Torres Strait Islander Peoples

Resources

* These resources provide descriptions of poisonous plants in Australia.
  + [Australia's most poisonous plants](http://www.australiangeographic.com.au/topics/science-environment/2012/07/australias-most-poisonous-plants/)
  + [Little shop of horrors: the Australian plants that can kill you](http://theconversation.com/little-shop-of-horrors-the-australian-plants-that-can-kill-you-50842)
  + [Poisonous or harmful plants](https://www.poisonsinfo.nsw.gov.au/site/files/ul/data_text12/4637620-poisonous_plants_en.pdf)
  + [Australian Native Poisonous Plants](http://anpsa.org.au/APOL7/sep97-4.html)
  + [Australian Weeds and Livestock](http://www.weeds.mangrovemountain.net/data.html)
  + Talalaj, Janusz Joseph. 2008, Poisonous plants in Australia/Janusz Talalaj Echidna Press North Adelaide, South Australia
  + Everist, S., 1981. Poisonous plants in Australia. London: Angus & Robertson Publishers.
* These resources describe how Indigenous communities have used various plants as foods and medicine, despite their toxic properties
  + [Aboriginal Plant Use](http://www.anbg.gov.au/gardens/visiting/exploring/aboriginal-trail/)
  + [Aboriginal Plant Use - NSW Southern Tablelands](http://www.anbg.gov.au/apu/)
  + [Wiradjuri Plant Use in the Murrumbidgee Catchment](http://archive.lls.nsw.gov.au/__data/assets/pdf_file/0009/495261/archive-wiradjuri-plant-use.pdf)
  + [Bush Medicine](http://www.arrawarraculture.com.au/fact_sheets/pdfs/15_Medicine.pdf)
  + [Aboriginal healing practices and Australian bush medicine](http://www.friendsofglenthorne.org.au/wp-content/uploads/Clarke-Vol-33-2008.pdf)
* These resources provide examples of specific plant toxins, including their uses in medicine, industry and agriculture
  + [Castanospermine](http://molview.org/?cid=54445) (in Moreton Bay Chestnut or Blackbean), [Prunasin](http://molview.org/?cid=119033), [Ptaquiloside](http://molview.org/?cid=13962857) and [Shikimic acid](http://molview.org/?cid=8742) (found in Bracken ferns)
  + [Primitive Technology: Making poisonous Black bean safe to eat (Moreton Bay Chestnut)](https://www.youtube.com/watch?v=eVvQnsKuOcE) (duration 4:50)
  + [austhrutime.com/food\_preparation\_poison.htm](http://austhrutime.com/food_preparation_poison.htm)
  + [The Role of Macrozamin and Cycasin in Cycads (Cycadales) as Antiherbivore Defenses](https://www.jstor.org/stable/3557555)
  + [Toxicology of Cycasin](http://cancerres.aacrjournals.org/content/canres/28/11/2262.full.pdf)
  + [Cycad Toxicity](http://plantnet.rbgsyd.nsw.gov.au/PlantNet/cycad/toxic.html)
  + [Preparation and Uses of Cycads](http://plantnet.rbgsyd.nsw.gov.au/PlantNet/cycad/ethnauprep.html)
  + Beck, W., 1992. [Aboriginal preparation of Cycas seeds in Australia](http://www.jstor.org/stable/4255419). Econ. Bot. 46: 133-147.

General references

* + Packer, J, Harrington, D, Jamie, J, Brouwer, N, Gaikwad, J, Vemulpad, S & Yaegl, CE 2011, Yaegl: medicinal and plant resources handbook. 1st ed, Macquarie University Lighthouse Press, North Ryde, NSW.
  + Stewart, Kathy. & Percival, Bob. & Royal Botanic Gardens (Sydney, NSW) & Environmental Trust (NSW). 1997. Bush foods of New South Wales: a botanic record and an Aboriginal oral history/Kathy Stewart, Bob Percival Royal Botanic Gardens Sydney Sydney

1. This document references the [Chemistry Stage 6 Syllabus](http://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/stage-6-science/chemistry-2017) © 2019 [NSW Education Standards Authority (NESA)](http://syllabus.nesa.nsw.edu.au/copyright/) for and on behalf of the Crown in right of the State of New South Wales. [↑](#footnote-ref-1)