

BONE WARS

Explores the discovery of dinosaurs and how our understanding of them has developed over time.
in2science.org.au

Year 8

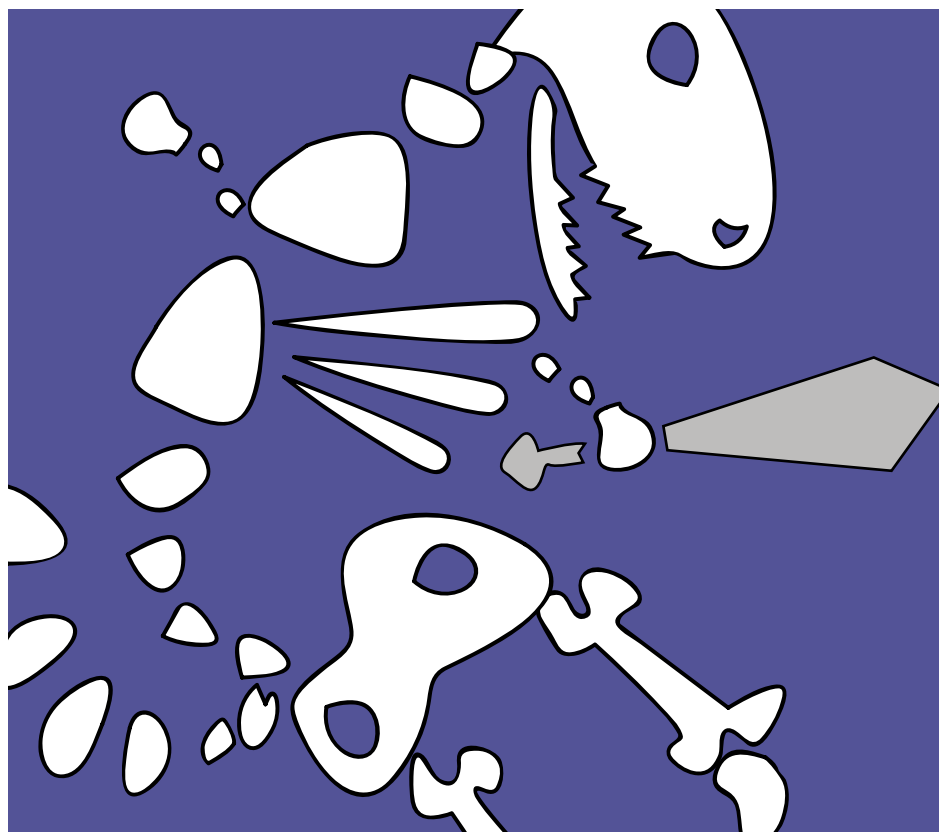
Subject

Science

Earth and Space – Rocks

Covers

SU, SHE & SIS requirements of the Australian curriculum



Meet a Mentor

Liz is studying Geology at the University of Ballarat

What are you aiming to do when you finish your course?

When I was little I was aware of an aunt who seemed to have a really exciting life – she was always travelling to new and strange places. As I grew up I realised that her work as a geologist was what gave her these opportunities to travel...so that's exactly what I want to do. When I've finished my degree I'd like to do Honours and then work in mineral exploration.

What's the most interesting thing you've done with your science studies?

Our trip last year to the Flinders Ranges is probably the highlight. One day we walked across a mountain range and travelled through several million years of earth's history – it was so cool to see the different rocks, know how they were formed and interpret the geological history of the area from the clues in the rocks.

What have you enjoyed about In2science?

One day after I had got to know the students quite well I took in part of my rock collection. A group of boys asked me the most perfect questions and were genuinely interested in them. They wanted to know what they were made of, their crystal structure and how they formed. It was so rewarding because normally they were quite disinterested and it really changed my relationship with them.

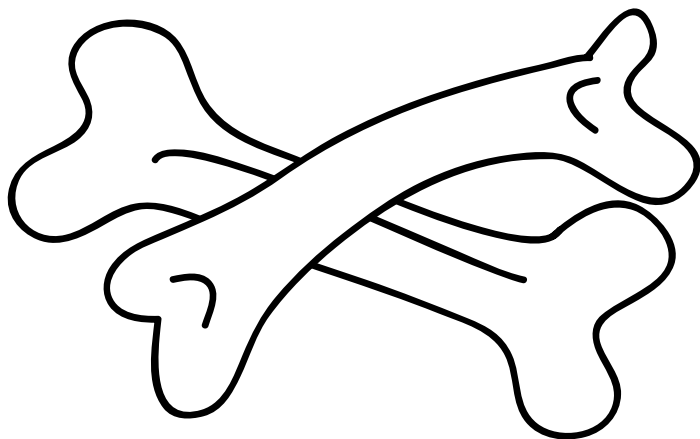


Curriculum Links

Nature and Development of Science

Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world (ACSHE134).

Science knowledge can develop through collaboration and connecting ideas across the disciplines of science. (ACSHE226).



Possible experiments

Create Crystals

Students investigate crystal growth by making sugar or salt crystals and cooling them at different rates. Relates to crystal formation in igneous rocks (minimegeology.com/home/mgeo/page_322/grow_sugar_rock_candy_crystals_experiment.html).

Making a fossil

Students use leaves, bones shells, bones (etc) to make fossils with plaster of Paris. (csiro.au/Portals/Education/Programs/Do-it-yourself-science/Earth-and-space-sciences-activities/fossil-activity.aspx).

Rock in a cup

Use sand, gravel and sugar water to make a rock (education.com/science-fair/article/making-a-rock-in-a-cup).

Day trip to Melbourne Museum

Further resources

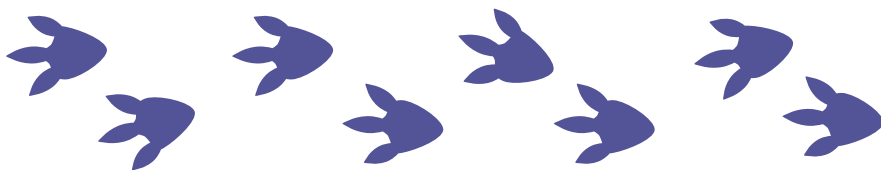
www.latrobe.edu.au/in2science/resources

australiancurriculum.edu.au/Science/Curriculum/F-10

Lesson Idea

Aim

To research the people who have contributed to our modern understanding of dinosaurs.



Lesson Outline

- Rock quiz revision (eg: which rock may contain fossils?) Example quiz: nationalstemcentre.org.uk/elibrary/file/1737/rocks_qns.pdf – adapt as necessary
- Watch 'How Fossils Are Formed?' and/of 'What are Fossils?' on Youtube
- Research early fossil hunters (eg: Robert Plot, Mary Anning, William Buckland, Gideon and Mary Ann Mantell, Richard Owen, Pliny Moody, Edward Cope and Othaniel Marsh) and modern palaeontologists (eg: Patricia Vickers-Rich). *ICT capability*
- Create timeline with significant discoveries up until the present day
Critical and creative thinking
- Make a fossil using plaster of Paris, sand and shells, bones etc
- Discuss how scientists sometimes got it wrong (eg: iguanodon, elamosaurus, brontosaurus). Goof gallery: strangescience.net/goof.htm

Curriculum Links

Earth and Space Science Year 8

Sedimentary, igneous and metamorphic rocks contain minerals and are formed by processes that occur within Earth over a variety of timescales. (ACSSU153)

Mentor Support

How your In2science mentor can assist.

Whole class

- Poll students: Who do you support in the bone wars? Was Mary Anning treated fairly?

Small Groups

- Question how scientists change their theories over time
- What can we learn from studying fossils?

One-on-one

- Question for deep understanding (eg: how do scientists know what colour skin dinosaurs had? Or what they ate?)