AUSTRALIAN EARTH SCIENCE EDUCATION

Eggsamples of Different Rock Types
Teacher Demonstration

This activity allows students to see that the difference between the rock types is not due to the chemistry of the rock (same egg every time) but to the processes it has undergone.

Equipment:

- 4 fresh eggs
- 1 large Petri dish
- Electric frypan (or similar) + egg flip + fork + beaker
- Oil or butter
- Beaker filled with water + vinegar (optional)
- For larger classes, you may like to use a camera set up on the demonstration streaming onto the projector/Smartboard/TV at the front of the class

Sedimentary Rocks

Sedimentary rocks demonstrate most of the characteristics they had when they were first deposited, although they may be compacted and cemented.
The broken fresh egg is used to represent the sedimentary rock, for comparison.
Typical sedimentary rocks include limestone, sandstone, shale and conglomerate.

Contact Metamorphic Rocks

Contact metamorphic rocks (those altered by heat) often retain sedimentary features, though their minerals are locally recrystallised**.**
Fry one of the eggs (leaving it sunny side up) to represent contact metamorphism.
The fried egg has the same structures as the fresh egg, but with marked changes where it was against the hot frypan.
Similar local changes are seen when sediment is “cooked” by a lava flow.
Typical contact metamorphic rocks include marble and quartzite.

Regional Metamorphic Rocks

Regional metamorphism occurs when rock is buried deep in the Earth and subjected to great temperatures and pressures.
Poach an egg in boiling water to represent regional metamorphism.
The poached egg changes in colour and texture. Protein chains demonstrate chemical and physical changes.
Typical regional metamorphic rocks include slate, schist and gneiss.

Igneous Rocks

Igneous rocks form from the crystallisation of molten rock (magma or lava).
Fry one of the eggs, using the egg flip to scramble it (representing melting and mixing of all materials).
Typical igneous rocks include granite, basalt and diorite.