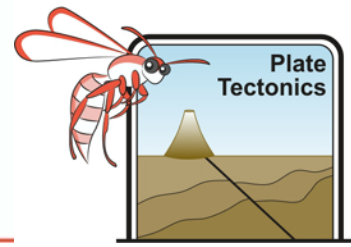
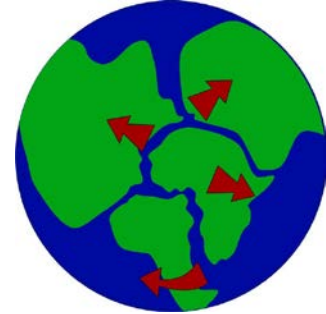


Supercontinents – Student Worksheet



Use a range of resources to answer the following questions.

What is a supercontinent?



An example of a past supercontinent would be.

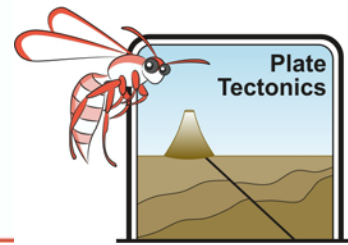
To which supercontinent did Australia most recently belong?

Which other continents formed this supercontinent?

Why does the formation of supercontinents often coincide with the formation of desert sandstones?

From the time when Australia was still part of Gondwana there is evidence of glaciation in a band of features such as U-shaped valleys, glacial drop stones, and moraines that runs through South America, Central Africa, North India and South Australia. None of these countries are currently near the South Pole. Explain why this is so.

Supercontinents – Student Worksheet



Glaciers move downhill away from the Poles. Stones held in the ice at the base and sides of the glaciers scrape deep scratches into the underlying rock. The scratches are aligned with glacier movement. These are known as glacial striations. How can we use these striations to find where the South Pole was located in Gondwana?



Visit Geoscience Australia's site at www.ga.gov.au/earthquakes/initRecentQuakes.do and use the real time data to learn about recent earthquakes in this part of the world. Most earthquakes occur at plate margins. Australia lies in the middle of a tectonic plate. How do we get frequent earthquakes here in Western Australia?

Cratons

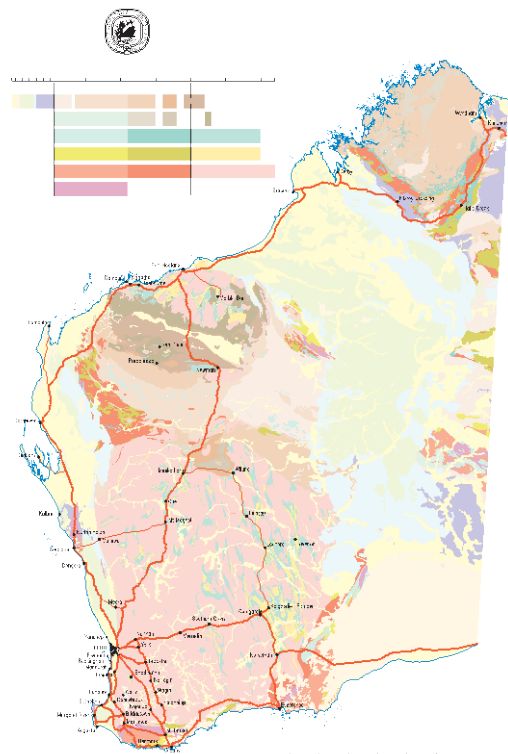
What is a craton?

Where would you find cratons in WA?
Please locate them on the map.

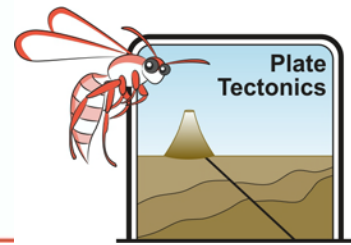
Kimberley Craton

Pilbara Craton

Yilgarn Craton



Supercontinents – Student Worksheet



The Yilgarn Craton is the largest remnant of Archean crust in Australia. It appears to have assembled between 3.2 and 2.8 billion years ago.

Cratons are interesting because they provide geological information from very early Earth, when tectonic processes may have been different. Heat remaining from the formation of the planet may have made convection currents within the Earth more fluid. This could explain how large deposits of very dense materials such as gold and nickel come to be found at the surface in rock of this age, but not in younger ones.

Cratons form the “anchors” round which tectonics plates accrete (stick onto).