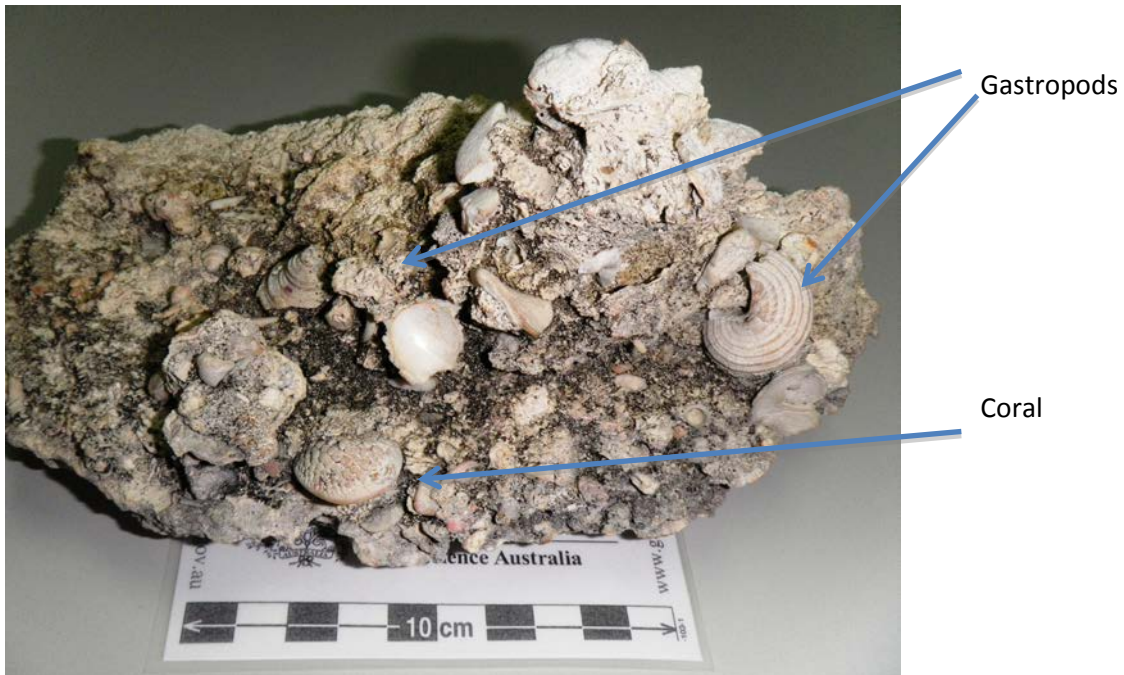


Fossil Evidence of Change – Student Activity

Hutton, the father of modern geology, said, “**The present is the key to the past**”. Clues about past times can be found by looking at evidence from the present day.

Fossils are the petrified (turned into rock) remains of living things. Very few remains of living things survive to be fossilised. Most are eaten by predators or broken apart by decomposers.

Fossils can tell us about changes in landscape over geological time.



Seventy thousand year old fossiliferous limestone found 5m above present sea level near Hamelin Bay in Southwest WA

What change in landscape must have taken place to explain why fossilised beach shells lie above present day sea level?

Because the fossilised (mineralised) shells are mostly whole or only broken into large pieces we can interpret that 70,000 years ago, it was a storm beach where waves only reached occasionally.

Similar, but much earlier fossil beaches are found near the top of Mt Everest at 8,400m. Everest is the tallest mountain in the world.

What changes in landscape must have taken place for this to occur? _____

Fossil Evidence of Change – Student Activity



The fossil on the left was found in a road cutting high in the hills of Cape Range National Park east of Ningaloo Reef. The fossil has been estimated as about 23 million years old. The coral skeleton on the right was found washed up on a beach just outside Ningaloo Reef recently.

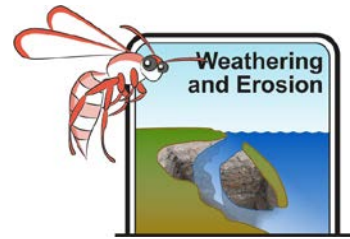
Is the modern coral skeleton similar to that of ancient fossil? _____

What can we interpret from this evidence? _____



These three teeth are from sharks. The one on the right is from a modern shark whilst the other two are probably from about 40 million years ago. The one on the left is from northern Australia, the one in the centre is from Texas in the USA and the one on the right is from New Zealand.

What can we interpret from this evidence? _____



Fossil Evidence of Change – Student Activity

EXTRA FOR EXPERTS!



Some depositional features can also be “fossilised”. The wind or water laying down the silt and sand will make patterns in the sediment, which then becomes rock.

What do the sedimentary features in this 1.6 billion year old sandstone from the mountain ranges near Tom Price remind you of?

What would the landscape have been then? _____



This bed of rock lies immediately above the specimen above and so must be younger. What do you think this pattern was created by?

So, what changes happened in this very ancient landscape over the time it took these two rocks to be deposited?
