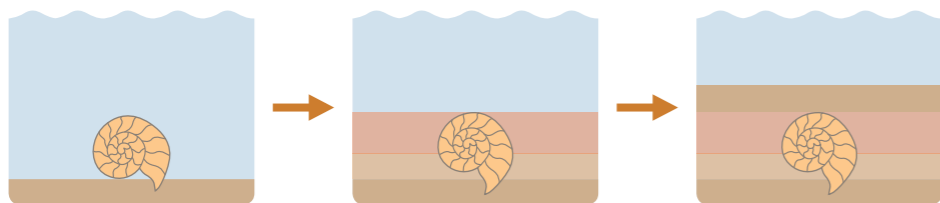


HOW DID AMMONITE FOSSILS FORM?

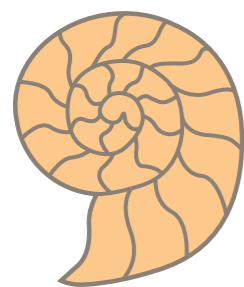
HOW AMMONITE FOSSILS FORM

Dead ammonites were buried by sediment millions of years ago. Chemical processes then eventually produced a fossil.



AMMONITE SHELLS

Ammonite shells are made of the calcium carbonate mineral aragonite. Over long time periods the aragonite can change into a more stable mineral form of calcium carbonate, called calcite.



Calcium carbonate



Aragonite

Calcite



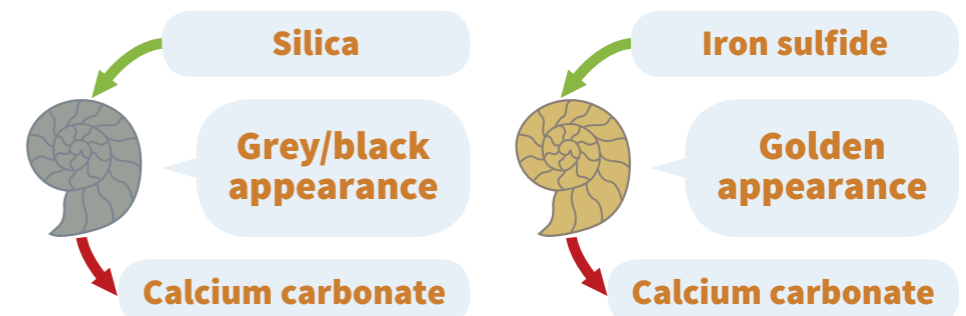
FOSSILISATION AND MINERALS

Over time the chambers of the buried ammonite shell can fill with mineral deposits. This produces detailed fossils and some shell can remain intact. In other cases the shell dissolves and mineral deposits fill the cavity to produce a cast.

SILICIFICATION



PYRITIZATION



In silicification, silica-rich solutions replace calcium carbonate with silica. Pyritisation occurs in sediment saturated with iron sulfides. Pyritised fossils can oxidise and slowly disintegrate in humid conditions.

