

SAFFRON WALDEN MUSEUM

The little museum with the whole world inside

Museum Spotlight: Our geological collection. Here, we house our geological finds and displays about the local and wider area.

Rocks and Minerals:

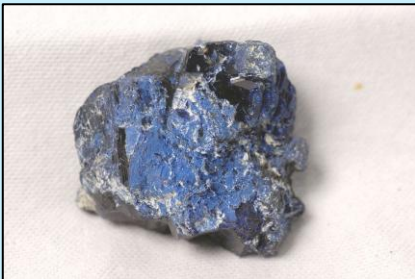
Rocks and minerals are often confused. A mineral is defined as 'a naturally occurring substance with distinctive chemical and physical properties, composition and atomic structure' by the British Geological Survey, whereas a rock is any solid aggregate of these minerals. Minerals often form valuable crystals and gemstones.



This is a cast of the Ashdon Meteorite, which fell on March 9th, 1923. The smooth, rounded surface is due to partial melting of the front-facing side as it fell through the Earth's atmosphere. This meteorite likely originated within our own Solar System, having similar composition to the Earth's mantle, and was probably flung out of the Asteroid Belt by the passing of a larger object.



Fluorite is a mineral formed from the salt of a metal and fluorine gas. Whilst naturally colourless, impurities are common, and these can fluoresce under UV light (this is where the word 'fluorescence' comes from) as displayed in our Earth Beneath Our Feet gallery.



Azurite gains its remarkable blue colour from the copper oxide it's composed of. Due to chemical instability, it slowly transitions into malachite when in the open air, although ordinary storage conditions are enough to stop this process. It was used in the development of the very first glass in Mesopotamia.

Fossils:

Fossilisation is the process of preservation of biological remains, often by turning them to rock. Our fossils have been collected from local areas and far abroad.



This ammonite fossil was formed through the process of replacement; the soft parts of the organism decomposed after it was buried, leaving hollow cavities in the rock.

Groundwater percolating through these cavities then deposited quartz, replacing the original tissue.



This is the fossil of a young Ichthyosaur, a group of reptiles which dominated the oceans of the Late Triassic and Early Jurassic until they were outcompeted by Plesiosaurs and failed to adapt to rising acidity levels in the ocean.

The Ichthyosauria family do not constitute dinosaurs, as they were purely aquatic creatures.



This is the thigh bone of a New Zealand Moa, a now-extinct family of birds which reached around 3.6 metres tall. The Moa were the only wingless birds to have ever existed and were driven to extinction by hunting by around 100 years after humans first arrived on the islands.



This is a fossilised woolly mammoth tusk found in Saffron Walden in 1882. Mammoths used to roam all across Europe, North America and northern Asia; the last ones died out on Wrangel Island 4,000 years ago – 6 millennia after the rest of their kin.

There are many ways in which a plant or animal can be preserved: the remains of plants or animals, or their shape or footprints, can be replaced or filled in by rock; amber is fossilised tree resin that can be found with plants and animals trapped inside.

Extremely dry or cold conditions can create naturally mummified or frozen remains with amazing detail and even DNA, but they are not technically fossils.