



Murchison Meteorite Fragment

Age approx. 4.6 billion years

Total mass collected >100 kg

Observed Fall in Australia 1969

The individual grains that make up this meteorite existed before the rock itself formed. Some of them are the oldest material the formed in our solar system history and are used to define the time of its birth 4.568 billion years ago. There are even some small grains that are older still, they formed around stars that died before our solar system formed.

The rock itself probably formed as this material was sandwiched together over several tens of millions of years after the solar system formed. Murchison is an unmelted meteorite rich in organic molecules.

It is called a carbonaceous chondrite; you can see the tiny round chondrules

Meteorites like this one could have seeded the early Earth with the chemical building blocks needed for life. The Sky at Night DVD in the kit shows the Murchison sample in the Natural History Museum.