

Object of the Month

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Celine, a work experience student from King Edward School for Girls in Edgbaston, describes her choice of Lapworth Museum Object of the Month [Video transcript here \(/accessibility/transcripts/les/lapworth-object-carbonaceous-chondrite-quartz.aspx\)](#)

Carbonaceous chondrite

Pueblite Allende, Chihuahua, Mexico

This fragment was part of the Allende meteorite, which is the largest carbonaceous chondrite ever found on Earth. The fireball was witnessed at 1:05 on February 8th 1969, falling over the Mexican state of Chihuahua at the speed of 10 miles per second.

Chondrites were formed by the accumulation of dust particles and grit present in the primitive Solar system which gave rise to asteroids over 4,550 million years ago. Carbonaceous chondrites make up less than 5% of the chondrites to fall on Earth.

Visible on the fragment is a black glassy fusion crust; when it fell at great speeds the exterior of the meteorite became very hot, melting it and forming the crust. When cut in half and polished you can see the interior structure: many dark-coloured clasts, white inclusions rich in calcium-magnesium silicate and oxide minerals, and mm-sized lighter coloured chondrules. Unlike many other chondrites, Allende is almost completely lacking in Fe-Ni metal.

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