

2. Meteorite

Why in News?

- Scientists from Physical Research Laboratory (PRL), Ahmedabad, are recently claiming that the meteorite that crashed in two villages in Banaskantha, Gujarat on August 17, 2022, has been identified as an aubrite.

Highlights

- Aubrite meteorite is a coarse-grained igneous rock that formed in oxygen-poor conditions and contains exotic minerals not found on Earth.
- For example, the mineral heideite was first described in the Basti meteorite.
- India has seen hundreds of meteorite crashes, but this is only the second recorded crash of an aubrite. The meteorite has been named the Diyodar meteorite after the taluka in which the villages are located.
- The last crash of an aubrite before this was in Basti, Uttar Pradesh on December 2, 1852.
- Around 90% of the meteorite was composed of orthopyroxene. Pyroxenes are silicates consisting of single chains of silica tetrahedra (SiO_4); orthopyroxenes are pyroxenes with a certain structure.
- Pyroxenes such as diopside and jadeite have been used as gems. Spodumene was historically used as lithium ore. Rocks with pyroxene have also been used to make crushed stone that is used in construction.
- Aubrites have crashed in at least 12 locations worldwide since 1836, including 3 in Africa and 6 in the U.S.
- A meteorite is a solid piece of debris from space that survives its passage through the Earth's atmosphere and lands on the Earth's surface.
- The difference between a meteor, meteorite and meteoroid is nothing but where the object is.
- Meteoroids are objects in space that range in size from dust grains to small asteroids.
- But when meteoroids enter the Earth's atmosphere, they are called meteors.
- But if a meteoroid enters the Earth's atmosphere and hits the ground, it is called a meteorite.