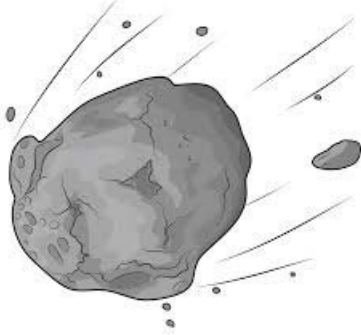


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How Do Meteors Differ From Meteoroids, Meteorites, And An Asteroid?

The night sky often surprises us with celestial phenomena like meteors, meteoroids, meteorites, and asteroids. These terms might sound similar, but they each refer to distinct objects with their own unique characteristics and roles in our cosmic neighborhood.

Meteors: Shooting Stars in the Night Sky

A meteor, commonly known as a "shooting star," is a bright streak of light that appears when a meteoroid enters Earth's atmosphere. This dazzling display is caused by the intense heat and friction generated as the meteoroid rapidly descends through the air. Most meteors are relatively small and disintegrate completely during their fiery journey.

Meteoroids: Cosmic Travelers

Meteoroids are the precursors to meteors. They are smaller rocky or metallic fragments that exist in space. Meteoroids can range in size from tiny grains of sand to larger rocks. When a meteoroid enters Earth's atmosphere and creates a streak of light, it becomes a meteor.

Meteorites: Space Rocks on Earth

Unlike meteors and meteoroids, meteorites are remnants of meteoroids that survive their passage through Earth's atmosphere and reach the planet's surface. These space rocks can vary in size from small pebbles to massive boulders. Scientists study meteorites to gain insights into the early solar system and its building blocks.

Asteroids: Celestial Bodies Orbiting the Sun

Asteroids are much larger objects than meteoroids, often ranging from a few meters to hundreds of kilometers in diameter. Unlike meteoroids, which can be composed of various materials, asteroids are primarily composed of rock and metal. They orbit the Sun and are considered minor planets. Some asteroids may cross Earth's orbit, but they are distinct from meteoroids.

Key Differences

The main differences among these celestial terms lie in their size, location, and stage of their journey. Meteors are streaks of light caused by meteoroids entering Earth's atmosphere. Meteoroids are smaller fragments in space that can become meteors. Meteorites are meteoroids that reach Earth's surface, while asteroids are larger celestial bodies that orbit the Sun.

Meteor Showers: A Collective Meteor Display

Meteor showers occur when Earth's orbit intersects with the debris left behind by comets. During these events, multiple meteors can be seen in a single night, creating a spectacular display. Meteor showers are composed of individual meteors, collectively forming a celestial show.