



Facts and Information about Asteroids

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ABOUT THE STUDY

Asteroids are rocky objects revolving around the sun that are too tiny to be called planets. They're also known as planetoids or minor planets. There are several asteroids, ranging in size from many miles to many feet across. In total, the mass of all the asteroids is less than that of Earth's moon. Despite their size, asteroids will be dangerous. Several have hit Earth in the past and a lot of can crash into our planet in the future. That is one reason scientists study asteroids and are eager to learn additional about their numbers, orbits, and physical characteristics.

Asteroids lie primarily among 3 regions of the solar system. Most asteroids lie in a huge ring between the orbits of Mars and Jupiter. This main belt holds over two hundred asteroids larger than sixty miles (100 km) in diameter. Scientists estimate the belt additionally contains between 1.1 million and 1.9 million asteroids larger than 1 km (3,281 feet) in diameter and several smaller ones, according to NASA. Not everything within the main belt is an asteroid-Ceres, once thought of solely as an asteroid, is now also considered a dwarf planet. In the past decade, scientists have also identified a category of objects referred to as "main-belt comets," tiny rocky objects with tails. Whereas some of the tails form when objects crash into an asteroid, or by disintegrating asteroids, others maybe comets in disguise. Many asteroids lie outside the main belt. For example, Trojan asteroids orbit the Sun along the constant path as a larger planet in two special places about sixty degrees ahead of and behind the planet. At these locations, referred to as Lagrange points, the gravitational pull of the sun and also the planet is balanced. Jupiter has the most Trojans with over 10,000 such objects, according to the International Astronomical Union's database.

Scientists also suspect that a lot of the solar system's moons were once asteroids till they were captured by a planet's gravity and

have become satellites. Near-Earth asteroids (NEAs) circle the sun at about the same distance as Earth does. These objects are split into sub-categories based on how the asteroid's orbit compares to Earth's, according to NASA. Astronomers also classify certain Near-Earth Asteroids as "Potentially Hazardous Asteroids" or PHAs. These rocks come back within about 4.65 million miles (7.48 million kilometers) of Earth's orbit and about larger than concerning 500 feet (140 meters) across, according to NASA's Center for Near-Earth Object Studies (CNEOS). However, the classification doesn't imply that the asteroid poses a certain threat to Earth. Asteroids are leftovers from the formation of our solar system about 4.6 billion years ago. Early on, the birth of Jupiter prevented any planetary bodies from forming in the gap between Mars and Jupiter, causing the small objects that were there to collide with one another and fragment into the asteroids seen nowadays.

As asteroids revolve around the sun in their elliptical orbits, they also rotate, sometimes tumbling quite unpredictably. Over one hundred fifty asteroids are identified to have a small companion moon, according to NASA, with some having 2 moons. Binary or double asteroids also exist, in which two asteroids of roughly equal size orbit each other, as do triple asteroid systems. The average temperature of the surface of a typical asteroid is minus one hundred degrees Fahrenheit (minus seventy-three degrees Celsius). Asteroids have stayed mostly unchanged for billions of years-as such, research into them might reveal a great deal about the early solar system. Asteroids come in a variety of shapes and sizes. Some are solid bodies, whereas others are smaller piles of rubble bound together by gravity. One, that orbits the sun between Neptune and Uranus, comes with its own set of rings. Another has not one but six tails.

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