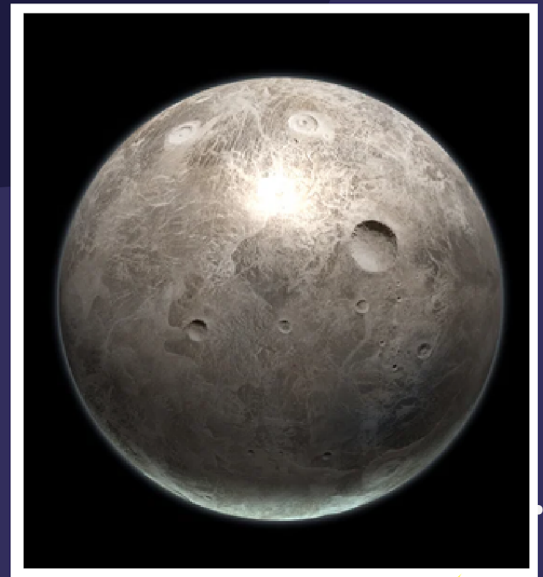


ASTEROIDS, METEORS, AND COMETS

Asteroids, meteors, and comets are fascinating objects in our solar system that have captivated astronomers for centuries. They are remnants of the formation of the solar system and can tell us about the early stages of our cosmic neighborhood.

Meteors

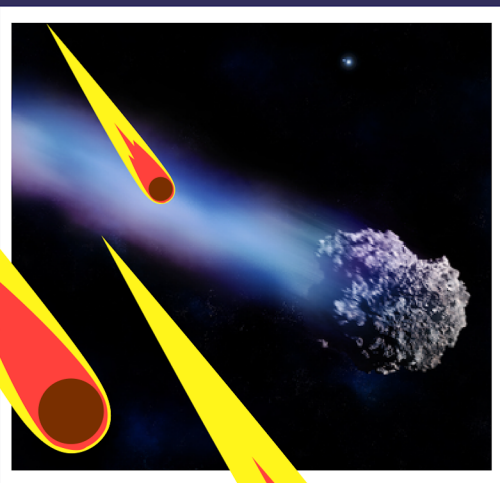
Meteors, also known as shooting stars, are small particles that burn up as they enter Earth's atmosphere. They are usually debris from comets or asteroids and can appear as streaks of light in the sky. When a meteoroid enters Earth's atmosphere and survives to hit the ground, it is called a meteorite.



CERES

Asteroids

Asteroids are rocky objects that orbit the sun and can range in size from small pebbles to large boulders. Most of them are found in the asteroid belt between Mars and Jupiter, but some of them have orbits that cross the path of Earth. The largest asteroid in our solar system is Ceres, which is also classified as a dwarf planet. The composition of asteroids can vary widely, with some containing valuable minerals such as platinum and gold.



Comets

Comets are icy objects that orbit the sun and can range in size from a few meters to tens of kilometers. They are composed of ice, dust, and rock and have long, glowing tails that can stretch for millions of kilometers. Comets originate from the outer edges of the solar system, in a region called the Oort cloud, and can take thousands of years to orbit the sun. Comets are often named after their discoverers, and the first comet to be discovered using a telescope was Comet C/1769 P1, also known as Messier 1.



Comet Halley is the most famous comet and can be seen from Earth every 76 years.

The impact of an asteroid or comet is thought to have caused the extinction of the dinosaurs 65 million years ago.

RECORDS!

1. The largest meteorite ever found on Earth weighs over 60 tons and was discovered in Namibia.
2. The first asteroid, Ceres, was discovered in 1801 by an Italian astronomer named Giuseppe Piazzi.
3. The first spacecraft to land on an asteroid was the Japanese spacecraft Hayabusa in 2005.

Comet Shoemaker-Levy 9 collided with Jupiter in 1994, producing a series of massive explosions that were visible from Earth.

The Tunguska event, which occurred in 1908 in Russia, is believed to have been caused by the explosion of a small comet or asteroid in the atmosphere.



The Chelyabinsk meteor, which exploded over Russia in 2013, was the largest meteor to hit Earth in over a century.

COMPREHENSION QUESTIONS

SET 1 (EASY)



- What is the difference between a meteor and a meteorite?
- Where are most asteroids found in our solar system?
- What is the name of the largest asteroid in our solar system?

SET 2 (MEDIUM)



- What is the Oort cloud?
- What is the name of the most famous comet?
- What caused the extinction of the dinosaurs 65 million years ago?

SET 3 (HARD)



- What are some of the potential uses of asteroids in the future?
- What is the difference between a comet and an asteroid?
- What are some of the challenges of studying comets and asteroids in our solar system?

