

Name _____

Exploring the Mysteries of the Oort Cloud and Comets

Short Answer Key

1. The Oort Cloud is named after the Dutch astronomer Jan Oort, who first proposed its existence in the 1950s.
2. Comets are composed of ice, dust, and rocky material. When they approach the Sun, the heat causes their icy nucleus to evaporate, releasing gas and dust into space, which forms a glowing coma and a tail.
3. The Oort Cloud has two regions: the outer Oort Cloud, which is farther away and contains comets less affected by the gravitational pull of nearby stars, and the inner Oort Cloud, which is closer to the Sun and has comets more influenced by the gravitational forces of the planets in our solar system.
4. Studying comets is important because they provide valuable information about the conditions and materials present when our solar system formed over 4.6 billion years ago. They act as time capsules preserving the history of our solar system's early days.
5. A comet's journey from the Oort Cloud to the inner solar system begins when it is disturbed by gravitational forces, such as a passing star or a nearby supernova explosion. It starts moving toward the inner solar system, and as it approaches the Sun, the heat causes its icy nucleus to evaporate, developing a glowing coma and a tail.

