

Name _____

Comets and Asteroids: Cosmic Wanderers of the Night Sky

Open-Ended Response Answer Key

1. Comets are sometimes referred to as "dirty snowballs" because they consist of a core made of dust, rock, and ices, similar to a snowball, but with a lot of dust and ices mixed in.
2. The asteroid belt is significant in our solar system because it contains numerous rocky objects that are remnants from the early formation of the solar system. It serves as a region of interest for scientists studying the history of our solar system's development.
3. Possible answers could include discussions of potential risks from asteroid impacts on Earth, such as the extinction of dinosaurs, as well as potential benefits from mining asteroids for valuable resources.
4. Visiting a comet might pose challenges related to the presence of a glowing coma and tail, volatile ices, and varying gravitational forces compared to visiting an asteroid.
5. Scientists study comets and asteroids using telescopes, space probes, and missions. By studying these objects, they can learn about the early solar system's conditions, composition, and history, which helps us understand our place in the universe and potential threats from space objects.

