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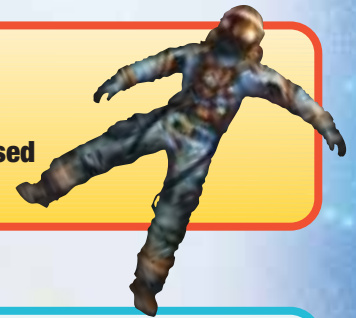
General Comet Misconceptions

Misconception: Comets are not part of the Solar System.

1 Reality: Comets are part of the Solar System. They are believed to originate from one of two locations within the Solar System: the Kuiper Belt or the Oort Cloud.

Misconception: Comets are similar to asteroids.

2 Reality: Comets and asteroids have a very different make-up. Asteroids are composed of rocky and metallic material, while comets are composed of water, ice, dust, and carbon- and silicon-based compounds.



Misconception: All comets look the same and don't change their appearance.

3 Reality: Comets have a coma and one, two, or three tails when near the Sun, and no coma or tail when far away from the Sun. (A *coma* is a cloud of gaseous material surrounding the nucleus.)

Misconception: Pluto is the most distant and last object in the Solar System.

4 Reality: Beyond Pluto's orbit is a group of icy objects known as the Kuiper Belt, from which short-period comets emerge. Farther still is a sphere of icy bodies, called the Oort Cloud, from which long-period comets emerge. Short-period comets visit the inner Solar System frequently, while the long-period comets visit infrequently.

Misconception: There is empty space between the planets.

5 Reality: There is gas and dust, also known as the interplanetary medium, between the planets. Comets are responsible for depositing some of the gas and dust found in the inner Solar System.