

**The name of this student text is**  
***Why are comets so important to understanding the origin of the Solar System?***

**Comets are primitive, leftover building blocks of the outer Solar System's formation process. They may have clues to the chemical mixture from which the Earth and other planets formed four and a half billion years ago.**

**Comets have spent most of their lives frozen in either the Oort cloud or the Kuiper belt. Astronomers think that the material that formed comets originally lies frozen just below a relatively thin crust.**

**Some comets may have crashed into planets as they were forming. They may have added to the planet's water and rock.**

**Other comets escaped to establish their own orbit around the sun.**

**There is a theory that comet impacts on Earth provided both the water and possibly the carbon-based molecules necessary for life on our planet.**