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The solar system consists of the Sun and all celestial bodies bound to it by gravity, including eight planets—Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune—along with their moons, dwarf planets like Pluto, and countless asteroids, comets, and meteoroids. The Sun, a massive star at the center, provides the light and heat that sustain life on Earth and drives the dynamic processes of the system. The planets orbit the Sun in elliptical paths, with the inner rocky planets closer and the outer gas and ice giants farther away. Surrounding the solar system is the Kuiper Belt and the distant Oort Cloud, regions filled with icy bodies and remnants from its formation about 4.6 billion years ago.