

Inner Planets

In the inner Solar System, we find the “Inner Planets” – Mercury, Venus, Earth, and Mars – which are named because they orbit closest to the Sun. These planets have a number of key differences from the Outer planets. They are smaller and denser and have few to no moons or rings circling them. The outer planets, meanwhile, often have dozens of satellites and rings composed of particles of ice and rock.

The inner planets are composed largely of minerals, such as the silicates, which form their crusts and metals such as iron and nickel, which form their cores. Three of the four inner planets (Venus, Earth and Mars) have atmospheres enough to generate weather. All of them have craters, valleys and volcanoes.

Mercury is the closest to our Sun and the smallest of the planets. This small planet looks much like the Earth’s Moon. Its magnetic field is only about 1 percent of Earth’s, and it’s very thin atmosphere means that it is hot during the day (up to 430°C) and freezing at night (as low as -187 °C) because the atmosphere can neither keep heat in or out. It has no moons of its own and is comprised of iron and nickel. Mercury is one of the densest planets.

Venus is about the same size as Earth, it has a thick toxic atmosphere that traps heat, making it the hottest planet. This atmosphere is made of 96% carbon dioxide, and nitrogen. Dense clouds within Venus’ atmosphere are composed of sulphuric acid and other corrosive compounds, with very little water. Venus is called the “morning star” because, with the exception of Earth’s moon, it’s the brightest object we see in the sky. Venus has no moon of its own.

Earth is the third inner planet. Of the four inner planets, Earth is the largest, and the only one that has liquid water, which is necessary for life. Earth’s atmosphere protects the planet from radiation and helps keep sunlight and warmth in which is also essential for life to survive.

Mars is the fourth planet, and is known as the “Red Planet” due to the rust of iron. Mars has the most interesting terrain having the largest mountain in the Solar System—Olympus Mons. The surface of Mars is old and filled with craters. Mars is less dense than Earth, has a smaller magnetic field, and has a solid core. Mars has two small moons called Phobos and Deimos.