

EARTH

Earth, the third planet in our Solar System, is about 150 million kilometers (93 million miles) from the Sun. Earth is the only planet in our Solar System with breathable air that allows plants and animals to survive. The temperature on Earth is not too hot or too cold—it is just right for life.

How Big Is Earth?

Earth's diameter is 12,756 kilometers (7,926 mi.), which makes it the fifth-largest planet in our Solar System.

How Long Are a Day and Year on Earth?

It takes Earth about 365 days to orbit the Sun. That's why Earth's year has 365 days. It takes Earth 23 hours and 56 minutes to spin around once. That's why we say a day is 24 hours long.

What Is Earth Made Of?

Earth is made up of several layers. The three main layers are the core, the mantle, and the crust. The core is deep inside Earth, about 3,000 kilometers (1,864 mi.) below Earth's surface. It's a dense ball of iron and nickel divided into two layers, the inner core and the outer core. The inner core is solid. The outer core is so hot that temperatures there reach 6,000°C (10,382°F). The layer above the core is the mantle. It makes up nearly 85 percent of the Earth's total mass. The crust, which lies above the mantle, is Earth's hard outer shell. Compared to the other layers, the crust is much thinner. It makes up only one percent of the Earth's mass. About 70 percent of Earth's surface is covered with water.

How Many Moons Does Earth Have?

Earth only has one moon. Earth's Moon is the only other place in the Solar System that humans have set foot on. The Moon is about four times smaller than Earth. It also has less gravity than Earth, so if you were walking on the Moon, you would not weigh much. The Moon doesn't produce its own light; it looks bright because it reflects light from the Sun.

Earth's Atmosphere

The atmosphere surrounding Earth is different from any other in the Solar System. It is made up of about 78 percent nitrogen, 20 percent oxygen, and 1 percent other gases. The atmosphere protects life on Earth in two ways. First, it traps just enough energy from the Sun to keep temperatures from becoming too hot or too cold. Second, the atmosphere is thick enough that most of the meteors and other space objects passing through it burn up before they reach Earth's surface. Earth's atmosphere, which took billions of years to form, is delicately balanced.

Do You Know?

- Earth is the only planet in our Solar System that is not named after a mythical god.
- It actually takes Earth 365 days and 6 hours to orbit the Sun. That's why every four years, we have an extra day on February 29th. Those years are called *leap years*.
- Earth is the only planet in our Solar System that has water as a liquid, a gas, and a solid.
- Earth is not a perfect sphere. It has a bulge around the equator caused by gravity and rotation.

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Earth's Interior

Crust

0–60 kilometers
below the surface
up to 400°C

Mantle

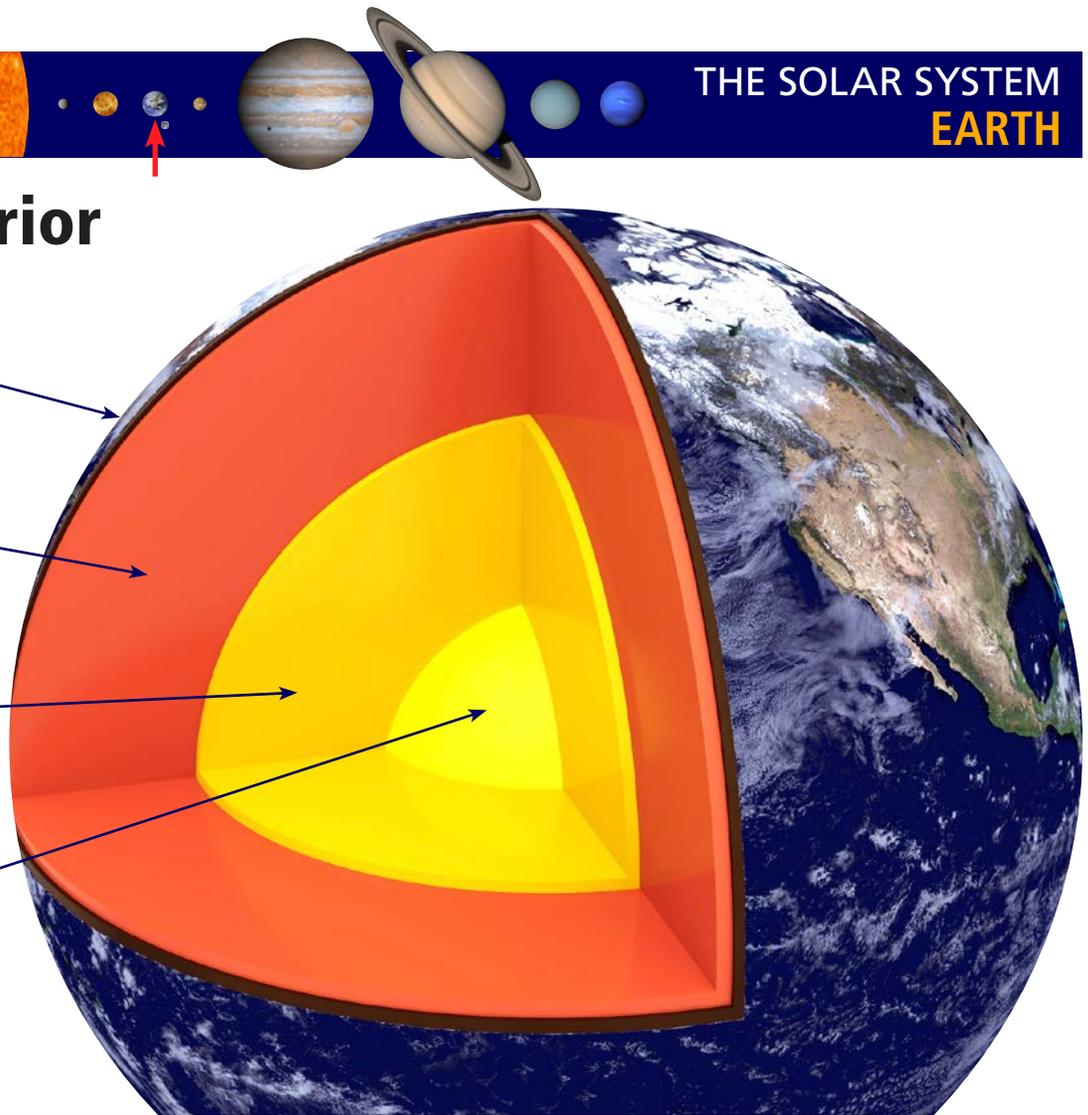
60–2,900 kilometers
below the surface
500–4000°C

Outer Core

2,900–5,150 kilometers
below the surface
4,400–6,100°C

Inner Core

5,150–6,378 kilometers
below the surface
5,430°C



This fireball, seen over California's Mojave Desert in 2009, was caused by a meteor that was once part of a comet.

How a Meteor Breaks Up in Earth's Atmosphere

- 1 A fast-moving meteor enters the atmosphere.
- 2 It rubs against the air, causing it to heat up and glow.
- 3 The meteor leaves behind a trail of melting rock and hot gases.
- 4 Most meteors break apart and burn up in the air before reaching the ground.

