The **Moon** is Earth's only natural satellite. It orbits around Earth at an average distance of 384399 km (238854 mi; about 30 times Earth's diameter). Its orbital period (lunar month) and its rotation period (lunar day) are synchronized at 29.5 days by Earth's gravity pulling on the Moon. This makes the Moon tidally locked to Earth, always facing it with the same side. Conversely, the Moon's gravitational pull produces tidal forces on Earth, which are the main driver of Earth's tides.

In geophysical terms, the Moon is a planetary-mass object or satellite planet. Its mass is 1.2% that of the Earth, and its diameter is 3,474 km (2,159 mi), roughly one-quarter of Earth's (about as wide as the contiguous United States). Within the Solar System, it is the largest and most massive satellite in relation to its parent planet, the fifth-largest and fifth-most massive moon overall, and larger and more massive than all known dwarf planets.[17] Its surface gravity is about one-sixth of Earth's, about half that of Mars, and the second-highest among all moons in the Solar System, after Jupiter's moon Io. The body of the Moon is differentiated and terrestrial, with no significant hydrosphere, atmosphere, or magnetic field. The lunar surface is covered in lunar dust and marked by mountains, impact craters, their ejecta, ray-like streaks, rilles and, mostly on the near side of the Moon, by dark maria ('seas'), which are plains of cooled lava. These maria were formed when molten lava flowed into ancient impact basins. The Moon formed 4.51 billion years ago, not long after Earth's formation, out of the debris from a giant impact between Earth and a hypothesized Mars-sized body called Theia.

From a distance the day and night phases of the lunar day are visible as the lunar phases and when the Moon passes through Earth's shadow a lunar eclipse is observable. The Moon's apparent size in Earth's sky is about the same as that of the Sun, allowing it to cover the Sun completely during a total solar eclipse. The Moon is the brightest celestial object in Earth's night sky, due to its large apparent size, while the reflectance of its surface is comparable to that of asphalt. Of the surface of the Moon about 59% are visible from Earth due to the different angles at which the Moon can appear in Earth's sky (libration), making parts of the far side of the Moon visible.

The Moon has been an important source of inspiration and knowledge for humans, having been crucial to cosmography, mythology, religion, art, time keeping, natural science, and spaceflight. The first human-made objects to fly to an extraterrestrial body were sent to the Moon, starting in 1959 with the flyby of the Soviet Union's *Luna 1* and the intentional impact of *Luna 2*. In 1966, the first soft landing (by *Luna 9*) and orbital insertion (by *Luna 10*) followed. On July 20, 1969, humans for the first time stepped on an extraterrestrial body, landing on the Moon at Mare Tranquillitatis with the lander *Eagle* of the United States' Apollo 11 mission. Five more crews were sent between then and 1972, each with two men landing on the surface. The longest stay was 75 hours by the Apollo 17 crew. Since then, exploration of the Moon has continued robotically, and crewed missions are being planned to return beginning in the late 2020s.