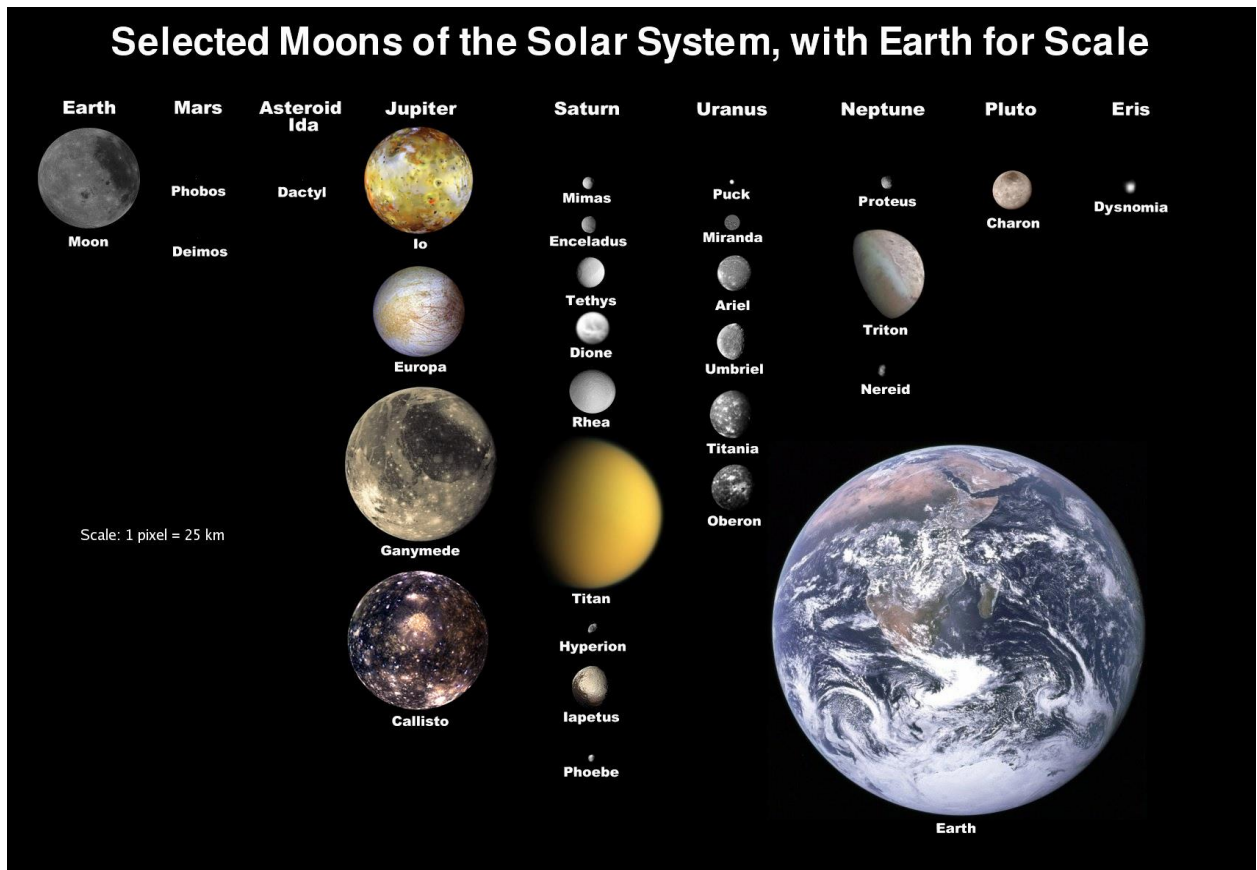


Selected Moons of the Solar System, with Earth for Scale



Inner Planets:

1. Mercury:

- **Number of Moons:** 0
- **Special Characteristics:**
 - Mercury is the smallest and closest planet to the Sun, with a diameter of 4,880 kilometres.
 - It has a thin exosphere but lacks a substantial atmosphere, contributing to extreme temperature variations.
- **Distance from Sun:** Approximately 57.9 million kilometers.
- **Rotational Period:** 59 Earth days.
- **Revolutional Period:** 88 Earth days.
- **Surface:** Mercury's surface is rocky and heavily cratered. It has extensive plains and cliffs, suggesting geological activity in the past.
- **Season and Rain Details:** Due to its lack of a significant atmosphere, Mercury experiences no seasons, and there is no rainfall on its surface.

2. Venus:

- **Number of Moons:** 0
- **Special Characteristics:**
 - Venus has a thick atmosphere composed mainly of carbon dioxide, with clouds of sulphuric acid, creating a runaway greenhouse effect.
 - It rotates on its axis in the opposite direction to most planets (retrograde rotation).
- **Distance from Sun:** Approximately 108.2 million kilometers.
- **Rotational Period:** About 243 Earth days.
- **Revolutional Period:** Around 225 Earth days.
- **Surface:** Venus has a rocky surface with plains, highland regions, and large volcanic structures. The atmosphere obscures direct views of the surface.
- **Season and Rain Details:** Venus experiences no seasons due to its near-zero axial tilt. While it has sulphuric acid clouds, rain on Venus is scarce, and any raindrops evaporate before reaching the surface.

3. Earth:

- **Number of Moons:** 1 (The Moon)
- **Special Characteristics:**
 - Earth is the only known planet to support life, with a diverse biosphere and a variety of ecosystems.
 - It has a strong magnetic field that protects the planet from the solar wind.
- **Distance from Sun:** Approximately 149.6 million kilometers.
- **Rotational Period:** 24 hours.
- **Revolutional Period:** 365.25 days.
- **Surface:** Earth's surface is dynamic, featuring oceans, continents, mountains, and diverse landscapes. It has a varied climate supporting liquid water.

- **Season and Rain Details:** Earth experiences four seasons (spring, summer, fall, winter) due to its axial tilt. Rainfall patterns vary globally, influencing climate zones and ecosystems.

4. Mars:

- **Number of Moons:** 2 (Phobos and Deimos)
- **Special Characteristics:**
 - Mars has the largest volcano in the solar system, Olympus Mons, and a vast canyon system called Valles Marineris.
 - The surface exhibits features resembling both Earth and the Moon, including dry riverbeds and impact craters.
- **Distance from Sun:** Approximately 227.9 million kilometers.
- **Rotational Period:** About 24.6 hours.
- **Revolutional Period:** Around 687 Earth days.
- **Surface:** Mars has a diverse surface with red-hued iron-rich soil. It features polar ice caps, large volcanoes, and canyon systems.
- **Season and Rain Details:** Mars experiences seasons due to its axial tilt. However, precipitation on Mars is minimal, and the thin atmosphere prevents sustained liquid water on the surface.



Outer Planets:

5. Jupiter:

- **Number of Moons:** 95 (including the four largest Galilean moons: Io, Europa, Ganymede, and Callisto)
- **Special Characteristics:**
 - Jupiter is the largest planet in our solar system, with a diameter of about 139,820 kilometers.
 - It has a powerful magnetic field and a dynamic atmosphere with prominent bands, the Great Red Spot (a giant storm), and numerous smaller storms.
- **Distance from Sun:** Approximately 778.5 million kilometers.
- **Rotational Period:** About 9.9 hours.
- **Revolutional Period:** Approximately 11.9 Earth years.
- **Surface:** Jupiter is a gas giant with no solid surface. The outer layers consist of hydrogen and helium, and it has a dense core.

- **Season and Rain Details:** Jupiter's lack of a solid surface means it does not experience traditional seasons or rainfall. Instead, its atmosphere hosts various storm systems.

6. Saturn:

- **Number of Moons:** 146 known moons, with the most notable being Titan.
- **Special Characteristics:**
 - Saturn is renowned for its stunning ring system, composed of ice and rock particles.
 - It has a hexagonal-shaped storm at its north pole.
- **Distance from Sun:** Approximately 1.4 billion kilometers.
- **Rotational Period:** About 10.7 hours.
- **Revolutional Period:** Around 29.5 Earth years.
- **Surface:** Like Jupiter, Saturn is a gas giant without a solid surface. Its atmosphere consists mainly of hydrogen and helium.
- **Season and Rain Details:** Saturn's atmosphere experiences dynamic weather patterns, but due to its lack of a solid surface, there is no traditional rain.

7. Uranus:

- **Number of Moons:** 27 known moons, with Titania and Oberon being the largest.
- **Special Characteristics:**
 - Uranus has a unique rotational axis tilted at almost 98 degrees, causing it to rotate on its side.
 - It has a faint ring system, and its atmosphere contains methane, giving it a blue-green color.
- **Distance from Sun:** Approximately 2.9 billion kilometers.
- **Rotational Period:** About 17.2 Earth hours.
- **Revolutional Period:** Approximately 84 Earth years.

- **Surface:** Uranus is an ice giant with a rocky core. Its atmosphere consists of hydrogen, helium, and methane.
- **Season and Rain Details:** Uranus experiences extreme seasonal variations due to its axial tilt. The methane in its atmosphere can form clouds and possibly rain.

8. Neptune:

- **Number of Moons:** 14 known moons, with Triton being the largest.
- **Special Characteristics:**
 - Neptune has a dynamic atmosphere with fast winds and a dark storm called the Great Dark Spot.
 - Its largest moon, Triton, orbits in a retrograde direction and may have been captured by Neptune's gravity.
- **Distance from Sun:** Approximately 4.5 billion kilometers.
- **Rotational Period:** About 16.1 Earth hours.
- **Revolutional Period:** Around 164.8 Earth years.
- **Surface:** Neptune, like Uranus, is an ice giant with a rocky core. Its atmosphere contains hydrogen, helium, and traces of methane.
- **Season and Rain Details:** Neptune's atmosphere features dynamic weather patterns, including storms and high-speed winds. While not traditional rain, precipitation in the form of icy materials occurs in the atmosphere.