

# Density of planets in our solar system

What is the average density of planets in order?

The average density of planets in order are:- Earth,Mercury,Venus,Mars,Neptune,Jupiter,Uranus, and Saturn. For reference ( $1 \text{ gm/cm}^3 = 1000 \text{ kg/m}^3$ ). The density of water is almost  $1 \text{ gm/cm}^3$  or  $997 \text{ kg/m}^3$ . Mercury is the second densest planet of our solar system after the Earth ( $5.514 \text{ gm/cm}^3$ ).

What is the density of Earth compared to giant planets?

Though its density increases with depth. The Crust density is almost  $2.5-3.0 \text{ gm/cm}^3$ , for Mantle  $3.0-3.5 \text{ gm/cm}^3$ , and the inner core density is approximate  $13 \text{ gm/cm}^3$ . So the mean density of the earth is  $5.514 \text{ gm/cm}^3$ . Mars is the least dense terrestrial planet. Though it has more density in comparison to giant planets.

What is the density of Jupiter vs Saturn?

Planet Jupiter is the 2nd densest giant-planet after Neptune. It is the largest planet but made of gases, so the density of this planet is lower. Saturn is the least dense planet in our solar system. The density of Saturn is just  $0.687 \text{ gm/cm}^3$ , which is less than the density of water ( $1 \text{ gm/cm}^3$ ).

What is the density of the Earth?

So the mean density of the earth is  $5.514 \text{ gm/cm}^3$ . Mars is the least dense terrestrial planet. Though it has more density in comparison to giant planets. Its atmosphere density is also lower, and the highest atmospheric density on Mars is almost the same as that found 32 km above the earth's surface.

How do you calculate the density of a planet?

Density computed using the total volume and mass of the planet. Time required for a full rotation of the planet relate to fixed stars. Time required for the planet to make one complete orbit around the sun relative to fixed stars. The visual magnitude of the planet as seen at a distance of 1 au from both the Sun and observer.

What is the average density of the Sun compared to Earth?

Compare to the earth's average density ( $5.514 \text{ gm/cm}^3$ ) it just 0.255 times. But the center density of the sun is  $162.2 \text{ gm/cm}^3$ , which is almost 12.4 times of earth's center density ( $13.1 \text{ gm/cm}^3$ ). This is the average density of the moon and it is almost 60.5% of the earth's average density.

Jupiter's average density is  $1.3 \text{ g/cm}^3$ , much lower than that of any of the terrestrial planets. (Recall that water has a density of  $1 \text{ g/cm}^3$ .) Jupiter's material is spread out over a volume so large that about 1,300 Earths could fit within it. ... a type of planet not found in our solar system. Appearance and Rotation. When we look at the ...

Saturn is the planet with the lowest density ( $0.7 \text{ g/cm}^3$ ), a density so low that it would float if placed in water! Uranus and Neptune are similar in size with a radius of 4.0 and 3.9 times the radius of Earth respectively. ... Did you know that in addition to the Sun and planets, our solar system is filled with millions

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of asteroids, which are ...

21.4 Planets beyond the Solar System: Search and Discovery; 21.5 Exoplanets Everywhere: What We Are Learning; 21.6 New Perspectives on Planet Formation; Key Terms; Summary; ... The same can be said of the other worlds in our solar system. There are many fascinating places, large and small, that we might like to visit, but humans could not ...

Saturn is the sixth planet from the Sun and the second largest planet in our solar system. Adorned with a dazzling system of icy rings, Saturn is unique among the planets. Saturn is a massive ball made mostly of hydrogen and helium. The farthest planet from Earth discovered by the unaided human eye, Saturn has been known since ancient times.

In our imaginations, let us build a scale model of the solar system, adopting a scale factor of 1 billion ( $10^9$ )—that is, reducing the actual solar system by dividing every dimension by a factor of  $10^9$ . Earth, then, has a diameter of 1.3 centimeters, about the size of a grape.

Neptune is the windiest planet in our solar system. Despite its great distance and low energy input from the Sun, wind speeds at Neptune surpass 1,200 miles per hour (2,000 kilometers per hour), making them three times stronger than Jupiter's and nine times stronger than Earth's. Even Earth's most powerful winds hit only about 250 miles per ...

Our Earth is the densest planet in the solar system. Though its density increases with depth. The Crust density is almost  $2.5\text{-}3.0 \text{ gm/cm}^3$ , for Mantle  $3.0\text{-}3.5 \text{ gm/cm}^3$ , and the inner core density is approximate  $13 \text{ gm/cm}^3$ . So the mean density of the earth is  $5.514 \text{ gm/cm}^3$ .

Earth is the third planet in our solar system. It is located at an average distance of 92.96 million miles (149.60 million km) from our star. Our beautiful planet is ideally placed inside the goldilock zone, making it the only ...

5 days ago; Solar system - Planets, Moons, Orbits: The eight planets can be divided into two distinct categories on the basis of their densities (mass per unit volume). The four inner, or terrestrial, planets—Mercury, Venus, Earth, and Mars—have rocky compositions and densities greater than 3 grams per cubic cm. (Water has a density of 1 gram per cubic cm.) In contrast, ...

The planets in our solar system fall into two groups: the terrestrial (Earth-like) planets (Mercury, Venus, Earth, and Mars) and the Jovian (Jupiter-like) planets (Jupiter, Saturn, Uranus, and Neptune). ... One of the outer planets, Saturn, has a density of only 0.7 that of water, which means that Saturn would float in water. Variations in the ...

Parts-per-million chart of the relative mass distribution of the Solar System, each cubelet denoting  $2 \times 10^{-24} \text{ kg}$ . This article includes a list of the most massive known objects of the Solar System and partial lists of

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smaller objects by observed mean radius. These lists can be sorted according to an object's radius and mass and, for the most massive objects, volume, density, and surface ...

Each planet in our solar system possesses a distinct density, which is a measure of the concentration of matter within its volume. For example, the gas giant Jupiter has a relatively low average density due to its primarily gaseous composition.

The heliosphere extends beyond the orbit of the planets in our solar system. Thus, Earth exists inside the Sun's atmosphere. Outside the heliosphere is interstellar space. ... That is approximately 8 times the density of gold (19.3 g/cm<sup>3</sup>) or 13 times the density of lead (11.3 g/cm<sup>3</sup>).

Among the terrestrial planets, Earth and Venus have experienced the most geological activity over their histories, although some of the moons in the outer solar system are also surprisingly active. In contrast, our own Moon is a dead world where geological activity ceased billions of years ago.

Planetary Fact Sheet in Metric Units. Planetary Fact Sheet in U.S. Units. Index of Planetary Fact Sheets - More detailed fact sheets for each planet. Notes on the Fact Sheet - Explanations of the values and headings in the fact sheet. Schoolyard Solar System - Demonstration scale model of the solar system for the classroom

Total mass of the planet. Bulk Density: Density computed using the total volume and mass of the planet. Sidereal Rotation Period: ... ("Astrometric and Geodetic Properties of Earth and the Solar System" in Global Earth Physics, A Handbook of Physical Constants, AGU Reference Shelf 1, 1995, American Geophysical Union, Tables 6,7,10.) had a few ...

This table lists the average density of all the planets in our solar system. We could also consider the Sun (average density 1.41 g/cm<sup>3</sup>) and Pluto (average density 1.88 g/cm<sup>3</sup>). The densest body (Earth) and the least dense (Saturn) only differ by a factor of less than 8.

Calculate the average density of our own planet, Earth. Show your work. How does it compare to the density of an ice moon like Mimas? See Table 7.2 for data. Answer: For a sphere, ... Even within our solar system, the planets differ greatly in size and chemical properties. The biggest dispute concerns Pluto, which is much smaller than the other ...

There's No Place Like Home. In the classic film The Wizard of Oz, Dorothy, the heroine, concludes after her many adventures in "alien" environments that "there's no place like home." The same can be said of the other worlds in our solar system. There are many fascinating places, large and small, that we might like to visit, but humans could not survive on any without a great ...

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