If YOU were the sun, how big, and how far away, would the other planets be?

|  |  |  |  |
| --- | --- | --- | --- |
| ***Name*** | **Size** | **Distance in** meters (big grownup steps) | **Notes** |
| *The sun* | You (1.4 meters around) | Right here | Hot, really, really hot! At least 4000 degrees at its surface, and over a million in its enormous atmosphere. Is also the solar systems most powerful magnet. |
| *Mercury* | 0.48 cm – a grain of sand | 58 | Mercury is the smallest planet, but still not too small: it’s as big as Australia! It’s also the fastest planet, only 88 days in a year. With almost no air it is boiling hot in the sun, and freezing at night! |
| *Venus* | 1.21cm – a fat pea | 108 | Venus is the hottest planet, 500oC all day and all night. It is about as big as earth. It rotates so slowly its day is longer than its 288 (earth) day year! |
| *Earth* | 1.28cm – a fatter pea | 150 | Earth is the only planet with life on it, so far as we know… Our moon is as bigger than Pluto, but smaller than mercury. Earth has the third largest magnetic field in the solar system. |
| *Mars* | 0.68cm – a beanbag bean | 228 | Mars is red due to iron in the dust, like outback Australia, but it’s not very warm: 0 degrees centigrade is an average day! It’s also not very big, so gravity is low. It’s only as wide as the Andes mountain range (south America), or a big ball from Brisbane to Hong Kong. |
| *Ceres and the asteroid belt* | .07 – a mote of dust | 420 | Ceres, the largest asteroid of the asteroid belt (about half way between Jupiter and mars) is about the size of Victoria, but it isn’t counted as a planet… do you think it should be? Also, most movies make out asteroid belts to be crowded, deadly place. Actually most are just grains of dust, and they’re so far apart from each other that it’s almost impossible to see one from the next. |
| *Jupiter* | 14.30cm – a small ball | 778 | The first of the four gas planets, Jupiter is the largest planet; bigger than the rest put together! The great red spot, larger than 3 earths side by side, is a violent storm that’s being going for at least 300 years. Jupiter has the second strongest magnetic field in the solar system, after the sun. |
| *Saturn* | 12.05cm –a vinyl record with a ball in the middle | 1,427 | Saturn’s spectacular rings are as wide as five earths, and yet so thin you could walk from the top to bottom, if you could walk in space (they are only a kilometer thick sometimes). All the Gas planets have rings. The largest moon in the solar system is Titan of Saturn – it is bigger than Mercury! |
| *Uranus* | 5.11cm – a handball ball | 2,871 | Spins almost on its side… so one side gets all the sun in ‘summer’, day and night! |
| *Neptune* | 4.95cm – an undersized handball | 4,498 | Fastest wind, 2000 km per hour! |
| *Pluto* | 0.23cm a really small grain of sand | 5,900 | No longer considered a planet, Pluto is now called a dwarf planet. Even so, it’s not that small, it’s about the size of Queensland. Pluto is considered the first of the TNO – trans Neptunian objects. |
| *Eris* | 0.25cm a really small but a bigger than Pluto grain of sand | 14.6 kilometres | Larger than Pluto, Eris caused the debate that demoted Pluto to dwarf planet status. Eris is named after the goddess of arguments. Eris is the largest TNO, which are all made of ice and dust, not gas or rock. There are loads of other TNO’s, maybe more that we can ever count! But some big ones include Haumea, Make Make, and Sedna, but scientists are still finding more!  |
| *Heliopause* | (a big ball 24 kilometres across) | Around 24 kilometres away | Where the solar wind is balanced out by the local galactic climate. |

***If you were the sun (140 cm tall) the planets would be:***  Saturn

Mercury:

Venus:

Earth: Saturn Jupiter

Mars:

Ceres:

Pluto:

Eris: Uranus Neptune