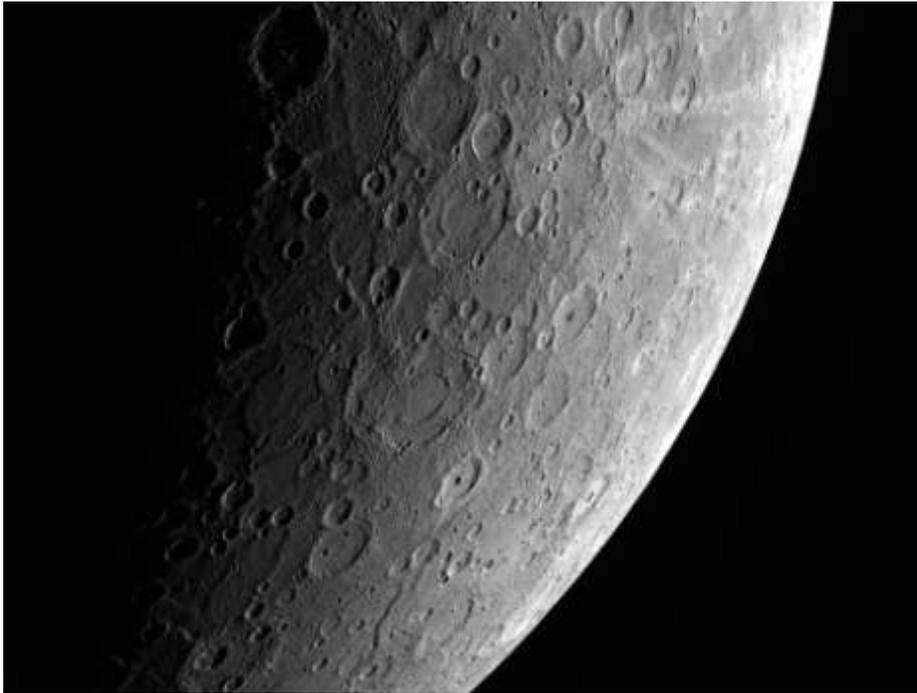


## Meet Mercury – our solar system’s little hot shot.



*Any visual similarity between Mercury and our Moon is purely coincidental. Image by NASA*

Mercury is the first planet out from the Sun. So it should come as no surprise that it’s hot enough to melt lead on the little guy’s surface. The chances of inhabiting it are about as likely as pitching a tent inside a volcano.

The side of Mercury facing away from the Sun is just the opposite. Temperatures are so low Frosty the Snowman and Santa Clause were seen buying tickets for Florida.

### Quick Smarts

**Diameter – 4,897 km**  
**Distance from Sun – 57,910,000 km**  
**Distance from Earth – 77,000,000 km**  
**Length of day – 59 Earth days**  
**Length of year – 88 Earth days**  
**Daytime temperature – 450 °C**  
**Night time temperature – minus 173 °C**  
**Atmosphere – Almost nonexistent**  
**Composition – Hydrogen and oxygen**  
**Wind speed – 0 km/h**  
**Weight – 38% of your Earth weight**

Mercury has a very thin atmosphere composed of hydrogen and helium that hangs close to the planet’s surface. This means there is no wind to circulate temperatures around the planet like they are on Earth. You’re either frozen or broiled. Pick any two.

Mercury is mineral rich but for now the cost of developing the technology for a mining community far outweighs the riches to be gained. But who knows what the distant future will bring?

The similarities between Mercury and our Moon are worth noting. Visually the two are identical twins. Both their surfaces are pock-marked with craters from asteroids that bombarded the solar system 2 billion years ago. Size-wise Mercury is just 1.4 times bigger than our Moon. That makes Mercury the smallest planet in the solar system now that Pluto has been demoted to dwarf planet status.



*Mercury and the Moon are look-a-likes thanks to surface craters. Because Mercury has virtually no atmosphere, there was nothing to slow incoming asteroids during our solar systems formation.*

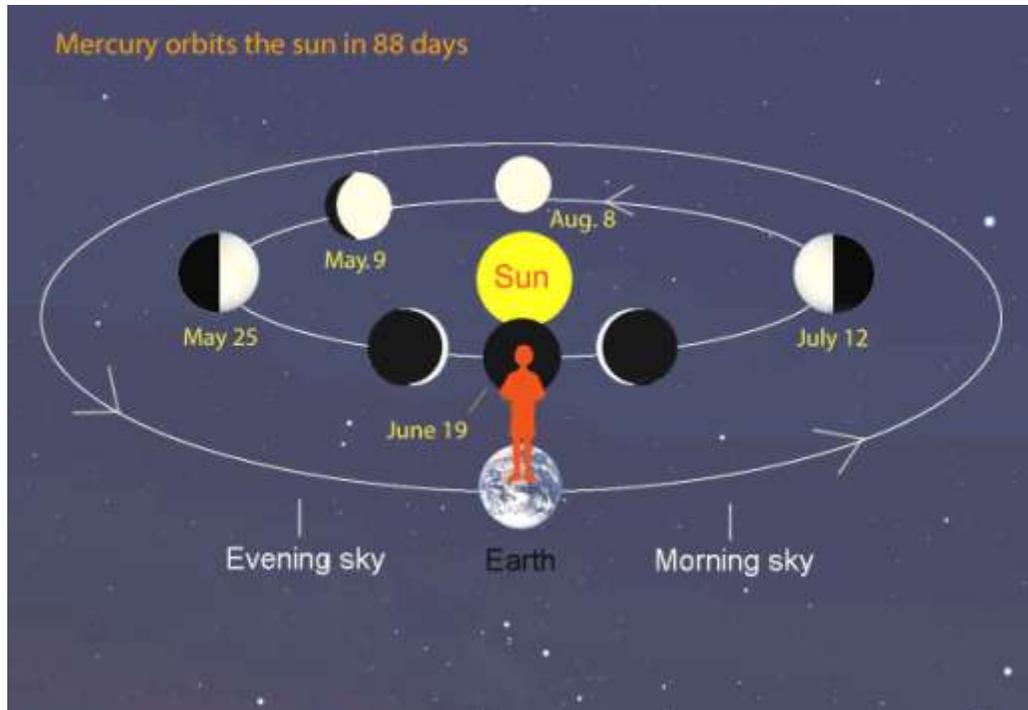
Another situation that the Moon and Mercury share is called tidal locking. Both are so close to another major source of gravitational pull that their rotation rates have slowed considerably.

In the Moon's case Earth's gravitational pull has slowed its rotation to the point that it is now fixed in position – a.k.a. tidally locked. That's why we only see one side of our Moon.

Mercury is experiencing the same phenomena courtesy of the Sun's gravitational pull, but not to the degree our Moon has.

Mercury still rotates. But it takes it nearly as long to rotate once on its axis (59.9 Earth days) as it does to orbit the Sun (88 days). In Earth time that makes a day on Mercury is nearly as long as a year. Make a note: Mercury is a great place for those who enjoy lengthy birthday celebrations.

During the early period of our Solar System's formation, Mercury may have been struck by a newly formed planetesimal. The impact could have stripped away much of Mercury's crust and mantle, leaving only the rocky and iron-rich core behind. A similar process, known as the giant impact hypothesis, is a popular theory used to explain the formation of the Moon.



**We look in towards the Sun to view Mercury and Venus. That's why we only see them in the morning or the evening. That's also why they appear to go through phases like the Moon.**

Observing Mercury takes patience and luck. You'll need a clear horizon because Mercury is a tree-top hugger. When observing it with a telescope you'll notice that it goes through phases – again another similarity with our Moon. But in Mercury's case this is because it is inside of Earth's orbit. Thus we can only view Mercury in the morning or the evening but never in the middle of the night.

Mercury was the Roman messenger of the gods and was known for his great speed. In Greek culture, which preceded the Romans, he was known as Hermes and fulfilled the same function. It is no wonder that he is often portrayed wearing sandals and a helmet with wings on them.