

Name _____

Date _____

Planet Mercury



The date was August 3, 2004. The event was the launch of the MESSENGER space probe. The mission: gather scientific evidence about the planet Mercury. MESSENGER finally reached Mercury in January, 2008 and returned new information about the planet in our solar system closest to the Sun. After other studies of Earth and the planet Venus, MESSENGER will return to Mercury and begin a yearlong study of the planet in March, 2011. MESSENGER is providing the first new close-up data about Mercury since the Mariner 10 probe took pictures and measurements of the planet in 1974 and 1975. Mercury must be an interesting place if NASA is willing to invest billions of dollars in these studies.

Mercury is a small planet; its diameter is about 40% the diameter of Earth. Mercury is just 36 million miles from the Sun while Earth is 93 million miles from the sun. Both Mercury and Earth have elliptical orbits around the Sun. This means that sometimes the planets are closer or further away from the Sun during their orbit about the Sun. Since Mercury is so much closer to the Sun than Earth, it takes Mercury less time to make one revolution around the Sun in its orbit. We call one revolution around the Sun a year on Earth. Based on Mercury's speed and the size of its orbit, a year on Mercury is just 88 Earth days.

That's not the only difference. Earth rotates on its axis once a day, that is, every 24 hours. However, Mercury rotates on its axis very slowly, the slowest planet in the solar system. One rotation on Mercury takes 59 Earth days.

Mercury is a dry planet and extremely hot, over 800 degrees F, because it is so close to the Sun. The sky on Mercury would look black to a human because there are no gases in Mercury's atmosphere to create color. Pictures of Mercury from space probes and land-based telescopes show that the surface looks a lot like the surface of our Moon.

People with telescopes can sometimes see Mercury. Because both planets have elliptical orbits sometimes Earth and Mercury are on different sides of the Sun. The constant motion between the planets and their orbits around the Sun determine when Mercury is visible to people on Earth.

