



Name: _____

Mercury

Mercury, named after the Roman messenger god, is the smallest and closest planet to the Sun in our solar system. Its **proximity** to the Sun makes it an interesting planet to learn about.

One of the most interesting features of Mercury is its extreme temperatures. As the closest planet to the Sun, it experiences scorching heat during the day, reaching up to 800 degrees Fahrenheit (430 degrees Celsius). However, due to its lack of atmosphere to hold in heat, Mercury's nights are bitterly cold, plummeting to around minus 290 degrees Fahrenheit (minus 180 degrees Celsius).

Mercury's surface is covered with vast plains, rugged mountains, and countless craters. These features are a result of the planet's violent past. They were shaped by intense volcanic activity and impacts from asteroids and comets. The largest impact area, known as the Caloris Basin, stretches approximately 960 miles (1,550 kilometers) in diameter.

Mercury's thin atmosphere is composed mainly of oxygen, sodium, hydrogen, helium, and potassium, but it's so **sparse** that it's often described as an **exosphere**. This lack of atmosphere means that Mercury is bombarded by solar radiation and cosmic particles, making its surface inhospitable to life as we know it.

Mercury's orbit around the Sun is also interesting. A single year on Mercury lasts only about 88 Earth days, due to its close proximity to the Sun. However, its rotation period is much longer, with one day on Mercury lasting approximately 59 Earth days. This leads to a big difference between its scorching days and chilling nights.

While much has been discovered about Mercury through various missions, such as NASA's MESSENGER spacecraft, there are still many unanswered questions about this intriguing planet. Further exploration and research are important to unlock the remaining mysteries of Mercury and gain deeper insights into its formation, composition, and evolution.

Mercury may be the smallest planet in our solar system, but it is a world of great scientific interest and discovery. From its extreme temperatures and cratered surface to its strange rotation and orbit, Mercury continues to have mysteries for us to solve.



artist's drawing of Mercury



Name: _____

Glossary

Sparse: Sparse means when something is spread out or not crowded. For example, if you have only a few toys in your toy box, it's sparse because there's a lot of empty space.

Proximity: Proximity means how close something is to another thing. If your house is close to your school, you can say they are in proximity to each other because they are nearby.

Exosphere: The exosphere is the outermost layer of the Earth's atmosphere. It's super high up and very thin. Astronauts travel through the exosphere when they go to space. It's like the Earth's outer space neighborhood!

1. How did Mercury get its name? _____

2. Why does Mercury get so hot? _____

3. Why does Mercury get so cold? _____

4. How were Mercury's surface features created? _____

5. Why could life as we know it not exist on Mercury? _____

