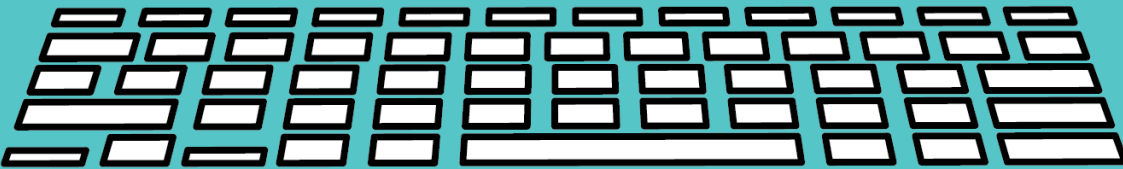


IMAGINE  
CHANGES IN  
TEMPERATURE  
RATHER THE MOST  
DRASTIC IN  
THE SOLAR  
SYSTEM

Short Answer	Type Answer Here
1. How many planets are in our solar system?	
2. Which planet is closest to the Sun?	
3. In miles, what is the diameter of Mercury?	
4. Who was first to see Mercury through a telescope?	
5. What is the core of Mercury made of?	
6. What year did the Messenger crash?	
7. Which planet is the smallest?	
8. What's the first aircraft to reach Mercury called?	



Short Answer	Type Answer Here	Fill in the Blank	Type Answer Here
1. How many planets are in our solar system?		9. Our solar system is in the ___ Galaxy.	
2. Which planet is closest to the Sun?		10. Mercury doesn't have any weather or ___.	
3. In miles, what is the diameter of Mercury?		11. The 1st known record of Mercury is by ___ astronomers.	
4. Who was first to see Mercury through a telescope?		12. Mercury's tilt in the ___ of rotation is only 2 degrees.	
5. What is the core of Mercury made of?		13. Jupiter and ___ are the outer gas giants.	
6. What year did the Messenger crash?		14. Mercury is the name of a god in ___ mythology.	
7. Which planet is the smallest?		15. It takes ___ Earth days for Mercury to orbit the Sun.	
8. What's the first aircraft to reach Mercury called?		16. The first 4 planets are considered the inner ___ planets.	



# PLANET MERCURY

Our solar system in the Milky Way Galaxy has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. The first four planets (Mercury, Venus, Earth, Mars) are considered the inner planets because they are closer to the Sun than the outer gas giants, while Uranus and Neptune are the outer ice giants. Mercury is the smallest planet and the one closest to the Sun. Still, Venus is the hotter planet than Mercury due to its thick atmosphere. Mercury does not have an atmosphere like Earth's because it only has a thin atmosphere of oxygen, sodium, helium, hydrogen, and potassium.

Mercury was discovered approximately 4,000 years ago. The first known record of Mercury is a 2nd-century BC Babylonian astronomer. Experts understand that the Babylonians, from around 3000 BC, knew about Mercury. Yet Galileo was the first to see Mercury through a telescope in the 1600s.

Mercury has no moons, no rings, and is 57.9 million miles (57.9 million km) from the Sun. This terrestrial (rocky) planet has a diameter of 3031 miles (4879 km) and a radius of 1,516 miles, which is larger than Earth's moon.

Mercury moves around the Sun quickly at 50 km per second. Thus, it takes 88 Earth days for Mercury to orbit the Sun. Meanwhile, it spins slowly, which means that one day on Mercury equals 58.7 days on Earth.

The planet was named Mercury (messenger of the gods) - the god of commerce, travel, and thievery in Roman mythology. Mercury's pathway around the Sun is an odd elliptical shape, like an egg.

Mercury has a rocky surface (crust), mantle (next layer), and iron core (center). Scientists think that the iron core is molten or liquid, like Earth. With an iron core similar to Earth and Mars, Mercury has a high mass for its small size.

The temperature on Mercury varies wildly since the days are so

long. The side of Mercury facing the Sun (daytime) can have temperatures that reach 800 degrees Fahrenheit (430 degrees Celsius - super hot). However, the side of Mercury away from the Sun (nighttime) can be -300 degrees Fahrenheit (-180 degrees Celsius - super cold). The lack of atmosphere is why the planet gets very cold.

Mercury looks like Earth's moon with craters caused by meteoroid and comet collisions. Interestingly, many craters are named after famous authors, musicians, and artists. For example, one crater is named after Dr. Seuss, the famous children's author and another is named after Alvin Ailey, a famous dancer. Experts think that Caloris Basin's crater was caused by a 60-mile wide asteroid hitting Mercury. The 960-mile wide crater is big enough for Texas to fit inside. The impact of something this size could have contributed to Mercury's odd rotational spin. There are cliffs on Mercury's surface, probably due to the planet shrinking billions of years ago.

Mercury doesn't have any weather or seasons. This is because the tilt in Mercury's rotation is only 2 degrees. Therefore, Mercury spins upright on Earth with its 23.5-degree tilt. Scientists observe the crater for information and they think that there could be ice at the north and south poles. However, ice would only be found where there are constant shadows. Permanent shadows would mean cooling while the rest of the planet heats up.

Scientists continue to how to get to the Sun, or how to get to Mercury. First, the Messenger probe provides the first close-up pictures of Mercury. The Messenger 10 mission was when scientists discovered that Mercury has a magnetic field. Second, the Messenger orbited Mercury from 2011 to 2015. It crashed on April 30, 2015.

Studying Mercury from Earth is difficult because you have to look toward the Sun to see Mercury. It's only visible just after the Sun sets or before it rises. Despite this, you can see Mercury without a telescope. People often wonder if there could be life on other planets. However, with the extreme temperatures and solar radiation, organisms couldn't adapt and survive on Mercury.

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