

2. Mercury (1st Planet)

4

Distance from Sun: 57.9 million km

Diameter: 4,879 km

Moons: 0

Key features:

Smallest planet

Closest to Sun

No atmosphere

Extreme temperatures:

Day: 430°C

Night: -180°C

Surface:

Craters

Rocky

Similar to Moon

Orbit:

Year: 88 Earth days

Day length: 59 Earth days give more info



Here is more detailed information about Mercury (1st planet from the Sun):

Mercury – Detailed Information

1. Basic Facts

- **Position from Sun:** 1st planet
- **Average distance from Sun:** 57.9 million km
- **Diameter:** 4,879 km
- **Radius:** 2,439 km
- **Mass:** 3.30×10^{23} kg
- **Gravity:** 3.7 m/s^2 (about 38% of Earth's gravity)
- **Moons:** 0
- **Rings:** None

Mercury is the **smallest and fastest planet** in the Solar System.

2. Orbit and Rotation

- **Length of year:** 88 Earth days
- **Length of day (rotation):** 59 Earth days
- **Solar day (sunrise to sunrise):** 176 Earth days

This means:

- Mercury rotates very slowly
- But orbits very fast around the Sun

It is the **fastest planet**, traveling about **47 km per second**.

3. Surface Features

Mercury's surface looks very similar to Earth's Moon.

Main features:

- Many **craters** from asteroid impacts
- Large **plains** of solidified lava
- Huge cliffs called **scarp**s
- Large impact basins like:
 - **Caloris Basin** (1,550 km wide)

Surface is:

- Rocky
- Dry
- Dusty

No water oceans exist.

4. Temperature

Mercury has the **most extreme temperature changes** of any planet.

- Day temperature: **430°C**
- Night temperature: **-180°C**

Reason:

- No atmosphere to trap heat
-

5. Atmosphere

Mercury has **almost no atmosphere**. Instead, it has a very thin layer called an **exosphere**.

Contains small amounts of:

- Oxygen
- Sodium
- Hydrogen
- Helium
- Potassium

This cannot protect the planet from:

- Heat
- Cold
- Asteroids

6. Gravity

Gravity is weaker than Earth.

If you weigh 50 kg on Earth, you would weigh:

19 kg on Mercury

7. Internal Structure

Mercury has 3 layers:

1. Core (very large iron core)
2. Mantle
3. Crust

Mercury's core is unusually large and makes up about **85% of the planet's radius**.

8. Magnetic Field

Mercury has a **magnetic field**, but it is weak.

This is surprising because Mercury is small.

The magnetic field protects it slightly from solar radiation.

9. Visibility from Earth

Mercury can be seen from Earth:

- Just before sunrise
- Just after sunset

It looks like a bright star.

It is hard to see because it is very close to the Sun.

10. Space Missions to Mercury

Important missions:

- Mariner 10 (1974–1975)
- MESSENGER (2011–2015)
- BepiColombo (launched 2018, arriving 2025–2026)

These missions studied:

- Surface
- Magnetic field
- Structure

— ChatGPT 5.2 ▾



11. Interesting Facts

- Mercury has the **shortest year**
- Mercury has the **longest day**
- Mercury has **no seasons**
- Mercury has **sunrises that appear to move backward briefly**
- Named after the Roman messenger god **Mercury**

12. Comparison with Earth

Feature	Mercury	Earth	🔗
Diameter	4,879 km	12,742 km	
Moons	0	1	
Year	88 days	365 days	
Day	59 days	24 hours	
Atmosphere	Almost none	Thick	
Water	None	Plenty	

If you want, I can also provide **10 easy points for school homework or a short paragraph version.**



