PLANET COMPARISON CHART

QUICK REFERENCE FOR TEACHERS · ALL 8 PLANETS

TEACHER REFERENCE

PLANET order from Sun · type	DIAMETER across the equator	AVG DISTANCE from the Sun	YEAR LENGTH orbital period	DAY LENGTH rotation period	AVG TEMPERATURE surface / cloud-top	MOONS confirmed	NOTABLE FEATURE
MERCURY 1st · Rocky (terrestrial)	**4,879** km 3,032 mi	**57.9M** km 36M mi	**88 days** Earth time	**59 days** Earth time	**167°C** 333°F · avg	0	*Has ice in its shadowed craters!*
VENUS 2nd · Rocky (terrestrial)	**12,104** km 7,521 mi	**108.2M** km 67.2M mi	**225 days** Earth time	**243 days** Earth time	**464°C** 867°F · avg	0	*Spins backwards compared to Earth!*
EARTH 3rd · Rocky (terrestrial)	**12,742** km 7,918 mi	**149.6M** km 93M mi	**365.25 days** 1 Earth year	**24 hours** 1 Earth day	**15°C** 59°F · avg	1	*The only planet with liquid water on its surface!*
MARS 4th · Rocky (terrestrial)	**6,779** km 4,212 mi	**227.9M** km 141.6M mi	**687 days** Earth time	**24h 37m** Earth time	**−63°C** −82°F · avg	2	*Home to the tallest volcano in the solar system!*
JUPITER 5th · Gas giant	**139,820** km 86,881 mi	**778.5M** km 483.6M mi	**11.86 years** Earth time	**9h 56m** Earth time	**−110°C** −166°F · avg	101	*Has a storm bigger than Earth — the Great Red Spot!*
SATURN 6th · Gas giant	**116,460** km 72,367 mi	**1,434M** km 891M mi	**29.46 years** Earth time	**10h 33m** Earth time	**−140°C** −220°F · avg	292	*So light it would float in a giant bathtub!*
URANUS 7th · Ice giant	**50,724** km 31,518 mi	**2,871M** km 1,784M mi	**84 years** Earth time	**17h 14m** Earth time	**−195°C** −320°F · avg	28	*Spins on its side — like a rolling ball!*
NEPTUNE 8th · Ice giant	**49,244** km 30,599 mi	**4,495M** km 2,793M mi	**164.8 years** Earth time	**16h 6m** Earth time	**−200°C** −330°F · avg	16	*Has the fastest winds in the solar system — 2,100 km/h!*

★ KEY VOCABULARY

ORBIT The path a planet travels around the Sun.

TERRESTRIAL A rocky, solid planet — Mercury, Venus, Earth, Mars.

AU Astronomical unit — Earth's distance from the Sun (~150M km).

ROTATION A planet spinning on its axis (creates day & night).

GAS GIANT Mostly hydrogen & helium, no solid surface — Jupiter, Saturn.

MOON / SATELLITE A natural object orbiting a planet.

REVOLUTION One complete trip around the Sun (= one year).

ICE GIANT Mostly water, methane & ammonia ices — Uranus, Neptune.

ATMOSPHERE The layer of gases held to a planet by its gravity.

Year = one full orbit around the Sun · Day = one full rotation · Distances are average (orbits are elliptical)

Data: NASA Solar System Exploration · Moon counts: IAU MPC, April 2026