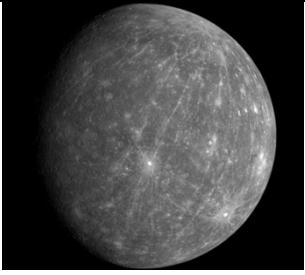




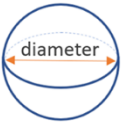
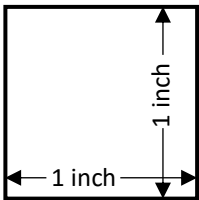


All Together—Comparing the Inner Planets (and Moon) to the Earth

Characteristic	Mercury	Venus	Earth	Moon	Mars
image					
1. order from sun	1 st planet (closest to sun)	2 nd planet from the sun	3 rd planet from the sun	Moon of 3 rd planet from sun	4 th planet from the sun
2. average distance from Sun (miles)	36,000,000 miles (about 1/3 earth's distance)	67,000,000 miles (about 3/4 earth's distance)	93,000,000 miles (93 million miles)	93,000,000 miles (about earth's distance on average)	142,000,000 miles (about 1.5 times earth's distance)
3. average diameter (miles) 	3032 miles (about 1/3 earth's diameter)	7521 miles (just a little smaller than earth's diameter)	7918 miles	2159 miles (about 1/4 earth's diameter)	4212 miles (about 1/2 earth's diameter)
4. shape	sphere	sphere	sphere	sphere	sphere
5. surface gravity at equator (1 gravity = earth's)	0.38 gravity (about 1/3 earth's gravity)	0.9 gravity (slightly less than earth's)	1 gravity	0.17 gravity (about 1/6 earth's gravity)	0.38 gravity (about 1/3 earth's gravity)
6. day length— 1 spin on axis (Earth days)	58.65 days	243 days	1 day	About 28 days	1.03 days
7. temperature at surface (°F) (note: water freezes at 32°F, boils at 212°F)	-279°F (night) to 801°F (day)	864°F (same day and night) (note: lead melts at 621°F)	-128°F (night, poles) to 131°F (day, equator) [Average 57°F]	-280°F (night) to 260°F (day)	-243°F (night, poles) to 68°F (day, equator) [Average -81]
8. surface broken into large chunks (plates) which move?	No	No	Yes	No	No. But there is some evidence of plate motion in the very distant past.
9. layer of gases (atmosphere) surrounds the object?	No	Yes	Yes	No	Yes
10. composition of atmosphere— main gases (% by volume)	None (no atmosphere)	96.5% carbon dioxide (CO ₂), 3.4% nitrogen (N ₂), 0.015% sulfur dioxide (SO ₂), 0.007% argon (Ar), 0.002% water vapor (H ₂ O _{vapor})	78% nitrogen (N ₂), 21% oxygen (O ₂), 0.9% argon (Ar), 0.04% carbon dioxide (CO ₂), 0 to 3% water vapor (H ₂ O _{vapor})	None (no atmosphere)	95.3% carbon dioxide (CO ₂), 2.7% nitrogen (N ₂), 1.6% argon (Ar), 0.1% oxygen (O ₂), 0 to 0.03% water vapor (H ₂ O _{vapor})
11. weight of atmosphere on every square inch of surface 	0 (no atmosphere)	1,334 pounds (per square inch)	14.7 pounds (per square inch)	0 (no atmosphere)	0.095 pounds (per square inch) (155 times less than the weight of the atmosphere on earth)
12. water (H ₂ O) exists in liquid form?	No	No	Yes	No	No. But there is strong evidence for a lot of liquid water in the distant past.
13. water (H ₂ O) exists in solid form (ice)?	Very likely—some ice detected in crater at north pole	No	Yes	Very likely—some ice detected in craters at poles.	Yes. Mars has polar ice caps consisting of water ice and dry (CO ₂) ice. Ice is also suspected below the surface (mixed with rocks/sand) in many areas.
14. evidence of life detected?	No	No	Yes	No	No