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

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| --- | --- | --- | --- | --- | --- |
| **Characteristic** | **Mercury** | **Venus** | **Earth** | **Moon** | **Mars** |
| **image** | [Black and white image of Mercury.](http://solarsystem.nasa.gov/multimedia/display.cfm?IM_ID=7543) | [ANd9GcTF38-DkEv2xTY3ADf5_I5-8O4-HbXxj018O2drwLbl90XV1J2u](http://www.google.com/url?sa=i&rct=j&q=venus+visible+light&source=images&cd=&cad=rja&docid=5sxSpEUZYD-QTM&tbnid=WAy4IWaJIammDM:&ved=0CAUQjRw&url=http%3A%2F%2Fstartswithabang.com%2F%3Fp%3D1606&ei=KrVIUbeMOYiTiQLV7IC4Aw&bvm=bv.44011176,d.cGE&psig=AFQjCNGYl18q-em1QjJati7luSEIkgks-Q&ust=1363805803836147) | Earth-Africa |  | [Water-ice clouds, polar ice, polar regions, and geological features can be seen in this full-disk image of Mars.](http://solarsystem.nasa.gov/multimedia/display.cfm?IM_ID=10167) |
| **1. order from sun** | 1st planet (closest to sun) | 2nd planet from the sun | 3rd planet from the sun | Moon of 3rd planet from sun | 4th 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) |
| Image result for image showing diameter of sphere**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 (CO2),  3.4% nitrogen (N2),  0.015% sulfur dioxide (SO2),  0.007% argon (Ar),  0.002% water vapor (H2Ovapor) | 78% nitrogen (N2),  21% oxygen (O2),  0.9% argon (Ar),  0.04% carbon dioxide (CO2),  0 to 3% water vapor (H2Ovapor) | None  (no atmosphere) | 95.3% carbon dioxide (CO2),  2.7% nitrogen (N2),  1.6% argon (Ar),  0.1% oxygen (O2),  0 to 0.03% water vapor (H2Ovapor) |
| **11. weight of atmosphere on every square inch of surface**  1 inch  1 inch | 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 (H2O) 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 (H2O) 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 (CO2) 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 |

Logo

Description automatically generated