

<p>Earth: Terrestrial</p> <p>Surface gravity: 9.81 m/s²</p> <p>Escape velocity: 11.19 km/s</p> <p>Albedo: 0.367</p> <p>Temperature: 288 K mean, 184 K minimum, 330 K maximum</p> <p>Number of satellites: 1</p> <p>Surface pressure: 101.325 kPa</p> <p>Atmospheric composition: 78.08% nitrogen, 20.95% oxygen, 0.930% argon, 0.0402% carbon dioxide, ~1% water vapor</p>	<p>Ceres: Dwarf</p> <p>Surface gravity: 0.285 x 10⁵ m/s²</p> <p>Escape velocity: 0.51 km/s</p> <p>Apparent magnitude: 6.6 to 9.3</p> <p>Angular diameter: 0.84" to 0.33"</p> <p>Number of satellites: 0</p> <p>Temperature: 197 K</p> <p>Albedo: 0.06</p>	<p>Ceres: Dwarf</p> <p>Discovery date: January 1, 1801 by Giuseppe Piazzi</p> <p>Semimajor axis: 2.77 AU</p> <p>Orbital period: 4.6 years</p> <p>Surface area: 8.4 x 10⁶ km²</p> <p>Volume: 2.8 x 10¹⁷ m³</p> <p>Mass: 9.4 x 10²⁰ kg</p> <p>Mean density: 2.16 g/cm³</p>	<p>Mars: Terrestrial</p> <p>Discovery date: ancient</p> <p>Semimajor axis: 2.28 x 10⁸ km (1.523 AU)</p> <p>Orbital period: 1.88 years (686.7 days)</p> <p>Synodic period: 2.13 years (778.0 days)</p> <p>Average orbital speed: 24.1 km/s</p> <p>Sidereal rotation period (Mars day): 1.03 Earth days</p> <p>Mean radius: 3,389.5 km (0.53 x Earth)</p> <p>Surface area: 1.45 x 10⁸ km² (0.28 x Earth)</p> <p>Volume: 1.63 x 10¹¹ km³ (0.15 x Earth)</p> <p>Mass: 6.42 x 10²³ kg (0.11 x Earth)</p> <p>Mean density: 3.93 gm/cm³ (0.71 x Earth)</p>
<p>Moon</p> <p>Semimajor axis: 3.85 x 10⁸ km (0.00257 AU)</p> <p>Orbital period: 27 d 7 h 43 min 11.5 s (27.321 days)</p> <p>Synodic period: 29 d 12 h 44 m 2.9 s (29.530 days)</p> <p>Average orbital speed: 1.022 km/s</p> <p>Sidereal rotation period (Moon day): 27.322 Earth days</p> <p>Mean radius: 1,737.1 km (0.27 x Earth)</p> <p>Surface area: 3.79 x 10⁷ km² (0.074 x Earth)</p> <p>Volume: 2.20 x 10¹⁰ km³ (0.020 x Earth)</p> <p>Mass: 7.34 x 10²² kg (0.012 x Earth)</p> <p>Mean density: 3.34 gm/cm³ (0.61 x Earth)</p>	<p>Moon</p> <p>Surface gravity: 1.62 m/s² (0.17 x Earth)</p> <p>Escape velocity: 2.38 km/s (0.21 x Earth)</p> <p>Apparent magnitude: -2.5 to -12.9, -12.4 at full moon</p> <p>Angular diameter: 29.3" to 34.1"</p> <p>Albedo: 0.136</p> <p>Temperature: 220 K mean, 100 K minimum, 390 K maximum</p> <p>Surface pressure: 10⁻⁷ Pa day, 10⁻¹⁰ Pa night</p> <p>Atmospheric composition: trace</p>	<p>Mars: Terrestrial</p> <p>Discovery date: ancient</p> <p>Semimajor axis: 2.28 x 10⁸ km (1.523 AU)</p> <p>Orbital period: 1.88 years (686.7 days)</p> <p>Synodic period: 2.13 years (778.0 days)</p> <p>Average orbital speed: 24.1 km/s</p> <p>Sidereal rotation period (Mars day): 1.03 Earth days</p> <p>Mean radius: 3,389.5 km (0.53 x Earth)</p> <p>Surface area: 1.45 x 10⁸ km² (0.28 x Earth)</p> <p>Volume: 1.63 x 10¹¹ km³ (0.15 x Earth)</p> <p>Mass: 6.42 x 10²³ kg (0.11 x Earth)</p> <p>Mean density: 3.93 gm/cm³ (0.71 x Earth)</p>	<p>Mars: Terrestrial</p> <p>Discovery date: ancient</p> <p>Semimajor axis: 2.28 x 10⁸ km (1.523 AU)</p> <p>Orbital period: 1.88 years (686.7 days)</p> <p>Synodic period: 2.13 years (778.0 days)</p> <p>Average orbital speed: 24.1 km/s</p> <p>Sidereal rotation period (Mars day): 1.03 Earth days</p> <p>Mean radius: 3,389.5 km (0.53 x Earth)</p> <p>Surface area: 1.45 x 10⁸ km² (0.28 x Earth)</p> <p>Volume: 1.63 x 10¹¹ km³ (0.15 x Earth)</p> <p>Mass: 6.42 x 10²³ kg (0.11 x Earth)</p> <p>Mean density: 3.93 gm/cm³ (0.71 x Earth)</p>
<p>Earth: Terrestrial</p> <p>Semimajor axis: 1.50 x 10⁸ km</p> <p>Average orbital speed: 29.8 km/s</p> <p>Sidereal rotation period: 23 h 56 m 4.1 s (0.997 day)</p> <p>Mean radius: 6,371.0 km</p> <p>Surface area: 5.10 x 10⁸ km² (land, 3.6 x 10⁸ km² water)</p> <p>Volume: 1.08 x 10¹² km³</p> <p>Mass: 5.97 x 10²⁴ kg</p> <p>Mean density: 5.51 g/cm³</p>	<p>Venus: Terrestrial</p> <p>Surface gravity: 8.87 m/s²</p> <p>Escape velocity: 10.36 km/s</p> <p>Apparent magnitude: -4.6 to -4.8</p> <p>Angular diameter: 66" to 23"</p> <p>Temperature: 737 K</p> <p>Number of satellites: 0</p> <p>Surface area: 4.6 x 10⁸ km²</p> <p>Volume: 2.6 x 10¹¹ km³</p> <p>Mass: 4.87 x 10²⁴ kg</p> <p>Mean density: 5.24 g/cm³</p>	<p>Venus: Terrestrial</p> <p>Discovery date: 1781 by Johann Good</p> <p>Semimajor axis: 1.08 AU</p> <p>Orbital period: 224.7 days</p> <p>Surface area: 4.6 x 10⁸ km²</p> <p>Volume: 2.6 x 10¹¹ km³</p> <p>Mass: 4.87 x 10²⁴ kg</p> <p>Mean density: 5.24 g/cm³</p>	<p>Mercury: Terrestrial</p> <p>Discovery date: ancient</p> <p>Semimajor axis: 5.79 x 10⁷ km (0.387 AU)</p> <p>Orbital period: 0.24 years (88.0 days)</p> <p>Synodic period: 0.32 years (115.9 days)</p> <p>Average orbital speed: 47.4 km/s</p> <p>Sidereal rotation period (Mercury day): 58.7 Earth days</p> <p>Mean radius: 2,439.7 km (0.38 x Earth)</p> <p>Surface area: 7.48 x 10⁷ km² (0.15 x Earth)</p> <p>Volume: 6.08 x 10¹⁰ km³ (0.056 x Earth)</p> <p>Mass: 3.30 x 10²³ kg (0.055 x Earth)</p> <p>Mean density: 5.43 gm/cm³ (0.98 x Earth)</p>
<p>The Solar System</p>	<p>Sun</p> <p>Orbital period: 225 – 250 million years around the center of the galaxy</p> <p>Average orbital speed: 251 km/s around the center of the galaxy</p> <p>Sidereal rotation period (solar day): 25.4 Earth days</p> <p>Equatorial radius: 6.96 x 10⁵ km (10⁹ x Earth)</p> <p>Surface area: 6.09 x 10¹² km² (12,000 x Earth)</p> <p>Volume: 1.41 x 10¹⁸ km³ (1,300,000 x Earth)</p> <p>Mass: 1.99 x 10³⁰ kg (333,000 x Earth)</p> <p>Mean density: 1.41 gm/cm³ (0.26 x Earth)</p>	<p>Sun</p> <p>Center density: 162.2 gm/cm³ (29.4 x Earth)</p> <p>Surface gravity: 274 m/s² (27.9 x Earth)</p> <p>Escape velocity: 617.7 km/s</p> <p>Apparent magnitude: -26.74</p> <p>Angular diameter: 30" (0.5 degrees)</p> <p>Temperature: 5,778 K photosphere, 1.57 x 10⁷ K in the core</p> <p>Luminosity: 3.828 x 10²⁶ W</p> <p>Atmospheric composition: 73.5% hydrogen, 24.6% helium, trace amounts of oxygen, carbon, iron, neon, nitrogen, silicon, magnesium, and sulfur</p>	<p>Mercury: Terrestrial</p> <p>Discovery date: ancient</p> <p>Semimajor axis: 5.79 x 10⁷ km (0.387 AU)</p> <p>Orbital period: 0.24 years (88.0 days)</p> <p>Synodic period: 0.32 years (115.9 days)</p> <p>Average orbital speed: 47.4 km/s</p> <p>Sidereal rotation period (Mercury day): 58.7 Earth days</p> <p>Mean radius: 2,439.7 km (0.38 x Earth)</p> <p>Surface area: 7.48 x 10⁷ km² (0.15 x Earth)</p> <p>Volume: 6.08 x 10¹⁰ km³ (0.056 x Earth)</p> <p>Mass: 3.30 x 10²³ kg (0.055 x Earth)</p> <p>Mean density: 5.43 gm/cm³ (0.98 x Earth)</p>

Pluto: Dwarf
 Discovery date: February 18, 1930 by Clyde Tombaugh
 Semimajor axis: 5.91 x 10⁹ km (39.48 AU)
 Orbital period: 248 years (90,560 days)
 Synodic period: 1,004 years (366.7 days)
 Average orbital speed: 4.67 km/s
 Sidereal rotation period (Pluto day): - 6.38 Earth days (retrograde)
 Mean radius: 1,187 km (0.19 x Earth)
 Surface area: 1.77 x 10⁷ km² (0.034 x Earth)
 Volume: 7.15 x 10⁹ km³ (0.007 x Earth)
 Mass: 1.30 x 10²² kg (0.002 x Earth)
 Mean density: 2.03 gm/cm³ (0.39 x Earth)

Eris: Dwarf
 Surface gravity: 0.82 m/s² (0.084 of Earth)
 Escape velocity: 1.38 km/s
 Apparent magnitude: 1.38
 Albedo: 0.96
 Temperature: 42.5K, min 30K, max 55K
 Number of satellites: 1
 Satellite: Dysnomia

Pluto: Dwarf
 Surface gravity: 0.62 m/s² (0.063 x Earth)
 Escape velocity: 1.21 km/s (0.11 x Earth)
 Apparent magnitude: +13.65
 Angular diameter: 0.06" to 0.11"
 Albedo: 0.49 to 0.66
 Temperature: 44 K mean, 33 K minimum, 55 K maximum
 Number of satellites: 5
 Satellites: Charon, Styx, Nix, Kerberos, Hydra
 Surface pressure: 1.0 Pa
 Atmospheric composition: nitrogen, methane, carbon monoxide

Haumea: Dwarf
 Discovery date: December 28, 2004 by Brown, Trujillo, and Rabinowitz
 Semimajor axis: 6.47 x 10⁸ km (43.35 AU)
 Orbital period: 285 years (104,096 days)
 Synodic period: 1,0035 years (366.5 days)
 Average orbital speed: 4.53 km/s
 Sidereal rotation period (Haumea day): 3.91 Earth hours
 Mean radius: 620 km
 Surface area: 6.8 x 10⁶ km² (0.013 x Earth)
 Mass: 4.0 x 10²¹ kg (0.0007 x Earth)
 Mean density: 2.6 – 3.3 gm/cm³ (0.47 to 0.60 x Earth)

Eris: Dwarf
 Discovery date: January 6, 2005 by Brown, Trujillo, and Rabinowitz
 Semimajor axis: 1.02 x 10¹⁰ km (67.67 AU)
 Orbital period: 558 years (203,810 days)
 Synodic period: 1,0018 years (365.9 days)
 Average orbital speed: 3.43 km/s
 Sidereal rotation period (Eris day): 25.9 Earth hours
 Mean radius: 1,163 km (0.18 x Earth)
 Surface area: 1.70 x 10⁷ km² (0.033 x Earth)
 Volume: 6.59 x 10⁹ km³ (0.006 x Earth)
 Mass: 1.66 x 10²² kg (0.0028 x Earth)
 Mean density: 2.52 gm/cm³ (0.39 x Earth)

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Makemake Dwarf
 Surface gravity: 0.47 m/s² (0.048 x Earth)
 Escape velocity: 0.84 km/s (0.075 x Earth)
 Apparent magnitude: 17.0
 Albedo: 0.81
 Temperature: 32 K
 Number of satellites: 1
 Satellite: MK 2

Haumea: Dwarf
 Surface gravity: 0.63 m/s² (0.064 x Earth)
 Escape velocity: 0.91 km/s
 Apparent magnitude: 17.3
 Albedo: 0.80
 Temperature: < 50K
 Number of satellites: 2
 Satellites: Hi'iaka, Namaka

Neptune: Jovian Ice Giant
 Surface gravity: 1.11 m/s² (1.11 x Earth)
 Escape velocity: 23.1 km/s
 Apparent magnitude: 7.8
 Albedo: 0.29
 Temperature: 72 K
 Number of satellites: 14
 Largest satellites: Triton, Proteus, Nereid, Larissa, Galatea, Despina
 Ring system: three main, faint, fragmented arcs
 Sidereal rotation period (Neptune day): 16.11 Earth hours
 Mean radius: 24,622 km (3.86 x Earth)
 Surface area: 6.96 x 10⁸ km² (1.09 x Earth)
 Volume: 6.25 x 10¹⁰ km³ (1.64 x Earth)
 Mass: 1.02 x 10²⁶ kg (17.15 x Earth)
 Mean density: 1.64 gm/cm³ (0.25 x Earth)

Uranus: Jovian Ice Giant
 Surface gravity: 0.89 m/s² (0.89 x Earth)
 Escape velocity: 21.3 km/s
 Apparent magnitude: 3.4
 Albedo: 0.49
 Temperature: 49 K
 Number of satellites: 27
 Largest satellites: Titania, Oberon, Umbriel, Ariel
 Ring system: five narrow, faint, dusty arcs
 Sidereal rotation period (Uranus day): 10.7 hours
 Mean radius: 25,362 km (3.98 x Earth)
 Surface area: 8.11 x 10⁸ km² (1.21 x Earth)
 Volume: 6.85 x 10¹⁰ km³ (1.88 x Earth)
 Mass: 4.5 x 10²⁵ kg (7.46 x Earth)
 Mean density: 1.27 gm/cm³ (0.19 x Earth)

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 Escape velocity: 21.3 km/s
 Apparent magnitude: 3.4
 Albedo: 0.49
 Temperature: 49 K
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 Largest satellites: Titania, Oberon, Umbriel, Ariel
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 Sidereal rotation period (Uranus day): 10.7 hours
 Mean radius: 25,362 km (3.98 x Earth)
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 Surface area: 8.11 x 10⁸ km² (1.21 x Earth)
 Volume: 6.85 x 10¹⁰ km³ (1.88 x Earth)
 Mass: 4.5 x 10²⁵ kg (7.46 x Earth)
 Mean density: 1.27 gm/cm³ (0.19 x Earth)

Jupiter: Jovian Gas Giant
 Discovery date: ancient
 Semimajor axis: 7.78 x 10⁸ km (5.202 AU)
 Orbital period: 11.86 years (4,332 days)
 Synodic period: 1.09 years (396.9 days)
 Average orbital speed: 13.1 km/s
 Sidereal rotation period (Jupiter day): 9.93 Earth hours
 Mean radius: 69,911 km (10.97 x Earth)
 Surface area: 6.14 x 10¹⁰ km² (121.9 x Earth)
 Volume: 1.43 x 10¹⁵ km³ (1,321 x Earth)
 Mass: 1.90 x 10²⁷ kg (317.8 x Earth), 1/1047 of the Sun)
 Mean density: 1.326 gm/cm³ (0.24 x Earth)

Jupiter: Jovian Gas Giant
 Surface gravity: 24.8 m/s² (2.53 x Earth)
 Escape velocity: 59.5 km/s (5.31 x Earth)
 Apparent magnitude: -1.6 to -2.9
 Angular diameter: 29.8" to 50.1"
 Albedo: 0.34
 Temperature: 165 K
 Number of satellites: at least 67
 Large satellites: Ganymede, Callisto, Io, Europa
 Ring system: faint, three main segments made of dust
 Atmospheric composition: 89.8% hydrogen, 10.2% helium, ~0.3% methane, ~0.026% ammonia, ~0.003% hydrogen deuteride, 0.0006% ethane, 0.0004% water, including ammonia ice, water ice, ammonium hydrosulfide ice

Saturn: Jovian Gas Giant
 Discovery date: ancient
 Semimajor axis: 1.43 x 10⁹ km (9.554 AU)
 Orbital period: 29.46 years (10,759 days)
 Synodic period: 1.04 years (378.1 days)
 Average orbital speed: 9.69 km/s
 Sidereal rotation period (Saturn day): 10.66 Earth hours
 Mean radius: 58,232 km (9.14 x Earth)
 Surface area: 4.27 x 10¹⁰ km² (83.7 x Earth)
 Volume: 8.27 x 10¹⁴ km³ (764 x Earth)
 Mass: 5.68 x 10²⁶ kg (95.1 x Earth)
 Mean density: 0.69 gm/cm³ (0.13 x Earth)

Saturn: Jovian Gas Giant
 Surface gravity: 8.96 m/s² (0.91 x Earth)
 Escape velocity: 35.5 km/s (3.17 x Earth)
 Apparent magnitude: +1.2 to -0.24
 Angular diameter: 14.5" to 20.1"
 Albedo: 0.30
 Temperature: 88 K to 151 K
 Number of satellites: at least 62 with regular orbits
 Largest satellites: Titan, Rhea, Iapetus, Dione, Tethys, Enceladus, Mimas
 Ring system: extensive, consisting of water ice and trace amounts of rock, particles from micrometer to meter sizes
 Atmospheric composition: ~96% hydrogen, 3% helium, ~0.4% methane, ~0.01% ammonia, ~0.01% hydrogen deuteride, 0.0007% ethane, ices