Table 1

| SOLAR SIZE | Notes <br> altern ative size | Actual Size Diameter Kilometers | Calcula tion | Sweden Scale 1:20 million | KALIWOO <br> D Meters Scale 1:40 million | Actual Circu mfere nce | $\begin{array}{r} \text { Circumfe } \\ \text { rence } \\ (=\mathrm{Pi} \times \mathrm{D}) \end{array}$ | Actual <br> Distace KM | Swed en distan ce | KALI/100 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | a |  |  | meters |  |  |  |  | km |  |
| Sun |  | 1,390,000 | 69.50 | 71 | 35.50 |  | 110 |  | 0 |  |
| Mercury |  | 4,879 | 0.24 | 0.25 | 0.13 |  | 0.38 | 57,910,000 | 29 | 2.9 |
| Venus |  | 12,104 | 0.61 | 0.62 | 0.31 |  | 0.98 | 108,200,000 | 55 | 5.5 |
| Earth |  | 12,742 | 0.64 | 0.65 | 0.33 | 40,075 | 1.02 | 149,600,000 | 76 | 7.6 |
| Earth Moon |  | 3,474 | 0.17 | 0.1 | 0.05 |  |  | 147,000,000 | 0.2 |  |
| Mars |  | 6,779 | 0.34 | 0.35 | 0.18 |  | 0.54 | 227,900,000 | 116 | 11.6 |
| Jupiter | 143000 | 139,820 | 6.99 | 7.1 | 3.55 |  | 11 | 778,500,000 | 400 | 40 |
| Saturn | 125000 | 116,460 | 5.82 | 6.1 | 3.05 |  | 9.4 | 1.434 billion | 730 | 73 |
| Uranus |  | 50,724 | 2.54 | 2.6 | 1.30 |  | 4.08 | 2.871 billion | 1,460 | 146 |
|  |  |  | 0.00 |  |  |  |  |  |  | 0 |
| Neptune |  | 49,244 | 2.46 | 2.5 | 1.25 |  | 3.8 | 4.495 billion | 2,290 | 229 |
| Pluto |  | 1,188 | 0.06 | 0.12 | 0.06 |  |  |  | 3,000 | 300 |


| SOLAR ROTATION |  |  | Rotation on axis time (Earth Days) spin | Orbit the sun time (E Days) | Tilt in degrees |
| :---: | :---: | :---: | :---: | :---: | :---: |
| EARTH |  |  | 1 DAY | 365 DAYS |  |
| Sun | Because it is a gas, does not rotate like a solid. The Sun actually spins faster at its equator than at its poles. The Sun rotates once every 24 days at its equator, but only once every 35 near its poles. We know this by watching the motion of sunspots. |  |  |  |  |
| Mercury | Closest to sun. Pull of suns gravity slowed M's spin. spinning back to face the Sun only once every two years. Long darkness very cold. No atmosphere | A Mercury dweller would spend one whole M year by day and then one year by night., | 59 days - very slow | 88 days - only 3 earth months | 0 but highly elliptical orbit |
| Venus | Similar in size and weight to earth. Toxic. Hottest planet. Spins anticlockwise around sun, but axis clockwise. Venus dweller would see sun rise in west and set in east. Venus day is 100 earth days long and about half the length of a venus year. Therefore 50 earth days in continual darkness. // | TILT A full circle is $360^{\circ}$. Half a circle is $180^{\circ}$. So if you subtract $177.3^{\circ}$ from $180^{\circ}$, you get $2.7^{\circ}$. In other words, Venus is actually only tilted away from the plane of the ecliptic by only $2.7^{\circ}$. Venus is actually completely upside down - almost perfectly upside down. | 243 days - even slower | 225 days | 177.4 |
| Earth |  |  | 1 day - 24 hours | 365 days | 23.5 |
| Earth Moon |  |  |  |  |  |
| Mars | Like earth spins anticlockwise, similar length of day |  | 24.6 hours - same | 686 days | 25 |
| Jupiter | Despite being 300 times heavier it spins faster |  | 10 hours - faster | $\begin{aligned} & 12 \text { years } 4,332 \\ & \text { days } \end{aligned}$ | 3.13 |
| Saturn | Despite being 300 times heavier it spins faster |  | 10 hours - faster | 29.42 years | 26 |
| Uranus | Almost completely sideways, its north and south poles lying in the same plane as its orbit |  | 17 hours - | 84.3 years | 98 |
| Neptune | Right way up |  | 16 hours | 165 years Ellipitcal | 30 |
| Pluto |  |  |  |  |  |


| SOLAR TEMP |  | TEMP MIN | TEMP MAX | Atmosphere | Moons |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Celcius |  |  |
| Sun |  |  |  |  |  |
| Mercury | slow orbit, night and day | -170 | +449 | the most extreme temperature range of any other planet in the solar system. But Thin so escapes | 0 |
| Venus | Slight variation | +465 | +465 | Hotest Planet due to thick atmosphere. almost complet of carbon dioxide, with traces of nitrogen | 0 |
| Earth |  | -89 | +58 |  | 1 |
| Earth Moon | Little atmosphere harsh, cold world | -129 | +127 | Technically no atmosphere but exosphere |  |
|  |  | -125 | +20 |  | 2 |
| Mars | Heat driven not the sun but interior of planet iron | -145 Clouds of Jupiter | $+24,000$ Planet's center hotter than the surface of the sun! | carbon dioxide (95.32\%) | 79 known moons. lo, Europa, Ganymede |
| Jupiter | Cool | -178 | -178 average - cool planet | molecular hydrogen and helium | 82, of which 53 named |
| Saturn | Coldest | -218 | -153 coldest planet in SS | Saturn's atmosphere, although similar to Jupiter's, is much less interesting to look at from a distance. | 27 known Shakespeare named Oberon and Titania |
| Uranus | huge storms | -214 Average | 7000 at core | hydrogen and helium | 14 including Triton |
| Neptune | the wildest in SS. huge storms high winds. |  | 200 degrees Celsius (minus 392 degrees Fahrenheit) | hydrogen and helium |  |
| Pluto |  |  |  | mainly of amounts of methane |  |

