The Sun and the Moon: A Few Scientific and Historical Facts

The Sun is one of a huge number of stars in the disk-shaped galaxy familiarly known as the Milky Way. It is pretty much an average star—in terms of its age, size, and temperature—when compared with other similar bodies. It also provides - directly or indirectly - most of the fuel energy required by people on earth. In addition to raw energy, the Sun also produces a visible light,generating 3.83 × 1026 watts of power in this form. Just for comparison, an ordinary incandescent light bulb uses 60 — 100 watts.The temperature at the center of the Sun is estimated to be about 13.6 million degrees Celsius. The masses of most stars are rather similar to that of the Sun– in fact 0.3 - 3.0 times the mass of the Sun.The Sun’s radius is also about average, as the radii of most of the mare 0.2- 15 times that of the Sun. The so–called ‘solar wind”is responsible for auroras — atmospheric lights of fantastic colors - in the polar regions of the Earth.

The Moon, our closest heavenly body, travels around Earth at an approximate distance of 384,403 km, and although it appears stationary in the sky, it is in fact moving at an average speed of 3,700 km/h. One full lunar month, which is slightly less than one of our ‘earth’ months, takes exactly 29 days, 12 hours, 44 minutes and 2.8 seconds. The diameter of the Moon is approximately 1/4 that of the Earth. The dark regions on the Moon’s face were originally thought to be oceans, and this accounts for the name mare (Latin for `sea`), which is used to refer to the crater—like features of the lunar surface.What about the origins of the Moon? A very long time ago, the Earth was struck by a large body, which has been estimated as being 2 1/2 —3 times the size of Mars! The debris from this impact would then eventually have coalesced, or 'stuck together”, to form the present Moon; and it was upon the chalky surface of this body that the famed Apollo 11 Commander Neil Alden Armstrong descended from his lunar module on 20th July 1969. The words that he spoke as he stepped down are nowlegendary:

"That's one small step for man - one giant leap for mankind."

He further commented on the powdery surface:

'I can kick it up loosely with my foot. I only go in maybe an eighth of an inch.'

There were six manned Moon landings—Apollo 11, 12, and 14 to 17—and all of these carried rock and other important geological samples back to Earth with them, weighing in at a grand total of 384 kg.

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