The Sun is the most prominent feature of our solar system. It is the largest object and contains approximately 98% of the total solar system's mass. One hundred and nine Earths would be required to fit across the Sun's disk, and its interior could hold over 1.3 million Earths. The Sun's outer visible layer has a temperature of 6,000°C (11,000°F). This layer has a mottled appearance due to the turbulent eruptions of energy at the surface.

Solar energy is created deep within the core of the Sun. Here, the temperature (15,000,000°C; 27,000,000°F) and pressure (340 billion times Earth's air pressure at sea level) are so intense that nuclear reactions take place. Every second, 700 million tons of hydrogen are converted into helium by nuclear fusion. In the process, 5 million tons of pure energy is released.

The Moon is the sole satellite of the planet Earth. It is an inert body 3,576 kilometers (2,200 miles) in diameter, and its interior could hold over 1.3 million Earths. The Moon’s outer visible layer has a temperature of 6,000°C (11,000°F). This layer has a mottled appearance due to the turbulent eruptions of energy at the surface.

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The Moon is the sole satellite of the planet Earth. It is an inert body 384,403 kilometers (238,857 miles) from the Earth. Its diameter is 3,476 kilometers (2,100 miles). Both the rotation of the Moon and its revolution around Earth take approximately 29 days, 12 hours, and 43 minutes. This synchronous rotation is caused by an asymmetrical distribution of mass in the Moon, which has allowed Earth's gravity to keep one lunar hemisphere permanently turned toward Earth.

The Moon has a crust 60 kilometers (37 miles) thick at the center of the near side. If this crust is uniform over the Moon, it would constitute about 10% of the Moon's volume. It has a maximum surface temperature of 123°C, and a minimum surface temperature of -233°C.

You could hardly find two objects that are more different than the sun and the moon. Almost the only thing that they have in common is that they are both roughly spherical celestial bodies belonging to our solar system.

Almost... However, there is another similarity which is rather strange. It's everyday knowledge, but when you think about it, there's no ostensible reason why it should be so.

Take a piece of cardboard and make it big enough that if you were to hold it up to the Sun, the Sun would be obscured. Now with that same piece of cardboard, hold it up to the full Moon. That same piece of cardboard will cover the Moon and the Sun. In other words, from our perspective the Moon and the Sun are almost identical in size.

Isn't that strange? That of all the places our planet could be located in space, we happen to be exactly where the Moon and the Sun look the same size to us.

In the Talmud (Chullin 60b), Rabbi Shimon ben Pazi poses a contradiction between two verses in the Book of Genesis: In one place it says “And G-d made two great orbs of light.” In another place it says “The great orb of light and the small orb.”
THE SUN AND THE MOON

How can it be that in one place it says there are two great orbs of light, and in another, only one? At the dawn of creation, Hashem created the Sun and the Moon of equal size and brightness. Said the Moon before the Holy One Blessed be He, “Master of the World, is it possible for two kings to use one crown?” Hashem said “Go and diminish yourself.”

The Jewish People are compared to the Moon. Every month the Moon gets smaller and smaller until it disappears completely. And then, seemingly miraculously it’s ‘new.’

The Jewish People have seen times in their history when they seem to have vanished completely, and then seemingly miraculously they are ‘new.’

This power of renewal is intrinsic to the Jewish People. For that reason, we count our calendar by the Moon. On the first day of the month of Nissan (Rosh Chodesh Nissan), the Jewish People received as a nation the first of the 613 mitzvos — the sanctification of the Moon.

Our year consists of lunar months. The word for month in Hebrew is ‘chodesh’ which comes from the same root as ‘chadash’ which means ‘new.’ Each month the Moon is ‘new’. It is renewed. Almost all the nations of the world count by the Sun, by the year. In Hebrew, the word for year is ‘shana’ which comes from the same root as the word ‘yashan’ — old. The Sun is without renewal. It is always the same unchanging yellow orb.

We are not the largest of all the nations. The Torah calls us the smallest. The Moon has no light of its own. It is a reflector. And like the Moon, the job of the Jewish People is to be a reflector. The reflector in this world of the light of the Holy One, may His Name be blessed.

Hashem’s light is concealed in this world. We don’t see it clearly and brightly. Similarly the Jewish People are not recognized as His emissaries. Thus, it is fitting that the Moon is small and diminished.

When Mashiach comes, then the primeval light which shone at Creation will again be restored and there will be total clarity. One end of the universe will be visible from the other.

When we look up to the sky, the Moon and the Sun look the same size to us. We know that one is millions of times the size of the other. But they look the same size.

Maybe this is a hint. A hint of a time that was. A hint to a time to come when the lacking and the blemish of the Moon will be filled; when the radiance of the Almighty will fill the world as it did in the six days of Creation.

In our long history, in times of the greatest darkness, when we have emerged, it has been to the greatest light. Our era has seen some of the darkest nights of our history. G-d has promised us that, exactly when the night is darkest, He will bring the final redemption. And when will that moment be? In the month of Nissan.

For Nissan is the appointed time for the redemption of the Jewish People. May it be this year in Yerushalayim!

Sources: This Month’s Signs: The Darkest Hour...; Sefer HaToda’ah, by Rabbi Eliahu Kitov, translated by Rabbi Nachman Bulman; The Sun and the Moon: Talmud Chullin 60b; Rabbi Reuven Subar; Calvin J. Hamilton; Dawn At The Wall: Song of Songs, Midrash Rabba; SEASONS OF THE MOON is written by Rabbi Yaakov Asher Sinclair and edited by Rabbi Moshe Neuman. Designed and Produced by the Office of Communications – Rabbi Eliezer Shapiro, Director.

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