

Comparative Cosmology Knowledge

		Vedic Scriptures	Scientists (See item 11 below)	Abrahamic Scriptures (See item 12 below)
1.	Age of universe	155.522 trillion years (See item 4 below)	At least 13.6 billion years	6,000 years
2.	Lifespan of universe	311.040 trillion years (See item 3 below)	No idea	No idea
3.	Time left to end of universe	155.518 trillion years (See item 5 below)	No idea	No idea
4.	Age of current earth planet	1.973 billion years (See item 8 below)	Around 4.5 billion years	6,000 years
5.	Age of current sun	1.973 billion years (See item 8 below)	Around 4.6 billion years	6,000 years
6.	Size of universe (diameter)	15,127 light years (See item 9 below)	92 billion light years	No idea
7.	Are there other universes?	Millions (See item 7 below)	Most likely	No idea
8.	How does this universe compare with others?	This is one of the smallest universes, there are other universes which are thousands of times bigger than this universe	No idea	No idea
9.	Is this the first creation?	This is not the first creation. There are cycles of creation and annihilation. Zillions of creations have already gone. (See item 3 below)	This is the first creation.	This is the first creation.

10.	Shape of earth	The earth is spherical (round). (See item 11 below)	The earth is spherical (round).	The earth is flat.
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All the above will be explained in detail below.

1. Day of Brahma (Kalpa)

"By human calculation, a thousand ages taken together form the duration of Brahma's one day. And such also is the duration of his night." (Lord Krishna, Bhagavad-Gita 8.17)

The four yugas or ages are as follows:

Satya yuga	1,728,000 years
Tetra yuga	1,296,000 years
Dvarpara yuga	864,000 years
Kali yuga	432,000 years

Total of 4 yugas = 4,320,000 years (4.32 million)

A thousand of 4 yugas is $4.32 \times 1000 = 4.32$ billion years

Thus, one daytime (12 hours) of Brahma is 4.32 billion years

(Reference: Purport of Bhagavad-Gita 8.17)

2. Divya-yuga/Chaturyuga

The four yugas are also confirmed in Caitanya-caritamrta:

"We know that there are four ages [yugas], namely Satya, Treta, Dvapara and Kali. These four together constitute one divya-yuga." (Sri Caitanya-caritamrta Adi-Lia 3.7)

The four yugas together is called a divya-yuga, which is also called a Chaturyuga, chatur means four.

3. Lifespan of universe

311.040 trillion years.

"O son of Kunte, at the end of the millennium all material manifestations enter into My nature, and at the beginning of another millennium, by My potency, I create them again." (Lord Krishna, Bhagavad-Gita 9.7)

The lifespan of the universe is related to the age of Brahma.

In the purport of Bhagavad-Gita 9.7, it defines "At the end of the millennium", as meaning the end of Brahma's life. Brahma lives for 100 of his years which is calculated as follows:

$4.32 \text{ (12 hours)} \times 2 \text{ (24 hours)} \times 30 \text{ (days in month)} \times 12 \text{ (months in year)} \times 100 \text{ (100 years)} = 311.040 \text{ trillion (311 trillion, 40 billion years)}$

The entire duration of the life of Brahma and the universe of 311.040 trillion years is less than a second for Maha-Visnu. This is the time that passes when Maha-Visnu exhales or inhales just once. Maha-Visnu is just an expansion of Lord Krishna. This is how great Lord Krishna (God) is.

"The duration of the two parts of Brahma's life, as above mentioned, is calculated to be equal to one nimesa [less than a second] for the Supreme Personality of Godhead, who is unchanging and unlimited and is the cause of all causes of the universe." (Shrimad-Bhagavatam 3.11.38)

4. Manvantaras and Current Age of Universe

The current age of Brahma and the universe is 155.52197 trillion years.

Each day of Brahma is divided into fourteen parts called manvantaras. Each manvantara has a different Manu and the current Manu is the seventh, called Vaivasvata. Each manvantara is divided into seventy-one parts called divya-yugas (also called chaturyugas).

We are now in the twenty-eight divya-yuga of the seventh manvantara. Before the first and after each manvantara, there is a juncture (sandhya) period of duration 1,728,000 years.

"Seventy-one divya-yugas constitute one manv-antara. There are fourteen manv-antaras in one day of Brahma. The present Manu, who is the seventh, is called Vaivasvata [the son of Vivasvan]. Twenty-seven divya-yugas [27 x 4,320,000 solar years] of his age have now passed." (Sri Caitanya-caritamrta Adi-Lila 3.8-9)

"The one hundred years of Brahma's life are divided into two parts, the first half and the second half. The first half of the duration of Brahma's life is already over, and the second half is now current." (Shrimad-Bhagavatam 3.11.34)

Brahma is in his 1st day of his 51st year. In his current day, he has passed 1972.949 million Earth years, which is 5 hours, 28 mins, and 49 seconds for Brahma. When 100,000 years pass on planet Earth, only 1 second passes for Brahma.

Calculation of time passed in the current day of Brahma

Time passed in current day 1972.949 million years (=1.973 billion - based on our clock)

1 day for Brahma = 4.32 billion = 4320 million

1 hour for Brahma = $4320/12 = 360$ million

1 minute for Brahma = $360/60 = 6$ million

1 second for Brahma = $6/60 = 0.1$ million = 100,000 years

$1972.949/360 = 5.4804138$ hours

5 hours

0.4804138 hours = 0.4804138×60 minutes = 28.824828 minutes

28 minutes

0.824828 minutes = 0.824828×60 seconds = 49.489 seconds

Time passed in current day of Brahma is 5 hours, 28 minutes, and 49 seconds (based on Brahma's clock)

Calculation of universe age:

50 years of Brahma [$4.32 \times 2 \times 30 \times 12 \times 50 = 155520$ billion] + Time passed in current day of Brahma [1.972949 billion]

=155.52197 trillion years

5. Time to End of Universe

311.040 (lifespan of universe) - 155.52197 (current age of universe) = 155.51803 trillion years.

6. Manifestation of Life

"At the beginning of Brahma's day, all living entities become manifest from the unmanifest state, and thereafter, when the night falls, they are merged into the unmanifest again." (Lord Krishna, Bhagavad-Gita 8.18)

Life is manifest in this universe only during the daytime of Brahma. With the onset of Brahma's night, all living beings are annihilated, and the entire universe is plunged into darkness. When another day of Brahma begins, life again becomes manifest.

7. There are many universes

"This universal egg, or the universe in the shape of an egg, is called the manifestation of material energy." (Shrimad-Bhagavatam 3.26.52)

The Vedic knowledge is that there are bubbles of universes in the material creation. This theory is now supported by the scientists and is known as Multiverse.

"These universes are understood to be floating in the air that Mahā-Viṣṇu exhales. They are like atomic particles that float in sunshine and pass through the holes of a screen. All these universes are thus created by the exhalation of Mahā-Viṣṇu, and when Mahā-Viṣṇu inhales, they re-enter His body. The unlimited opulences of Mahā-Viṣṇu are completely beyond material conception." (Sri Caitanya-caritamṛta Madhya-Lila 20.279-280)

"After creating the total number of universes, which are unlimited, Maha-Visnu expanded Himself into unlimited forms and entered into each of them." (Sri Caitanya-caritamṛta Madhya-Lila 20.284)

8. Age of current Earth and Sun

At the beginning of each day of Brahma, he first creates the sun and then the earth, and other planets. At the end of each day of Brahma, the sun, earth, and other planets are destroyed. Then again, the next day, he creates and so on. In the current universe, the sun, earth, and other planets have been created, destroyed, and re-created more than 18,000 times. This is not the first creation. The age of the sun is the age of Brahma in his current day, which is 1.973 billion years (see #10).

There is a gap between the creation of the sun and other planets like earth, and so the 1.973 billion years current age of earth and other planets is an approximation, the actual value will be less. I am not able to find out the exact timings for the creation of earth and other planets, from the Vedic scriptures. It is certain that the sun is created first and then the earth, because life on earth cannot exist without the sun.

The lifespan of the sun and the earth is the duration of 12 hours (1 daytime) of Brahma, 4.32 billion years.

9. Diameter of universe

The diameter of the universe is 15,127.38 light years

"Sukadeva Goswame said: My dear King, I have thus far described the diameter of the universe [fifty crores of yojanas, or four billion miles] and its general characteristics, according to the estimations of learned scholars." (Shrimad-Bhagavatam 5.21.1)

"The layers or elements covering the universes are each ten times thicker than the one before, and all the universes clustered together appear like atoms in a huge combination." (Shrimad-Bhagavatam 3.11.41)

"Every universe is covered by seven layers – earth, water, fire, air, sky, the total energy and false ego – each ten times greater than the previous one. There are innumerable universes besides this one, and although they are unlimitedly large, they move about like atoms in You. Therefore, You are called unlimited [ananta]." (Shrimad-Bhagavatam 6.16.37)

- 1. The inner core of the universe is called the Bhu-Mandala. This is 2 billion miles in radius.**
- 2. The Bhu-Mandala is covered with 7 layers. The first layer is particles of earth. This is 40 billion miles from the end of the core to the next layer.**
- 3. The second layer is water particles or water vapors. This is 400 billion miles from the end of the first layer to the end of the second layer.**

4. The third layer is heat or fire and this is 4000 billion miles from the end of the second layer to the end of the third layer.
5. The fourth layer is air, and this is 40,000 billion miles.
6. The fifth layer is ether or sky, and this is 400,000 billion miles.
7. The sixth layer is total energy, and this is 4000,000 billion miles.
8. The seventh layer is false ego, and this is 40,000,000 billion miles.

Total distance from the center of the universe to the end of the universe:

= 2 billion + 40 billion + 400 billion + 4000 billion + 40,000 billion + 400,000 billion + 4000,000 billion + 40,000,000 billion

= 44444442×10^9 miles

Speed of light = 186,282 miles per second

1 light year = 5.88 trillion miles (5.88×10^{12})

The time it would take light to travel from the center of the universe to the end of the universe:

= $44444442 \times 10^9 / 5876025120000$

= 7563.69 light years

The diameter of the universe is $7563.69 \times 2 = 15,127.38$ light years (=88,949 trillion miles)

The time it would take light to travel from one end of the universe to the other is 15,127.38 light years

The above is a general calculation based on one understanding and interpretation of the Vedic scriptural information on the universe. There are other interpretations, which may give different results.

10. Shape of Universes and Planets

'anda-kosah – egg shaped' (Shrimad Bhagavatam 6.16.37)

"This universal egg, or the universe in the shape of an egg, is called the manifestation of material energy." (Shrimad-Bhagavatam 3.26.52)

'jagat-anada' (Brahma-Samhita 5.35) – This refers to the egg-shaped planets or universes.

'brahma-anada' (Caitanya-caritamrta 2.43) – This refers to the egg-shaped universe of a Brahma. Each universe is administered by a different Brahma. There are brahmandas, which means there are many universes.

11. Knowledge from the Scientists

There are differences between the Vedic and scientist's knowledge, for several reasons.

- a. The estimates by the scientists are always changing, and they themselves admit that it could be wrong. This is because the scientist's knowledge is based on their own limited perception and manmade instruments which are not perfect. The Vedic numbers have been written down and fixed for more than 5,000 years, it never changes, because the Vedic knowledge comes from the Supreme scientist, Lord Krishna (God). For example, about a hundred years ago, the scientists used to say the age of the universe was at most a few million years, and then they increased it to a billion and have been increasing it every 20 years or so. Currently they say it is at least 13.6 billion years old. In the future when they have better instruments, they will arrive at figures in the trillions.**
- b. The scientists determine the distance by calculating how long light has traveled from a distant galaxy in space to reach us. Since there is no known fixed point from which to measure the light, they could be measuring the light from another universe or some other point. The scientists do not know.**
- c. The universe is always expanding and thus the light from distant galaxies is always moving away from us and thus the diameter (distance from the origin) of the universe is always increasing.**
- d. The definition of universe based on the scientists and the Vedic scriptures is different, and thus we cannot really expect the 2 values to be equal or close, since there is no agreement on the definition of universe between the two sources.**
- e. The scientists are assuming that this is the only universe in the material creation, whereas the Vedic knowledge is that the material creation is comprised of millions of universes. The scientists use the term 'observable universe' instead of 'universe' because they are not sure whether they are measuring in one universe or from another universe or from somewhere outside.**
- f. The scientists have no solid evidence to prove that their ability to measure time and distance in billions of years is accurate.**

12. Abrahamic Religions Teachings

Based on the Abrahamic scriptures:

- a. On day 1 God created light (Genesis 1:3-5).
- b. On day 2 God created the sky (Genesis 1:6-8).
- c. On day 3 God created the earth, sea, and vegetation (Genesis 1:9-13).
- d. On day 4 God created the sun, moon, and stars (Genesis 1:14-19).
- e. On day 5 God created birds and sea creatures (Genesis 1:20-23).
- f. On day 6 God created animals and humans (Genesis 1:24-31)
- g. Adam and Eve, the first humans, were created about 6,000 years ago (By adding the ages provided in Genesis 5 and 11).
- h. All humans originate from Adam and Eve.
- i. Based on all the above, the universe and earth are about 6,000 years old.
- j. The earth is flat.

The Quran accepts the authority of the Bible on creation and thus all the above is also supported by the Quran.

Based on science:

- The universe is billions of years older than the earth, not a few days.
- The universe is billions of years old, not 6,000 years.
- Humans have existed for millions of years, not 6,000 years.
- The vegetation cannot exist without the sun. So the sun must be created before the vegetation.
- The humans in the world today could not have originated from one couple.
- The earth is spherical and not flat.

Based on the Bible, the earth is flat, not round.

"I saw a very tall tree out in a field, growing higher and higher into the sky until it could be seen by everyone in all the world." (Daniel 4:10-11)

The above states that the Earth has an 'end' which means the Earth is flat. It is not possible to see the end of the Earth from one point unless it is flat.

"I saw four angels standing on the four corners of the earth" (Revelation 7:1)

The above verse very clearly confirms that based on the Bible; the world is flat.

Based on Al-Quran, the earth is flat, not round.

"Who has made earth for you like a bed (spread out)." (Quran 20:53)

"Have We not made the earth as a bed." (Quran 78:6)

There are many other Quranic verses which very clearly state that the earth is flat. The Arabic word used in the Quran to describe the earth shape is 'Mehad', which means bed.

