



THE AGE OF THE UNIVERSE AND EARTH FROM A BIBLICAL AND SECULAR SCIENTIFIC PERSPECTIVE

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INTRODUCTION

From a simplistic perspective, the definition of *age* is defined as “*the length of time that a person or thing has existed.*”¹ Although this definition can be easily applied to numerous facets of everyday life – such as the age of a person, an automobile, a building, or other similar items – it becomes much more difficult to determine the age of the universe and/or Earth as they are not equipped with a birth certificate or a sales receipt. Regrettably, this paradox has primarily been responsible for a continuing debate between secular scientific theories and the validity of biblical scripture, particularly when a common viewpoint from either source is “*the universe and earth just look old.*”^{2,3} This perception has resulted in the belief – either from a scientific or frequently from a biblical viewpoint – that the universe and Earth are very old, which is currently defined as about 13.7 billion years for the universe and about 4.54 billions years for the Earth⁴. However, if we consider why the universe and Earth allegedly look *very old*, the definition of *very old* can become somewhat uncertain, particularly if we rely on visual appearances and current scientific dating methods.

To illustrate, lets apply the phrase *very old* to an artifact that is typically considered by science to be the oldest object on Earth, and is also used to date the



Figure 1. An Acasta Gneiss rock

age of the Earth – rocks – and look at two specimens. According to secular science, the oldest surface rock on Earth is known as the Acasta Gneiss⁵ rock (Figure 1) that has been dated by secular geologists as 3.96 to 4.03 billion years old.⁶ From a visual perspective, this rock looks no different than many rocks on Earth's surface yet secular geologists believe that it is the oldest surface rock on Earth. Obviously, visual appearances alone can be misleading, particularly when determining the age of rocks.



Figure 2. An Igneous Rock From Mount St. Helens

Now, to expand the perspective of dating rocks, let's take a quick look at the validity of *secular and biblical* dating and apply it to the rock in Figure 2. This

is an igneous rock that was formed from the cooling and solidification of magma (lava) at Mount St. Helens during its eruption in 1980. This rock has been radiometric dated by secular geologists as between 340,000 to 2.8 million years old.⁷ Even though this rock could also be categorized as *very old* along with a lack of notable characteristics that would identify this rock as either older or younger than the rock in Figure 1, there is a fundamental problem with the alleged geological date of 340,000 to 2.8 million years. How could the aforementioned geological date of 340,000 to 2.8 million years be correct when we know that Mount St. Helens erupted in 1980 which indicates the actual age of the rock is about 38 years old? This example indicates that modern secular scientific radioisotope dating methods are not the “*gold standard*” of dating methods or may not be capable of accurately dating the age of this Earth that is radiometric dated from rocks. Opposed to this viewpoint, biblical scripture would date this rock as its known age from on-scene eyewitness accounts as radiometric dating would not be used to justify an Earth billions of years old. The previous two examples demonstrate the difficulty in determining the age of a rock and also illustrate a current division between two competing worldviews.

As there is an enormous difference between the ages for the universe and Earth from secular science and biblical scripture, lets look at how these competing ages are derived from secular science and biblical scripture, and then look at which viewpoint the evidence from factual science actually supports. Lets begin with secular science.

SECULAR SCIENCE

As the dating of the universe and Earth from secular scientific methodology demands two different methods, lets look at each process individually.

UNIVERSE – 13.7 – 13.8 Billion Years Old

To consider how secular science arrives at an age for the universe of 13.7 - 13.8 billion years, lets look at two secular quotes:

“The best available information indicates that the age of the universe is 13.7 billion years old. Hubble has helped to measure the age of the universe using two different methods. The first method involves measuring the speeds and distances of galaxies. Because all of the galaxies in the universe are generally moving apart, we infer that they must all have been much closer together sometime in the past. Knowing the current speeds and distances to galaxies, coupled with the rate at which the universe is accelerating, allows us to calculate how long it took them to reach their current locations. The answer is about 14 billion years. The second method involves measuring the ages of the oldest star

*clusters. Globular star clusters orbiting our Milky Way are the oldest objects we have found and a detailed analysis of the stars they contain tells us that they formed about 13 billion years ago. The good agreement between these two very different methods is an encouraging sign that we are honing in on the universe's true age"*⁸

*"Until recently, astronomers estimated that the Big Bang occurred between 12 and 14 billion years ago. To put this into perspective, the Solar System is thought to be 4.5 billion years old and humans have existed as a genus for only a few million years. Astronomers estimate the age of the universe in two ways: 1) by looking for the oldest stars; and 2) by measuring the rate of expansion of the universe and extrapolating back to the Big Bang; just as crime detectives can trace the origin of a bullet from the holes in a wall"*⁹

Summarizing the previous two quotes, notice two noteworthy points:

- The use of the phrases/words "*the best available information,*" "*we infer,*" "*about,*" "*we are honing in on the universe's true age,*" "*thought to be,*" and "*astronomers estimate*" indicate a questionable uncertainty in determining the true age of the universe
- Currently, the age of the universe is determined by:
 - Studying globular clusters (a dense collection of about 50,000 to half a million gravitationally bound stars)
 - Measuring the current expansion rate of the universe by referring back to the big bang model

Unfortunately, if a person is not an astronomer and/or a physics professor, the previous discussion on determining the age of the universe can sound overly technical and daunting – which it is. Without going into a technical overload, let's summarize the current dating methodology for the age of the universe and look at its inherent problems that impact its validity.

Globular Clusters

Briefly, by comparing observed color-magnitude diagrams of globular clusters with calculated changes over time from models of stellar evolution, astronomers expect the best fit between observations and theoretical models to reveal the ages of globular clusters. However, notice the ages of globular clusters (and therefore the alleged age of the universe) is dependent on *theoretical models of stellar evolution*.¹⁰

Big Bang Model

Keeping in mind that the "big bang" is a primary pillar of evolutionary theory, let's look at three problematic aspects of this secular scientific viewpoint:

- When the current expansion rate of the universe is combined with a *model* of the big bang, cosmologists are supposed to be able to compute an age for the

universe. So, the computed age for the universe depends on the particular version of the big bang model that is assumed. Therefore, if the model changes, the age of the universe changes (model dependent). As an example, from the early 1960's until the early 1990's the age of the universe was estimated to be between 16-18 billion years old, whereas it is currently about 13.7 to 13.8 billion years old. Not surprisingly, the big bang model has changed over the years which is reflected in a changing age of the universe that is dependent on *each new discovery* resulting in *uncertainty and a lack of consistency*¹¹

- Current theory assumes two primary characteristics of the universe upon which the big bang model relies. These assumptions are that the universe is both homogeneous and isotropic, which is called the *cosmological principle*:
 - Homogeneity is the assumption that matter in the universe is uniformly distributed throughout space and that physical laws are the same everywhere
 - Isotropy is the assumption that the universe has the same properties in every direction



Figure 3. "Where Did Everything Come From?"

However, matter in the universe is very clumpy but cosmologists generally assume that these clumps smooth out in contrast to observations that indicate that the universe is not smooth. Additionally, evidence suggests that not only is the universe not homogeneous, it is also not isotropic. Therefore, if the cosmological principle is not true, then one must question whether the big bang is true along with the assumed secular scientific age of the universe¹²

- A belief in the big bang theory requires a faith that accepts everything we see came from absolutely nothing. When the big bang is properly understood, the big bang model was the sudden appearance of matter and energy, but also of space and time. That is, space and time came into existence along with matter and energy in the big bang, so space and time did not exist prior to the big bang. Interestingly, this same conundrum was featured on the cover of the April 2002 issue of the secular magazine Discover (Figure 3). Additionally, remember that the big bang theory also violates one of the most basic laws of physics, the 1st Law of Thermodynamics that states – “energy cannot be created or destroyed”¹³

EARTH – 4.54 Billion Years Old

Over the past 400 hundred years, scientists have tried various methods to determine the age of this planet. As an example, the age was predicted based on changing sea levels and the salinity of the oceans until these procedures were proven to be unreliable. More recently, secular scientists have turned to rocks, which are considered to be the oldest substances on the Earth’s surface. In the twentieth century, scientists began to use radiometric dating as a selective means to date surface rocks on Earth, and also the moon. The following quotes summarize how this is accomplished:

“Earlier research had shown that isotopes of some radioactive elements decay into other elements at rates that can be easily predicted. By examining the existing elements, scientists can calculate the initial quantity, and thus how long it took for the elements to decay, allowing scientists to determine the age of the rock. The oldest rocks found on Earth to date are the Acasta Gneisses (Figure 1) in northwestern Canada and are dated at about 4 billion years old. To refine this theory, scientists believe that rocks from early history should be present on the moon. Samples returned from the Apollo and Luna mission’s revealed ages between 4.4 and 4.5 billion years old, helping to constrain the age of the Earth. By using not only the rocks on Earth but also information gathered about the system that surrounds it, scientists have been able to place the age of the Earth at 4.54 billion years old”¹⁴

“The consistency of dating techniques also gives us confidence that the theory is true. Uranium-lead, rubidium-strontium and potassium-argon dating, for example, are all reasonably consistent in their determination of the age of the rocks and fossils. The ages are given in estimates, but the margins of error are in the range of 1%. It is not as if one scientist finds that a fossil hominid (human) is 1.2 million years old while another one finds it is 10,000 years old.”¹⁵

From the preceding two quotes, note that the basic premise of modern dating techniques is based on evaluating radioactive decay in rocks found on Earth and the moon which initially appears to be reliable and trustworthy methodologies. However, even though these quotes praise the accuracy, consistency and confidence of these dating techniques, lets briefly look at the two most common dating methods, as the same issues trouble both methods.

Radioisotope

Radioisotope (or radiometric) dating is normally limited to dating rocks and is contingent on four basic assumptions:

- (1) The decay rate of the unstable radioactive elements has been constant
- (2) There has been no contamination of the rock sample
- (3) Original quantity of the unstable radioactive elements is assumed to be known
- (4) There has never been a global-restructuring catastrophic flood

Because these assumptions are not observable, repeatable or testable, they are not provable. There are three basic kinds of rocks found on earth:

- Metamorphic (granite; the result of pressure and heat)
- Igneous (lava; the result of molten magma)
- Sedimentary (sediments such as sandstone, limestone, shale, mud, etc.)

Rocks that can be dated with radioisotope methods are *metamorphic and igneous* rocks. Radioisotope dating compares the amount of unstable radioactive “Parent” elements and their “Daughter” elements. Parent elements are unstable radioactive elements that decay into daughter elements over a period of time. As an example, a popular radioisotope dating method is uranium-lead as uranium-238 (parent element) spontaneously decays into lead-206 (daughter element). The rate that uranium-238 decays into lead-206 through its intermediate steps are known as its half-life. The half-life for uranium-238 decay into lead-206 is *thought* to be 4.5 billion years as the actual decay rate has obviously not been observed and/or tested for 4.5 billion years. There are also other radioisotope dating methods such as potassium-argon, rubidium-strontium, and lead-lead, but they all operate on the same basic principle.

If the uranium-lead method is used to date a metamorphic or igneous rock, a measurement of the amount of the intermediate isotopes that are present in the rock, including the amount of uranium-238 and lead-206 are taken. This will supposedly yield the alleged age of the rock from the ratio of the uranium-238 to lead-206 that is found in the rock. The fatal flaw to this supposition is that science cannot confirm that the decay rate has been constant over 4.5 billion years, the rock sample has never been contaminated (water) over 4.5 billion years, and potentially most importantly, the original quantity of radioactive element (i.e., uranium 238) being measured cannot be known in an alleged 4.5 billion years old rock, it can only be assumed.¹⁶

At this point in our discussion, a legitimate question is *“how accurate are radioisotope dating methods?”* Based on the current measurements of rocks of known ages, radioisotope-dating methods are extremely inaccurate! The following are a few examples:

- The Kaupulehu Flow, Hualalai Volcano, Hawaii, is known to have erupted in 1800-1801. Radioisotope dating ranges from 1.32 to 1.76 million years old
- Lava flows from Mt. Kilauea, Hawaii, are known to have erupted in 1959 yet radioisotope dating gives dates between 1.7 to 15.3 million years old
- Lava flows at Mt. Ngauruhoe, New Zealand are known to have erupted in 1954, yet radioisotope dating methods have yielded dates up to 3.5 million years old
- Mt. Saint Helens, Washington, erupted in May 1980. Radioisotope dating of the lava flows yielded dates between 350,000 and 2.8 million years old
- The Mt. Etna volcano in Sicily erupted in 1972. Radioisotope dating of the lava flows have yielded dates between 210,000 to 490,000 years old

The previous examples give credibility to the impression that radioisotope dating does not work on rocks of known ages, but is assumed to work on rocks of unknown ages. In many cases, it is a fact that published dates are in reality, selected dates by secular science. Therefore, the published date by secular science for the age of the Earth is an assumption based on an inaccurate methodology. Consider the following quote:

“Dating methods may be further summarized by the simple statement that there are really no reliable long-time radiological clocks, and even the short-time radiocarbon clock is in serious need of repair”

Dr. Melvin Cook, Physical Chemistry, Yale

Carbon 14

Although Carbon 14 is not used to date rocks, it is currently a very popular dating method, so let's consider its methodology and noteworthy limitations to understand its basic parameters.

Carbon 14 is likely the more recognized of the two popular dating methods (radiometric and carbon 14) and is based on the simple principle of the ratio between carbon 12 (C_{12}) and carbon 14 (C_{14}). Here is how it works. C_{12} is a stable form of carbon and along with the gas nitrogen 14 (N_{14}), they are both naturally found in our atmosphere. When N_{14} is bombarded by cosmic rays from outer space, the unstable radioactive isotope C_{14} is formed. Being a cyclical process, C_{14} is continually being formed and decaying back into N_{14} . Things that were once living tissue (plants, animals, and man) absorb C_{12} and C_{14} atoms while breathing and eating. Once an animal, plant, or human dies, they stop absorbing C_{12} and C_{14} atoms, and the unstable C_{14} atoms begin to revert back to N_{14} . As a result, the ratio of C_{12} to C_{14} atoms will change over time.

Therefore, to use the C_{14} method to date a past living plant, animal, or human, the amount of C_{12} is *assumed* to remain constant and is compared to the amount of the unstable C_{14} that is left.¹⁷ However, the C_{14} dating method does have noteworthy limits:

- In the 1940's, Dr. William Libby was credited with the discovery of the C_{14} dating method. At the time, he acknowledged there was at least a 23% error rate. Today, it is known that the error rate can exceed 50%
- C_{14} also depends on the same four assumptions that hamper radioactive dating methods. Because these assumptions are not observable, repeatable or testable, they are not provable. Again, the four are assumptions are:
 - (1) The decay rate of C_{14} has been constant
 - (2) There has been no contamination of the C_{12} or C_{14}
 - (3) The original quantity of C_{12} is assumed to be known
 - (4) There has never been a global-restructuring catastrophic flood

A quick review of the previous four assumptions should clearly illustrate that over a period of an alleged billions and millions of years, it is impossible to verify a constant decay rate, assume no contamination (water leaching, and that is why a global flood create a major problem for secular science), and know the original quantity of the stable isotope C_{12} . Additionally, there is clear evidence of a worldwide catastrophic flood as 75% of the Earth's crust is sedimentary! Even within its limitations, C_{14} dating can often yield results that are at best, misleading. Consider the following quote:

“No matter how useful it is, the radiocarbon method is still not capable of yielding accurate and reliable results. There are gross discrepancies, the chronology is uneven and relative, and the accepted dates are selected dates”

Anthropological Journal of Canada, “Radiocarbon, Ages in Error”

With the previous review of how C_{14} works, let's look at another fundamental parameter of C_{14} to fully understand the parameters of this dating methodology. Many people believe that C_{14} dating methods can be used to justify billions and/or millions of years, but this is not the case because C_{14} decays so fast. The half-life of C_{14} is only 5,730 years, which means that every 5,730 years it has decayed to only half its initial amount. After two half lives, a quarter is left; after three half lives, only an eighth is left; and after 10 half lives, less than a thousandth is left, and so on. If the half life decay continues so the C_{14} is totally exhausted, *there should be no detectable C_{14} left after about 200,000 years.*¹⁸ This fact will become very important when we look at the last section, Scientific Evidence For The Age Of The Universe And Earth.

BIBLICAL SCRIPTURE

In direct opposition to secular science, determining the origin and resultant ages of the universe and Earth by biblical Scripture is meaningfully more direct and descriptive than the multiple dating methods employed by secular science (that primarily rely on assumptions) as the architect, builder, and only eyewitness to the beginning of the universe and Earth is clearly detailed in Genesis 1:1 thru Genesis 2:4. It is important to remember that biblical authors took Genesis as *literal history* as did Jesus (Mark 10:6-9, Matthew 19:4-5, and Luke 17:27). So, it is best to let Scripture interpret Scripture when determining the age of the universe and Earth from Scripture.

As a Scriptural review, let's first look at the account of the architect and builder of the universe and Earth, and then look at the age of the universe and Earth from a biblical perspective.

ARCHITECT AND BUILDER

“In the beginning, God created the heavens and the earth”

Genesis 1:1

While God exists eternally (Psalm 90:2), this verse specifically delineates that this marked the beginning of the universe in time and space. The word *created* is used of God's creative activity alone, and the context demands in no uncertain terms that this was a creation without pre-existing material (*ex nihilo*). All of God's creation is incorporated into this summary statement which includes all 6,

consecutive days of creation that are outlined beginning in Genesis 1:2 and continuing through to Genesis 2:1.

As a point of emphasis, the truth of God creating everything we see from the beginning is also repeated in other portions of Scripture, such as the following verses:

“(1) In the beginning was the Word, and the Word was with God, and the Word was God. (2) He was in the beginning with God. (3) All things were made through Him, and without Him nothing was made that was made”

John 1:1-3

AGE OF THE UNIVERSE AND EARTH

The uninterrupted creation account in Genesis 1:2 to 1:31 explicitly uses the terms *first day, second day, third day, fourth day, fifth day and sixth day* to describe when specific creative acts were performed by God. Even though most people are familiar with the creation account as outlined in these verses, there has, and continues to be, an enduring disagreement over the definition of the word *day* being defined as a literal 24-hour day or long periods of time. From another perspective, did creation take place over six 24-hour solar days as we know them today, or does the Bible allow for long periods of time such as billions and/or millions of years in the creation account? As the correct interpretation of the word *day* is the first step to the solution of determining the age of the universe and Earth from a biblical perspective, let's look at three areas of consideration:

- Does the Bible allow for long periods of time in the creation account?
- The biblical word “*day*”
- Bible chronology

Does The Bible Allow For Long Periods Of Time In The Creation Account?

Prior to the eighteenth century, the issue of creation being accomplished in six 24-hour days was not an issue. However, during the eighteenth century, evolutionary and naturalistic theories of the earth's creation based on uniformitarian assumptions (*the scientific perception that the same natural laws and processes that operate in the universe now, have always operated in the universe in the past and apply everywhere*) and old-earth theories emerged in addition to two enlightenment-generated philosophical movements, deism and atheism. These movements elevated human reason to a place of supreme authority and took an anti super naturalistic view of the Bible, holding it to be just another human book.

Then, after the eighteenth century, many Christians in the early nineteenth century sought to harmonize biblical teaching with old-earth geological theories

and a tranquil or local Noachian flood. These two philosophical movements with their advocacy of an old-earth preceded Darwin and supplied him with millions and billions of years needed for his naturalistic theory of the origin of living things. From this lineage it is clear that biased science, old-earth theories, and naturalism are inseparable. As a result, the Christian church primarily began to incorporate millions of years into biblical Scripture during the nineteenth century as evidenced by the following four examples:¹⁹

- 1810 – Introduction of the Gap Theory (insert long ages between verses 1 and 2 of Genesis 1)
- 1820 – Introduction of the Day-Age Theory (creation days are interpreted as long ages) and the concept of a Peaceful Global Flood Theory
- 1830 – The introduction of the Local Flood Theory (Mesopotamian Valley area) and the perception of Genesis as a myth – not history
- 1850 – The general acceptance of millions of years by the Christian church that was framed on the foundation of “everything can be explained by *time*, plus *chance*, plus the *laws of nature*”

Once the concept of millions of years had gained the status of acceptable science, some influential and respected Christian authors and publications added to its credibility. Several examples are:

- 1909 C.I. Scofield, Scofield Reference Bible. The margin notes for Genesis 1:2 states – “*The first creative act refers to the dateless past, and gives scope for all the geologic ages*”
- 2000 Dr. Norman Geisler, Baker Encyclopedia of Christian Apologetics. Pages 270 and 272 state – “*The problem is deepened by the fact that there is prima facie evidence to indicate that the days of Genesis are indeed twenty-four hour periods.....Most scientific evidence sets the age of the world at billions of years*”

So, when we apply the preceding summary of where long ages in the creation account originated from, it is easy to see why the word *day* within the creation account has created a significant amount of debate, confusion, misunderstanding and diversity within the church and Christian leaders.

Next, lets look at why biblical Scripture does not support long ages in the creation account as evidenced by the literal definition of the word *day* and biblical chronology.

The Biblical Word “Day” (Yom)

As a starting point, let’s look at the word “*day*” from a Hebrew perspective (as the Old Testament was written in Hebrew) and see if the Bible clearly defines day, and if so, are there any consequential implications. The Hebrew word for day in the Genesis account of creation is “*Yom*” and occurs 2,300 times in the Old

Testament, with 1,450 uses in the singular, 845 uses in the plural, and 5 uses in the dual form. Its semantic range is limited to five meanings:

1. A period of a year
2. A general or vague concept of time
3. A period of light in a day/night cycle
4. A specific point of time
5. A period of 24 hours

As can be seen by the five preceding meanings, *Yom* can be defined as various periods of time and is used in different contexts throughout the Bible. As an example, the word day is used in Genesis 1, in Exodus 20:11, in describing the three days Jonah was in a great fish, and so on. However, one use of the word day that is often boldly used to illustrate that a day can mean long periods of time is found in 2 Peter 3:8 – *“One day is like a thousand years, and a thousand years are like a day.”* This verse is best defined as – *God understands time much differently from man. From man’s viewpoint, Christ’s coming seems like a long time away*²⁰ (see *Psalm 90.4*). Even though the context of this verse has nothing to do with creation and the verse does not say, *A day is a thousand years*, this verse is still used to give a measure of credibility to a day meaning long periods of time.

A serious exegesis by leading contemporary theological expositor Dr. Kenneth Gentry underscores five relevant points with Hebrew grammar as applied to the creation account in Genesis:²¹

- “Day” is qualified by evening and morning (Genesis 1:5, 8, 13, 19, 23, 31), which specifically limits the time frame
- The very same word “day” is used on the fourth day to define a time period that is governed by the sun, which must be a regular day (Genesis 1:14)
- In the 119 instances of the Hebrew word “day” (*yom*) standing in conjunction with a numerical adjective (first, second, etc.) in the writings of Moses, it never means anything other than a literal day. Consistency would require that this structure must so function in Genesis 1
- Exodus 20:9-11 patterns man’s workweek after God’s original workweek, which suggests the literality of the creation week
- In Exodus 20:11 the plural for the word “days” of creation is used. In the 845 instances of the plural “days” in the Old Testament, it never means anything other than literal days

Based on the Hebrew rules of grammar, *Yom* in the Genesis account of creation means 24-hours. The clearest example of the use of *Yom* is found in the Fourth Commandment in both Exodus 20:8-11 and 31:17 – *“For in six days the LORD made the heavens and the earth, the sea, and all that is in them, and rested on the*

seventh day. Therefore, the LORD blessed the Sabbath day and hallowed it." The word *for* (also having the sense *because*) at the beginning of the expression is a causal explanation showing that the creation week is the very basis of the working week. In these passages, it's explicit that the creation days were the same as those of the human workweek. Therefore, if a biblical day is supposed to mean billions and millions of years, then is the Sabbath day billions and millions of years in length? Consider the following quotes:

"Probably, so far as I know, there is no professor of Hebrew or Old Testament at any world-class university who does not believe that the writer(s) of Genesis 1-11 intended to convey to their readers that creation took place in a series of 6 days which were the same as the days of 24-hours we now experience, and Noah's flood was understood to be worldwide"

James Barr, past Regis Professor of Hebrew, Oxford University

"I have not met any Hebrew professors who had the slightest doubt about this unless they were already committed to some alternative by other considerations that do not arise from a straightforward reading of the Hebrew text as it stands"

Hugh Williamson, current Regis Professor of Hebrew at Oxford University

"For the biblical people this was history, difficult as it is for us to accept this view"
Emanuel Tov, J.L. Magnes Professor of Bible, Hebrew University of Jerusalem

"There isn't much in the way of observational evidence in astronomy to conflict with a very young age for the sun and earth; less than 7,000 years"
Evolutionist John Eddy, one of the worlds leading Astronomers

Three additional side points of interest are:²²

- *"God called the light Day, and the darkness He called Night"* – Genesis 1:5. This verse begins the cycle of the day. With the creation of light, it is now possible to have a cycle of light and darkness, which God labels "day" and "night." Evening is the transition from light/day to darkness/night. Morning is the transition from darkness/night to light/day. Having an evening and a morning amounts to having one full day. Hence, the following equation is what Genesis 1:5 expresses – Evening + Morning = one day. Consequently, by using a most unusual grammatical construction, Genesis 1 is defining what a day is
- A literal reading of Genesis 1:5 through Genesis 2:2 directly from the Hebrew would read as follows – (1:5) *"One day morning and was evening and was (1:8) second day morning and was evening and was (1:13) third day morning and was evening and was (1:19) fourth day morning and was evening and was (1:23) fifth day*

morning and was evening and was (1:31) sixth day morning and was evening and was (2:2) the seventh on day God. And finished had He made which work His the seventh day on and He rested.” Notice the first day has a cardinal number (one, two, three, etc.) and the others have ordinal numbers (second, third, fourth, etc.). Therefore, a literal translation of creation week would be *day one, a second day, a third day, a fourth day, a fifth day, the sixth day, the seventh day*

- According to 2 Peter 3:10-13 the universe and Earth will ultimately melt in fervent heat that ends human history, as we know it. However, Revelation 21:1 says that a new heaven and earth will be made as a replacement. If it is believed it took evolution and/or God billions and millions of years to create the original universe and Earth, will it also take billions and millions of years to re-create the new heaven and Earth or will God create it in an instant by the *word of his mouth?*²³

Therefore, in a biblical and Hebrew context in the Genesis account of creation, the word *day* means a literal 24-hours. The resultant consequential implications are:

- **The long periods of time that evolution requires do not fit anywhere within the 6-day creation account**
- **The evolutionary process within the 6-day creation week is also not possible**
- **There is no room for evolution, anywhere, in the biblical account of creation**

To conclude the aforementioned comments on the meaning of the word “Day,” if the text of Genesis 1 and 2 does not mean to teach traditional chronology and literal 24-hour days, then how are the following questions answered that have been posed by Dr. Jud Davis, Associate Professor of Greek at Bryan College:

- Why do nearly all world-class Hebraists assume that the writer of Genesis intended normal days and the text as history?
- Why did the ancient, medieval, and modern church – until about 1800 – have few commentators (if any) who believed in an ancient universe?
- Why is there little or no classical Rabbinic support for an ancient universe?
- Why does Jesus take Genesis 1 & 2 as teaching history (Matt 19:4, Mark 10:6)?
- Why does Paul take Genesis as history (Romans 5:12, 1 Corinthians 11:8-9, 15:21-22, 15:45, 1 Timothy 2:12-14)?
- Why do all of the ancient translations and paraphrases, such as the Aramaic Targums, take the words in Genesis 1 at face value and translate them as “days” with no hint that they might mean “ages?”

- Why are there well-qualified PhD scientists who still support physical data as consistent with a young-earth view?

Bible Chronology

Once we have determined the Hebrew definition of the word *day*, we can then use Bible Chronology to determine the approximate age of the universe and Earth by referring to the chrono-genealogies in Genesis 5 and 11 as each name contains a time stamp. As an example, Seth was born to Adam when he was 130, and Seth had Enosh when he was 105. So, from Adam to Enosh was 235 years.

Continuing on:

- If the genealogy list and resultant ages are added from Adam to the birth of Noah's sons, there should be 1,556 years. Shem was the middle child (Genesis 9:24, 10:21), and was born when Noah was 502, resulting in Shem's birth 1,558 years after the creation of Adam
- Beginning with the dates of Shem's descendants in Genesis 11:10 and going to Terah accumulates another 320 years. Using Genesis 11:32 and 12:4, we find that Terah was 130 when Abraham was born
- Adding the aforementioned dates yields a time span of about 2,008 years from Adam until Abraham
- As most biblical and secular scholars agree that Abraham was born around 2,000 BC (which also agrees with the Bible), we know Abraham to Jesus covers about 2,000 years, and we are about 2,000 years removed from Jesus (specifically 2018 years)
- **So, 2,000 + 2,000 + 2,000 means that the universe and Earth are about 6,000 years old,²⁴ as in Figure 4**

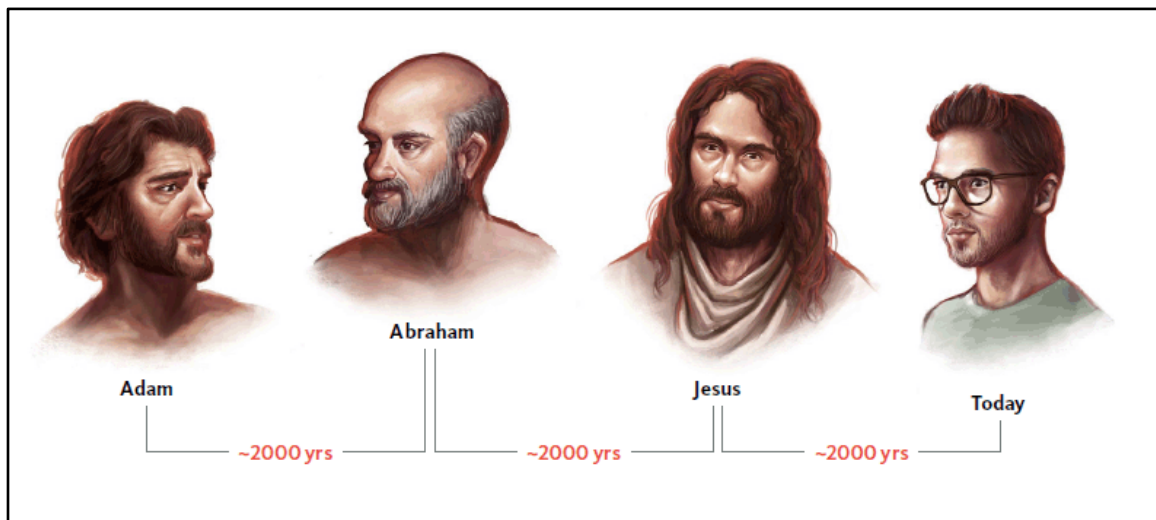


Figure 4. A General Biblical Chronology

- The word *about* is previously used several times, as there are some differences in various manuscripts. Although the dates can vary by a few thousand years at the most, the approximate age of the universe and Earth is about 6,000 years old with an upper range to possibly 8,000 years old. This is far different than the secular dates of 13.7 to 13.8 billions of years for the universe and 4.5 billions of years for the Earth

SCIENTIFIC EVIDENCE FOR THE AGE OF THE UNIVERSE AND EARTH

There are many categories of evidence for the age of the universe and Earth that indicates they are much younger than is generally declared by modern secular science. All ages (called clocks) result from calculations that must involve making assumptions about the past as secular science is without any eyewitness accounts concerning the beginning of the universe or Earth which places the validity of secular science dating in question. Consider the following three basic secular assumptions:

- The starting time of the clock has to be assumed
- Has the speed of the clock remained constant or has it varied over time
- It must be assumed the clock has never been disrupted

Unfortunately, the previous three assumptions cannot be tested or verified by secular science. Instead, ages of billions and millions of years are all calculated by *assuming* the rates of change of processes in ages past were the same as we observe today. This is called the principle of *uniformitarianism*, which is a foundation of modern secular science dating methodology. Unfortunately, in the absence of observation, there is no independent natural and/or reliable clock that the aforementioned uniformitarianism assumptions has witnessed, tested and verified. It should be noted that factual science *does not* support long ages for the universe and Earth, which often comes as a noteworthy surprise to most people as there has been a constant mantra of long ages from modern secular science.

The following list is a summary of current evidences that challenge the current dating assumptions of secular science and point towards the validity of young ages for the universe and Earth. They are not listed in any particular order, are strong arguments for a young age of the universe and Earth, and speak for themselves. Additional applicable lists of factual scientific evidences for a young Earth and universe can be found at:

- *Age of the earth – 101 evidences for a young age of the earth and the universe, creation.com*
- *Evidence for a Young World, Dr. Russell Humphreys, www.icr.org*
- *10 Best Evidences From Science That Confirms a Young Earth, Dr. Andrew A. Snelling, www.answersingenesis.org*

COAL AND DIAMONDS

Coal is thought to be between 360 to 290 million years old, and diamonds are thought to be 3.5 to 1 billion years old.²⁵ Yet, readily detectable amounts of C¹⁴ (remember our previous discussion on C₁₄?) has been detected in samples of coal, diamonds, and even fossils that are dated at 500 million years old. Conventional C₁₄ laboratories have been aware of this anomaly since the early 1980's, and are unable to account for it as this points towards an Earth that is thousands of years old, not billions of year's old.²⁶

SATURN

On September 15, 2017, the Cassini spacecraft from the Cassini-Huygens mission sent back data on Saturn, its satellites, and its exotic ring system. This mission surprised secular scientists by illuminating some key characteristics that point towards a young universe. Following is a few of the discoveries:²⁷

- The observed changes in Saturn's rings showed that Saturn's rings are far younger than the alleged 4.5 billion years age for the universe
- The measured gravitational pull within the rings is too light to have lasted billion of years
- Measurements of the dust coming from the outer solar system show that the icy rings are too clean to be billions of years old
- Measurements of Saturn's core and gravitational forces showed that the planet cannot be billions of years old

SHORT-LIVED COMETS

According to evolutionary theory, comets are supposed to be the same age as the solar system, about 5 billion years old. A comet is nothing more than frozen ice and dust that spends most of its time far from the sun in the deep freeze of space. When a comet's orbit comes close too close to the sun, much of the comet's ice and dust are dislodged to form a tail. As comets have little mass, each close pass by the sun greatly reduces the comet's size, eventually fading the comet away. Yet, many comets have typical ages of less than 10,000 years.²⁸

EARTH'S MAGNETIC FIELD

The energy in the Earth's magnetic field is decreasing with a half-life of about 1,465 years. Evolutionary theories cannot explain this rapid decrease as well as how the Earth could have maintained its magnetic field for billions of years. Evidence indicates that the field's total energy has always decayed at least as fast as recent studies. At this rate, the field could not be more than 20,000 years old.²⁹

SOFT TISSUE IN FOSSILS

This noteworthy problem for the evolutionary dating process was covered in detail in our program Dinosaurs aired on November 17, 2017. To summarize, in 2005, a research group led by Dr. Mary Schweitzer, University of Montana, reported the discovery of fresh red blood cells, hemoglobin, soft fibrous tissue, intact bone cells, fragments of collagen (primary protein in bone), Carbon-14 and complete soft blood vessels in the fossilized femur (leg bone) of an alleged 68 million year old T-Rex (Figure 13).³⁰ Remarkably, the tissue had retained its pliable and soft characteristics that allowed it to be stretched and then return to its original shape. This discovery provides direct physical evidence that the T. rex fossil was not millions of years old which stands in direct contradiction of contemporary secular dating systems. Not surprisingly, this discovery created an enormous amount of skepticism, as it was obvious that if dinosaur fossils are at least 65 million years old, any residual tissue should have decomposed millions of years ago and any fossil examined for Carbon-14 after this time frame should be *carbon dead*.

This exciting discovery (which is not the first for Dr. Schweitzer or other scientists) makes an obvious statement – *“It is inconceivable that such things could be preserved for millions of years. Evidence of hemoglobin, and the still-recognizable shapes of red blood cells, in ancient dinosaur bone is a powerful testimony against the whole idea of dinosaurs living millions of years ago. It speaks volumes for the Bible’s account of a recent creation.”*³¹ So, if dinosaur bones cannot be millions of years old, how old are they? The simple answer is – *a few thousand years old, not millions of years old!*

VERY LITTLE SEDIMENT ON THE SEAFLOOR

If sediments have been accumulating on the seafloor for four billion years, the seafloor should be choked with sediments many miles deep, yet the average thickness of seafloor sediments over the whole seafloor globally is not even 1,300’. Every year, water and wind erode about 20 billion tons of dirt and rock debris from the continents and deposit them on the seafloor. An estimated one billion tons are removed each year by movement of tectonic plates, leaving a net gain of 19 billion tons per year. At this rate, 1,300’ of sediment would accumulate in way less time than billions of years.³²

FAINT SUN PARADOX

Current evidence supports the power from the sun comes from the fusion of hydrogen into helium in the core of the sun. However, as the hydrogen fuses, it should change the composition of the sun’s core, gradually increasing the sun’s temperature. This means that the Earth should have been below freezing 3.5

billion years ago, when life supposedly evolved. Evolutionists refer to this problem as the “*faint young sun paradox*.”³³

SUPERNOVA REMNANTS

According to astronomical observations, galaxies like our own (Milky Way) experience about one supernova (a violently-exploding star) every 25 years. The gas and dust remnants from these explosions rapidly expand outward and should remain visible for over a million years. Yet, the nearby parts of our galaxy (in which we can observe such gas and dust shells) contain only about 200 supernova remnants. That number is consistent with only about 7,000 years worth of supernovas.³⁴

ZIRCONS

Zircons often contain abundant helium, produced by much radioactive decay. Yet, these small and inert atoms should long ago have diffused out of the zircon crystals. This indicates that it was recently produced no more than 6,000 years ago by accelerated radioactive decay.³⁵

FLAT GAPS

Smooth boundary lines between rock strata layers (formally called *paraconformities*), and readily visible in the Grand Canyon, show that there has been no time for significant erosion between geological rock layers that are allegedly separated by millions of years.³⁶ This indicates a much younger age for the rock strata and boundary lines than billions and millions of years.

CONCLUSION

This discussion has summarized the importance of trust and faith when applied to the Bible, and particularly the Genesis account of creation. Unfortunately, many people either reject Genesis or find Genesis hard to believe even though they claim to believe in the authority and inerrancy of the Bible. This dilemma is best explained as outlined in Romans 1:18-22 – “(18) *For the wrath of God is revealed from heaven against all ungodliness and unrighteousness of people who suppress the truth by their unrighteousness, (19) because what can be known about God is plain to them, because God has made it plain to them. (20) For since the creation of the world his invisible attributes-his eternal power and divine nature have been clearly seen, because they are understood through what has been made. So people are without excuse. (21) For although they knew God, they did not glorify him as God or give him thanks, but they became futile in their thoughts and their senseless hearts were darkened. (22) Although they claimed to be wise, they became fools.*”

However, the real question is “*What is the best explanation for your purpose in life?*” If creation is true (and the evidence from science and Scripture indicate that it is), then each person should be concerned with their future destiny and

specifically, where you will spend eternity. The Bible clearly says – “*All have sinned and come short of the Glory of God*” – Romans 3:23, and those without a personal acceptance of God will spend eternity in a lake of fire (Revelation 20:15). Nevertheless, God has provided an alternate choice, and that choice is a free gift that only needs to be accepted by you – “*For God so loved the world, that He gave his only begotten Son, that whosoever believeth in Him should not perish, but have everlasting life*” – John 3:16, and “*For whosoever shall call upon the name of the LORD shall be saved*” – Romans 10:13. This is God’s message to you, so have you accepted his free gift of eternal life?

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