

# Genesis 1: How God Created the Earth? – Timeline and Definitions

## SERVANT PREPARATION:

### VERSE & REFERENCES:

Genesis 1:1-28 and the movie “How the Earth was Made.”

“For since the creation of the world His invisible *attributes* are clearly seen, being understood by the things that are made, *even* His eternal power and Godhead, so that they are without excuse” (Romans 1:20).

## LESSON PREPARATION

### OBJECTIVES

**Lesson Objective:** To learn about how God created the earth – timeline and definitions, and to thoroughly understand Genesis 1:1-28 and connect God’s plan of creation to science and show that they are in complete harmony.

INTRODUCTION: “We believe in one God, the Father the Pantocrator, Maker of Heaven and Earth, and all things seen and unseen.” There are the opening words of the Nicene Creed, the central doctrinal statement of Christianity, affirm that the one True God is the source of everything that exists – both physical and spiritual, both animate and inanimate. The Holy Scriptures begin with a similarly striking assertion: “In the beginning God made heaven and earth.” St. Basil declares:

“In the fear that human reasonings may make you wander from the truth, Moses has anticipated inquiry by engraving in our hearts, as a seal and a safeguard, the awesome name of God: ‘In the beginning God created.’ It is He – beneficent Nature, Goodness without measure, a worthy object of love for all beings endowed with reason, the beauty the most to be desired, the origin of all that exists ... it is He who ‘in the beginning created heaven and earth.’”

The ever-existent Almighty God was not forced to create the universe. Rather, in His goodness and lovingkindness, He freely chose to do so. And the fact that the Lord created the universe *out of nothing* stands in clear contrast to the creation myths of the surrounding cultures in the ancient world.

The central role of Jesus Christ, the Word of the Father, in the creation of all things is plainly stated in the first chapter of St. John's Gospel, where it is written "In the beginning was the Word..." All things were made through Him, and without Him nothing was made that was made" (John 1:1-3). And the specific role of the Holy Spirit, the Third person of the Undivided Trinity, in the creation of the world is seen in Genesis 1:2 (see also Psalm 103:30; 32:6).

Regarding questions about the scientific accuracy of the Genesis account of creation, and about various viewpoints concerning evolution, the Orthodox Church has not dogmatized any particular view. What is dogmatically proclaimed is that the One Triune God created everything that exists, and that man was created in a unique and special way and is alone made *in the image and likeness of God* (Genesis 1:26-27). The Church Fathers also consistently affirm that each species of the animate creation came into existence instantaneously, at the command of God, with its seed within itself. In contrast, *God formed man from the dust of the ground and breathed into his nostrils the breath of life* (Genesis 2:7).

The development of life was not by accident. Rather, Supreme Intelligence and Impenetrable Wisdom were at work in the creation and sustenance of all that exists. In discussing various scientific theories of his day, St. Basil the Great declared, "If there is anything [or any other] system which seems probable to you, keep your admiration for the source of such perfect order – the wisdom of God."

He also wrote, "We must still remain faithful to the principle of true religion and recognize that all that exists is sustained by the Creator's power."

The repeated affirmation "and God saw that it was good" in Genesis 1 underscores the intrinsic, fundamental *goodness* of matter and the whole created order, even after the Fall of Adam and Eve. This understanding is the basis for a sacramental world view – that the created order not only is good, but also can be a means for communion with God, by virtue of being created by the All-Good god. Moreover, the astounding beauty, intricate order, and sublime harmony of all aspects of

Creation, as well as the tremendously vast expanse of the universe, are intended to draw mankind to an awareness of and appreciation for the Creator, and to the worship of Him – and him alone! (See Psalm 18:1-4, Romans 1:20).

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#### LESSON BODY:

Our focus will be on Genesis 1:1-28, which cover the 6 days of creation.

**1. Definition of day and night** – A day represents a period of time of light, and night represents a period of darkness. Thus, the day that is talked about in Genesis 1 is not 12 or 24 hours. It is simply a period of light, which would be billions of years. For example, a polar day is 6 months and a polar night is 6 months. Thus, even by today's definitions, a day and night is not 12 hours each.

2. God created the world in 6 periods of light (which God called mornings), where each period of light was preceded by a period of darkness (which God called nights.)

3. The 6 periods of light and darkness will correspond to certain geological events. The periods of darkness correspond to certain catastrophic geological events in the earth's atmosphere.

4. As we read in Genesis, we see that there is a sequence of events in the creation:

**Day 0:** "In the beginning, God created the heaven and the earth. The earth was invisible and unfinished; and darkness was over the deep" (Genesis 1:1-2). Here, **God creates the universe.**

**Day 1: Light is created.** "God said, let there be light" (Genesis 1:3). "God saw the light and it was good" (Genesis 1:4). There is only water. The Church Fathers also say that God created the angels and all the heavenly beings on Day 1, since the angels are representatives of light.

**Day 2: The sky is created.** "God said, let there be a firmament in the midst of the water. God divided the water under the firmament from the water above the firmament. So God called the firmament heaven" (Genesis 1:7). Still no life whatsoever on earth.

**Day 3: Land is created and then plants.** So life first appears on earth on the third day. "Then God said, "Let the waters under the heavens be gathered together into one place, and let the dry land appear"; and it was so. And God called the dry land Earth, and the gathering together of the waters He called Seas. And God saw that it was good. Then God said, "Let the earth bring forth grass, the herb *that* yields seed, *and* the fruit tree *that* yields fruit according to its kind, whose seed *is* in itself, on the earth"; and it was so. And the earth brought forth grass, the herb *that* yields seed according to its kind, and the tree *that* yields fruit, whose seed *is* in itself according to its kind. And God saw that *it was* good. So the evening and the morning were the third day." (Genesis 1:9-13).

**Day 4: The Sun, moon, and stars shine on the earth.** “Then God said, “Let there be lights in the firmament of the heavens to divide the day from the night; and let them be for signs and seasons, and for days and years; and let them be for lights in the firmament of the heavens to give light on the earth”; and it was so. Then God made two great lights: the greater light to rule the day, and the lesser light to rule the night. *He made* the stars also. God set them in the firmament of the heavens to give light on the earth, and to rule over the day and over the night, and to divide the light from the darkness. And God saw that *it was* good. So the evening and the morning were the fourth day” (Genesis 1:14-19).

**Day 5: God creates the birds, fish, and great land and sea creatures.** It was on the 5<sup>th</sup> day that dinosaurs were created. In Strong’s concordance Bible, Taneen is used to describe the great creatures, which means great land or sea monster. “Then God said, “Let the waters abound with an abundance of living creatures, and let birds fly above the earth across the face of the firmament of the heavens.” So God created great sea creatures and every living thing that moves, with which the waters abounded, according to their kind, and every winged bird according to its kind. And God saw that *it was* good. And God blessed them, saying, “Be fruitful and multiply, and fill the waters in the seas, and let birds multiply on the earth.” So the evening and the morning were the fifth day. (Genesis 1:20-23).

**Day 6: God creates the mammals and then creates man.** The mammals that were created on the 6<sup>th</sup> day are modern day mammals (not extinct). Then God said, “Let the earth bring forth the living creature according to its kind: cattle and creeping thing and beast of the earth, *each* according to its kind”; and it was so. And God made the beast of the earth according to its kind, cattle according to its kind, and everything that creeps on the earth according to its kind. And God saw that *it was* good” (Genesis 1:24-25).

Then God said, “Let Us make man in Our image, according to Our likeness; let them have dominion over the fish of the sea, over the birds of the air, and over the cattle, over all the earth and over every creeping thing that creeps on the earth.” So God created man in His *own* image; in the image of God He created him; male and female He created them. Then God blessed them, and God said to them, “Be fruitful and multiply; fill the earth and subdue it; have dominion over the fish of the sea, over the birds of the air, and over every living thing that moves on the earth.” (Genesis 1:26-28).

Notice here that the creation of man is very special and very different than the creation of anything else. First, we notice that God says, “Let Us” implying that the Holy Trinity is involved in all of creation. Second, God says, “Let Us make man in Our image, according to Our likeness”. God does not say that about any other created thing. Thus, man is a special creation that is above any other creation. Third, man has dominion over the “fish of the sea and the birds of the air.” Thus, man is above any living created animal or creature.

**Day 7: God rests on the 7<sup>th</sup> day, meaning that there is no more creation.** All of creation is now complete.

## The Harmony between Science and Creation:

CREATION TIME LINE					
Time* (Best Est.)	Scientific Description	Gen Day	Theistic Description	Bible Ref	Scripture Quotation (NKJ)
13.8 Ga	Beginning of time: the <a href="#">big bang</a> .	0	Creation of the universe. God creates time and space, setting all the laws of Physics.	Gen 1:1	In the beginning God created the heavens and the earth.
13.3 Ga	Galaxies and the first stars coalesce from the primordial gases produced shortly after the big bang.		The universe evolves according to the natural laws, which are the commands of God. He maintains control at every moment. Yet uses the forces of nature as His tools.		
ongoing	Heavy elements are formed by fusion within stars. These elements are released into space through supernova explosions.				
4.5 Ga	The shock wave from a nearby supernova initiates the collapse of a large				

	cloud of gas and dust. From this, many stars and planets form, including the Sun and the Earth.				
4.4 Ga	The Earth cools within about a 100 million years of formation. A world wide ocean forms with a hot thick atmosphere of CO <sub>2</sub> , methane, water vapor, and many volcanic gases.		God selects the Earth, a water world, to cultivate for life. The thick atmosphere prevents light from reaching the Earth's surface.	Gen 1:2	The Earth was without form, and void; and darkness was on the face of the deep. And the spirit of God was hovering over the face of the waters.
4.4-3.8 Ga	Gradual evolution of the Earth's atmosphere.	1	God causes the atmosphere to become translucent, allowing light to reach the surface of the Earth.	Gen 1:3-5	Then God said, "Let there be light"; and there was light...
3.9 Ga	The late heavy meteor bombardment. This may have affected the atmosphere's composition. Extreme heating during this event is thought to have made the Earth uninhabitable for any form of life.	2	Clouds lift and water vapor in the atmosphere is reduced.  Some of the atmospheric changes may be due to the action of microbes. God may have created them for this purpose.	Gen 1:6-8	...Thus God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament.
3.8 Ga	Lower temperatures, loss of volatile elements from				

	<p>the atmosphere into space, less water in the atmosphere.</p> <p>The first microorganisms appear.</p>				
3.0-2.0 Ga	<p>Over about a billion year period most of the Earth's crust was formed during a high level of tectonic activity. Over half of Earth's land mass is formed during this time.</p>		<p>God creates land by the natural system of plate tectonics that He invented. The bible implies that all the land was together in one supercontinent. This is known to have happened many times throughout geological history.</p>	Gen 1:9-10	<p>Then God said, "Let the waters be gathered together into one place, and let the dry land appear..."</p>
850-580 Ma	<p>Marine plants, especially photo-plankton thrive on the continental shelves.</p> <p>Land plants may have been present by 700 million years ago. (DNA evidence suggests this, though there are no fossils of plants from this time.) Mainly small moss like species, plus lichens and algae. (fossils for lichens and algae are present in the fossil record during this time period.)</p>	3	<p>Plant life is created. Sea plants were first. Land plants came next. The descriptions in Genesis may not be intended to represent individual plant species, but the origin of land plants as whole. During this time period, land plants had their beginnings. (Ancient people would not have distinguished fungi, algae, lichens, etc from the plant kingdom as does modern science. So these are included as well.)</p>	Gen 1:11-13	<p>Then God said, "Let the earth bring forth grass, the herb that yields seed, and the fruit tree that yields fruit according to its kind, whose seed is in itself..."</p>



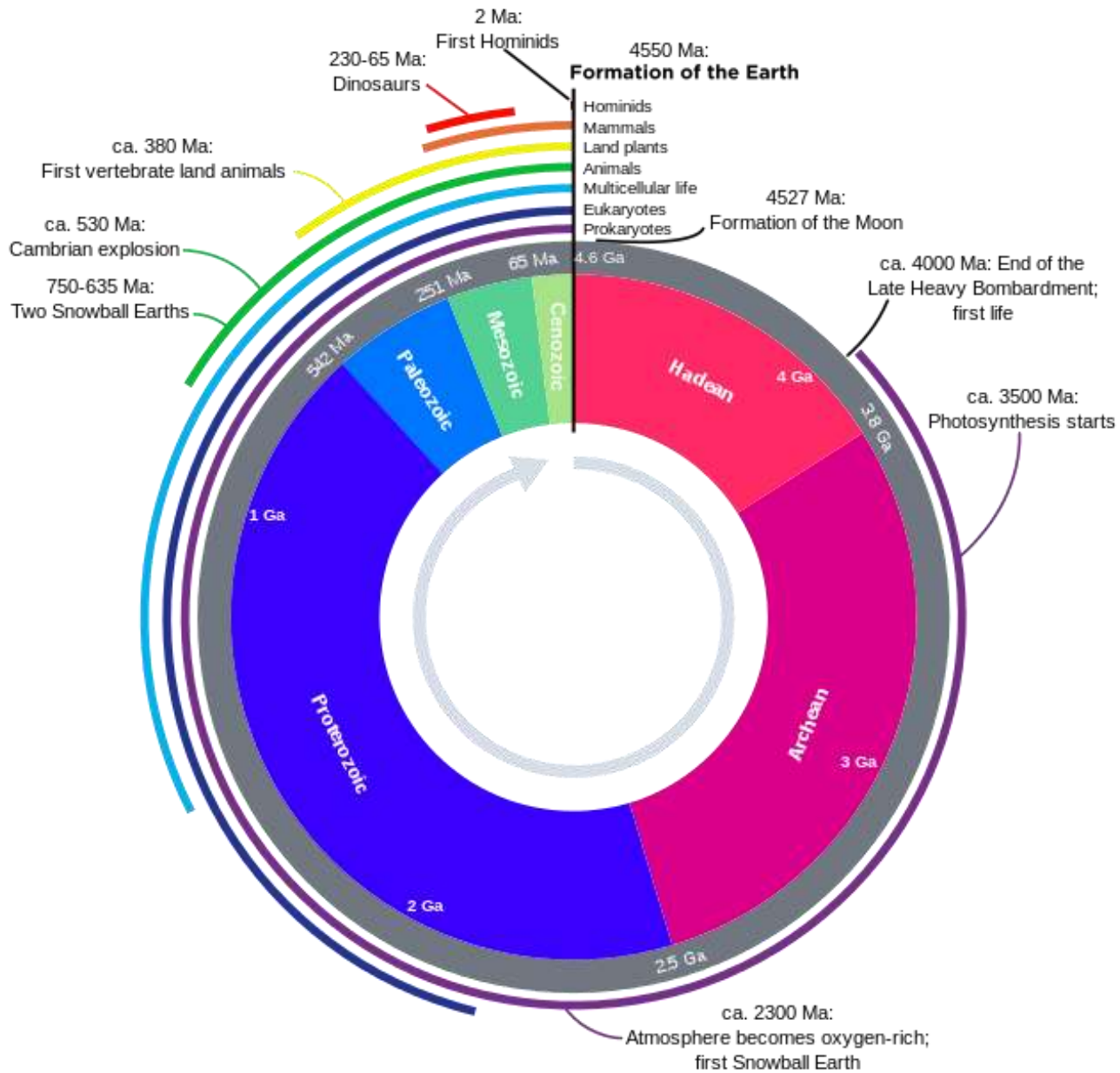
700-550 Ma	Oxygen levels rise significantly due to photosynthesis. The atmosphere is comparable to its current composition by the end of this time.	4	An oxygen/nitrogen atmosphere is transparent to visible light. The sun, moon, and stars can now be seen from the surface of the Earth. (Note: that Genesis only predicts that the light of these bodies appear in the sky at this time, not the original creation of them. The creation of all heavenly bodies is described in Gen 1:1, prior to the first day)	Gen 1:14-19	Then God said, "Let there be lights in the firmament of the heavens to divide the day from the night; and let them be for signs and seasons, and for days and years..."
580-480 Ma	The Cambrian explosion: The massive and abrupt appearance of ancient sea animals in the fossil record. Nearly all animal phyla are known to have originated during this time.	5	Creation of sea animals.	Gen 1:20-23	Then God Said, "Let the waters abound with an abundance of living creatures, and let the birds fly above the earth..."
199-65 Ma	Dinosaurs roamed the Earth during this time. A clade of dinosaurs, theropods, would be the only dinosaur group to have descendants that survive to the present. Today theropods are represented by modern birds.		Creation of birds. Dinosaurs and birds existed at this time. But only birds are listed in Genesis, since other dinosaurs did not survive to the present and were unknown to ancient people.		
65-1	Large mammals appear in	6	Creation of familiar land	Gen	Then God said,

Ma	the fossil record soon after the extinction of the dinosaurs.		mammals that still exist today. (Cows, goats, pigs, dogs, cats, bears, mice, deer, rabbits, horses, lions, elephants, etc; all originate during this time period.)	1:24-25	"Let the earth bring forth the living creature according to it's kind: cattle and the creeping thing and the beast of the earth, each according to it's kind..."
25-75 ka	Anatomically and behaviorally modern humans have only existed for thousands of years. Extremely recent in geologic time. Not only does the fossil record show this, but the remarkably low genetic diversity of the human genome supports this fact as well.		The Genesis creation account lists the creation of man last, this is verified in the fossil record.	Gen 1:26-31	Then God said, "Let Us make man in Our image, according to our likeness..."

\* Ga = giga-annum (billions of years ago)

Ma = mega-annum (millions of years ago)

ka = kilo-annum (thousands of years ago)



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## CONCLUSION:

The earth is 4.5 billion years old. God is the creator of the universe and every living thing, and science is in complete harmony with the Bible. The Orthodox Church does not interpret the Day as literally 24 hours in the account of the creation given in Genesis. The Days in Genesis 1 are very long periods of time, and could be billions of years. The 6 Days given in Genesis 1:1-28 have periods of night followed by periods of morning. The 6 Days of night correspond to catastrophic geological events, and the 6 Days of morning correspond to events of creation by God. The catastrophic events as well as the events of creation in Genesis 1 are totally consistent with scientific research and discovery.

**VERSE TO REMEMBER:** “In the beginning was the Word, and the Word was with God, and the Word was God. He was in the beginning with God. All things were made through Him, and without Him nothing was made that was made.” (John 1:1-3).

## 1. What did Scientists Find?

### SERVANT PREPARATION:

### VERSE & REFERENCES:

Then God said, “Let Us make man in Our image, according to Our likeness; let them have dominion over the fish of the sea, over the birds of the air, and over the cattle, over all the earth and over every creeping thing that creeps on the earth.” So God created man in His *own* image; in the image of God He created him; male and female He created them.” (Genesis 1:26-27)

### LESSON PREPARATION

### OBJECTIVES

**Lesson Objective:** To learn that science and the Bible are in total harmony with respect to the creation

### INTRODUCTION:

In the first lesson, we learned that God created everything in 6 Days (periods), and that this account of creation Genesis is consistent with scientific discovery. There was a specific pattern in the creation, there were nights and days. The nights consisted of periods of “darkness” of catastrophic events and the days consisted of periods of “light” of new events. We also learned that the earth is 4.5 billion years old, and that the creation of man is very unique and special

### LESSON BODY:

The earth is 4.5 billion years old as scientists have formally calculated from dating of rocks and meteors.

God created the earth by allowing (commanding) gigantic supernova explosions from the big bang that eventually formed the earth. This corresponds to Day 0, and in the Bible this activity corresponds to Genesis 1:1 where God says, "In the beginning God made heaven and earth."

As a result of these cosmic collisions that formed the earth 4.5 billion years ago, the earth was very hot, and all kinds of volcanic activity erupted over the next 100 million years and meteors hit the earth from these cosmic collisions. Now scientists determined from the meteors that hit the earth, that the rocks formed from the meteors themselves contained bubbles of water, thus indicating that water did indeed cover the earth. This precisely verifies Genesis 1:2 which says, "the earth was invisible and unfinished, and darkness was over the deep." The existence of water at the time of the formation of the earth helped in the cooling of the earth.

**Day 1:** Day 0 corresponds to the creation of heaven and earth (Genesis 1:1). Day 1 night corresponds to the darkness that was over the deep described in Genesis 1:2. Thus, the period of light after this darkness is the morning of Day 1 where God created light, and we read "God said, "let there be light."

Thus, Day 1 morning is the creation of light. On the morning of Day 1, God causes the atmosphere to become translucent, allowing light to reach the surface of the Earth. The angels and the heavenly being were also created on Day 1.

**Day 2:** After this period of light in Day 1, there again came darkness which came in Day 2 night. In Day 2 night, there was a heavy meteor bombardment that may have affected the atmosphere's composition, thereby verifying Genesis 1:6 "Let there be a firmament in the midst of the water..." This is the day (Day 2 morning) that the sky is now created. Extreme heating during this event is also thought to have made the Earth uninhabitable for any form of life as determined by scientists. This is consistent with what is stated in the Bible, as life had not yet existed on Day 2. Thus, the morning of Day 2 is stated in Genesis 1:6-7, "Then God said, let there be a firmament in the midst of the water. God divided the water under the firmament from the water above the firmament. So God called the firmament heaven." Still no life whatsoever on earth. As calculated by scientists, these events occurred approximately 3.8 - 3.9 billion years ago.

As stated above, scientists discovered water bubbles from rocks of meteors that predate the meteors, the volcanic activity and the hot earth, thereby confirming the Genesis account that

water did indeed cover the earth at a point in time. Specifically, scientists noted that these ancient meteor rocks are pillow lavas that contain characteristic pillow-shaped structures that are attributed to the extrusion of lava under water, therefore showing that the earth was covered under water before the volcanic activity that led to the appearance of granite continental masses.

**Day 3:** In Day 3 night, there were earthquakes and tectonic activity that led to the formation of the continents. The earth at this time was just one big land mass. This occurred approximately 2-3 billion years ago. The tectonic activity (gigantic earthquakes) as determined by scientists, led to the formation of our modern day continents. This event is consistent with what is stated in the Bible for Day 3, where we read "Then God said, 'Let the waters under the heavens be gathered together into one place, and let the dry land appear'; and it was so. And God called the dry land Earth, and the gathering together of the waters He called Seas." (Genesis 1:9-10).

Thus, Day 3 has two big events: i) the formation of the continents and ii) the first sign of life on earth, namely plant life. Is plant life as recorded in the Bible consistent with scientists findings? Modern day scientists found photo-plankton on rocks formed from meteors, called stromatolites. Stromatolites are layered bio-chemical structures formed in shallow water by the trapping, binding and cementation of sedimentary grains of microorganisms, especially cyanobacteria. Stromatolites are the first signs of providing ancient records of life on earth about 800 million years ago. These stromatolites give off an enormous amount of oxygen, thus facilitating plant life. Scientists have also discovered amino acids in meteors that date to about 800 million years ago. Amino acids are the key building blocks to any form of life. These scientific findings are consistent with what is said about Day 3 in the Bible. Thus, Day 3 night is tectonic activity and the morning of Day 3 is the formation of the continents and the beginning of plant life.

**Day 4:** Now that there is plant life from Day 3, oxygen levels rise significantly due to photosynthesis around 700 million years ago as determined by scientists. The atmosphere is comparable to its current composition by the end of this time. Day 4 night is a mile thick sheet of ice, known as the "Snowball earth" by scientists. The Snowball Earth hypothesis posits that the Earth's surface became entirely or nearly entirely frozen at least once, around 700 million years ago. Proponents of the hypothesis argue that it best explains sedimentary deposits generally regarded as of glacial origin at tropical altitudes.

**What caused the snowball earth?** - Recent research from 2013 reveals that three events triggered the snowball earth: 1) During this period, there was a rare preponderance of

continents in the tropics, where it is hot and wet. As a result, CO<sub>2</sub> concentrations fell and the global climate cooled because there was less "greenhouse" warming. The greater the CO<sub>2</sub> in the atmosphere, the warmer it is.

ii) The breakup of a supercontinent named Rodinia, which began 830 million years ago and continued for nearly 200 million years. A supercontinent is the assembly of almost all continents into a single mass. When a supercontinent exists, most land area is far from the ocean and therefore very dry. When a supercontinent breaks up into small fragments, formerly dry regions become wetter and weathering rates increase accordingly, and hence there is less CO<sub>2</sub> in the atmosphere causing a colder climate, iii) there was a massive volcanic eruption of basalt lava ("flood" basalt) 700 million years ago in Arctic Canada, which was then very close to the equator. Basalt lava covered the equator and it weathers rapidly. The combined effects of tropical continents, supercontinent breakup, and equatorial flood basalt caused a snowball earth, and this has been shown in simulations by researchers.

**How did the snowball earth melt?** – Huge amounts of CO<sub>2</sub> began to appear again in a major heatwave caused by major tectonic activity resulting in massive volcanoes and earthquakes 500 million years ago. This would correspond to the catastrophic event of Day 5 night.

After the snowball earth, the tremendous amount of Oxygen from the stromatolites helped clear the atmosphere leading to Day 4. Day 4 morning corresponds to the Sun and the moon shining on the earth and the stars give light to the sky. Perhaps the clearance of the atmosphere from the Oxygen led to the sunlight and moon shining on the earth and the stars lighting the sky. The abundant amount of Oxygen led to the formation of iron leading to our blue planet that we are familiar with today. This all occurred around 700 million years ago.

**Day 5:** Day 5 corresponds to the creation of certain living creatures, including fish, birds, dinosaurs (taneen) and giant sea creatures. The light of Day 5 is preceded by a period of darkness (Day 5 night), which is marked by major tectonic activity resulting in massive volcanoes and earthquakes and very high levels of CO<sub>2</sub> gas. What is mentioned in Genesis for Day 5 is remarkably consistent with scientific findings which date the first birds, fish, and dinosaurs to about 550 million years ago. This period marks the beginning of the Cambrian explosion as explained by scientists and is remarkably consistent with Day 5 as described in Genesis 1:20-23.

**Day 6:** Day 6 night corresponds to end of the Cambrian explosion and marks the extinction of dinosaurs and many other creatures, fish, and birds. It is known to be the greatest mass



extinction ever known on earth. Researchers agree that a major factor was an asteroid about 10 kilometers in diameter that struck what is now the Yucatán peninsula in Mexico. Meteors also hit the earth in great numbers. The effects of the impact were catastrophic, probably including global forest fires, possibly a period of cold weather due to sunlight-blocking dust and smoke, and a subsequent period of hot climate caused by the high levels of CO<sub>2</sub> released into the atmosphere by the impact. Evidence for the devastation of terrestrial vegetation comes in the form of a thin rock layer deposited just after the impact that is dominated by fossil plants whose present-day relatives recover well after fires or other disturbances. Thus, the environmental and physical effects of the meteors and asteroid led to their extinction.

Day 6 morning corresponds to the creation of i) creeping things, ii) mammals, and iii) man in that order as given in Genesis 1:24-28).

**Day 7:** Creation is finished. There is no more creation.

So we can summarize as follows:

**Day 1 night (4.5 billion years ago):** “darkness was on the face of the deep” (Genesis 1:2)

**Day 1 morning (3.8-3.9 billion years ago):** God created light

**Day 2 night:** meteor bombardment separating the waters

**Day 2 morning (2-3 billion years ago):** God created the sky

**Day 3 night:** earthquakes and tectonic activity

**Day 3 morning (700 million years ago):** continents are formed and plant life is created

**Day 4 night:** the snowball earth

**Day 4 morning (700 million years ago):** the Sun, moon, and stars shine on the earth

**Day 5 night:** major tectonic activity resulting in massive volcanoes and earthquakes. CO<sub>2</sub> levels rise dramatically.

**Day 5 morning (550 million years ago):** creation of fish, birds, and large land and sea creatures including the dinosaurs

**Day 6 night (65 million years ago):** The Cambrian explosion in which a large asteroid and many meteors hit the earth resulting in extinction of dinosaurs and many types of fish and birds and other creatures. The greatest extinction recorded in history.

**Day 6 morning (thousands of years ago):** creeping things, modern day mammals, and man is created in that order.

**Day 7:** No more creation.

**Remarks:**

1. In the movie, "How the Earth was made," the narrator erroneously commented that "rocks, not doctrine, would determine how the earth was made. "The creationists in the 1900's erroneously claimed that the earth was 6,400 years old. This was never the official view of the Orthodox Church nor was it the official view of any church in general. Thus, the narrator generalized that opinion to the entire church which is erroneous. In fact, as we have seen in the last two lessons, science is in total harmony with the account of creation in Genesis.
2. Please note the three methods of creation that God uses in Genesis 1:1-28. i) There is the creation that it initiated by God and then the forces of nature are allowed to act according to God's plan and control, such as the big bang and all of the geological events that occurred during the formation of the final form of the earth in Days 1-4. God uses the forces of nature to create, under His precise control, to create in Days 1-4, ii) There is the instantaneous creation by the command of God, such as the creation of time and space, and the creation of the plants in Day 3 and animals in Days 5 and 6, and iii) there is the special creation of man which is distinct from any other creation in which God uses dust (which symbolizes nothingness) to create man, and "breathed into his nostrils the breath of life" (Genesis 1:26). This is a very personal and intimate creation like no other. The breathing is receiving the Holy Spirit into man through a kiss (breathed into his nostrils). It is very personal and intimate.

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**CONCLUSION:**

The account of creation recorded in Genesis is in total harmony with scientific discovery. God created science and uses science in order for us to see how awesome He is and to glorify Him. He is not only a God of mercy and justice, He is also a God of unbounded intellect and precision who uses the nature and laws of physics that He created as tools in the creation. As noted above, the account of the creation given in Genesis shows that God used three different methods for creation: i) by allowing physics and nature to work under his total control and will, ii) His instantaneous command, and iii) the unique and special intimate creation of man in which God makes man from the dust of the ground and breathes into his nostrils His breath of Life (the Holy Spirit).

The reason that scientists reject God is that they do not want to acknowledge a supreme intellectual power at work using the forces of nature according to His will. Acknowledging a supreme intellectual power, they feel, would take away from their own intellect and scientific discovery. It is a major form of pride and self-centeredness. Scientists also confuse the three methods of creation that we discussed above, and lump them into one form, that form being that everything is initiated and controlled by nature itself and every geological event occurred by randomness and/or necessity. This, of course is circular argument, which essentially claims that nature is both the controller and the one being controlled. A total contradiction.

It is also important to note here that the science we discussed cannot be proved to be the ground truth. For example, scientists do not know with 100% certainty if the earth is 4.5 billion years old, how long the tectonic plates took to move, whether the big bang occurred and how long it took, etc... It is not our goal here in these lessons to prove these issues scientifically nor believe that they are 100% correct. One of our main goals in these lessons is to demonstrate that science and the Bible can be in harmony, and that we accept science as long as it does not contradict the Bible. The Bible for the Christian is always our reference frame, it is the ground truth. We can accept any scientific theory as long as it does not contradict the Bible. So part of our goal in these lessons was to show that the Bible can be used to verify science and vice-versa, hence leading to harmony between the Bible and science. We only reject scientific theories that are in contradiction to the Bible (such as human evolution) because we, as Orthodox Christians, hold the Bible as the ground truth and reference frame for all of our beliefs and actions. The Bible is our reference frame to evaluate and judge everything in life!

**VERSE TO REMEMBER:** Then God said, "Let Us make man in Our image, according to Our likeness; let them have dominion over the fish of the sea, over the birds of the air, and over the cattle, over all the earth and over every creeping thing that creeps on the earth." So God created man in His *own* image; in the image of God He created him; male and female He created them." (Genesis 1:26-27).

### 3. ARE WE CREATIONISTS?

#### SERVANT PREPARATION:

#### VERSE & REFERENCES:

"Before I formed you in the womb I knew you. Before you were born I sanctified you. I ordained you as a prophet to the nations", (Jeremiah 1:3).

"Blessed be the God and Father of our Lord Jesus Christ, who has blessed us with every spiritual blessing in the heavenly places with Christ Just as He chose us in Him before the foundation of the world, that we should be holy and without blame before Him in love" (Ephesians 1:3-4).

#### LESSON PREPARATION

#### OBJECTIVES

**Lesson Objective:** To understand who the "young earth creationists" are, their beliefs and how Orthodox Christians differ from them

#### INTRODUCTION:

Young Earth creationism (YEC) is the religious belief that the Universe, Earth and all life on Earth were created by direct acts of God during a relatively short period, between 5,700 and 10,000 years ago. Its primary adherents are those Christians and Jews who, using a literal interpretation of the Genesis creation narrative as a basis, believe that God created the Earth in six 24-hour days. Young Earth creationists differ from other creationists in that they believe in a strict literal interpretation of the Bible regarding the age of the Earth. This contrasts with old Earth creationists, who believe that the six creation days of the Book of Genesis may be interpreted metaphorically and who accept the scientifically determined age of Earth and the universe.

Since the mid-20th century, young Earth creationists starting with Henry M. Morris (a Protestant) have devised and promoted a pseudoscientific explanation called "creation science" as a basis for a religious belief in a supernatural, geologically recent creation. Young Earth creationism is contradicted by scientific evidence from numerous scientific disciplines that shows the age of the universe is 13.8 billion years, the formation of the Earth was 4.5 billion years ago, and life first appeared on Earth at least 2.5 billion years ago.

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#### LESSON BODY:

1. **Young Earth Creationists** have a strict interpretation of time throughout the Bible. In particular, they adhere to the notion that a day constitutes 24 hours throughout the entire Bible. Young Earth creationists believe that God created the Earth within the last ten thousand years, literally as described in the Genesis creation narrative, within the approximate time-frame of biblical genealogies. Most young Earth creationists believe that the Universe has a similar age as the Earth. Orthodox Christians do NOT adhere to young earth creationism. We adhere to the notion that "Days" in Genesis 1 refer to periods of time (not a literal 24 hour period), and hence the Orthodox position on Genesis 1 is consistent with the scientific findings in geology and physics.

Moreover, young earth creationists adhere to the fact that in the book of Revelation, a day is literally interpreted to mean 24 hours. Orthodox Christians do NOT adhere to this and the Orthodox position is that a Day in the Book of Revelation is symbolic of a period of time. For example, 3 ½ days in the Book of Revelation is NOT interpreted as 84 hours by Orthodox Christians. Rather, it is symbolic of a period of time.

2. **Old Earth Creationists** - Old Earth creationism is typically more compatible with mainstream scientific thought on the issues of physics, chemistry, geology, and the age of the earth. Orthodox Christians are more in line with old earth creationists in that they believe in an old earth consistent with scientific discoveries about the age of the earth and the universe.
3. **Evolutionary creationists** agree with the scientific community on evolution. Orthodox Christians are NOT evolutionary creationists and do NOT adhere to human evolution. There is no official Orthodox doctrine on animal (non-human) evolution and thus the Orthodox Church does not take a specific position on animal evolution and hence does not refute it.
4. **Creationism** is the general belief that the Universe and living organisms originate "from specific acts of divine creation." For young Earth creationists, this includes a literalistic

reading of the Book of Genesis and the rejection of evolution. As science developed during the 18th century and forward, various views aimed at reconciling the Abrahamic and Genesis creation narratives with science developed in Western societies. Those holding that species had been created separately (such as Philip Gosse in 1857) were generally called "advocates of creation" but were also called "creationists," as in private correspondence between Charles Darwin and his friends. Old Earth creationists hold different concepts of creation, such as the acceptance of the age of the Earth as understood by the scientific community.

5. Two disciplines somewhat allied with creationism are **creation science and intelligent design**. The most notable disputes concern the evolution of living organisms, the idea of common descent, the geological history of the Earth, the formation of the solar system and the origin of the universe. Theistic evolution, also known as evolutionary creationism, tries to reconcile theistic religious beliefs with scientific findings on the age of the Earth and the process of evolution. It includes a range of beliefs, including views described as evolutionary creationism and some forms of old Earth creationism, all of which embrace the findings of modern science and uphold some religious teachings about God and creation. Again, Orthodox Christians only adhere to the scientific findings on the age of the earth and the universe and do NOT adhere to or accept any form of human evolution whatsoever. The Orthodox church does not take a specific dogmatic position on the evolution of animals.
6. **History** - The term "creationist" to describe a proponent of creationism was first used in a letter by Charles Darwin in 1856. In the 1920s, the term became particularly associated with Christian fundamentalist movements that insisted on a literalist interpretation of the Genesis creation narrative and likewise (correctly) opposed the idea of human evolution. These groups succeeded in getting teaching of evolution banned in American public schools, then from the mid-1960s the young Earth creationists promoted the teaching of "scientific creationism" using "Flood geology" in public school science classes as support for a purely literal reading of the Book of Genesis. After the legal judgment of the case *Daniel vs. Waters* (1975) ruled that teaching creationism in public schools contravened the Establishment Clause of the First Amendment to the United States Constitution, the content was stripped of overt biblical references and renamed creation science. When the court case *Edwards vs. Aguillard* (1987) ruled that creation science similarly contravened the constitution, all references to "creation" in a draft school textbook were changed to refer to intelligent design, which was presented by creationists as a new scientific theory. The *Kitzmiller vs. Dover* (2005) ruling concluded that intelligent design is not science and contravenes the constitutional restriction on teaching religion in public school science classes. In September 2012, Bill Nye ("The Science Guy") expressed his concern that creationist views threaten science education and innovations in the US.

7. **Martin Luther** taught young Earth creationism, that creation took six literal days about 6000 years ago. **John Calvin** also rejected instantaneous creation, but criticized those who, contradicting the contemporary understanding of nature, asserted that there are "waters above the heavens." Discoveries of new lands brought knowledge of a huge diversity of life, and a new belief developed that each of these biological species had been individually created by God. In 1605, **Francis Bacon** emphasized that the works of God in nature teach us how to interpret the word of God in the Bible, and his Baconian method introduced the empirical approach which became central to modern science. In 1650 the Archbishop of Armagh, **James Ussher**, published the Ussher chronology based on Bible history giving a date for Creation of 4004 BC. This was generally accepted, but the development of modern geology in the 18th and 19th centuries found geological strata and fossil sequences indicating an ancient Earth. By 1850 all geologists and most Evangelical Christians had adopted various forms of old Earth creationism, while continuing to firmly reject evolution.

Comparison of major creationist views					
	Acceptance (U.S.)	Humanity	Biological species	Earth	Age of Universe
Young Earth Creationism	40%	Directly created by God.	Directly created by God. Macroevolution does not occur.	Less than 10,000 years old. Reshaped by global flood.	Less than 10,000 years old (some hold this view only for our solar system).
Gap creationism				Scientifically accepted age. Reshaped by global flood.	Scientifically accepted age.
Progressive creationism	38%	Directly created by God (based on primate anatomy).	Direct creation + evolution. No single common ancestor.	Scientifically accepted age. No global flood.	Scientifically accepted age.
Intelligent design		Proponents hold various beliefs. For example,	Divine intervention at some point in the past, as	Some adherents accept common	Scientifically accepted age

		Michael Behe accepts evolution from primates	evidenced by what intelligent-design creationists call "irreducible complexity"	descent, others not. Some claim the existence of Earth is the result of divine intervention	
<b>Theistic evolution (evolutionary creationism)</b>		Evolution from primates.	Evolution from single common ancestor.	Scientifically accepted age. No global flood.	Scientifically accepted age.

Flood geology is the concept that the geology of the Earth has been shaped by the global flood described in Genesis 6-8. The Orthodox Church does NOT adhere to flood geology. Orthodox Christians are not in any of the above categories.

#### CONCLUSION:

Orthodox Christians are indeed creationists in that they believe in the account of creation given in Genesis 1, but they are more in line with old Earth creationists in the sense that they believe that the age of the earth and the universe is consistent with scientific research and discoveries. Orthodox Christians do not adhere to human evolution and the Orthodox Church does not have a dogmatic position on animal evolution. Young earth creationism was mainly a protestant movement advocated by Martin Luther, Henry Morris and authors who advocate that the earth and all life on earth were created by direct acts of God during a relatively short period, between 5,700 and 10,000 years ago. Its primary adherents are those who, using a literal interpretation of the genesis creation narrative as a basis, believe that God created the earth in six 24-hour days. Young Earth Creationists differ from other creationists in that they believe in a strict literal interpretation of the Bible regarding the age of the earth. This contrasts with Old Earth Creationists, who believe that the six creation days of the book of Genesis may be interpreted metaphorically and who accept the scientifically determined age of the earth and the universe.



**VERSE TO REMEMBER:** "Blessed be the God and Father of our Lord Jesus Christ, who has blessed us with every spiritual blessing in the heavenly places with Christ Just as He chose us in Him before the foundation of the world, that we should be holy and without blame before Him in love" (Ephesians 1:3-4).

## 4. CREATION AND EVOLUTION

### SERVANT PREPARATION:

#### VERSE & REFERENCES:

"When You take away their breath, they die and return to their dust. When You send forth Your Spirit, they are created, and You renew the face of the earth."  
(Psalm 104:29-30)

### LESSON PREPARATION

#### OBJECTIVES

**Lesson Objective:** To learn and understand the theory of human evolution and see how it contradicts the account of creation given in Genesis 1.

**INTRODUCTION:** A well known theologian described dust in the following way:

"Dust - truly a splendid symbol. Dust, this is the image of the commonplace. There is always more than enough of it. One fleck is as good as the next. Dust is the image of anonymity; one fleck is like the next, and all are nameless. It is the symbol of indifference: what does it matter whether it is this dust or that dust? It is all the same. Dust is the symbol of nothingness: because it lies around so loosely, it is easily stirred up, it blows around blindly, it is stepped upon and crushed - and nobody notices. It is a nothing!"

We read in Genesis 2:7 that God in fact made us out of the dust of the ground! We read, "And the Lord God made man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being" (Genesis 2:7).

Now, what does it mean that we were made out of the dust of the ground? It means first that we were created out of nothing, for dust is nothing, and that we are kept alive constantly *only* by God's good gift of breath. As we read in Psalm 104:29-30, "When You take away their breath, they die and return to their dust. When You send forth Your Spirit, they are created, and You renew the face of the earth." Secondly, that we are made of dust means that we are to honor the limits of our humanity by obeying God's laws and always standing before Him in awe! We are to resist the kind of ambition which seeks to make us like God, that is, pride. For we are dust! Thirdly, how easily we forget that we are dust! We hide behind the masks of our possessions or our intellectual smartness. We forget that we are

going to die and we push aside our mortality. Forgetting that we are dust, we imagine ourselves to be more powerful and more capable than we really are. It is precisely this forgetting that we are dust that lies behind the greed, the selfishness, the anxiety, and the brutality that drives our common life. Fourthly, we forget what God remembers! God never forgets that we are dust. As we read in Psalm 103:14, "For He knows our frame; He remembers that we are dust." And because God remembers our dustiness, He surrounds our dust with His massive "steadfast love" (Psalm 103:11). As we beautifully read in Psalm 103:10-17, "He does not deal with us according to our sins; nor requite us according to our iniquities. For as the heavens are high above the earth, so great is His steadfast love toward those who fear Him; As far as the east is from the west, so far does He remove our transgressions from us. As a father pities his children, so the Lord pities those who fear Him. For He knows our frame; He remembers that we are dust. As for man, his days are like grass; he flourishes like a flower of the field; for the wind passes over it, and it is gone, and its place knows it no more. But the steadfast love of the Lord is from everlasting to everlasting for those who fear Him." Thus, God "knows our frame." And "He remembers that we are dust." And because He remembers that we are dust, He therefore surrounds us with His massive "steadfast love."

We are indeed dust, but we are also more than dust. We are also the image of God. As we read in Genesis 1:26-27, "Then God said, 'let us make man in Our image, in Our likeness, and let them rule over the fish of the sea and the birds of the air... God created man in His own image. In the image of God created He them.'

When Jesus became one of us, He actually became dust, for us! For when the great God of the universe takes on flesh and blood means exactly that, that He becomes dust for us. And He did it in order to raise us from dust to the glory of God. As God took dust, and breathed His breath into it to make us alive, so He breathes His Holy Spirit into us today through the Sacrament of Chrismation at Baptism and through

prayer each day to make us living images of God. From dust to image of God, and from dust to icon of God. Because the real icon that we should venerate is not merely the one that is made of wood, but rather the icon of God engraved in the human heart by the Holy Spirit at Baptism. Here is what Mother Theresa said about the living icon of the image of God in each one of us: "If we were able to see God's image in our neighbor, do you think weapons and generals would be needed?"

In Christ, and through the Holy Spirit, the dust in us is animated, and by God's grace, we rise from dust to the image of God; from dust to the likeness of God; from dust to sons and daughters of God; from dust to heirs of God's eternal kingdom; from dust to "partakers of God's divine nature" sharing His glory (2 Peter 1:4), and from dust to an ultimate union with God in heaven.

Is it true then that we are dust and to dust we shall return? Yes, but only, only partially. The body which was made of dust will indeed return to dust at death, but that will not be the end! At the Second Coming of our Lord Jesus, He will raise this dusty body of ours, and then it will no longer be a body of dust, but a glorious heavenly body exactly like the body of Jesus after His resurrection. We turn here to 1 Corinthians 15:42-44, 47-49 where St. Paul talks so beautifully about the body of dust and the heavenly body. This is the Pauline Epistle reading in the Liturgy of the Resurrection on Easter eve in the Coptic Orthodox Church.

"So it is with the resurrection of the dead. What is sown is perishable. What is raised is imperishable. It is sown in dishonor. It is raised in glory. It is sown in weakness. It is raised in power. It is sown a physical body. If there is a physical body, then there is also a spiritual body. The first man Adam, was from earth, a man of dust. The second Man Christ is from heaven. Just as we have borne the image of the man of dust, we shall also bear the image of the Man of heaven."

Does St. Paul tell us we go from dust to dust? No! We go from dust to the image of God. And from dust to the likeness of God. And from dust to the resurrection of the dead. And from dust to a glorious heavenly body, with whose eyes we shall behold the glory of God eternally. "For He knows our frame." He knows it. And "He remembers that we are dust" (Psalm 103:14). Since He remembers that we are dust, He therefore surrounds us with His massive "steadfast love" and forgiveness (Psalm 103:11). But He knows also that we are more than dust. We are also the image of God. Since we are in His image, He therefore expects us to strive for heaven, to strive for "perfection" (Matthew 5:48), to strive for union with God, to

strive for the likeness of God, to strive for the holiness of God, to strive for the "prize of our high calling in Christ Jesus our Lord" (Philippians 3:14), and to strive for the "crown of righteousness" (2 Timothy 4:8).

How exalted then is our image and our destiny: from dust to the image of God. From dust to partakers of God's glory, by God's grace, and by God's grace alone.

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## LESSON BODY:

**What is evolution:** The word evolution means a process of change in a particular direction. The theory of human evolution claims that humans descended from other kinds of animals (namely apes) that lived in earlier times and that the differences are due to inherited changes that took place over many millions of years. The field of human evolution is called physical anthropology.

**Charles Darwin:** The primary author of the Theory of Evolution is Charles Darwin (1809-1882). Darwin was the British scientist who became famous for his theories of evolution and natural selection. Darwin proposed his theory in the 1859 book "The Origin of Species." Like several scientists before him, Darwin believed all the life on earth evolved (developed gradually) over millions of years from a few common ancestors. His research led to several related theories: i) evolution did occur; ii) evolutionary change was gradual, requiring thousands to millions of years; iii) the primary mechanism for evolution was a process called natural selection; and iv) the millions of species alive today arose from a single original life form through a branching process called "specialization."

**Natural Selection:** It is the theory of natural selection that postulates that humans evolved from ape-like creatures over a period of millions of years. Specifically, the theory of natural selection is grounded in the belief that each new species is produced by having some advantage over those with which it comes into competition, and the consequent extinction of less-favored forms almost inevitably results. There are two primary forms of physical human evolution: i) the evolution of upright walking, and ii) the evolution of larger brains.

**Hominids:** The word "hominid" in anthropology refers to members of the family of humans, Hominidae, which consists of all species on our side of the last common ancestor of humans and living apes.

The hominid fossil timeline is given as follows:

Sahelanthropus Tchadenis (7.5 million years ago)

Orrorin Tugenensis (6.1 million years ago)

Ardipithecus Kadabba (6 million years ago)

Ardipithecus Ramidus (5 million years ago)

Australopithecus Afarensis (4 million years ago)

Australopithecus Africanus (2.8 million years ago, "Lucy").

Homo Erectus (1.1 million years ago)

Homo Neanderthalis (50,000 thousand years ago)

Cro-Magnon Man (30,000 years ago)

The Missing Link

Modern Man (7,500 – 10,000 years ago)

### **The Orthodox Response to Human Evolution:**

The Bible clearly says that “God created man in his own image” (Genesis 2:7), and thus for a man to descend from an ape or any other animal would contradict this statement. Thus, if the Bible is our reference frame of truth, which is based on faith in Jesus Christ, the theory of human evolution is a total contradiction to Genesis 2:7.

There are some Christians who believe that God did create man but man evolved physically after that due to natural selection. This is a form of what is called theistic evolution. This thinking is also erroneous since this would totally contradict the fact that God created man in his own image. God’s image is unique and not dynamically changing. It is incompatible with the Bible that God would first make man look like some kind of ape or animal and have him change into “modern man.” This would contradict the fact that God created man in His own unique image, that is, in the image of Jesus Christ, who looks exactly like us.

Man was a special creation by God. As we learned in earlier lessons, God formed man from the dust of the ground, and breathed into his nostrils His breath of life (Genesis 2:7). God also made man in His own image and likeness (Genesis 1:26). God did not create the animals this way. The animals were created instantaneously at the very command of God, while man was created very intimately and uniquely.

From a totally scientific perspective, the theory of human evolution has two major holes. First, there is the missing link, that is, the inability of scientists to link animal bones and fossils to human bones. Second, all of human bones found in the history of anthropology are bones corresponding to modern man that have been dated from 7,500 - 10,000 years old. This dating corresponds very precisely with the chronology of the creation in Genesis given in Genesis 1:1-28. That is, no human bones have ever been dated to be millions of years old, for example. Thus, all scientific dating of human bones have always been found to be between 7,000 – 10,000 year old, which responds chronologically with the creation account given in Genesis.

### **We are very different than the animals:**

We were created to communicate with God and animals were not and cannot.

We were created to worship God and animals were not and cannot.

We were created with a conscience and the intellect to know differences between right and wrong, the ability to discern between what is moral and what is immoral, and animals were not and cannot. That is, man was created with the natural law of God written on his heart and animals were not. As we read in Romans 2:14-16, "For when the Gentiles, who do not have the law, by nature do the things in the law, these although not having the law, are a law to themselves, who show the work of the law written in their hearts, their conscience also bearing witness, and between themselves their thoughts accusing them or else excusing them in the day when God will judge the secrets of men by Jesus Christ, according to my gospel" (Romans 2:14-16).

We were created with an intellect far superior to that of any animal, with the capability of reading, writing, speaking, and worshipping.

God created man with a spirit, which will never vanish or be annihilated. Animals do not have spirits, and thus their physical death is their final state, in which they are annihilated.

If God allowed man to evolve from animals, then both animals and man must have the chance for salvation, otherwise God would be unjust. Animals cannot even speak to God or repent, and thus have no chance for salvation.

Jesus came in the "likeness of men" (Philippians 2:7), not animals.

Jesus came for the salvation and eternal life of man as clearly stated in the Bible, not animals.

Only man is capable of a life of righteousness through Jesus Christ, and not animals.

The Holy Spirit can only dwell in man through Baptism and Chrismation and not in animals.

God Created Man to Rule and Have Dominion Over the Animals – We read in Genesis 1:26 that God created man to rule and have dominion over the animals, so man cannot be considered in the same class as animals. In Genesis 1:26 we read, "...let them have dominion over the fish of the sea, the birds of the air, and over the cattle, over all of the earth and over every creeping thing that creeps on the earth." God repeats this notion of dominion of man over animals in Genesis 1:28. God not only created man to have dominion over the animals, but to have dominion over "all of the earth." Thus, man is a very supreme being that is far above any other earthly creation.

There is not a single verse in the entire Bible about the salvation of animals. The entire Bible is about God's plan to send Jesus Christ for the salvation of man, and man alone.

**The missing link** - The scientific evolutionary timeline is incomplete. There is a "missing link", that is there is an enormous physical, intellectual, and unexplainable gap between Cro-Magnon and modern man that scientists cannot explain, and such fossils that would fill in this gap have not been found to this day. For those who believe in the creation in the Bible, this missing link is indeed inevitable and will never be resolved. This missing link, in some sense, demonstrates scientifically that man and animal are indeed in a different class (creation) and their bones cannot be reconciled. This notion of a missing link gives great truth to Genesis 1:26.

Man was created in a very different time period than any other living being. Man was created after the modern day animals on the 6<sup>th</sup> day and was created much later than the birds, fish, and dinosaurs, which were created on the 5<sup>th</sup> day. They are very different time periods. Thus, from this account alone in the Bible, the evolution of man from animals is grossly erroneous.

To reject evolution and believe in God's creation also requires faith and to believe that the Bible is the ground truth. We cannot scientifically prove everything in the Bible, and thus we as Christians should never resort to scientific explanations in explaining all of God's work. God's work requires and demands faith from us. God completely intended it this way since He wants faith to play a major and dominant role in our relationship with Him, and thus faith is critical in believing what is in the Bible. Thus, in rejecting evolution, there is some (not much required however) demand of faith in God on our part, that He created man separately from animals for an entirely different purpose. We should never rely on science alone to believe in God's creation, since for example, if the missing link is somehow claimed to be "found" by scientists someday, we must have other means to rely on to reject evolution, namely our faith in God and His word in the Bible.

**Darwin's Theory is not a Theory, it is a Conjecture** - Darwin's theory of evolution is, at best, a conjecture, not a theory. A theory is something that can be proven mathematically and/or scientifically. For example, Einstein's theory of relativity (which states that space is curved) is something that was proved both mathematically and experimentally. Darwin's "theory" has major scientific holes. It has not been proved mathematically or experimentally. It remains a conjecture, and anyone can conjecture anything about anything. In fact, Darwin's theory is no different than saying that man evolved from insects or rocks, for example. Every conjecture is as good as the other.

The Orthodox church does not have a dogmatic or theological view on the evolution of animals alone, that is animals evolving over time through natural selection or other means. That is, animals (not human) may have evolved. If true, this would not contradict the Bible since the Bible makes no mention of animals being any special creation nor is their image, likeness, or uniqueness ever mentioned in the Bible. However, the scientific proof even for the evolution of animals is still quite weak and not well accepted in science circles.

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## CONCLUSION:

Man is a very special unique creation of God that is very different from all the animals. The theory of human evolution contradicts the Bible and also has major scientific holes. Man was created in the unique image and likeness of God, and Jesus came in the likeness of men. Based on this verse alone, it is impossible that man evolved from animals. If animals are our ancestors, then they are superior to us and would deserve salvation more than us. An ancestor is never less than their offspring. Man was also created in a much later time period than the



animals, and no fossil records of modern man ever date to anything more than 10,000 years ago. There is never been a human fossil more than 10,000 years old. The missing link is also a gaping hole in the theory of human evolution further showing that man and ape cannot be linked anatomically or physiologically.

A big mistake that anthropology makes that is contradictory to the Bible is that it attempts to classify man as an animal. Science classifies man as a primate and attempts to attribute his intellectual and physical properties through scientific comparisons and similarities with other animals. This is erroneous and not according to the Bible, since the Bible makes it clear that man is in his own class, and he has no relation to animals in any way, either physically, mentally, or spiritually.

Finally, it is important to note here that man does change in some very minor respects over time. For example, over time, man can develop an immunity to certain diseases over time or develop a greater affinity for certain diseases. The skin color of man also changes according to the amount of sun light he is exposed to as one developed more melanin as a result of being exposed to more sun, etc... These changes, however, are not anatomical or physiological changes and are in no way the types of physical changes that Darwin was referring to in his theory of human evolution.

#### VERSE TO REMEMBER:

"He does not deal with us according to our sins; nor requite us according to our iniquities. For as the heavens are high above the earth, so great is His steadfast love toward those who fear Him; As far as the east is from the west, so far does He remove our transgressions from us. As a father pities his children, so the Lord pities those who fear Him. For He knows our frame; He remembers that we are dust. As for man, his days are like grass; he flourishes like a flower of the field; for the wind passes over it, and it is gone, and its place knows it no more. But the steadfast love of the Lord is from everlasting to everlasting for those who fear Him." (Psalm 103:10-17).



## 5. WHAT ABOUT EXODUS?

### SERVANT PREPARATION:

#### VERSE & REFERENCES:

The movies “Mountain of Fire” and the “Exodus of Israel from Egypt - REVEALED”

And the LORD said: “I have surely seen the oppression of My people who *are* in Egypt, and have heard their cry because of their taskmasters, for I know their sorrows. <sup>8</sup> So I have come down to deliver them out of the hand of the Egyptians, and to bring them up from that land to a good and large land, to a land flowing with milk and honey (Exodus 3:7-8)

### LESSON PREPARATION

#### OBJECTIVES

**Lesson Objective:** In the earlier lessons, we observed the harmony between science, archeology, and geology and the account of creation given in Genesis 1:1-28. In this lesson, we want to study the harmony between archeology and geology in the story of the Exodus of the children of Israel as given in Exodus, chapters 3 – 20. Again, we will see the harmony between science and the Bible in the biblical account of the Exodus, yet again showing the remarkable consistency between science and the Bible. The Bible can be used to verify and science.

**INTRODUCTION:** In this lesson, we will examine several incidents of the Exodus from Egypt for which there is scientific evidence. These are the events of the burning bush, the crossing of the Red Sea, the location of Mount Sinai, The chariots of the Egyptians, the Altar of sacrifice, and the golden calf.

After Moses killed the Egyptian while he was living in Pharaoh's house, he fled to Midian at the age of 40 because Pharaoh had heard of the incident and wanted to kill Moses. The land of Midian (Midian is like a province) is an Arabia, as determined by early maps and scholars.





After Moses fled to Midian, he married Zipporah of Midian whose father was named Jethro. Moses was a shepherd in the house of Jethro (Exodus 3:16-22). One day, Moses was tending the sheep of his father-in-law, Jethro, and he saw the Burning Bush at Mt. Horeb, the **Mountain of God**. We read, “Now Moses was tending the flock of Jethro his father-in-law, the priest of Midian. And he led the flock to the back of the desert, and came to Horeb, the mountain of God” (Genesis 3:1). Mount Horeb is the exact mountain as that of Mt. Sinai. We read, God told Moses at the burning bush, “So He said, “I will certainly be with you. And this *shall be* a sign to you that I have sent you: When you have brought the people out of Egypt, you shall serve God on this mountain.” (Genesis 3:12). Thus, God is telling Moses that once Moses leads the children out of Israel, that they will

worship on this same mountain, which is Mount Horeb, the Mountain of God, in Midian. This immediately tells us from the Bible that Mt. Horeb is indeed Mt. Sinai, and thus must be in the land of Midian which is in Arabia. Moreover, St. Paul tells in Galatians 4:24-26 that Mt. Sinai is indeed in Arabia. We read “For these are the two covenants: the one from Mount Sinai which gives birth to bondage, which is Hagar— for this Hagar is Mount Sinai in Arabia, and corresponds to Jerusalem which now is, and is in bondage with her children— but the Jerusalem above is free, which is the mother of us all” (Galatians 4:25-26).

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#### LESSON BODY:

**Where is Mount Sinai?** - The first question we ask is the following: Where is Mt. Sinai, and what scientific evidence is there, if any, indicating where Mt. Sinai is?

In the Introduction, we saw that there are two Biblical references that Mt. Sinai is indeed in Arabia. The first reference is Genesis 3:12 and the second reference is Galatians 4:24-26. Now we ask, where is the scientific evidence of the location of Mt. Sinai. The modern day name of this mountain is called **Gabal El-Lawz**, that is, the mountain of almonds. It is in Saudi Arabia. It corresponds to the real Mt. Sinai because of all of the amazing geological and archeological features found there.

Gabal El-Lawz in Saudi Arabia is an almost semi-circular range, with a vast desert area around it as well as more than enough room for the encampment of perhaps a couple of million people along with their flocks and herds. Not only that, but there was a single, large oasis located perhaps 10 to 15 miles away - an area that could have been the home of Moses’ father-in-law, Jethro - and this was the town of Al-Bad. Recall that Jethro visited Moses at Mt. Sinai once the children of Israel reached Mt. Sinai (Exodus 18:1-9). “And Jethro, the priest of Midian, Moses’ father-in-law, heard of all that God had done for Moses and for Israel His people—that the LORD had brought Israel out of Egypt. Then Jethro, Moses’ father-in-law, took Zipporah, Moses’ wife, after he had sent her back, with her two sons, of whom the name of one *was* Gershom (for he said, “I have been a stranger in a foreign land”) and the name of the other *was* Eliezer (for *he said*, “The God of my father *was* my help, and delivered me from the sword of Pharaoh”); and Jethro, Moses’ father-in-law, came with his sons and his wife to Moses in the wilderness, where he was encamped at the mountain of God. Now he had said to Moses, “I, your father-in-law Jethro, am coming to you with your wife and her two sons with her.” So Moses went out to meet his father-in-law, bowed down, and kissed him. And they asked each other about *their* well-being, and they went into the tent. And Moses told his father-in-law all that the LORD had done to Pharaoh and to the Egyptians for Israel’s sake, all the hardship that had come upon them on the way, and *how* the LORD had delivered them. Then Jethro rejoiced for all the good which the LORD had done for Israel, whom He had delivered out of the hand of the Egyptians.”

There is a desert area around Jebel el Lawz, between Al-Bad and the highest peak in this mountain range - and that there were valleys in the mountain range which Moses could have led his flocks through, taking him to the "backside of the desert."

Here is the archeological evidence found at Gabal El-Lawz by many people, including Ron Wyatt, Bob Cornuke, Larry Williams and many others. After these findings which corresponded to the events of Exodus in the Bible, most scientific researchers agreed that Gabal El-Lawz indeed corresponds to Mt. Sinai, which is also called Mt. Horeb, the Mountain of God.

- 1. The Altar of Sacrifice** – There were large rocks and columns that fit the description of an altar at the base of the mountain. The columns and rocks were very different from the rock formations of the mountain itself. This building of the Altar corresponds to "And Moses wrote all the words of the LORD, and rose up early in the morning, and built an altar under the hill, and twelve pillars, according to the twelve tribes of Israel" (Exodus 24:4). See also Exodus 20:24. Scientists found that there were at least 10 pieces of broken, round columns almost 23 inches in diameter. They varied in height from 8 inches to 26 inches. In addition, there were a large number of rectangular marble stones 8 1/4 inches by 16 1/2 inches, from 10 to 26 inches long. These pieces were found around the altar, while others lay scattered at a greater distance, and are not included in our count. Pieces of column are given in the picture below.









2. **Golden Calf Altar-** At the base of the mountain, scientists found what is believed to be the Altar of the golden calf that was made when Moses went up the Mountain to receive the 10 commandments from God. This was the altar with Petroglyphs.





**View of the "Holy Area" at the foot of Mt. Sinai**

- A = Saudi Guard House
- B = Altar with Petroglyphs
- C = Remains of 12 Pillars
- D = Large Altar at the foot of Mt. Sinai
- e = Red Lines mark Wells
- e = Aqua Lines mark Stone Fences

**3. The blackened peak of Gabal El-Lawz** – Scientists found the top of the Mt. Gabal El-Lawz to be blackened and burned up, and the rocks so soft that they could be cracked open with bare hands. There was no sign of volcanic activity whatsoever. This corresponds to the event when Moses brought the





people out of the camp to meet God. We read in Exodus 19:16-18, "Then it came to pass on the third day, in the morning, that there were thunders and lightnings, and a thick cloud on the mountain; and the sound of the trumpet was very loud, so that

all the people who *were* in the camp trembled. And Moses brought the people out of the camp to meet with God, and they stood at the foot of the mountain." Now Mount Sinai *was* completely in smoke, because the LORD descended upon it in fire. Its smoke ascended like the smoke of a furnace, and the whole mountain quaked greatly.



4. **The split rock** – At the base of Gabal El-Lawz, researchers found a pair of split rocks, as if they split in half. These rocks probably correspond to the rocks that Moses split to draw water as described in Exodus 17:5-6, “And the LORD said to Moses, “Go on before the people, and take with you some of the elders of Israel. Also take in your hand your rod with which you struck the river, and go. Behold, I will stand before you there on the rock in Horeb; and you shall strike the rock, and water will come out of it, that the people may drink.” The figures below show the split in the rock where the water came out.



**5. Elijah's Cave** –  
Jezebel wanted to  
kill Elijah after  
the Mount Carmel  
miracle, where  
God brought fire



on the Altar to consume the burnt offering (1 Kings Chapters 18 and 19). When Elijah found out that Jezebel wanted to kill him, he fled to Mt. Horeb (Mt. Sinai) and dwelt in a cave. We read, "Then as he lay and slept under a broom tree, suddenly an angel touched him, and said to him, "Arise *and* eat." Then he looked, and there by his head *was* a cake baked on coals, and a jar of water. So he ate and drank, and lay down again.<sup>7</sup> And the angel of the LORD came back the second time, and touched him, and said, "Arise *and* eat, because the journey *is* too great for you." So he arose, and ate and drank; and he went in the strength of that food forty days and forty nights as far as Horeb, the mountain of God. And there he went into a cave, and spent the night in that place; and behold, the word of the LORD *came* to him, and He said to him, "What are you doing here, Elijah?" (1 Kings 19:5-9).

So we clearly read about Elijah spending a night in a cave on Mt. Horeb, the Mountain of God. At Gabal El-Law, a cave was indeed found, and the picture below clearly indicates this cave. There is only one cave on Gabal El-Lawz, and thus this must be the cave of Elijah, giving further evidence that Gabal El-Lawz is indeed the real Mt. Sinai.



6. **Almond Trees** – Gabal El-Lawz means Mountain of Almonds. It is called that because this mountain has lots of almond trees. Almond trees have been identified near the cave of Elijah by scientists. Phenomenon like this may have contributed to the naming of the mountain. It is interesting to note that when Moses was in the Mount in

Exodus 25, that the Lord instructed Moses to use the pattern of the almond blossom for the Golden Lamp stand. Indeed to have a visual aid for Moses and the artisans would have been helpful. Scientists have photos of almond trees in full bloom from the immediate environs of the mountain. In verse 40, the Lord says to Moses, "*And see to it that you make them* [the

blossom for the Golden Lamp stand. Indeed to have a visual aid for Moses and the artisans would have been helpful. Scientists have photos of almond trees in full bloom from the immediate environs of the mountain. In Exodus 25:40, the Lord says to Moses, *“And see to it that you make them [the arms of the Lamp stand with an almond blossom design] according to the pattern which was shown you on the mount.”* Could an almond tree have

been on the mount that God used to show Moses? Or was God just referring to His verbal description of the pattern for the lampstand? It would seem helpful to at least have some trees in the vicinity to use as models for the craftsman. Based on this biblical scripture, this further contributes to the evidence that Gabal El-Lawz is indeed Mt. Sinai.

7. **Crossing of the Red Sea** – When the children of Israel crossed the red sea, there is mounting scientific evidence that they crossed at the Gulf of Aqaba. Chariot wheels and parts of chariots have been found at the bottom of the Red Sea in the Gulf of Aqaba. The picture below shows the Exodus route:







Chariot parts have been found at the bottom of the Red Sea at the gulf of Aqaba





Superimposed image

Below is a chariot wheel that is in excellent preservation. The wood rotted away long ago but the gold-silver plating that once covered the wheel is still in tact. It would be destroyed if someone would try to move the wheel. The only time in the history of Egypt that chariots used both four and six spoke chariot wheels was during the 18<sup>th</sup> dynasty.



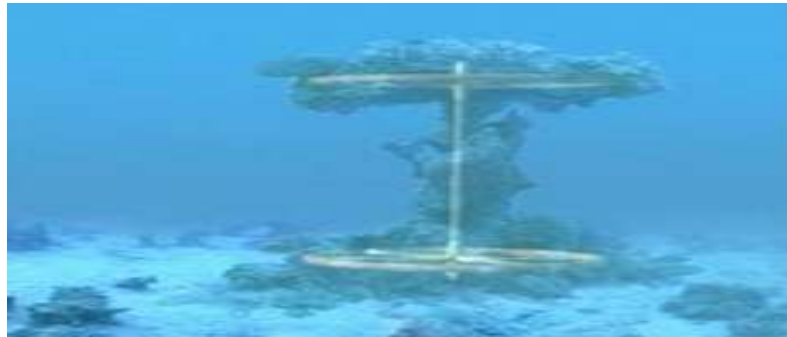


Image superimposed

These mushroom shaped formations are common in the Red Sea between Egypt and the other side. These are barnacle covered chariot wheels.

The Gulf of Aqaba is 15 miles wide and reaches depths of 6,000 ft. The passage way is certainly long enough and deep enough for the children of Israel to pass safely. It is very deep water. Crossing the Red Sea at the Gulf of Aqaba makes the most sense of Mt. Sinai is indeed Gabal El-lawz. It would of made no sense to cross anywhere else since the closest crossing point in the Red Sea to Gabal El-Lawz is indeed the Gulf of Aqaba.

Remarks:

1. The traditional location (route) of Mt. Sinai is called Gabal Musa in the Sinai Peninsula in Egypt. Scientists have examined this mountain and have determined that this mountain does not have any of the archeological or geological features of Gabal El-Lawz. It does not

have any features that match the Bible, so this mountain has been discounted by many as the location of Mt. Sinai. St. Catherine's monastery is in the Sinai Peninsula near Gabal Musa. Gabal Musa is displayed in the map below.



Here is a map of the traditional route (which is inconsistent with the Bible and science)



2. The children of Israel did not take a shorter route through the land of the Philistines since God had said that they would encounter war and thus return back to Egypt. We read “And it came to pass, When Pharaoh let the people go, God did not lead them on the road through the Philistine country, though that was shorter. For God said, “If they face war, they might change their minds and return to Egypt.” So God led the people around by the desert road toward the Red Sea (Exodus 13:17-18).



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#### CONCLUSION:

There is overwhelming Biblical and scientific evidence that Mt. Sinai is indeed Gabal El-Lawz, and it is NOT Gabal Musa. The evidence at Gabal El-Lawz consists of the 1) Altar of sacrifice, 2) the Altar of the Golden calf, the image of the calf on the rock, 3) Elijah's cave, 4) the blackened mountain, 5) the almond trees, 6) the split rocks, the columns, 7) the Gulf of Aqaba crossing point and the chariot parts at the bottom of the Gulf of Aqaba. The Gulf of Aqaba is the shortest crossing point to Gabal El-Lawz. Again, we see here through a close study of the Bible and science, that is a total harmony between Biblical teaching and scientific discovery.

**VERSE TO REMEMBER:** And the LORD said: "I have surely seen the oppression of My people who *are* in Egypt, and have heard their cry because of their taskmasters, for I know their sorrows. <sup>8</sup> So I have come down to deliver them out of the hand of the Egyptians, and to bring them up from that land to a good and large land, to a land flowing with milk and honey (Exodus 3:7-8)

## 6. UNIT REVIEW QUESTIONS

SERVANT PREPARATION:

VERSE & REFERENCES:

## LESSON PREPARATION

### OBJECTIVES

**Lesson Objective:** To review the first 5 lessons of this unit by preparing questions and giving answers.

### LESSON BODY:

1. According to scientists, how old is the earth? Answer: 4.5 billion years
2. How many days did God's creation take? Answer: 6 days
3. Each day in the creation was broken up into --- and ---- Answer: morning and night
4. What is Genesis 1:1 Answer: In the beginning God created the heaven and the earth"
5. On the first day, God created what? Answer: light
6. On the second day, God created what? Answer: Sky
7. On the third day, God created what? Answer: dry land (continents) then plant life.
8. On the fourth day, God created what? Answer: He allowed to sun and the moon to shine on the earth.
9. On the fifth day, God created what? Answer: Birds, fish, giant sea and land creatures including dinosaurs.
10. On the sixth day, God created what? Answer: mammals and man.
11. On the seventh day, God did what? Answer: He rested. Creation was finished.
12. What is the name of the first discovered plant life on earth? Answer: stramatolites.
13. When did the dinosaurs roam the earth? Answer: 550 million to 65 million years ago

14. When was Day 1, approximately? Answer: 3-4 billion years ago.
15. When did plants appear, approximately? Answer: 700-800 million years ago
16. What verse in the Bible show that man is a special creation by God? Answer: Genesis 1:26-27, Genesis 2:7
17. What and when was the Cambrian explosion? Answer: massive and abrupt appearance of ancient land and sea animals, 500-65 million years ago.
18. The snowball earth happened on which day? Answer: Day 4 night
19. Which day corresponds to all of the earthquakes and tectonic activity? Answer: Day 3 night
20. Name the three methods of creation God uses in Genesis? Answer: i) God controls nature and lets nature take its course, ii) God command, iii) intimate creation of man.
21. Those who have a literal interpretation of the day as 24 hours in Genesis are called what? Answer: young earth creationists
22. Name one famous person who taught young earth creationism? Answer: Martin Luther
23. Define creationism. Answer: the universe and all living organisms originate from specific acts of divine creation.
24. What do old earth creationists believe? Answer: Their beliefs about the age of the earth are more consistent with scientific thought on issues of physics, chemistry, geology, and the age of the earth.
25. What is theistic evolution? Answer: It believes that God created man but man evolved anatomically and physiologically after he was created in a Darwinian fashion.
26. Who was the main anthropologist who put forth the theory of evolution? Charles Darwin in 1859.
27. According to Darwin's theory of evolution, what is the primary mechanism for evolution? Answer: Natural selection
28. What is Darwin's theory of human evolution? Answer: humans evolved from ape-like creatures over periods of millions of years.
29. What is natural selection? Answer: the belief that specifies animals compete for survival and the loser eventually becomes extinct.
30. How old are fossils of modern man? Answer: 7,000-10,000 years old
31. What is the missing link? Answer: anthropologists cannot find bones in a period between cro-magnon man (30,000 years ago) and modern man.
32. Why is human evolution against Christianity? Answer: It contradicts the Bible in that God created man in His own image and likeness (Genesis 1:26-27) and that man was a special creation of God apart from and above the animals.
33. Name some differences between man and animals? Answer: language, intelligence, we can communicate with God, we have a spirit, salvation is only for man, the Holy Spirit can only dwell in man, and there are many other reasons.



34. What is the last creation of God? Answer: man
35. According to scientific discovery, where is Mt. Sinai and what is the modern day name of the mountain? Answer: Saudi Arabia and Gabal El-Lawz.
36. Where is the most likely place where the children of Israel crossed the Red Sea? Answer: Gulf of Aqaba.
37. Gabal Musa is found where? Sinai Peninsula in Egypt.
38. Where did Moses settle after he left the house of Pharaoh? Answer: Midian
39. Name some of the things found in Gabal El-Lawz that are consistent with the Bible? Answer: Altar of Sacrifice, Altar of Golden Calf, split rock, Elijah's cave, the blackened mountain peak, almond trees.
40. How old was Moses when he left the house of pharaoh after killing the Egyptian? Answer: 40 years old
41. How old was Moses when he led the Israelites out of Egypt? Answer: 80 years old.
42. What was found on the sea floor at the Gulf of Aqaba? Answer: chariot wheels and parts.
43. What is another name for Mt. Sinai? Answer: Mount Horeb or Mountain of God.
44. What is the name of the mountain for the traditional crossing of the Red Sea? Gabal Musa in the Sinai Peninsula.
45. Why didn't the children of Israel take a shorter route to the promised land? Answer: to avoid the Philistines as God had told them.
46. What is the split rock? Answer: the rock that Moses struck to get water.
47. Why did Elijah stay in the cave? Answer: He was on the run from Jezebel.
48. Why is the top of the mountain blackened? Answer: when God spoke to the Israelites, He appeared to them as fire.
49. What did the Israelites draw on the rocks? Answer: cows since they worshiped them while Moses was obtaining the 10 commandments.
50. How old was Moses when he died? Answer: 120
51. What is the name of Moses's father in Law? Answer: Jethro.

3.

SERVANT PREPARATION:

VERSE & REFERENCES:

LESSON PREPARATION

OBJECTIVES

***Lesson Objective:***

INTRODUCTION:

LESSON BODY:

CONCLUSION:

VERSE TO REMEMBER:

4.

SERVANT PREPARATION:

VERSE & REFERENCES:

LESSON PREPARATION

OBJECTIVES

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INTRODUCTION:

LESSON BODY:

CONCLUSION:

VERSE TO REMEMBER:

5.

SERVANT PREPARATION:

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OBJECTIVES

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INTRODUCTION:

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VERSE TO REMEMBER:

