

In The Name Of the Father and
the Son and the Holy Spirit



The Theotokos St. Mary



SCIENCE AND RELIGION – PART I



Introduction

- ❖ Our objective is 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.
- ❖ We believe in one God, the Father the Pantocrator, Make 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.

Introduction

- ❖ The Holy Scriptures begin with a similarly striking assertion: “In the beginning God made 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.

Introduction

- ❖ 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).

The Definition of Day and Night

- ❖ 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.

The Definition of Day and Night

- ❖ 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.)
- ❖ 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.
- ❖ As we read in Genesis, we see that there is a sequence of events in the creation.

The Days and Nights

- ❖ Day 0: Creation of space, time, and the universe. God sets off the “big bang.” “God created the heaven and the earth (Genesis 1:1).
- ❖ Day 1 night (4.5 billion years ago): “darkness was on the face of the deep” (Genesis 1:1)
- ❖ Day 1 morning (3.8-3.9 billion years ago): God created light

The Days and Nights

- ❖ 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

The Days and Nights

- ❖ Day 4 night: the snowball earth due to the combined effects of tropical continents, supercontinental breakup, and equatorial flood basalt from volcanoes.
- ❖ 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. Co₂ levels rise dramatically.
- ❖ Day 5 morning (550 million years ago): creation of fish, birds, and large land and sea creatures including the dinosaurs

The Days and Nights

- ❖ 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 (7,000-10,000 years ago): creeping things, modern day mammals, and man is created in that order.
- ❖ Day 7: No more creation.

The Harmoning of Science and Genesis

Creation Time Line					
Time* (Best Est.)	Scientific Description	Gen Day	Theistic Description	Bible Ref	Scripture Quotation (NKJ)
13.8 Ga	Beginning of time: the big bang .	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				

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	of gas and dust. From this, many stars and planets form, including the Sun and the Earth.				
4.4 Ga	The Earth cools within <u>about a 100 million years</u> of formation. A <u>world wide</u> ocean forms with a hot thick atmosphere of CO ₂ , 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...

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3.9 Ga	<p>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.</p>	2	<p>Clouds lift and water vapor in the atmosphere is reduced.</p> <p>Some of the atmospheric changes may be due to the action of microbes. God may have created them for this purpose.</p>	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	<p>Lower temperatures, loss of volatile elements from the atmosphere into space, less water in the atmosphere.</p> <p>The first microorganisms appear.</p>				
3.0-2.0	Over about a billion year period most of the Earth's	3	God creates land by the natural system of plate tectonics that He	Gen 1:9-	Then God said, "Let the waters

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Ga	crust was formed during a high level of tectonic activity. Over half of Earth's land mass is formed during this time.		invented. The bible implies that all the land was together in one supercontinent. This is known to have happened many times throughout geological history.	10	be gathered together into one place, and let the dry land appear..."
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. (<u>fossils</u> for lichens and algae are present in the fossil record during this time period.)</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, <u>etc</u> from the plant kingdom as <u>does</u> modern science. So these are included as well.)	Gen 1:11-13	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 <u>itself</u> ..."

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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	5	Creation of sea animals.	Gen 1:20-23	Then God <u>Said</u> , "Let the waters abound with an abundance of living creatures, and let the birds

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	during this time.				fly above the earth..."
199-65 Ma	Dinosaurs roamed the Earth during this time. A clade of dinosaurs, <u>theropods</u> , would be the only dinosaur group to have descendants that survive to the present. Today <u>theropods</u> 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 Ma	Large mammals appear in the fossil record soon after the extinction of the dinosaurs.	6	Creation of familiar land mammals that still exist today. (Cows, goats, pigs, dogs, cats, bears, mice, deer, rabbits, horses, lions, elephants, <u>etc</u> ; all originate during this time period.)	Gen 1:24-25	Then God said, "Let the earth bring forth the living creature according to <u>it's</u> kind: cattle and the creeping thing and the beast of the earth, each according to <u>it's</u> kind..."

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25-75 <u>ka</u>	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 <u>last</u> , 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..."
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