

Science and the Bible

A Search for Meaning & Significance

The Days of Genesis – The Science Evidence

Welcome/Introductory Notes/Prayer/Video

Foundational Principle for the Entire Study: **Test everything. Hold on to the good.** ¹ Thessalonians 5:21

The Premise of this Study: **The Facts of Nature and the Bible are the Same.**

Reminders: Dual Revelation, Symbiosis, Faith based in Reason, Salvation/Evangelism, Young/Old-Earth

Introductory Comments

20th Century Clash between Two World Views:

Old-Earth Creationism

- Ⓢ Billions-of-years-old Universe
- Ⓢ The Universe had a Beginning
- Ⓢ God was the Beginner beyond Space & Time

Methodological Naturalism

- Ⓢ Infinitely-old Universe
- Ⓢ No Beginning
- Ⓢ No Beginner

International Council on Biblical Inerrancy:

Old-Earth Creationists agree with the ICBI Statements of Belief. For example:

“We affirm that since God is the author of all truth, all truths, biblical and extrabiblical, are consistent and cohere, and that the Bible speaks truth when it touches on matters pertaining to nature, history, etc.”

“We affirm that in some cases extrabiblical data have value for clarifying what Scripture teaches and for prompting correction of faulty interpretations.”

“We deny that extrabiblical views ever disprove the teaching of Scripture or hold priority over it.”

Young- and Old-Earth Creationists agree on many issues, including:

- Ⓢ The Universe is far too young for naturalistic evolution to have had any chance to work.
- Ⓢ The Universe was created by the God of the Bible, who exists beyond space and time.

Biblical Support for the Fixed Laws of Nature

General: Jeremiah 33:25-26 *This is what the LORD says: “If I have not established my covenant with day and night and the fixed laws of heaven and earth, then I will reject the descendants of Jacob and David my servant and will not choose one of his sons to rule over the descendants of Abraham, Isaac and Jacob. For I will restore their fortunes and have compassion on them.”*

Second Law of Thermodynamics: Romans 8:19-21 *For the creation was subjected to frustration, not by its own choice, but by the will of the one who subjected it, in hope that the creation itself will be liberated from its bondage to decay and brought into the glorious freedom of the children of God.*

Evidence for Long Days from the Record of Nature

Evidence # 1: The Big Bang Creation Event

The Big Bang Theory Describes:

- Ⓢ The Beginning of all Space, Time, Matter and Energy
- Ⓢ The Expansion of the Universe began from a nearly infinitely Hot State
- Ⓢ The Constancy of the Laws of Physics
- Ⓢ Continuous Cooling of the Universe until coming to an End of Life in the distant Future

Brief History of the Big Bang Theory

- Ⓢ 1916 Theoretical Evidence (Einstein)

- Ⓞ 1925 Expansion Observed (Lemaître)
- Ⓞ 1929 Establishment of Expansion (Hubble)
- Ⓞ 1965 Confirmation: Cosmic Microwave Background Radiation (Arno Penzias & Robert Wilson)

Quote from atheists Stephen Hawking and Roger Penrose: “If the universe contains mass and if the general relativity reliably describes the dynamics of the universe, then space and time must be created by an Agent outside of space and time.” (from the technical journal article *The Singularities of Gravitational Collapse and Cosmology*, 1970).

Evidence # 2: The Cooling of the Universe

The temperatures measured from distant stars and galaxies match the predicted cooling curve from the Big Bang creation event, indicating an age of the universe of approximately 14 billion years.

Evidence # 3: The Expansion of the Universe

One way to detect the expansion of the universe is by observing galaxies at different distances from Earth. In the presentation, pictures of galaxy clusters from 2 billion light years and 12 billion light years away were shown, and the following differences in characteristics were observed:

Galaxy Clusters: 2 billion light years away (older)	12 billion light years away (younger)
Ⓞ The galaxies have spiral arms forming	Ⓞ No spiral arms
Ⓞ Are generally yellow in color	Ⓞ Range of colors
Ⓞ Are farther apart	Ⓞ Closer together
Ⓞ Are larger in size	Ⓞ Smaller in size

The age of the universe is determined by the simple equation: **AGE = Present Size ÷ Expansion Rate.**
All expansion measurements/calculations yield a universe age of approximately 14 billion years.

Evidence # 4: Radiometric Elements

Radiometric elements are produced in the nuclear generators of stars.

All isotopes of Neptunium (Np), Plutonium (Pu), Technetium (Tc) have half-lives of less than 2.5 my.

All isotopes of Uranium (U) and Thorium (Th) have half-lives of billions of years.

If the universe were the following ages, which of the radiometric elements would be found on Earth?

	<u>Np, Pu, Tc</u>	<u>U, Th</u>
Young Earth (< 10 thousand years)	Yes	Yes
Old (Naturalism) (> 10 ¹⁶ years)	No	No
Middle-age Earth (~10 ¹⁰ years)	No	Yes

The observations match up with the Middle-age (Old Earth Creationist) view.

Evidence # 5: Light Travel

Differences in light travel times in the two creation models:

Young Earth Model predicts distant light travels a million times faster than clocks on Earth.

Middle-Age Model predicts distant light travels ~25% slower than clocks on Earth, because of expansion.

One way of testing is to use cosmic “clocks”, and one of these clocks is the cooling time of a supernova.

The Young Earth Model predicts the observed cooling time should be about 18 seconds, and the

Middle-Age Model predicts about 9 months. All of the observed cooling times are about 9 months.

This technique supports the Middle-Age Model (Old Earth Creationist) age for the universe.

Evidence # 6: Ice Cores

Cores of ice have been taken from several locations. The cores contain annual layers representing hundreds of thousands of years of Earth history.

Antarctica Ice Cores (3 sites): 740,000, 420,000 and 100,000 years of annual layers

North Greenland Ice Cores (3 sites): all 100,000+ years

Here are two methods utilized to calibrate that each layer represents a year:

1. The dust signatures from very large volcanic eruptions like Vesuvius (79) & Krakatoa (1883)
2. The eccentricity of the Earth's orbit changes the layer thicknesses in 100,000-year cycles

The ice cores and the analysis of their annual layers verify that the Earth is at least 740,000 years old.

Evidence # 7: The Three Most Scientifically Convincing Evidences (also the most scientifically complex):

- 🌐 Sloan Digital Sky Survey (SDSS) – 2.5 meter telescope at the Apache Point Observatory, NM
- 🌐 UKIRT Infrared Deep Sky Survey (UKIDSS) – UK Infrared Telescope (UKIRT) in Hawaii
- 🌐 Wilkinson Microwave Anisotropy Probe (WMAP) – NASA's WMAP Satellite

Other Techniques used for Measuring the Age of the Universe:

- 🌐 White dwarf cooling times
- 🌐 Globular cluster star burning times
- 🌐 Uranium/Thorium ratios in the oldest stars
- 🌐 Relaxation times for star clusters

Other Techniques used for Measuring the Age of the Earth:

- 🌐 Argon abundance
- 🌐 Growth of continental land masses
- 🌐 Earth's rotation rate slowing down
- 🌐 Accumulation of biodeposits/fossil fuels

Concluding remarks:

The results from every reliable scientific age-measuring technique are consistent with the Middle-Age Model (Old-Earth Creationism): the age of the universe is 13.7 billion years and the Earth: 4.5 by.

In two separate radio debates, both Dr. John Morris (President of the Institute for Creation Research) and Dr. Duane Gish (Senior Vice President of the ICR) were asked the following question: "Do you know any scientist who concludes, outside of a particular Biblical interpretation, that the cosmos or the Earth is young?" *Without hesitation, they both answered the question: "No."*

Finally, only if the Earth is middle-aged, can one hold that all of the 20+ chapter-length creation passages in the Bible are literal and consistent. *(A key hermeneutical principle: let Scripture interpret Scripture)*

Therefore, based on the science evidence, it is quite apparent that: Only a strong pre-commitment to a particular interpretation of the Bible would cause someone to say the universe is young.

Testing the Old-Earth Creation Model of Reasons to Believe

If there is NOT a Creator:

- ❖ As more nature facts are collected, divine design evidences will decrease in strength and number, and the evidence for Jesus Christ as the Designer will get progressively weaker.

If there IS a Creator:

- † As more facts of nature are collected, divine design evidences will increase in strength and number, and the evidence for Jesus as the Designer will get progressively stronger.

For more information, see the book *More Than a Theory* (Hugh Ross, 2009) (webpage: reasons.org)

"I have deep faith that the principles of the universe will be both beautiful and simple." (Albert Einstein)

*Questions?**Glimpse Ahead and Conclusion*

Addendum 2015

Science and the Bible*A Search for Meaning & Significance***The Days of Genesis – The Science Evidence**

“Education is not the learning of facts, but the training of the mind to think.” (Albert Einstein)

The Scientific (Biblical Interpretive) Method: Application to Genesis 1

Starting with the process of the Scientific Method applied in The Days of Genesis 1 – Bible – Addendum, then reanalyzing the resultant model by adding the data/information from The Days of Genesis 1 – Science

1. Identify the frame of reference

At the surface of (“hovering over”) the waters ^{1:2} (no change)

2. Determine initial conditions

(1) formless and (2) empty (lifeless) (life not present until 800 my after Earth's formation),
(3) dark (Earth formed with a thick cloud layer - Venus), (4) water world (water would have been abundant at the time of Earth's formation)

3. Note what occurs, when, where and in what order

Day 1: light reached the earth's surface (atmosphere changed: opaque to translucent)
(mars-sized planet in the same orbit collided with Earth, blowing away some atmosphere)

Day 2: waters separated into surface water and clouds, creating a stable water cycle
(the water cycle, including clouds and rain, was necessary for the plants/trees in Day 3)

Day 3: water receded/land appeared ^{1:9-10}, creation of seed-bearing land plants/trees
(with the formation of land from plate tectonics/volcanism, plants/trees began to grow)

Day 4: sun, moon, stars clearly seen (atmosphere changed: translucent to transparent)
(an event [environmental?] caused atmosphere to clear, making sun/moon/stars visible)

Day 5: creation of (*nephesh*: soulish) sea life and birds (the Cambrian explosion?)
(fossil remains verify an explosive appearance of many complex sea animals ~542 mya)

Day 6: creation of short- and long-legged (soulish) land mammals and man
(paleontological evidence indicates land mammals were created ~200 mya, man ~ 150 kya)

4. Note final conditions

Day 7: “God had finished the work he had been doing; so on the seventh day he rested”
(since man was created, there have been many extinctions, but no new created species)

5. Form hypothesis

Revise the Creation Model based on *General* Revelation information in steps #1-4.

6. Test hypothesis ^{1 Thessalonians 5:21}

Gather *more* information from *Special/General* Revelations and compare to Creation Model.

7. Revise hypothesis

Adjust Creation Model based on comparisons **with additional data/information.**

“Try not to become a man of success, but rather try to become a man of value.” (Albert Einstein)