

## Course 104: Age of the Earth

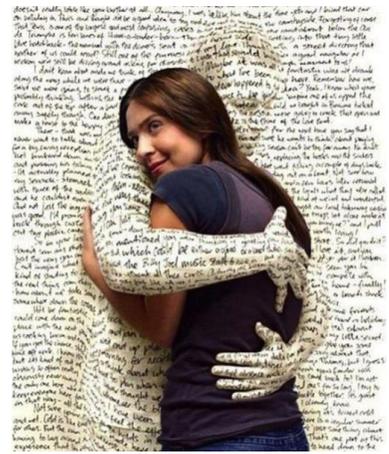
### Student Lecture Notes

#### SECTION 1: The Credibility of the Bible and the Age of the Earth

Name: \_\_\_\_\_ Date: \_\_\_\_\_

#### Lesson: Is the Bible Trustworthy?

- Evolution says that the earth is billions of years old, and a strict, literal interpretation of the Bible's genealogies seems to say that the earth is only 6,000 years old.
  - Which view is the most plausible when all factors are taken into account?
- The age of the earth is controversial, even within Christianity.
  - A person's salvation does not depend on what they think of this issue.
  - But it is still very important because it affects how a person will interpret the Bible and its reliability.
- The Bible is worthy to be \_\_\_\_\_.
  - 2 Timothy 3:16 — "All Scripture is \_\_\_\_\_, and is useful for teaching, rebuking, correcting, and training in righteousness." (NIV)
  - 2 Peter 1:20-21 "Above all, you must understand that no prophecy of Scripture came about by the prophet's own interpretation of things. For prophecy never had its origin in the human will, but prophets, though human, spoke from God as they were carried along by the \_\_\_\_\_." (NIV)



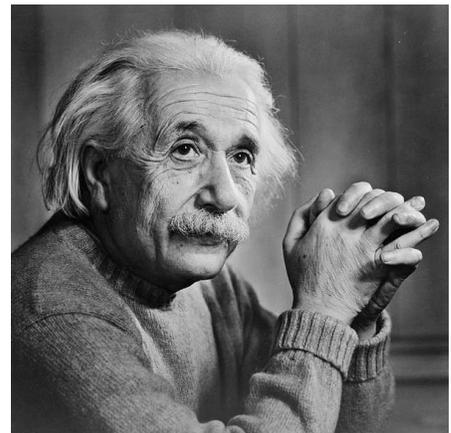
#### Lesson: The Bible vs The Skeptics

1. Bible: The Hittites are a part of h \_\_\_\_\_.  
Skeptics: The Hittites are m \_\_\_\_\_.
  - The Hittites are mentioned over 40 times in the Bible. \_\_\_\_\_ years ago, critics thought that the Hittites were an imaginary people made up by the biblical authors ... until the capital, Boghazkoy, was finished being excavated in 1906.
  - Finding the Hittites' empire forced skeptics to withdraw their claim of b \_\_\_\_\_ e \_\_\_\_\_.
2. Bible: Luke was a meticulous recorder of facts.  
Skeptics: Luke was unreliable, evidenced by "Politarch".
  - Luke was accused of being unreliable for using the term politarch (Luke 17:6, 8) because there was no known use of it outside the Bible... until, in the 19<sup>th</sup> century, a 2<sup>nd</sup> century AD inscription was found listing six Politarchs among other officials.

- So far, \_\_\_\_ inscriptions have been found that have the term “politarchs” (“city authorities”), and 19 of them come from Thessalonica. At least three date from Paul’s time. Again, the Bible was right, and the skeptics were wrong.
3. Bible: David was a powerful king of Israel.  
Skeptics: David likely wasn't even real.
- King David was considered to be a m\_\_\_\_\_ figure by many skeptics because they claimed that if he was as powerful as the Bible describes, there would be some mention of him outside the Bible.
  - An archaeologist (Abraham Biran) working at the site of the OT city of Dan in 1993 and 1994 found three pieces of an i\_\_\_\_\_ s\_\_\_\_\_ referring to David.
  - The stone was inscribed in Aramaic with the expression “the h\_\_\_\_\_ of David” and refers to King David’s d\_\_\_\_\_.
4. Bible: Jesus asked the blind man to wash in the Pool of Siloam (John 9:6-7).  
Skeptics: Archeology shows that the Pool of Siloam didn’t exist in Jesus’ day.
- Some Scholars denied that the Pool of Siloam existed in Jesus’ day because the traditional location for the pool dates back only to the \_\_\_\_ century.
  - In \_\_\_\_\_, archeologists unearthed the steps of the real Pool of Siloam less than 200 yards from the traditional location, dating back to the \_\_\_\_ century.

**Lesson: In the Beginning**

5. Bible: There was a b\_\_\_\_\_ to the universe.  
Skeptics: The universe is e\_\_\_\_\_. (steady state)
- \_\_\_\_\_, along with other scientists, believed in “steady state theory,” which says that the universe had no beginning.
    - In 1916, he noted that his field equations of general relativity predicted an e\_\_\_\_\_ universe. He didn’t like this conclusion and knew others wouldn’t either, so he m\_\_\_\_\_ his equations.
    - Einstein later told George Gamow that this was the biggest blunder of his life.
  - Scientific evidence that showed the universe had a beginning:
    - 1925—Abbe Georges Lemaitre came up with the idea of a “big bang.”
    - 1929—observations by Edwin Hubble established the expansion of the universe.
    - 1946—George Gamow calculated that a beginning to the universe could explain the abundance of elements.
    - 1965—Penzias and Wilson discovered background radiation from the big bang.



- Science finally realized that the universe had a beginning, but the Bible had already been saying this for thousands of years (Gen. 1:1, Ps. 102:25-27).
  - If you were alive prior to 1916, and the smartest scientist in the world had views about reality that conflicted with the Bible, who would you go with?
  - Who is your authority? Fallible man, or God’s infallible word?
- 6. Bible: God is the reason and cause for c\_\_\_\_\_.
- Skeptics: There is no reason or cause for the natural world.
  - According to the Humanist Manifesto, “Humanists regard the universe as s\_\_\_\_\_ and not c\_\_\_\_\_.”
    - According to Genesis 1:3, “And God said, ‘Let there be l\_\_\_\_\_ ...’”
  - “... the observable universe could have evolved from an infinitesimal region. It’s tempting to go one step further and speculate that the entire universe evolved from literally \_\_\_\_\_.” —Guth and Steinhardt, Scientific American, 1984
  - “Given a big enough e\_\_\_\_\_, enough virtual particles can pop into e\_\_\_\_\_ for free, to trigger a Big Bang and start a universe. Nothing is doing something, and not only that, it has to do something.” —Lawrence Krauss
  - “The universe burst into something from absolutely nothing—zero, nada. And as it got bigger, it became filled with even more stuff that came from absolutely nowhere. How is that possible? Ask Alan Guth. His theory of inflation helps explain everything.”—Discover Magazine, 2002

**Lesson: Video: Can Nothing Explain Everything?**

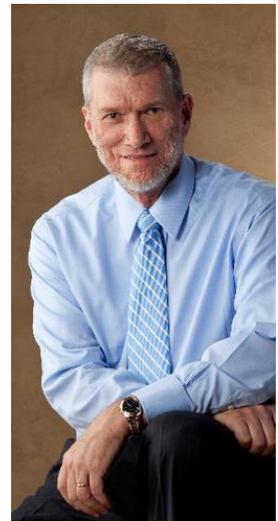
**Lesson: The Skeptics vs. Logic**

- By stating that “nothing made everything,” skeptics violate two principles of logic:
  1. The Principle of Sufficient Reason
    - Everything needs an e\_\_\_\_\_. Nothing just *is* without a reason *why* it is.
    - We use the principle of sufficient reason every day, in common sense and science as well as in philosophy and theology.
  2. The Law of Causality
    - Every event with a b\_\_\_\_\_ must have a c\_\_\_\_\_.
    - What caused the beginning of the universe? Skeptics have no cause and no reason. They don't even have a plausible guess.
    - The idea that nothing made everything denies known laws of logic and science.
      - It’s not just unscientific, it’s ant-scientific.
- In many other instances, the Biblical position defeats the skeptical position.
- The Bible is worthy to be trusted.
  - John 17:17 “Sanctify them by the \_\_\_\_\_; your word is \_\_\_\_\_.”

- 2 Samuel 7:28 “Sovereign Lord, you are God! Your covenant is trustworthy, and you have promised these good things to your servant.”
- Matthew 24:35 “Heaven and earth will pass away, but my \_\_\_\_\_ will not pass away.”

### Lesson: Four Different Theories

1. Atheistic Evolutionists (e.g. Richard Dawkins): Earth is billions of years old.
  - “The Bible is a bunch of made-up stories and can’t be trusted.”
    - The belief that there was nothing and then nothing happened to nothing, and then nothing magically exploded for no reason, creating everything, and then a bunch of everything magically rearranged itself for no reason whatsoever into self-replicating bits, which then turned into dinosaurs. Makes perfect sense.
2. Theistic Evolutionists (e.g. Francis Collins): Earth is billions of years old.
  - “The Bible is somewhat trustworthy, but not with science (especially not Genesis).”
    - “God is real, but largely uninvolved in creation. He started the Big Bang and then just let everything go on its own. The universe and life randomly and by chance all created itself through the natural laws established by God.”
3. Old-Earth Creationists (e.g. Hugh Ross): Earth is billions of years old.
  - “The Bible is completely trustworthy, and it doesn’t deny that the earth is old.”
    - We go with “science” even though the Bible seems to teach the earth is young. There are a variety of ways to fit an old earth within the biblical history: gap theory, day-age theory, progressive creation theory, framework hypothesis.
4. Young-Earth Creationists (e.g. Ken Ham): Earth is 6,000 years old.
  - “The Bible is completely trustworthy, and it clearly teaches the earth is young.”
    - Science is always learning and always changing, and is therefore less reliable than the historical accounts recorded in the Bible. There is plenty of factual scientific data that indicates the earth and universe are only about 6,000 years old, as recorded in the Bible.



### Lesson: Old Earth Creation Theories

- Gap theory
  - God had a completely separate creation that he made, but it was destroyed during a war between Satan and God in a “gap” between Genesis 1:1 and 1:2.
    - What biblical justification is there for this gap? None at all.

- Day-Age Theory
  - Each day in Genesis represents an \_\_\_\_\_ of some sort, not an actual day; therefore, the universe and the earth can be billions of years old.
- Progressive Creation Theory
  - God started creation, then stopped. Every once in a while, he does more creating.
    - They too believe the days represent indefinite ages, citing 2 Peter 3:8-9.
    - But this is not a proper interpretation of the passage, which is about being patient. And it would still only add a few thousand years, not billions.
- Framework Hypothesis
  - A day is a day, but Genesis 1 is poetic, not h\_\_\_\_\_ narrative.
    - Once again, there is no biblical justification for this interpretation.

### Lesson: Does Creation Fit an Old Earth?

- Does it really matter whether the earth is old or young?
  - A conversation between the two positions might go:
    - Ken Ham (YEC): “The earth is 6,000 years old. That’s what the Bible teaches and that’s what science shows.”
    - Hugh Ross (OEC): “Science proves the earth is billions of years old. You are ruining our witness by clinging to unscientific interpretations of the bible. Genesis 1 wasn’t meant to be read l\_\_\_\_\_. Let’s just be friends. It’s not that big of a deal.
    - Ken Ham (YEC): It’s a huge deal. You’re saved, but you’re destroying the c\_\_\_\_\_ of the Bible and the church.
- Does the Bible match evolution?

#### Bible:

1. Earth before sun
2. Oceans before land
3. Light before sun
4. Land plants first
5. Fruit trees before fish
6. Fish before insects
7. Plants before sun
8. Marine animals before land animals
9. Birds before reptiles
10. Atmosphere between 2 layers of water
11. Man brought death into the world
12. God created man

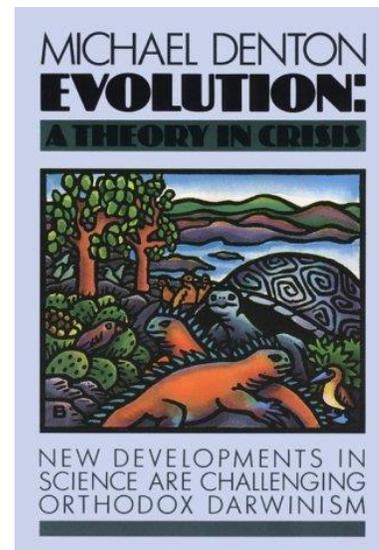
#### Evolution

1. Sun before earth
2. Land before oceans
3. Sun before light
4. Marine life first
5. Fish before fruit trees
6. Insects before Fish
7. Sun before plants
8. Land animals before marine animals
9. Reptiles before birds
10. Atmosphere above water
11. Death brought man into the world
12. Man created God

- Was it theology or “science” that caused interpreters to change their view of Genesis?
  - The literal day interpretation was the dominant view of Christian interpreters from the Church Fathers until Charles Lyell in the mid-1800s.
  - What has primarily changed since Lyell’s time is the way man defines and uses science. Modern scientific opinion has seemingly been elevated to the status of being e\_\_\_\_\_ or s\_\_\_\_\_ to biblical revelation.
    - Who is your authority? Fallible man or God’s infallible word?
  - Many nonliteral interpreters refer to “science’s” opinion as general revelation. And with its elevation, “scientific opinion” has become a presupposition that influences many evangelicals to jettison the literal interpretation of Genesis 1:1-2:3 in favor of a nonliteral view, such as the F\_\_\_\_\_ Hypothesis.

**Lesson: Does the Age of the Earth Matter?**

- Who cares about the age of the earth?
  1. The credibility of the Bible is at stake. If something that reads like historical narrative is actually allegory or metaphor, then why can’t the same be said of the rest of the Bible?
  2. The credibility of \_\_\_\_\_ is at stake. Jesus cited Genesis 25 times.
  3. People’s \_\_\_\_\_ is at stake, because they won’t take the need for a savior seriously. (The need is based on Adam’s sin, which is in Genesis.) They are making God who they want Him to be rather than who He is (idol worship).
  4. The evolutionists care. Their entire theory looks silly without “billions of years” to hide it in.
- Consider this statement from Michael Denton, an agnostic scientist (with two PhDs):
  - “Today it is perhaps the Darwinian view of nature more than any other that is responsible for the a\_\_\_\_\_ and s\_\_\_\_\_ outlook of the twentieth century.”  
—*Evolution: A Theory in Crisis*, p. 358
- For a period of over 300 years (1600s to 1900s), America’s public schools used textbooks that were full of Scripture, as well as references to God and the gospel.
  - Generations of American children were educated on the foundation of the Christian religion.



- One of the most popular of these books was Noah Webster's "b\_\_\_\_-b\_\_\_\_ s\_\_\_\_," which is the most highly sold book after the Bible.
  - This book references God and the Bible constantly.
- 1859 — *On the Origin of \_\_\_\_\_ by Means of Natural \_\_\_\_\_* (or *The Preservation of Favoured Races in the Struggle for Life*) is published and begins to take hold in Europe.
- 1920 — The ACLU (American Civil Liberties Union) is founded.
  - This group is largely responsible for removing Bible from schools.
  - The ACLU pursues goals such as the legalization of prostitution, the defense of all pornography as free speech, the legalization of all drugs, the promotion of homosexuality, opposition of parental consent for minors seeking abortions, opposition of parental choice in their child's education, and many more.
  - ACLU founder Roger Baldwin said: "We are for s\_\_\_\_\_, disarmament, and ultimately for abolishing the state itself... We seek the social ownership of property, the abolition of the propertied class, and the sole control of those who produce wealth. Communism is the goal." (*Trial and Error* by George Grant)
- 1925 — S\_\_\_\_\_ M\_\_\_\_\_ Trial — \_\_\_\_\_ lose the case, but gain popularity. People started to view the Bible and science as being in conflict rather than harmony.

### Lesson: The Bible Loses Credibility

- 1925-1961 — not much of a defense against evolution from the Christian community.
  - Many Christians conceded that maybe the earth is old, without accepting evolution.
  - The ACLU and evolution spread unhindered, turning the culture away from God.
- 1954 — Johnson Amendment limits the ability of pastors to speak out on so-called "\_\_\_\_\_" issues and candidates.
- 1961 — Henry Morris (father of the scientific creationism movement) publishes his landmark book, *The Genesis Flood*. But it's too late to prevent what happens in 62-63.
- 1962 — US Supreme Court removes p\_\_\_\_\_ from public schools.
- 1963 — US Supreme Court says schools cannot mandate prayer or Bible reading.
- 1968 — Prohibiting the teaching of evolution is declared un\_\_\_\_\_.
  - With the Bible banned (because it was viewed as unscientific) and evolution allowed, schools became the playground of humanist philosophy.
- 1970 — No-fault divorce is first legalized in California, as is homosexuality.
- 1973 — Supreme Court forces all states to legalize abortion (*Roe v. Wade*).
  - 50 million babies have been killed because of this decision.
- Today people are harshly criticized for believing what the Bible says.

- Republican Senator Marco Rubio said in an interview with GQ that he wasn't sure how old the earth was. After being mocked for the statement, he issued a retraction saying that it is 4.5 billion years old and there's no scientific debate.

### Lesson: The Moral Avalanche

- At his death at the age of 100 in 2005, notable American evolutionist Ernst Mayr tells us when the moral and social avalanche started.
  - "The [Darwinian] revolution began when it became obvious that the earth was very a \_\_\_\_\_ rather than having been created only \_\_\_\_\_ years ago. This finding was the snowball that started the whole avalanche."
- Old earth views give evolution a foot in the door of the church.
  - An acceptance of \_\_\_\_\_ in spite of the clear teaching of Genesis enables people to a \_\_\_\_\_ any part of the Bible and say "that's not what it really means." This enables the justification of homosexuality and other immorality.
- PCUSA, the largest Presbyterian denomination in the US, affirms evolutionary theory and says that it does not contradict the doctrine of God as creator.
  - Most of the leaders of PCUSA deny the i \_\_\_\_\_ of the Bible and other cardinal doctrines of the Christian faith, and they support radical social causes such as a \_\_\_\_\_ and homosexual rights.
- R. C. Sproul said: "Creation is foundational for the Christian church, with every major Christian doctrine coming out of the events recorded in the first chapters of Genesis."
  1. The nature of God, including his p \_\_\_\_\_ and goodness.
  2. The nature of man, created in the \_\_\_\_\_ of God but fallen because of his sin.
  3. The nature and consequences of sin.
  4. The nature of marriage.
  5. The origin of \_\_\_\_\_ as a penalty for sin (and an enemy).
  6. The need for a \_\_\_\_\_ to redeem man from sin.
  7. The origin and meaning of work and the weekly day of rest.
  8. The relationship between man and the rest of creation, which is now cursed because of sin. (And many more doctrines!)
- In John 5:46-47, Jesus said: "If you believed M \_\_\_\_\_, you would believe me, for he wrote about me. But since you do not believe what he wrote, how are you going to believe what I say?"



## Lesson: What is a “Day”?

- What do \_\_\_\_\_ scholars say about the word “\_\_\_\_\_”?
  - The Old Testament uses y\_\_\_ as a normal day \_\_\_% of the time.
  - The Hebrew word y\_\_\_ is used more than 2,000 times in the Old Testament. In over 1,900 cases (95%), the word is clearly used of a 24-hour day, or of the daylight portion of a normal day.
  - Many of the other 5% refer to expressions such as “the day of the Lord” (Joel 2:1), which may not be exceptions at all, since the second coming of Christ will occur on one particular day (1 Cor. 15:51-52).
- C. John Collins (PhD in Biblical Hebrew Linguistics, Old Testament Chairman and Editor for the ESV Study Bible, ESV Text Editor for English-Greek reverse Interlinear New Testament) says:
  - “Generally speaking, the Hebrew word yom (‘day’) has several attested senses. In the singular it can designate (1) the period of d\_\_\_\_\_, (2) a period of 24 hours, and (3) a period of time of unspecified length.

“To be lexically responsible, we should try to indicate criteria by which a reader would discern one sense or another in a given context. Sense 1 and 2 are fairly easy to discern, as Hebrew as well as in English; that is to say, these are the senses that require the least supporting information from the context.

“Sense 3 exists in English too and we detect it in both languages based on qualifiers such as ‘day of the Lord,’ ‘day of Jerusalem,’ ‘day of wrath,’ ‘in that day,’ etc. Such qualifiers are not present here in Genesis 1:1-2:3, so it would be better to find an interpretation that does not rely on sense 3 ... we may also say that [the day-age] view asks too much harmonization with modern scientific theories for us to see its connection with what the ancient account was actually for.”

## Lesson: The Framework Hypothesis

- In 1924, Arie Noordzij developed the f\_\_\_\_\_ hypothesis, which sought to eliminate the problems with the gap theory, progressive creation theory, and day-age theory. It is currently one of the most popular views of Genesis 1 being taught in seminaries.
  - “For most of my teaching career, I considered the framework hypothesis to be a possibility. But I have now changed my mind. I now hold to a literal six-day creation... Genesis says that God created the universe and everything in it in six \_\_\_\_\_ periods. According to the Reformation hermeneutic, the first

option is to follow the plain sense of the text. One must do a great deal of hermeneutical gymnastics to escape the plain meaning of Genesis 1-2.” —R. C. Sproul

- James Barr of Oxford University, one of the best H\_\_\_\_\_ in the world, said: “So far as I know, there is no professor of Hebrew or Old Testament at any world-class university who does not believe that the writer(s) of Gen. 1-11 intended to convey to their readers the idea that creation took place in a series of six days which were the same as the days of \_\_\_\_\_ we now have.”
  - Dr. Jud Davis, the Associate Professor of Greek at Bryan College, contacted some of the world-renowned Hebrew Scholars to find out what the author of Genesis intended when he wrote it, and emailed Barr’s letter to them.
    - Hugh Williamson, current Regius Professor of Hebrew at Oxford, responded: “So far as the days of Genesis 1 are concerned, I am sure that Professor Barr was c\_\_\_\_\_. I have not met any Hebrew professors who had the slightest doubt about this unless they were already committed to some alternative by other considerations that do not arise from a s\_\_\_\_\_ reading of the Hebrew text as it stands.”
    - Emanuel Tov of Hebrew University Jerusalem responded: “For the biblical people this was h\_\_\_\_\_, difficult as it is for us to accept this view.”
    - Dr. Peter Williams, warden of the Tyndale House at Cambridge, said: “Although the Young Universe Creationist position is not widely held within s\_\_\_\_\_ academia, the position—that the author of Genesis 1 maintained that the world was created in six literal days—is nearly u\_\_\_\_\_ held.”
- The Numerical qualifier demands a 24-hour day.
  - The word “day” appears over 200 times in the Old Testament with n\_\_\_\_\_. In every single case, without exception, it refers to a 24-hour day. Each of the six days of the creation week is so q\_\_\_\_\_ (Gen. 1:5, 8, 13, 19, 23, 31) and therefore the consistency of Old Testament usage requires a 24-hour day in Genesis 1 as well.

### Lesson: Life Needs a 24-Hour Day

- Symbiosis requires a 24-hour day.
  - Plants were created on the \_\_\_\_\_ day (Gen. 1:9-13), birds on the fifth day (1:20-23), and insects on the sixth day (1:24-25, 31).
  - Plants and animals depend on each other for survival (like the dodo bird and the Calvaria tree, or the yucca plant and the yucca moth). How could plants have survived for millions while waiting for insects and other animals to be created?



- The survival of plants and animals requires a 24-hour day.
  - If each day were a billion years, then half of that day (500 million years) would have been \_\_\_\_\_.
  - We are explicitly told in verse 5 that the light was called day and the darkness was called night, and that each day had one period of light-darkness.
  - How would the plants, insects, and animals have survived through each 500 million year stretch of darkness? A 24-hour day is needed.
- If you had agreed with Einstein prior to 1916 that the universe had no beginning, contrary to the Bible's clear teaching, you would have been wrong.
  - We are in the same situation today, but now people are rejecting the Bible's clear teaching of a young universe and a 6-day creation.
- The Catholic Church has always said that t\_\_\_\_\_ is on equal footing with the Bible as their authority. PCUSA says the same thing about "science."
  - But what happens when tradition and "science" are in conflict with the Bible? Which should have the final say?

**Lesson: Read Article #1 – Theistic Evolution and the Day-Age Theory**

**Quiz: Article 1 Quiz – Theistic Evolution and the Day-Age Theory**

**Quiz 2: Section 1 Quiz – Credibility of the Bible and the Age of the Earth**

## **SECTION 2: The Biblical Age of the Earth and Evidence of a Young Earth**

**Lesson: When Was the Beginning?**

- In order to know how old the Bible says the e\_\_\_\_\_ is, we have to know when the Bible says t\_\_\_\_\_ started. When was the beginning?
  - "In the beginning God created the \_\_\_\_\_ and the \_\_\_\_\_." (Genesis 1:1)
  - "But at the beginning of creation God made them \_\_\_\_\_ and \_\_\_\_\_." (Mark 10:6) Theistic evolution teaches there was not male and female in the beginning.
  - "So it is written: 'The \_\_\_\_\_ man Adam became a living being'; the \_\_\_\_\_ Adam a life-giving spirit." (1 Corinthians 15:45)
  - "...In the beginning, Lord, you laid the foundations of the earth..." (Hebrews 1:10)
  - "For by him all things were created, in heaven and on earth..." (Colossians 1:16)
  - "...at the beginning the Creator 'made them male and female...'" (Matthew 19:4)
    - Was Jesus lying when he said this? Did he not understand modern science?

- Of course not. He's all knowing and he made everything. Jesus was right, in contradiction to all old-earth views.
  - The Bible teaches that Adam and Eve were both created at the "beginning" of time along with Earth and the universe. So time began when the \_\_\_\_\_ and \_\_\_\_\_ and \_\_\_\_\_ were created.
- When did death start happening?
  - Why is this an important question?
    - Evolutionists, theistic evolutionists, progressive creationists, gap-theorists, and day-age theorists all teach that there was physical death \_\_\_\_\_ Adam and Eve.
    - Young Earth Creationists teach that death didn't start until \_\_\_\_\_ they sinned.
  - "God saw all that he had made, and it was very \_\_\_\_\_..." (Genesis 1:31)
    - How can death be very good? It is the enemy Jesus came to conquer.
  - The question is: did man bring \_\_\_\_\_ into the world, or did \_\_\_\_\_ bring man into the world?

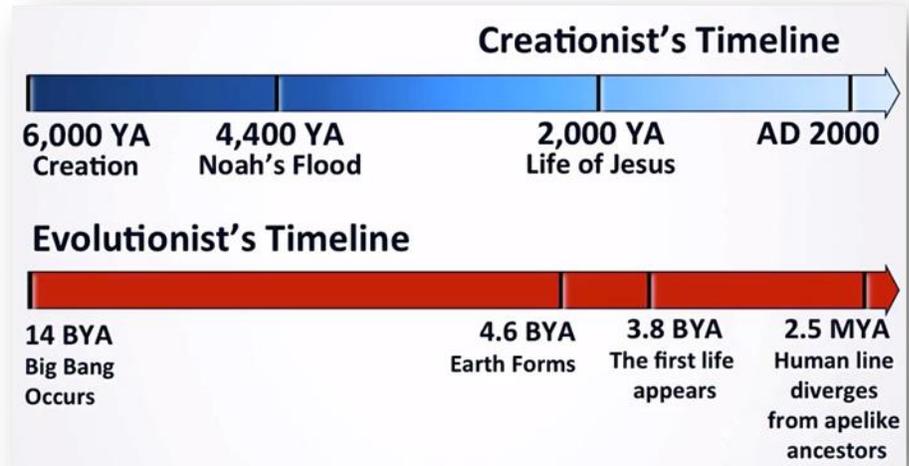
### Lesson: Could God Have Used Evolution?

- Could God have used \_\_\_\_\_ to create?
  - He could have, but that's not the right question.
  - The right question to ask is, "\_\_\_\_\_?"
- What does the Bible say about the origin of death?
  - "For since death came through a man, the resurrection of the dead comes also through a man. For as in Adam all \_\_\_\_\_, so in Christ all will be made \_\_\_\_\_." (1 Corinthians 15:21-22)
  - "Therefore, just as sin entered the world through one man, and \_\_\_\_\_ through \_\_\_\_\_; and in this way death came to all people, because all sinned." (Romans 5:12)
  - "Nevertheless, death reigned from the time of \_\_\_\_\_ to the time of \_\_\_\_\_..." (Romans 5:14)
  - Adam's sin also affected \_\_\_\_\_ and animals (Gen. 3:17-19, Rom. 8:18-22)
- After we know (1) the meaning of the word "\_\_\_\_\_" in Genesis, (2) when the \_\_\_\_\_ was, and (3) when \_\_\_\_\_ started happening, we can get a good idea of how old the Bible says the earth is.
  - "Adam named his wife \_\_\_\_\_; because she would become the m\_\_\_\_\_ of all the living." (Genesis 3:20)
  - After \_\_\_\_\_ years, Adam had \_\_\_\_\_ (5:3); after \_\_\_\_\_ years, Seth had \_\_\_\_\_ (5:6); after \_\_\_\_\_ years, Enosh had \_\_\_\_\_ (5:9).
    - Using genealogies like these, you see how old the Bible says the earth is.



## Lesson: Limiting Factors

- There are two basic theories about the age of the earth →
  - Who is right?
  - Does it matter?
- The Bible teaches the earth is \_\_\_\_\_. Does \_\_\_\_\_ support this position?
- Suppose you are exploring a shipwreck, and you find coins with different dates. Which coin will be most important for determining when the shipwreck happened?
  - The most recent coin, because you know it must have happened after that date.
  - The newest coin is a *limiting factor*, because it limits how old the wreck can be.
- The human population topped \_\_\_\_\_ at the start of 2014. (US News)
  - Population is a limiting factor for mankind's age, because it grows exponentially.
  - Around 200 years ago, there were only ~ \_\_\_\_\_ people. The human population has increased sevenfold since then. If humans have been around for 200,000 years, as evolution teaches, then how is the population so low?
  - However, if the Bible is true then the human population was only 8 people after the flood occurred 4400 years ago, and its growth since then makes perfect sense.
- Is the world overcrowded?
  - Thomas Malthus predicted that population growth would overtake the production of resources, resulting in starvation.
  - The real problem is not too many people or too few resources, but greed and poor management of resources.

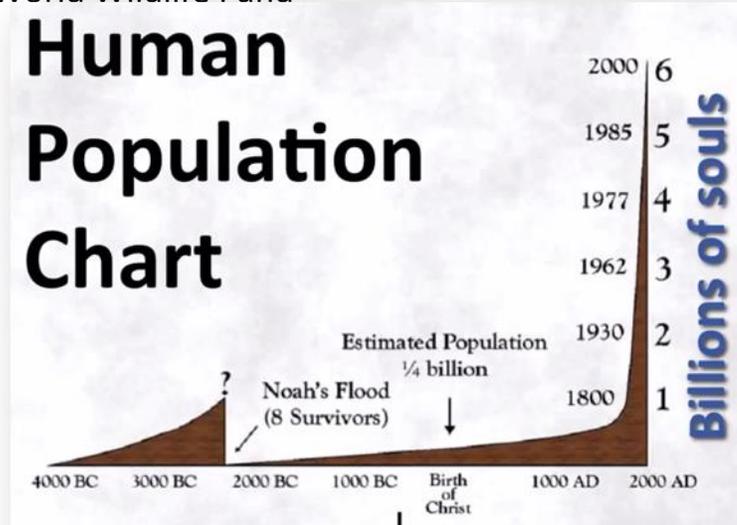


## Lesson: Human Population Levels

- If evolution were true, then due to population growth there would now be about \_\_\_\_\_ people per square inch on earth!
  - Not only do we not have enough people living, but we don't have enough human remains to support the idea that humans have existed 200,000 years.
- Perspectives on the human population:
  - "In order to stabilize world \_\_\_\_\_ we must eliminate \_\_\_\_\_ people per day." —Jacques Cousteau, French conservationist and oceanographer

- “A total world population of 250-300 million people, a \_\_\_\_% decline from present levels, would be \_\_\_\_.” —Ted Turner, CNN
- “\_\_\_\_\_ are the cause of all the \_\_\_\_\_; we have too many of them; we need to get rid of some of them, and this [ban of DDT] is as good a way as any.” —Charles Wurster, Environmental Defense Fund
- “...we must either reduce the earth’s human population to \_\_ billion or reduce the standard of living to an agrarian ‘\_\_\_\_\_’ status.” —Convention on Biological Diversity, signed by Bill Clinton
- “\_\_\_\_\_ is our foe. If \_\_\_\_\_ rights is to succeed, we must destroy the Judeo-Christian religious tradition.” —Peter Singer, “father of animal rights” who supports killing babies up to 28 days after their birth
- “The world has \_\_\_\_\_, and the \_\_\_\_\_ is \_\_\_\_.” —Alan Gregg, long-time official of the Rockefeller Foundation
- “If I could be \_\_\_\_\_, I would wish to return to Earth as a killer \_\_\_\_\_, to lower human population levels.” —Prince Philip, husband of Queen Elizabeth and president of the World Wildlife Fund

- Regardless of the future, the \_\_\_\_\_ population shows only \_\_\_\_\_ years of growth.
  - Based on DNA studies, scientists are now putting forth the theory that there was a \_\_\_\_\_ years ago that reduced the human population to a few \_\_\_\_\_, creating a genetic bottleneck. They propose that a \_\_\_\_\_



- caused this near-extinction of mankind. (Discovery Channel, May 12, 2002)
  - There was a giant catastrophe that did this: Noah’s Flood.

### Lesson: How Old are the Stars?

- Supernovae
  - Astronomers have observed that about every \_\_\_\_ years a star “dies” and explodes into a supernova. If the universe is billions of years old, how come there are less than \_\_\_\_\_ supernovae (dead stars)? There should be several hundred million of them. Are the stars wrong, or is the evolutionary theory?

- Critics of biblical creation sometimes use distant \_\_\_\_\_ as an argument against a young universe. The argument goes something like this:
  1. There are galaxies that are so far away, it would take light from their stars \_\_\_\_\_ of years to get from there to here.
  2. We can see these galaxies, so their starlight has already arrived here.
  3. Therefore the universe must be at least billions of years old—much older than the 6,000 or so years indicated in the Bible.
- Light travel-time: a self-refuting argument
  - Big bang proponents use light travel-time to argue against the biblical time scale, but the big bang has its own issues with light travel-time: the horizon problem.
  - In the big bang model, light is required to travel a distance much \_\_\_\_\_ than should be possible within its time frame of about \_\_\_\_ billion years.

### Lesson: Age of Planets and Moons

- Jupiter is \_\_\_\_\_ off.
  - At the rate it is going, it should already be completely frozen; but it isn't.
- Jupiter's moon \_\_\_\_\_ has a strong \_\_\_\_\_ field.
  - "If there is an electric current in a core consisting of a moving conducting liquid, this may generate a magnetic field. The chief problem in a small body such as Ganymede is a small core. A small sphere cools faster than a large sphere, thus a moon tends to cool rapidly over time. The heat flux out of Ganymede's core should not be enough to keep convection operating in the core for over four billion years." —Wayne Spencer, "Ganymede: the surprisingly magnetic moon," Creation.com.
  - Magnetic fields are generated by the liquid motion of molten metal inside a body. Yet Ganymede should have cooled solid \_\_\_\_\_ of years ago.
- Saturn's rings are \_\_\_\_\_ and cannot be \_\_\_\_\_ of years old.
- The moon is moving away from the earth.
  - At the rate it is moving away, it should already have escaped its orbit of Earth.
- Inverse Square Law: the force of \_\_\_\_\_ between two objects is inversely proportional to the square of the \_\_\_\_\_ between them.
  - If the distance is 1/3, the gravitational force is 9 times greater.
  - As you go back in time, the moon gets closer to Earth. If you go far enough, its gravitational effects would wreak havoc on the earth; farther still and it would collide.
  - This fact alone puts the max age of the Earth/Moon system at less than \_\_\_\_\_ billion years.

- \_\_\_\_\_ period comets are losing material and have a life expectancy of less than \_\_\_\_\_ years. Why are they still around?
  - In 1950, Dutch astronomer Jan Oort proposed that a great spherical shell of comets exists in a remote part of our solar system as the source of comets.
  - However, as Carl Sagan observed: “Many scientific papers are written each year about the \_\_\_\_\_ Cloud, its properties, its origin, its evolution. Yet there is not a shred of direct observational \_\_\_\_\_ for its existence.
  - If the universe is young as the Bible says, there’s no problem explaining comets.
    - “The \_\_\_\_\_ declare the glory of God; the \_\_\_\_\_ proclaim the work of his hands.” —Psalm 19:1
- Magnets lose their strength with time—Earth’s magnetic field is weakening.
  - It cannot be billions of years old—\_\_\_\_\_ max.
  - Earth’s magnetic strength has declined \_\_\_% in the last 150 years and \_\_\_% in the last \_\_\_\_\_ years.

**Lesson: How Does Radiocarbon Dating Work?**

- \_\_\_\_\_ Column—instead of providing evidence for evolution, it ends up just being a case of circular reasoning. For example:
  - Q: How do you know a \_\_\_\_\_ is 500 million years old?
  - A: Look at the geologic column.
  - Q: How do you know the geologic column is right?
  - A: Because trilobites were the first multi-organ creatures to evolve 500 million years ago.
  - Q: How do you know a trilobite is 500 million years old? (and so on)
- Radioactive dating (radiometric dating) and radiocarbon dating (carbon-14 dating)
  - Let’s say you walk into an empty room and there’s this hourglass (→) sitting there. How much time has passed in this hourglass?
  - To answer you must make three assumptions:
    1. All the sand started in the \_\_\_\_\_ of the glass.
    2. Nobody \_\_\_\_\_ any sand to the glass part way through.
    3. The sand has been moving at the same \_\_\_\_\_ (rate) the whole time. (Nobody hit the glass, shook it, or leaned it sideways to change the speed at which the sand is moving.)



- The same assumptions apply to radiometric dating.
- How is a \_\_\_\_\_ like an hour \_\_\_\_\_?
  - Rocks have what are called “parent isotopes,” which over time decay and produce “daughter isotopes.” For example, \_\_\_\_\_-14 decays into nitrogen-14.
    - This means the older a rock is, the less carbon-14 and the more nitrogen-14 it will contain. Eventually all the carbon-14 will have changed to nitrogen-14.
    - Carbon-14 dating measures the amount of each element in a rock to determine its age. If the rock is past the point of having no carbon-14 left, then this method will no longer work to estimate a date. But does it work in general?
- Assumptions for radiometric dating:
  1. The amounts of parent and daughter \_\_\_\_\_ present when the rock formed are known (initial conditions are \_\_\_\_\_)
  2. All daughter atoms measured must only have been derived by radioactive decay in that rock (no \_\_\_\_\_ took place)
  3. The radioactive decay must have been \_\_\_\_\_ at today’s measured rate (constant decay rate).
    - But scientists have only been using radiometric dating for about 100 years.
- Problems with the assumptions:
  - None of these assumptions are \_\_\_\_\_.
  - The past cannot be \_\_\_\_\_ and \_\_\_\_\_ (tested), so these assumptions are not even reasonable.
  - Daughter atoms may be \_\_\_\_\_ when rock forms.
  - Subsequent contamination is common.
- The RATE research project:
  - An 8 year creationist research project to investigate Radioisotopes and the Age of The Earth concluded that assumption 3 (a constant decay rate) is absolutely false.
  - They concluded that during the flood there were rapid rates of decay.

**Lesson: Video: Radioisotope Dating**

- The lower \_\_\_\_\_ of the Fairbanks Creek mammoth had a radiocarbon age of 15,280 RCY (radiocarbon years), while its \_\_\_\_\_ and \_\_\_\_\_ were 21,300 RCY.”  
—Harold Anthony, “Nature’s Deep Freeze,” *Natural History*
- “One part of the Vollosovitch mammoth carbon dated at \_\_\_\_\_ years and another part at \_\_\_\_\_ years.” —Troy L. Pewe, Quaternary Stratigraphic Nomenclature in Unglaciaded Central Alaska

## Lesson: Video: Carbon 14 in Diamonds

### Lesson: Earth's Rotation

- The earth is spinning at over 1,000 mph at the equator.
  - "Earth's rotation is \_\_\_\_\_. To compensate for this lagging motion, June will be one second longer than normal. This 'leap second,' announced by the International Earth rotation Service in February, will keep \_\_\_\_\_ time in close alignment with \_\_\_\_\_ time." —Astronomy Magazine, June 1992
  - What does this mean if you go back in time? Earth spins faster and faster.
    - The \_\_\_\_\_ of the earth causes the Coriolis Effect (which increases wind).
    - If the earth was around billions of years ago, it would have been spinning so fast and had such strong winds, no life could have survived on it.
- The Sahara Desert has a prevailing \_\_\_\_\_ pattern.
  - This causes the desert to \_\_\_\_\_. This process is called \_\_\_\_\_.
  - Why isn't the desert much bigger than it is?
    - Its current span of about \_\_\_\_\_ mi. means it is about \_\_\_\_\_ years old.
    - This lines up with Noah's Flood being 4,400 years ago.

### Lesson: Oil and Coal

- Oil and coal are formed when animal and plant remains are compressed.
  - Evolutionists say that this process takes millions of years.
  - In 1996, a \$22.4 million proposal was approved in Western \_\_\_\_\_ that will build a plant to create oil from \_\_\_\_\_ in 30 minutes.
- "Technological savvy could turn 600 million tons of \_\_\_\_\_ and other waste into 4 billion barrels of light Texas crude each year." —Brad Lemley, "Anything Into Oil," *Discover Magazine*
  - "We duplicated what Mother Nature does, but what Mother Nature took millions of years to do, we do in about \_\_\_\_\_ minutes." But did nature take that long?
  - A worldwide flood would bury enough plant and animal matter, and apply enough pressure, to create the coal and oil deposits we see today.

### Lesson: Erosion

- How much sediment is carried in the Mississippi River each year?



Student Lecture Notes

- At the current rate, it would only take about 30,000 years to accumulate the \_\_\_\_\_ in the \_\_\_\_\_.
- That's still longer than the Biblical timeline ... but a lot of the mud would have been deposited during Noah's Flood suddenly, but just by the river gradually.
- Old-earthers have the bigger problem of explaining why there is so little mud, if the process has been happening for millions of years.
- Why are the oldest trees only about 4,300 years old? (The Flood was 4,400 years ago)
  - The "General \_\_\_\_\_" sequoia was thought to be 5-6,000 years old, but tests showed only \_\_\_\_\_ rings. In an old earth, shouldn't there be older trees?
- The Great Barrier Reef's size suggests that it is only \_\_\_\_\_ years old.
- Niagara Falls is moving backwards as it erodes the cliffs away.
  - Eventually the falls will be gone completely ... why hasn't this already happened?
  - If it has moved 7.5 miles at a rate of 4.7 ft/yr., then it is only 8,426 years old.
  - Again, this is longer than the Bible's time frame, but the Flood kick started things.

### Lesson: Salty Seas

- Salt fills the sea too fast (and is not removed fast enough).
  - Oceans today are around 3.6% \_\_\_\_\_.
  - They could have gone from fresh water to that level of salinity in < \_\_\_\_\_ years.
  - If the evolutionary timescale is true, it should be much saltier.
- Stalagmites and stalactites can form quickly.
  - Carlsbad Caverns is said to have formed over the last 250 million years.
  - Some estimated that stalactites grow at \_\_\_\_\_ inches every \_\_\_\_\_ years.
  - This is completely false, since they have been observed to form quickly even on structures built within the last century. Large ones can grow in a few decades.
- At the current rate of erosion, the continents would erode flat in \_\_\_\_\_ million years.
  - How can we have rocks \_\_\_\_\_ times older than that still above sea level?

### Lesson: Major Writing Systems

- The oldest writing system in the world is Mesopotamian Cuneiform.
  - It dates back to around 3,000 BC, and was probably invented by Sumerians.
  - "The first developed systems of \_\_\_\_\_ appeared only about \_\_\_\_\_ years ago." —World Book Encyclopedia
  - "The oldest \_\_\_\_\_ that can reasonably be \_\_\_\_\_ is already modern, sophisticated, complete from an evolutionary point of view." —*The Biological Nature of Man*

- The year 2000 was the year \_\_\_\_\_ on the Chinese calendar.
  - Maybe they started with the birth of \_\_\_\_\_ or \_\_\_\_\_ before the flood.
  - It was the year \_\_\_\_\_ on the \_\_\_\_\_ calendar.
- The Saxons in England had a genealogy going back to \_\_\_\_\_.
- The Danish and Norwegian king lists go back to \_\_\_\_\_.
- Why are the oldest reliable historical records less than \_\_\_\_\_ years old?
  - Because, as the Bible says, that's how long history has been happening!

## Lesson: Read Article #2 – *Theistic Evolution and the Day-Age Theory*

## Quiz: Take Quiz on Article #2 – *Theistic Evolution and the Day-Age Theory*

### Lesson: Video - Does an Old-Earth View Affect the Credibility of the Bible?

- Progression of Princeton Theological Seminary:
  - Charles Hodge (1779-1787) accepted an old earth but rejected Darwinism.
  - A. A. Hodge (1823-1886) considered theistic evolution as a possibility.
  - B. B. Warfield (1851-1921) accepted theistic evolution, but defended orthodoxy.
  - Charles Templeton went to Princeton after this, and ended up rejecting the faith.
    - His acceptance of evolutionary ideas was part of his motivation.
- Most seminaries today deny the literal truth of Genesis 1-11.
  - A well-known evangelical theologian said: different views on the age of the earth don't matter, and accepting an old earth view doesn't mean rejecting inerrancy.
    - Maybe not explicitly, but it does mean implicitly rejecting inerrancy.
    - Either modern old-earth theologians are wrong, or all the young-earth theologians throughout church history are wrong.
  - He also said: he does not see any clear young-earth teachings in the Bible, and it doesn't seem to be something God thought it was important to include.
    - This is because Christians have compromised on this issue for 150 years.

### Lesson: Defending the Biblical View of the Earth

- The church has treated long ages and evolution as side issues, insignificant to the preaching of the gospel.
  - While they aren't direct attacks on the gospel, they are attacks on its foundation.



- If the church continues to allow these attacks, the foundation will be destroyed.
  - Answers in Genesis (and other creationist organizations) exist to equip the church to defend against attacks on the gospel's foundation.
- Michael Denton, agnostic author of *Evolution: A Theory in Crisis*, said: "Today it is perhaps the Darwinian view of nature more than any other that is responsible for the agnostic and skeptical outlook of the 20<sup>th</sup> century."
- Leading Evolutionist Ernst Mayr said: "The [Darwinian] revolution began when it became very obvious that the earth was very ancient rather than having been created only 6000 years ago. This finding was the snowball that started the whole avalanche."
- Three strands of evolution: Astronomical, Geological, and Biological
  - These are the components of philosophical naturalism, which opposes the Bible.
  - Biblical creationism frees you from naturalism; theistic evolutionists and progressive creationists remain trapped by it.

### Lesson: Science or Scientism?

- Is it rational and logical to give scientists authority over the Bible? When a scientist makes a claim about reality that contradicts the Bible, whom should I choose to believe?
  - There is science, and there is scientism.
    - Science is the objective, systematic study of reality accurately reported.
    - Scientism is when scientists accidentally or purposely \_\_\_\_\_ their \_\_\_\_\_ for their own agenda, whether that is money, an atheistic worldview, or any other reason.
  - In survey data collected from 1986 to 2005, scientists reported that \_\_\_% of their colleagues falsify or manipulate data. \_\_\_% perceived their fellow scientists as guilty of other questionable \_\_\_\_\_ practices.
    - Atheist paleontologist Stephen Jay Gould wrote in 1994: "The stereotype of a fully rational and objective 'scientific method,' with individual scientists as logical (and interchangeable) robots, is self-serving mythology." In other words, scientists are \_\_\_\_\_ and capable of \_\_\_\_\_, just like people in any other field.
    - There are many examples of scientists who are guilty of this:
      - Eric Poehlman, University of Vermont, 2006.
      - Van Parjis, MIT, 2011.
      - Diederik Stapel, social psychology researcher, 2011.
      - Yoshitaka Fujii faked results in 172 studies (1993-2011).

- The Bible claims, “All Scripture is breathed out by God.” (2 Timothy 3:16). If this is true (and evidence shows that it is), then why would I trust a \_\_\_\_\_ over \_\_\_\_\_?
  - Jesus calls the OT the Word of God in Mt. 15:6, Mk. 7:13, and Jn. 10:35. Paul indicates his writings are \_\_\_\_\_ in Col. 4:16, and Peter agrees in 2 Pt. 3:16.
- The Bible is worthy to be trusted.
  - John 17:17: “Sanctify them by the \_\_\_\_\_; your word is \_\_\_\_\_.”
  - Mt. 24:35: “Heaven and earth will pass away, but my \_\_\_\_\_ will not pass away.”

## Quiz: Take Quiz on Section 2 –

### The Biblical Age of the Earth and Evidences of a Young Earth