



# How Old Is the Earth?

# 6

## Key Themes

- The Bible records the true history of mankind and the universe.
- God's Word must be the absolute authority.

## Key Passages

- Genesis 5:1–32, 11:10–26; 1 Chronicles 1:17–27; Luke 3:34–38

## Objectives

Students will be able to:

- Identify the sources of the biblical and secular ages of the earth.
- Describe the connection between the age of the earth and the authority of Scripture.



## Lesson Overview



### Come On In

Write on the board, "Does the age of the earth matter?"

Students will bookmark Genesis 5, Genesis 11, 1 Chronicles 1, and Luke 3 in their Bibles.



### Studying God's Word

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The Bible provides a clear date for creation, showing a young earth. The radiometric dating methods used by many scientists to determine the earth's age as billions of years old are flawed and go against God's Word.

- Study the Prepare to Share section.
- Go Before the Throne.
- DVD player and TV or computer
- Preview the video "Why Shouldn't Christians Accept Millions of Years?" (4:09) on the Resource DVD-ROM.



### Activity: Calculating Earth's Age

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Students will use Genesis 5 to calculate the date from Adam to Noah. They will also compare the genealogies from Genesis 5 and 11 to other genealogies to calculate the age of the earth.

- Print one Calculating Earth's Age worksheet from the Resource DVD-ROM for each student. Keep the answer key for your use.
- "Radiometric Dating" video on the Resource DVD-ROM



# Prepare to Share

## SCRIPTURAL BACKGROUND

Begin your preparation this week by looking at these key passages: Genesis 5 and Genesis 11:10–26.

So, now that you've read the key passages listed above, is your head spinning? We often rush through the genealogies of the Bible, laughing at our inability to pronounce the difficult names. But this time, take note of the details given in these two chapters. Genesis 5 recounts the ten generations before the Flood; Genesis 11 lists the ten generations after the Flood. When God includes such specific details, He intends for us to take notice.

Unlike a genealogy that simply lists the order of lineage, these passages contain ages and enough detail for the reader to determine the time span. They serve as "birth certificates," and allow us to calculate the time from Adam to Abraham. Each generation builds on the one before it, so we can add the years together to determine when Adam was created and the approximate age of the earth.

As we add up the years from Adam to Abraham, we get approximately 2,000 years. Historically it has been agreed upon by Christian and non-Christian historians alike that Abraham lived about 2,000 years before Christ. If we add the 2,000 years that have passed since Jesus's birth, we get an accurate age of roughly 6,000 years.

Were there billions of years that passed *before* Adam was created? No! The Bible says that Adam was created on the sixth day of creation (Genesis 1:26, 31) and that God created at the "beginning" (Genesis 1:1). Jesus Himself confirmed His belief in the creation account when He acknowledged that Adam and Eve were created at "the beginning of creation" (Mark 10:6).

There are many Christians and non-Christians who, in an attempt to make the universe older than it is, will say there are gaps in the genealogies recorded in Genesis. They argue that the word *begat* allows for generation skipping. However, the Hebrew word for *begat* (*yalad*) means a literal father/son relationship. Nowhere in the Old Testament is *yalad* used in any

other way than to mean a single-generation (father/son or mother/daughter) relationship.

The genealogies are important to our history and should be read just as they are written. They are given to us to verify that the Bible is real history and that we are all descendants of a real man, Adam. We can trust these genealogies to give us accurate information because they are a part of the infallible, inerrant Word of God.

## APOLOGETICS BACKGROUND

The belief that scientists have "proved" the earth to be billions of years old is a major reason many in the church have abandoned the biblical account of creation. However, contrary to popular belief, radiometric dating does not prove the earth is old.

All radiometric dating methods are based on the rate that radioactive elements decay in the rocks. Geologists refer to "parent" elements in rock decaying to "daughter" elements in the rock. By measuring how much "parent" and "daughter" elements are in a specimen, scientists try to calculate how old it is.

However, these methods are based on assumptions that are neither testable nor provable. These old-earth geologists come up with faulty dates because they are relying on faulty assumptions. These assumptions are:

1. The assumption that we know the starting conditions of these rocks—particularly the ratio of parent atoms to daughter atoms in the rocks to begin with. No one can definitively explain the starting conditions because no one was there when they were formed. It is impossible to know the ratio when the rock was formed, so secular scientists assume there was 100% parent and no daughter.
2. The assumption that all of the daughter atoms found in a rock were formed from the parent atoms in the same rock. We have no way of knowing for sure that all of the daughter atoms in a rock came from parent atoms in the same rock. Contamination of some sort, from ground water, for example, could add or eliminate parent and/or daughter atoms to the rock, making any dating of this type unreliable.

3. The assumption that the rate of decay has always been constant. This is a dangerous assumption given that we weren't there and we don't know if the rate of decay has been the same over thousands of years.

In addition to these assumptions, there are documented examples of inaccurate radiometric dating. Following are just a few examples:

- A sample of the lava dome in the Mount St. Helens crater (that had been observed to form and cool in 1984) was analyzed in 1996. It contained so much argon-40 (daughter atoms) that it had a calculated "age" of 350,000 years!
- Lava flows on the sides of Mt. Ngauruhoe, New Zealand, known to be less than 50 years old, yielded radiometric "ages" of up to 3.5 million years.
- The same basalt flows on the top of Grand Canyon were tested using three different dating methods. The "ages" calculated were 916 million years, 1.143 billion years, and 2.6 billion years!

God's Word unmistakably teaches a young earth and universe. God has ensured the accurate recording and preservation of His eyewitness account of the earth's history, which Jesus Christ endorsed repeatedly during His earthly ministry. We must have confidence in what God has revealed to us in His Word and not allow man's ideas to cause us to reinterpret it or compromise it in any way.

## HISTORICAL BACKGROUND

For centuries Christians have believed that God created the world in six literal days roughly 4,000 years before Jesus's birth and that He judged the world by destroying it in the Flood of Noah's day. It is only over the last 250 years that questions about the Bible's record of time have arisen. Why? Christians and non-Christians swayed by the words of men began to try to fit billions of years of earth history into the Bible. The anti-biblical, philosophical assumptions that were used to interpret rocks and fossils threw the door

wide open for doubting, manipulating, and questioning God's Word.

Even before the technology of radiometric dating was available, the shift in belief from the young earth to the faulty old-earth theories invented by man was leading to the idea of Darwinian evolution. Consequently, an avalanche of anti-biblical science appeared on the scene. It wasn't long before many church leaders began to embrace the old-age theories and made efforts to fit the ages into the Bible. Today, placing man's knowledge above what Scripture says has become commonplace. Sadly, interpretations of science, and tradition, often influence Christians more than Scripture itself.

But does the age of the earth really matter? Consider this. The Bible gives a detailed record of the age of the earth in the Genesis genealogy passages. Choosing to discount that part of the Bible because it doesn't line up with what we've heard from the scientific community, or the media, is placing man's knowledge above the authority of Scripture. If we are unable to take Genesis 1–11 as documented history, then how are we to believe the rest of the Bible? The Bible must be the final authority on all the matters it speaks of—not just the moral and spiritual. Every Word of God is true. It is the history book of the universe and we dare not presume to know more than the Creator God.

For more information on this topic, see the Online Resource Page.



## BEFORE THE THRONE

Omniscient and sovereign God, I praise you for your Word. I recognize that it is completely sufficient for me. Your Word is living, and I continue to learn as I study to teach others about you. Show me your wisdom Lord and bless my students this week. Use me to present your truth clearly so these students will have a better understanding of the age of the earth, and be prepared to answer the attacks on your Word that are so prevalent today.

► **Pace your lesson!** You can use the provided clocks to indicate the time each section should be completed to keep the lesson on schedule. While teaching, you can compare your anticipated times with the actual time and shorten or drop sections as necessary.



## Review

In our last lesson, we focused on the creation of Adam and Eve and how the big overview of Genesis 1 is followed by more details in Genesis 2. Contrary to the evolutionary view of man that would teach mankind is simply a highly evolved animal, Scripture teaches that God made man with intimate care and in His own image. The two views stand in stark contrast to one another.

? How did we define a biblical view of marriage and what was that definition based on? *Biblical marriage is one man married to one woman for life. This comes from the pattern set by God's creation of Eve from Adam's side (Genesis 2) and the words of Christ regarding marriage (Mark 10).*

Our culture has largely rejected God's instructions for marriage, but we have the opportunity to use these issues to preach the gospel to those who are living their lives without regard for God's commands. God's grace and mercy have been demonstrated in Christ's sacrifice for those who are dead in trespasses and sins (Ephesians 2:1–10). We have the privilege of communicating that message of forgiveness and hope of change to those around us. Knowing what God has forgiven us for, how can we not respond by telling others of His love and grace?



- Write on the board, "Does the age of the earth matter?"
- Have students bookmark Genesis 5, Genesis 11, 1 Chronicles 1, and Luke 3 in their Bibles.



## Studying God's Word

To start our lesson today, I am going to show you a short video clip to introduce the topic. *Show the video "Why Shouldn't Christians Accept Millions of Years?" from the Resource DVD-ROM.*

### READ THE WORD

We are going to tackle the topic of the age of the earth today. We have been hinting at this topic as we have been discussing the ideas of the creation of the universe, but we are going to get to the heart of this matter today.

Let's read a portion of Genesis 5 together. *Read verses 1–11.*

The rest of the passage continues on in the same pattern through Cainan, Mahalalel, Jared, Enoch, Methuselah, Lamech, and Noah. We will see Noah again in chapter 11.

### EXAMINE THE WORD

#### Observe the Text

*Refer to the Bible Study poster to remind your students how to dig deeper into God's Word by asking the right questions.*

**Genesis 5:1–11**

- Some of these names are difficult to pronounce, so have some fun at your own expense if you stumble over a few.

- ? What does verse 1 tell us about what type of literature this passage is? *It is a genealogy of the line of Adam.*
- ? What ideas from our previous studies are confirmed in verses 1 and 2? *God created man in His likeness as male and female.*
- ? Are there any phrases or words that are repeated? *The entire passage is a series of repeated phrases.*
- ? How old was Adam when Seth was born? *130.*
- ? How old was Adam when he died? *It was 800 years after Seth was born, so Adam was 930 at his death.*

We can continue looking at those ages through this passage all the way up to Noah, but let's look at Genesis 11 for a minute.

- ? How does the passage beginning in verse 10 compare to what we saw in chapter 5? *The structure is identical.*
- ? Looking ahead to verse 26, what important figure do you see at the end of this genealogy? *Abram (Abraham).*

These genealogies can be called chronogenealogies since they give the timeframe for each of the relationships.

This passage gives us a list from Noah's son Shem down to Abram. We see a similar list later in 1 Chronicles 1, starting in verse 17. Turn there.

- ? What difference do you see in this list? *There are no dates given in this list, and other sons and daughters are identified by name.*
- ? Let's also look at a genealogy from the New Testament. Turn to Luke 3 and look at verses 34–38. Which type of genealogy is this? *It is more similar to the 1 Chronicles list, which lacks the dates of the Genesis chronogenealogies.*

## Discover the Truth

Understanding these genealogies is the key to understanding the age of the earth. This is another point where we must ask ourselves if we look to the authority of Scripture or man's ideas to answer this question. Looking through biblical glasses, we come to a radically different conclusion.

Some people claim that there are gaps in these genealogies. In fact, if you were to take time to carefully line up all of the different genealogies, there are some names omitted from the lists. But, does this mean there are mistakes in one list or another?

Is it possible that, using the genealogies in the Bible, we could stretch them out to fit them into the idea of millions of years? Well, let's examine them more closely in an activity and compare the biblical age to the secular age of the earth and universe.

Genesis 11:10–26

**Chronogenealogy:** a genealogy that includes the timeframe of the relationship; in the Bible, the age of the father at the birth of the son is given

1 Chronicles 1:17–27

Luke 3:34–38



# Calculating Earth's Age

## MATERIALS

- Calculating Earth's Age worksheet for each student
- Calculating Earth's Age answer key for your use
- "Radiometric Dating" video on the Resource DVD-ROM
- TV and DVD player or computer

## INSTRUCTIONS

*Have the students use the dates in Genesis 5 to calculate the amount of time that passed from Adam to Noah. Then review the information and fill in any information the students were not able to determine.*

*Pass out the worksheet to each student. On this worksheet, you are going to use the text of Genesis 5 to complete the information missing from the table. After you finish that, look through the rest of the blanks and see if you can fill in any of the other information. We will cover any blanks you might have unfilled in a few minutes. If you would like, work with a partner and see how many you can fill in. If you have a calculator on your cell phone, it might come in handy.*

*If you are short on time, have the students fill in a few of the dates in the table to get the general idea and then talk through the rest of the answers with them.*

## CONNECT TO THE TRUTH

Let's see how you did. *Refer to the Calculating Earth's Age answer key for answers.* Looking at the table, we can add up the time from the creation of Adam to the birth of Noah.

That result should be 1,056 years. *Refer to the Seven C's of History timeline to give some context to these dates.* This would correlate to 2948 BC.

As we saw in Genesis 11, we have the same basic format for the line from Noah to Abraham. If you add up all of those dates, you get 952 years from Noah to Abraham.

By combining those two numbers, we come up with 2,008 years from Adam to Abraham. Of course, we can't forget that Adam was created on Day Six, so add six more days to get back to the creation of the earth.

If we think backward from today, we can fill in the last three missing pieces on the worksheet.

? How many years between us and Jesus?  
*About 2,000.*

? Does anyone know about how many years passed between Abraham and Jesus? *Again, about 2,000 years passed. This is a date drawn from biblical events aligned with other historical records and events and is affirmed by most scholars.*

And we have already determined that there were about 2,000 years between Adam and Abraham. Adding all of these together gives us a biblical age for the earth of about 6,000 years.

From a secular perspective, the age of the earth is quite a bit older than the age we just determined from the Bible—but only

by about 4.54 billion years! And when the universe is dated by those who accept the big bang model, they speak of an age of 13.75 billion years. These are quite a bit different. Consider writing these numbers on the board, lining up the last zeros to help the students see the difference: 6,000; 4,540,000,000; 13,750,000,000.

Uniformitarianism is the presupposition that the same natural laws and processes that function in the universe today have always operated in the same way in the universe in the past. It leads to the belief that “the present is the key to the past”—that we can know what happened in the past by observing what is happening in the present. Scientists use the idea of uniformitarianism to try to calculate the age of the earth, using various methods of radiometric dating. Using what are believed to be the oldest rocks on the earth and meteorites, scientists take samples of the chemicals in the rocks and measure the ratios of different atoms. Some atoms are radioactive—their atoms change from one substance to another.

For example, some isotopes of uranium atoms can decay to form lead (radioactive uranium-238 isotopes decay to form stable lead-206 isotopes). The original uranium atoms are called the parent isotope and the lead atoms are called the daughter isotope. By comparing these ratios, an age is calculated. But, there are lots of

assumptions involved and this video is going to explain this issue briefly. As you watch, listen for the assumptions used in the radiometric dating of the earth.

Show the video “Radiometric Dating.”

As you heard, the three assumptions used to assign dates to the rocks are:

- The starting conditions of the parent/daughter ratio is known
- All the daughter atoms come from the parent atoms
- The rate of decay has always been constant

None of these assumptions are scientific in the sense of being observable, testable, or repeatable. No experiment can be performed to either prove or disprove these assumptions.

This is certainly a much more complicated issue, but that gives you a general idea of how scientists who trust these methods determine the age of the earth at about 4.5 billion years. There are also inconsistencies among dates given by different methods, and rocks of a known young age often give dates of hundreds of thousands or even millions of years. This issue is a big part of the scientific debate over the age of the earth. We can give thanks to God that He has already revealed this information to us in His inerrant Word.



## READ THE WORD

Many skeptics of the Bible point to the Genesis genealogies as “proof” that the Bible must be filled with errors. Let’s look at Genesis 5 again to try to understand this objection.

## EXAMINE THE WORD

### Observe the Text

- ? According to verse 5, how old was Adam when he died? *930.*
- ? How old was Seth when he died (verse 8)? *912.*
- ? Who is the oldest person in this list (verse 12)? *Methuselah at 969.*

### Discover the Truth

Methuselah is the oldest recorded person, living 969 years. By today’s standards, this almost seems absurd. Skeptics point to this as an obvious flaw in the Bible, but that is because many have rejected the truths of Scripture before evaluating the biblical explanation.

- ? Is there any reason from the text to assume that these men did not live to the ages recorded? *No, it is recorded in God’s Word, so there is no reason to doubt it.*
- ? Can anyone think of an explanation that might help us explain how these long lifespans were possible thousands of years ago? *The best explanation seems to be the original perfect condition of God’s creation. If mankind was created perfectly—without any genetic mistakes or diseases—then there is no reason that they could not have lived much longer than we do today. Geneticists call the accumulation of genetic mutations and diseases the genetic load. Because our genes are subject to 6,000 years of decay since the Fall and God’s curse on the universe, we live much shorter lifespans. Various environmental factors could also be an influence. After the Flood, we see the lifespans drop off to 600 (Shem), then 400, then less than 200, and down to around 100 by the time of Joseph.*

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There is no reason, apart from adding man’s ideas into the text, to doubt that these men really lived this long and that our short lifespans are another reminder of the effects of sin on the world. It is also a reminder of the wisdom of God—He was able to make a perfect creation without mistakes. To doubt God’s ability to create men who could live for 1,000 years is to doubt His wisdom and power as the Creator. *Refer to wise on the Attributes of God poster.*





# Applying God's Word

## WHAT YOU HEARD IN THE WORD

As we have talked about many times, it is important to understand the lenses that we look at the world through. Are we going to start our thinking based on what the Bible clearly lays out, or are we going to let the flawed thinking of man be our starting point? We must decide who has the authority in our understanding.

When we consider the age of the earth, everyone is looking at the same evidence and interpreting it based on different starting assumptions. By looking to the biblical genealogies, we arrive at an earth and universe that is about 6,000 years old. By starting from the assumptions of radiometric dating and big bang cosmology, others have arrived at an earth that is 4.5 billion years old and a universe about 13.7 billion years old.

Ultimately, this is not a battle between science and the Bible, but one of starting points and authority. If God's Word is the authority, we must reject the idea of millions and billions of years.

## GOD'S WORD IN THE REAL WORLD

Many of you may never have a conversation with someone regarding the details of the methods used in radiometric dating, but you will surely hear about this topic in many places. We want to be careful not to get caught up in the scientific arguments and fail to point to the truths of God's Word and the gospel.

- ? **In what areas of our culture do the questions about the age of the earth typically get asked?** *It is very common in television programs that attempt to teach scientific ideas, in textbooks for students, and in literature that tries to undermine the authority of God's Word.*
- ? **As we think about the vast difference in the descriptions of the age of the earth—6,000 versus 4.5 billion—how is this debate primarily a debate about the authority of Scripture?** *If we allow Scripture to inform us without outside influences, the age seems quite straightforward. When we start to allow secular scientific ideas to be the starting point, placing the ideas of scientists above the Word of God, we have allowed our foundation to be built upon something other than God's Word.*
- ? **Should our goal in a conversation with an unbeliever over the age of the earth be to get them to agree that the earth is young?** *No! We should be looking to exalt the authority of God's Word and use it as a way to point to the Savior that is revealed in Scripture. There is nothing wrong with answering questions regarding such scientific topics, but skeptics will often jump from topic to topic in order to avoid facing the truths of Scripture. Use these topics to get to the hope of Christ's death and Resurrection.*

- ? **How would you describe the issue in terms of authority?** *Use an analogy like looking through glasses or using a filter; point to the fact that everyone has the same evidence and it must be interpreted in light of the worldview or starting assumptions that are being used as the lenses. Facts don't speak for themselves; they must be interpreted.*
- ? **How could you use the passages we have looked at today to help answer the questions of those who doubt the Bible's authority on the issue of the age of the earth?** *Open the Bible and show how the ages can be added together to arrive at a date from Adam to Abraham. Let them argue against what God's Word says, not your words.*
- ? **How might you expect to suffer for Christ's sake by standing on God's Word when this issue is raised?** *Throughout the book of 1 Peter, Christians are called to be willing to face trials for the sake of Christ. If we are boldly proclaiming the authority of God's Word and talking of the exclusive hope found in Christ, we can expect to be hated by the world (John 15:18). We should be willing to offend people with the truth, although our manner should not be offensive (Colossians 4:2-6). The message of the Cross is foolishness to those who are perishing (1 Corinthians 1:18).*



### MEMORY VERSE

**Exodus 20:11** For in six days the Lord made the heavens and the earth, the sea, and all that is in them, and rested the seventh day. Therefore the Lord blessed the Sabbath day and hallowed it.



### GROUP PRAYER TIME

Be sure to pray with your class before you dismiss them.

- Praise God for His wisdom.
- Thank God for the truths in His Word and the ability to study His world.
- Ask God for wisdom in understanding how to discuss these ideas with skeptics and how to point them to the hope of Christ.