

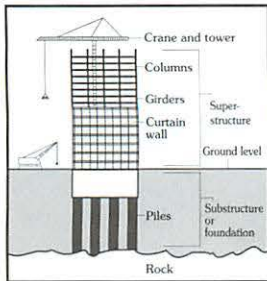
Wisdom Booklet 53



WISDOM QUIZ

Matthew 7:24-27

"Therefore whosoever heareth these sayings of mine, and doeth them, I will liken him unto a wise man, which built his house upon a rock. . . ."



How well do you understand the concept of testing?

1 The way to build your house upon the rock is to do good works for God. ☐ ☒

(Read Isaiah 53:6.)

- Before doing good works for God, we must hear the commands of God. The workers of iniquity described in the previous passage did many "wonderful works," but Jesus condemned them because the works were not in harmony with the will of His Father in Heaven. Iniquity is doing our own will, and the most subtle iniquity is doing good works which God did not direct.

Everyone hears the words of God, but not everyone obeys them. ☐ ☐ ?
(See Matthew 13:15.)

2 It is vital for Christians to develop the quality of initiative in order to do the work of God. ☐ ☒

(Read John 5:19-30.)

- Initiative from self-motivation results in iniquity. Jesus did nothing of His own initiative—He did only what His Heavenly Father directed Him to do. Any work we do for God must be based not on our initiative but on God's grace: the desire and power to do His will.
(See Philippians 2:13.)

God's work begins with the things we do for other people, not for ourselves. ☐ ☒

(See John 6:28-29.)

3 The ark was the "house" that Noah built. ☐ ☒

(Read Genesis 7:1.)

- The house refers to the extent of our jurisdiction. A single person has jurisdiction over himself and all his property. A father has jurisdiction over his home and family. Joshua stated, ". . . As for me and my house, we will serve the Lord" (Joshua 24:15). Noah's "house" was not the ark, but his family who was in the ark.

A father who fails to build his own family is not qualified to lead the house of God. ☐ ☐
(See I Timothy 3:5.)

4 The house that falls is one which cannot withstand normal pressures of rain, flood, and wind. ☐ ☒

(Read II Peter 2:1-10.)

- The house on the sand fell because of God's judgment upon it, not simply from normal pressures. Adversities that strengthen the life of a Christian cause bitterness and defeat in those who do not understand the ways of God.

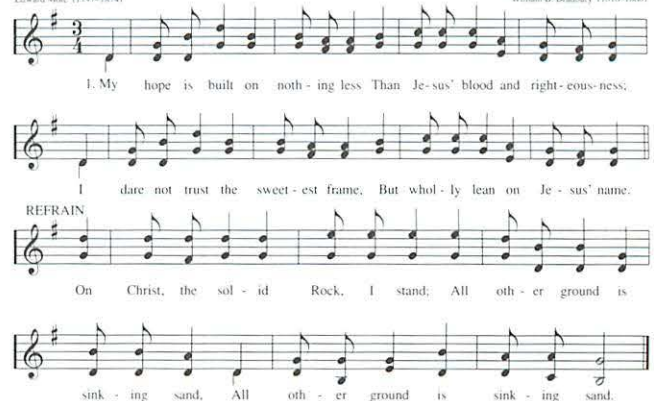
Every delusion that destroys a house is sent by Satan. ☐ ☒
(See II Thessalonians 2:11.)

Total Correct 7

The Solid Rock

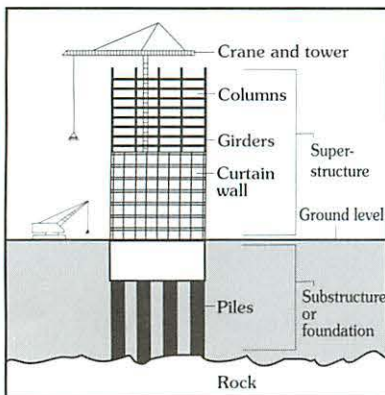
Edward Mote (1797-1874)

William B. Bradbury (1816-1908)





"Therefore whosoever heareth these sayings of mine, and doeth them, I will liken him unto a wise man, which built his house upon a rock: And the rain descended, and the floods came, and the winds blew, and beat upon that house; and it fell not: for it was founded upon a rock.



*And every one that heareth these sayings of mine, and doeth them not, shall be likened unto a foolish man, which built his house upon the sand
And the rain descended, and the floods came, and the winds blew, and beat upon that house; and it fell: and great was the fall of it."*

- The house represents a man's family, which is built either on the solid foundation of Christ's own words or the shifting sands of humanistic philosophies.
- The rains first test the roof, which represents leadership. A small leak in the roof can allow much damage in the house. Next, the foundations are tested by the floods. The foundation represents the principles upon which the house is built. Then finally, the walls are tested by the winds. The walls represent the members of the house.

Linguistics

Languages,
Grammar, Vocabulary,
Communication



HEARETH

Greek: ἀκούω (ah-KOO-oh)
DEFINITION: To perceive and make sense of sounds coming to the ear.

Do Resource A.

DOETH

Greek: ποιέω (poi-EH-oh)
DEFINITION: To accept and carry out; submit to verbal instruction.

RAIN DESCENDED

Greek: βροχή καταβαίνω
(braw-KHAY kah-tah-BYE-no)
DEFINITION: Violent rain. These are the only two instances of this Greek word in the New Testament.

FLOODS CAME

Greek: ποταμός ἔρχομαι
(paw-tah-MOSS AIR-kaw-my)
DEFINITION: A rush of water caused by a torrent of rain.

WINDS BLEW

Greek: ἄνεμος πνέω
(AH-neh-moss PNEH-oh)
DEFINITION: A strong, tempestuous wind coming from all directions.

BEAT UPON

Greek: προσπίπτω (v. 25) (pross-PIP-toe)
προσκόπτω (v. 27) (pross-KOP-toe)
DEFINITION: The root πίπτω means "to fall." The root κόπτω means "to chop, as in beating the breast in grief."

FOUNDED

Greek: θεμελιόω (theh-meh-lih-AW-oh)
DEFINITION: Proper basis was established. Tense indicates past state of completion.

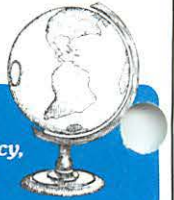
GREAT FALL

Greek: μέγας πτώσις
(MEH-gahss PTOE-sis)
DEFINITION: Used of size, measure, degree. Not that a *great* house fell, but that the house fell *greatly*. πτώσις is the same word used for *poor* in spirit (hum-bled), which is God's purpose for a fall.

Do Resource B.

History

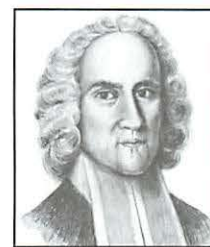
Archaeology,
Geography, Prophecy,
Music, Art, Literature



How do the marriages of great Christians illustrate building a house on a rock or on sand?

Two men were born in 1703 whose lives would profoundly impact the world. One of them was born into the family of a New England pastor.

The other was born into the family of an English preacher whose efforts to multiply his ministry took him from his family for months at a time.



Jonathan Edwards
1703-1758

The first man's name was Jonathan Edwards, and his ministry was blessed by the Lord with a great spiritual awakening which the Founding Fathers acknowledged as the basis for a Christian America.

Among his descendants are many who have continued to have an impact.

The other man's name was John Wesley. He was born out of the reunion of his parents after his father had left the family over a marital disagreement.



John Wesley
1703-1791

Though Mrs. Wesley taught her children the disciplines of Christian living which made John an unparalleled minister of the Gospel in Great Britain, John failed to overcome the iniquities passed on by his father.

Because of the weak commitment with which John Wesley held his marriage, he destroyed his greatest potential of continuing the fruit he began.

From the marriages of six great men of faith, learn how the foundations laid in a family determine the duration of the fruit.

Do Resource C.

Science

Chemistry, Biology,
Astronomy, Geology,
Physics, Mathematics



How do the three basic classifications of stone relate to building a strong foundation?

Scientists classify stone into three categories: *sand*, *gravel*, and *rock*.

Sand is defined as loose grains of rock which are between one-four-hundredth of an inch and one-twelfth of an inch in diameter. It is useless for building purposes except as a source of silica and alumina, which are removed from sand as ingredients for concrete.

Gravel is made up of rock fragments between one-eighth inch and twelve inches in diameter. Gravel is used in the construction of roads and railroad embankments but is not sufficient to support a structure.

Rock is the basic component of the earth's crust. A large mass of rock provides a firm foundation for buildings and bridges.



Golden Gate Bridge

Learn how engineers avoided sand, gravel, and even "soft" rock to establish an unshakable foundation for one of the largest bridges in the United States.

Do Resource D.

How is believing in a worldwide flood building your house on a Rock?

Overwhelming evidence supports a worldwide flood, yet many refuse to believe Scripture. They put their faith in the shifting sands of evolution.



A preserved bee

Do Resource E.

Law

Government,
Economics, Logic



How is the "rock" upon which America was built eroding into sand?

In a 1947 Supreme Court decision, Thomas Jefferson was cited for the basis of the Court's statement: "The First Amendment has erected a wall of separation between church and state. That wall must be kept high and impregnable."



Thomas Jefferson
1743-1826

What Thomas Jefferson actually said on January 1, 1802, was that the First Amendment had built a wall of separation which was meant to keep the government from controlling the Church. He presupposed that the

Amendment would ensure that Christian principles remained in government.

By taking a few words out of context, like chipping a few grains of sand from a rock, many leaders have used this misrepresentation of the intent of the Founding Fathers as the foundation for many false ideas.

How are Biblical presuppositions vital to strong foundations?

America's Founding Fathers had the presupposition that God and His laws were foundational to all their discussions.



The first Congress
began with prayer.

Unfortunately, they did not clearly state these presuppositions when writing, "We the people. . . ." Now, secular presuppositions are being brought to the Constitution, and the time-honored principles which made America strong are being changed by "public opinion."

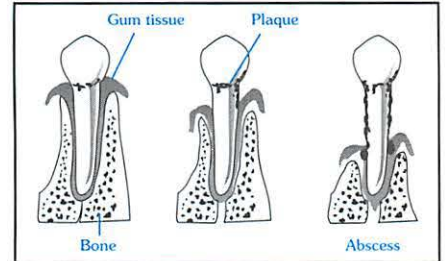
Do Resource F.

Medicine

Health,
Nutrition, Behavior,
Counseling



How can the destruction of the foundations of teeth go unnoticed?



Periodontal disease destroys the teeth's supporting gums and bone.

So widespread is the problem of periodontal disease that it is the primary cause of tooth loss in people over thirty-five.

Because periodontal disease is painless in its development and because it progresses slowly most of the time, it is not detected until great damage has been done to the foundations of the teeth.

The chief cause of periodontal disease is the accumulation of plaque and calculus between the gums and the teeth. As a result, periodontal disease develops.

Gingivitis

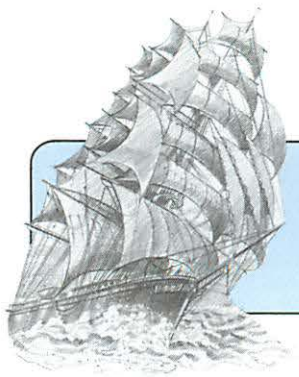
The technical name of the gums is *gingivae*. If the gums become inflamed, they bleed easily when brushed. This condition is called *gingivitis*. If left untreated, *gingivitis* develops into *periodontitis*.

Periodontitis

Periodontitis, formerly called *pyorrhea*, destroys the ligaments which hold the teeth in place and the teeth's sockets in the jawbone. If left untreated, the teeth will eventually fall out.

Learn how the foundations of our teeth and the foundations of our spiritual lives are attacked.

Do Resource G.



RESOURCE QUIZ

How many of these questions can you answer *before* studying the Resources?

HOW DO PAST IDEAS HINDER INSIGHTS?



- What causes preconceived ideas?2895
- What is the significance of *therefore*?2895
- What does the word *house* mean?2896
- What is the rock upon which we are to build? ..2897
- How were Noah and his family wise?2897

WHAT IS THE KEY TO BUILDING A HOUSE?



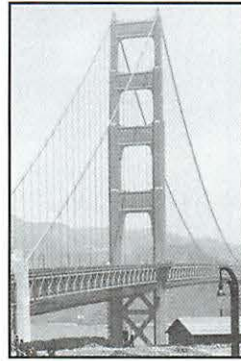
- What mindset does one need to understand Jesus' sermon?2899
- What is the purpose of a servant?2900
- How can a house be secured by doing more than is required?2901
- How does discipline reveal true motives?2902

HOW IS A "HOUSE" BUILT?



- How does "incompatibility" help a marriage? ..2905
- What two things bring grace to a family?2906
- How can the position of a wife be exalted? ...2914
- How does resting strengthen a "house"? ..2920
- What little things should you take to God in prayer?2920

HOW IMPORTANT ARE FOUNDATIONS?



- What is the Golden Gate?2925
- How long is the Golden Gate Bridge?2926
- What gives a bridge equilibrium?2929
- What balances a bridge's freedom to move?2930
- What saved the lives of nineteen men as they built the bridge?2931

HOW VITAL IS THE FLOOD FOR WISDOM?



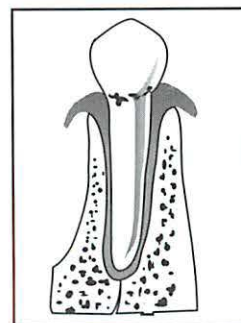
- How long was Noah in the ark?2933
- How smooth is the surface of the earth? ..2935
- What is *hydraulic plucking*?2937
- What is a *kolk*?2938
- What makes C₁₄ dating inaccurate?2947
- What was the real cause of the "ice age"?2951

HOW WAS AMERICA BUILT ON A ROCK?

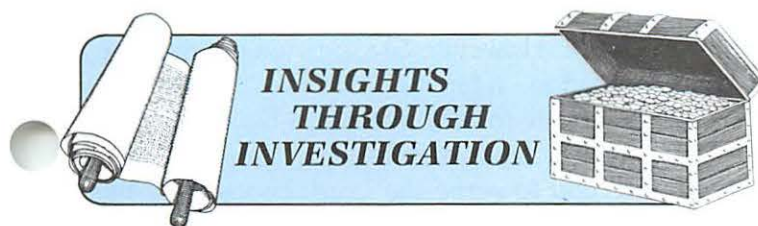


- Where did America's Fathers get their ideas for government?2961
- What is the true and only basis of morality?2962
- What erodes a nation's foundations?2963
- What causes people to accept a bad idea?2964
- How does a nation answer to God?2965

WHAT ERODES FOUNDATIONS?

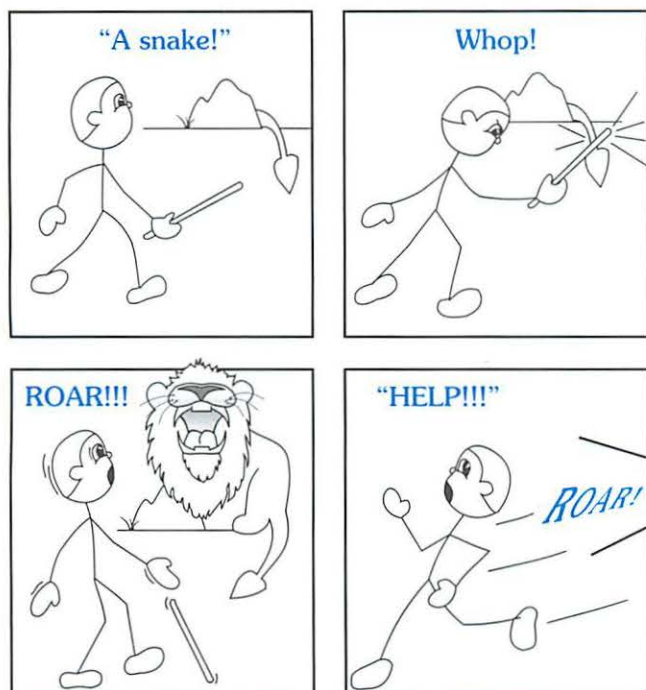


- How do *Sharpey's Fibers* protect teeth? ..2967
- What is the difference between *periodontal disease* and *pyorrhea*? ..2968
- What *does* gingivitis lead to?2969
- What causes macrophages to attack their own kind?2970



HOW CAN PRECONCEIVED IDEAS BE SET ASIDE IN ORDER TO GAIN INSIGHT FROM A PASSAGE?

One of the most difficult tasks that we have in studying a passage of Scripture is to set aside what we “think” the passage is going to say, or is saying, so we will be able to “hear” what the Lord is communicating to us from His Word.



Preconceived ideas can cause a person greatly to misinterpret the facts in a passage of Scripture—similar to the sequence above.

There are several causes of preconceived ideas. An in-depth study may have been done on the passage of Scripture at one time. A preacher or teacher may have shared on the section from a particular point of view. The passage may be very familiar through memorization or frequent reading.

Even songs and choruses, many of which have been sung since childhood, can make it difficult for us to receive insights from a passage.

There is a chorus based on Matthew 7:24–27 which many of us learned as children. Its words are:

The wise man built his house upon the rock, (3×)
And the rains came tumbling down.
The rains came down, and the floods came up, (3×)
And the house on the rock stood firm.

The foolish man built his house upon the sand, (3×)
And the rains came tumbling down.
The rains came down, and the floods came up, (3×)
And the house on the sand went “crash!”

In-depth study, remembering what was preached, memorization, frequent reading of Scripture, and putting Scripture to music are not wrong. What can happen, however, is that because of familiarity, we tend to think, “I already understand this passage.”

Approaching Scripture with an “I-already-know-it” attitude will hinder us from gaining deeper truth or further insight into the passage.

Learn how the following steps can help us to set aside presuppositions in Matthew 7:24–27.

1 Count every word as important.

What is the significance of the first word in Matthew 7:24–27?

Jesus used the conjunction *therefore* eleven times to summarize the points which He made in the Sermon on the Mount. (See Matthew 5:19; 5:23; 5:48; 6:2; 6:8–9; 6:22–23; 6:25; 6:31; 6:34; 7:12; and 7:24.)

Since the last *therefore*, which is in Matthew 7:12, Christ has been warning us that because of our natural inclinations, **we tend to—**



1 Go along with the crowd—verse 13

The broad way

2 Follow leaders—verse 15

The false prophets

3 Be self-willed—verse 23

The workers of iniquity

In verse 24, Christ is summarizing His warning not to go along with our natural inclinations. He now says, “**Therefore**, be sure that you listen

to and put into practice My words, rather than go along with the crowd, follow men (or the traditions of men), or do whatever you 'feel' like doing."

2 Correlate parallel ideas.

What is the significance between "I will liken him unto a wise man" in verse 24 and "shall be likened unto" in verse 26?

The Greek word for "wise" in verse 24 is φρόνιμος. It characterizes a practical wisdom that sees what must be done and what must not be done in any given situation. It means that the person will be quick and correct in perception, and hence, the person will be discreet and circumspect.

φρόνιμος has more to do with the practical and concrete situations of life than those which are abstract and theoretical.

The most accurate English word for φρόνιμος is *prudent*. A prudent man is not only cautious, but he also has the capacity for judging in advance the probable results of his actions.

On the other hand, the foolish man is described by the Greek word μωρός. A μωρός man lacks alertness to reason. He is a man who is heedless and reckless.

Notice that it is Christ who says of the man who hears and does His sayings, "... I will liken him unto. . . ." Others will look at a man who hears Christ's words and does not do them and will liken him unto a fool.



Esther Bubley's World of Children in Photographs

The Greek word μωρός is similar to the English term *morose*. *Morose* describes people who, because they are heedless, are also fretful, dour, moody, depressed, and ill-tempered.

3 Consider alternate meanings.

What is the house that is being built?

The most common meaning of the word *house* is a building in which people live. *Strong's Concordance* defines *house* (οἰκία) as a residence

or an abode. However, *Strong's* goes on to say, "By implication, 'a family.'"

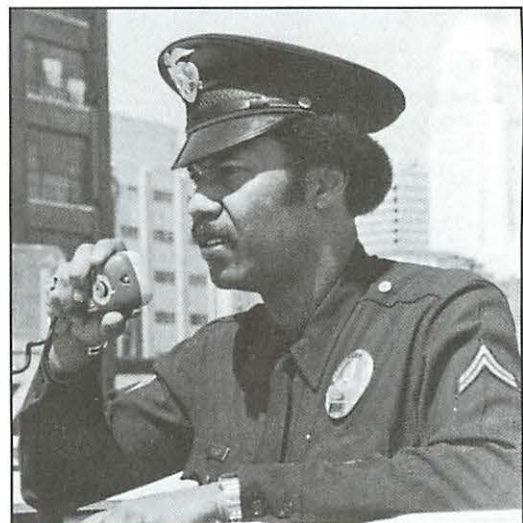
It was his *family* and not a building which Joshua had in mind when he said, "And if it seem evil unto you to serve the Lord, choose you this day whom ye will serve . . . but as for me and my *house*, we will serve the Lord" (Joshua 24:15).

Luke 1:26-27 tells us "... The angel Gabriel was sent from God unto a city of Galilee, named Nazareth, To a virgin espoused to a man whose name was Joseph, of the *house* of David. . . ." Here, Luke is saying not that Joseph lived in the building where David lived, but rather that he was a descendant of David.

Family is also what Luke had in mind when he described the Lord's purpose: "And hath raised up an horn of salvation for us in the *house* [from the descendants] of his servant David" (Luke 1:69).

When Jesus was born, Mary and Joseph were in Bethlehem, because Joseph was "... of the *house* [family] and the lineage of David" (Luke 2:4).

Thus, the word *house* can properly be used to define a man's area of jurisdiction.



Los Angeles Police Department

Jurisdiction describes the territorial range of a person's authority. A policeman's jurisdiction is limited to a certain city, county, or state.

Notice how the concept of jurisdiction adds meaning to Acts 18:8: "And Crispus, the chief ruler of the synagogue, believed on the Lord with all his house. . . ."

It is obvious that the building in which he lived did not believe, but rather all the people within the jurisdiction defined by his house believed. Crispus's family and servants would all be included in the word *house*.

The man whom Jesus is calling a wise man is the one who applies the Word of God to his family and to all other people for whom he is directly responsible.

4 Identify the key thought.

What is the rock, and what is the sand?

It is interesting to note that there is a layer of rock covering the earth called the *mantle layer*. Thus, rock is available to everyone. The knowledge of God is also available to everyone. Therefore, the Apostle Paul stated that people have no excuse for not knowing God. (See Romans 1:20.)

Sand represents *anything* that comes between the rock and what is being built—even that which we would consider acceptable.

Notice, both men heard Christ's words. Both men made a choice as to what they were going to do with what they heard. Both men built their houses according to their choice. The key thought is that one chose to apply Christ's words and the other did not. Thus, the key part of this passage is "*and doeth them.*"

The Apostle James emphasizes the importance of being doers of the Word.

"Wherefore lay apart all filthiness and superfluity of naughtiness, and receive with meekness the engrafted word, which is able to save your souls.

*"For if any be a **hearer of the word, and not a doer**, he is like unto a man beholding his natural face in a glass:*

"For he beholdeth himself, and goeth his way, and straightway forgetteth what manner of man he was.

*"But whoso looketh into the perfect law of liberty, and continueth therein, he being **not a forgetful hearer, but a doer of the work**, this man shall be **blessed** in his deed" (James 1:21–25).*

God intends His Word to be put into practice in our homes. That is, He wants us to live out the Bible in our everyday lives and not view the Scriptures as just another book to read.

5 Investigate Biblical testimonies.

Is there any account in Scripture in which a house stood firm after rain, flood, and wind beat against it?



Bible Art Series, Standard Publishing, Cincinnati

From Noah's 500th birthday to his 600th birthday he built the ark, and Noah's life message made him a preacher of righteousness. (See II Peter 2:5.)

The account of Noah and the Flood in Genesis 5–8 is amazingly close in its detail to Matthew 7:24–27.

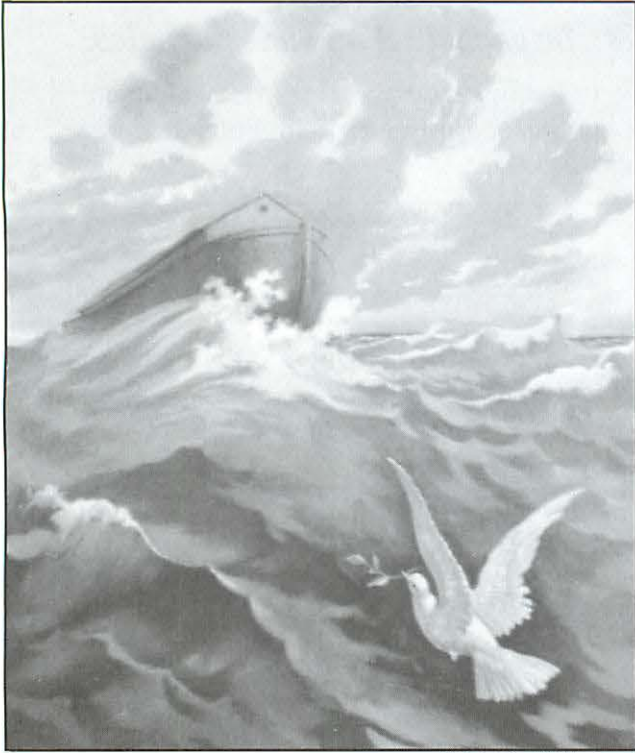
Noah found grace in the eyes of the Lord because he "... was a just man and perfect in his generations, and Noah walked with God" (Genesis 6:8–9).

Sometime after Noah's 500th birthday "... God **said** unto Noah ... *Make thee an ark ...*" (Genesis 6:13–21).

After Noah "heard God's sayings," he went to work to do that which God had spoken. "**Thus did** Noah; according to all that God commanded him, so **did** he" (Genesis 6:22).

A second time Noah heard God's word, and he followed through. "... The Lord **said** unto Noah, Come thou and all thy **house** into the ark. ... And Noah **did** according unto all that the Lord commanded him" (Genesis 7:1–6).

The "house" which Noah took onto the ark consisted of his wife, his sons Shem, Ham, and Japheth, and their wives—eight people in all.



Bible Art Series, Standard Publishing, Cincinnati

Noah is called a wise man because he heard the sayings of God and did them. The result was that after the rain, the flood, and the wind, he and his house stood firm on the rock. At first glance, we might consider the “rock” to be the structure made of gopher wood; however, what the “rock” really consisted of was hearing and doing the Word of God.

Compare how God destroyed the earth and what Jesus said would happen to the two houses. In each situation, there was rain, a flood, and wind.

“... I will cause it to **rain** upon the earth. . . . The **flood** of waters was upon the earth” (Genesis 7:4-6). “... God made a **wind** to pass over the earth . . .” (Genesis 8:1).

“And the **rain** descended, and the **floods** came, and the **winds** blew, and beat upon that house . . .” (Matthew 7:25, 27).

6 Observe the descriptive words.

What kind of fall did the house on the sand have?

The house of the one who shall be called a foolish man did not simply fall down. Christ said that it would have a **great** fall.

The Greek word for “great” is μέγας, from which comes the word *mega*, meaning “huge.” μέγας denotes greatness in size and intensity. The house truly had a μέγας fall.

Consider the purpose of the Flood given in Genesis 6:5-7: “And God saw that the wickedness

of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually.

“And it repented the Lord that he had made man on the earth, and it grieved him at his heart.

“And the Lord said, I will destroy man whom I have created from the face of the earth; both man, and beast, and the creeping thing, and the fowls of the air; for it repenteth me that I have made them.”

The wise man Noah was saved; however, the rest of the world was foolish, and as a result, the people experienced a μέγας fall. So μέγας was the fall that everyone and everything that had breath was destroyed in the rain, the flood, and the wind.

In commenting on the Flood, the Apostle Peter said, “For if God spared not the angels that sinned, but cast them down to hell . . . to be reserved unto judgment;

“And spared not the old world, but saved Noah the eighth person, a preacher of righteousness, bringing in the flood upon the world of the ungodly. . . .

“For this **they willingly are ignorant of, that by the word of God** the heavens were of old, and the earth standing out of the water and in the water:

“Whereby the world that then was, being overflowed with water, perished:

“But the heavens and the earth, which are now, **by the same word** are kept in store, **reserved unto fire against the day of judgment** and perdition of ungodly men” (II Peter 2:4-3:7).

While it is true that the individuals in the house of those who do not do God’s Word will experience failures, these consequences are not the “great fall” but are reproofs to bring the house to repentance. If they fail to heed the reproofs and turn to the Lord, they will one day experience a judgment similar to the Great Flood.

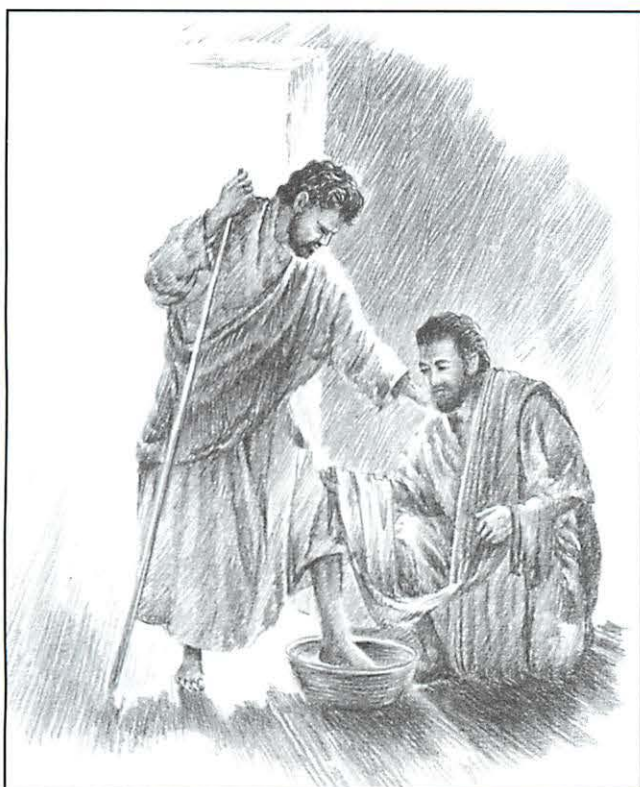
PROJECT

Read Romans 1-5 and make a list of all the ways that we foolishly “pretend” we are doing the will of God when in reality we are not. Then discuss what we would need to do in each situation in order *really* to do what God is saying in His Word.

Date completed _____ Evaluation _____



HOW DOES THE SPIRIT OF SERVANTHOOD ALLOW US TO COMPREHEND AND DO THE SAYINGS OF CHRIST?



Peter misunderstood Jesus' intentions of washing his feet until he saw this action as a classroom on servanthood. Similarly, the Sermon on the Mount takes on new meaning when we see it as a handbook on serving.

Seeing the Sermon on the Mount as a "handbook" on serving

The Sermon on the Mount takes on exciting new dimensions if we view it as a "handbook" on how to be a successful servant. Without this perspective, the Sermon may be viewed as a series of disconnected topics. Seeing the Sermon from the

perspective of serving is very fitting, because the whole ministry of Christ is a fulfillment of His obedience to the Father in serving us.

The mind-set that is required to comprehend the Sermon on the Mount

Scripture commands all of us to have the mind of Christ in order to live the Christian life in the way God intended. The mind of Christ is defined in Philippians 2:5–8:

"Let this mind be in you, which was also in Christ Jesus: Who, being in the form of God, thought it not robbery to be equal with God: But made himself of no reputation, and took upon him the form of a servant, and was made in the likeness of men: And being found in fashion as a man, he humbled himself, and became obedient unto death, even the death of the cross."

Notice how the mind of Christ is amplified in each topic of the Sermon on the Mount.

1 *The character of a servant*

The Sermon on the Mount begins with a precise list of essential character qualities. Each quality is directly related to serving and is vital for its success.

☐ The poor in spirit—**Gratefulness**

The true spirit of serving grows out of gratefulness. Serving is not a calculated investment to receive something in return. It is an act of gratitude for all that God and others have done for us.

☐ Those that mourn—**Humility**

True gratefulness is not possible until we recognize our bankrupt condition before God. If we forget the true nature of our sinful hearts, we become proud and expect others to serve us, or we serve others with the motive of getting approval and praise. If we are not given proper recognition, we tend to become bitter.

☐ The meek—**Meekness**

Meekness begins by yielding rights, but it is developed by placing our strength under God's control. His strength can then be perfected through our weakness as we meet the needs of others through service.

☐ Hunger for righteousness—**Diligence**

A servant is an "energy-giver." Righteous serving requires spiritual energy. When this energy is used up, the servant should have a hunger and thirst for more of God's strength. If this need is not met, the servant will become spiritually worn out and discouraged.

☐ The merciful—**Kindness**

Servants are often treated as inferiors. Those who are served expect to be served, and rather than being grateful for the service they receive, they are critical if it does not measure up to their high expectations. Being kind in the face of such attitudes requires that we remember that God is merciful to the just and the unjust and that our true reward comes from the Lord and not from those we serve.

☐ The pure in heart—**Sincerity**

A servant must have the right motive in serving. The highest motive is the desire to advance the Kingdom of God and to protect the name of the Lord. When selfish motives are detected in a servant, his service will likely be rejected, reacted to, or exploited.

☐ The peacemakers—**Wisdom**

Serving is giving a person not what he wants, but what he needs. The goal of serving is not just to meet needs but to bring people to a true and proper relationship with God and with others. In order to accomplish these vital goals, the servant must see other people and their needs from God's perspective. He must understand cause-and-effect sequences and know that sometimes a wise reproof is necessary for proper growth.

☐ The persecuted—**Courage**

It seems ironic that the more successful a servant is, the more persecution he will receive. Yet this is understandable when we realize that a servant does great damage to Satan's kingdom. Moreover, an effective servant will often be asked to do things that

require compromise. When a servant has no agenda but God's glory and is not looking for personal reward or man's approval, he will have the courage to do what is right whatever the cost.

2 *The purpose of a servant*



In order for a servant to function effectively, he must understand God's purposes for his serving. The perception of a servant as a weak person to be walked over is contrary to the demonstration of Christ, Who came to serve.

☐ ***"Ye are the salt of the earth."***

Salt not only brings out the real flavor of food, but it preserves food as well. When Jesus cleansed the Temple, He was serving His Father as well as every person in Israel, because the blessing of God upon Israel depended upon the purity of the priesthood.

☐ ***"Ye are the light of the world."***

The goal of the servant is to make those he serves successful. A person will be successful to the degree that he avoids the pitfalls and traps of life. One who serves will therefore shed light on the ways of others so they can walk in truth.

3 *The guidebook of a servant*



It is against human nature to serve. When a person *does* serve, it is against his nature to do it in the right way or with the right motives. For these reasons it is essential for the servant to follow the directives of Scripture in all he does.

☐ ***"Think not that I am come to destroy the law, or the prophets."***

The Scriptures give the servant precise instructions on how to serve effectively. These instructions must be his ultimate authority.

4 *The pitfalls of a servant*



Ernst Gellman

The ultimate reward of serving the Lord is to hear those longed-for words, "Well done, thou good and faithful servant!"

This final commendation will be greatly diminished if we allow ourselves to fall prey to the following traps.

☐ *"Whosoever is angry . . ."*

There are many reasons why a servant could become angry, especially when his sacrificial efforts are misunderstood, criticized, or rejected. It would be easy for him to cut off his spirit from those he is serving and nurture roots of bitterness. By so doing, he has the same response as a murderer.

A servant who is bitter must forgive his offender and also confess to God the sin of bitterness. Then he must claim the blood of Christ for his sin and ask God to reclaim the "ground" which he gave to Satan because of his bitterness.

A further step in reclaiming lost "ground" is to recognize how we have offended those toward whom we are bitter and ask them to forgive us.

☐ *"Whosoever looketh on a woman . . ."*

Just as a servant must have pure motives in serving, he must also have a pure mind while he serves. Because his serving will bring him into close contact with others, it would be very easy for him to use serving as an excuse to be with a person or as an opportunity to feed lustful desires.

A servant must also be alert to the dangers which Joseph experienced when he served Potiphar and attracted the lustful desires of Potiphar's wife.

☐ *"Whoso putteth away his wife . . ."*

It is easy for a servant to be alert to the wants of other people and neglect the needs of his own family. This damages the spirit of the marriage and other family relationships, and the servant will tend to react to his hurt, demanding family members.

He may even view his family as a hindrance to serving others, not realizing that their reactions are God's call to rebuild the

spirit of the marriage and family so together they can serve others more effectively.

☐ *"Swear not at all . . ."*

When we see a need in the life of another person, it is quite natural for us to try to meet that need or to promise that we will meet it at our earliest convenience. However, the need of the moment often fades into insignificance as more pressing problems come upon us.

Scripture warns that our words must be depended upon, and that if we make a promise, we should carry it out, even if it requires further sacrifice than we expected.

5 *The secret of a servant*



Peter Connolly

Many people struggle with bitterness. They try to forgive their offenders and forget about past hurts. However, the wounds keep reopening, and the roots of bitterness grow deeper. Through serving, the power of bitterness can be broken.

☐ *"Go the second mile."*

God commands all of us to do more than what is required of us. If we do only what is expected, we will not overcome the resentments toward those who hurt us. When we go the second mile and invest a treasure in the life of an offender, our resentments are transformed into loving forgiveness.

☐ *"Love your enemies."*

It is easy to serve those who love us, and it is natural to avoid those who reject us. However, God gives a special reward to those who serve their enemies. The way to bless those who curse us is humbly to tell them how God has used them to benefit our lives. The way to do good to those who hate us is to look for their basic needs and find ways of meeting them.

When we invest our treasures of time, effort, and money in the lives of offenders, we will have a love for them. For where a servant's treasure is, there will his heart be also.

6 The disciplines of a servant



©Providence Lithograph Co.

God promises to reward our serving when it is done with the right motive and is the by-product of Scriptural disciplines. These disciplines not only guide us in the scope of our service but also help us to remember that it is the *Lord* we are serving.

☐ “When thou doest thine alms . . .”

One of the most important disciplines of serving is to make sure that what we do is done for the Lord and not for the praise of men. Jesus instructs us that in whatever we do for even the least Christian, we are actually doing unto Him. If we discipline ourselves in remembering this concept, we will not be disappointed or discouraged if the people we serve do not show the right kind of gratefulness.

☐ “When thou prayest . . .”

The power and direction for serving is received in the prayer closet. The discipline of prayer is especially difficult when we have many things to do. Yet Martha learned that service for the Lord must be secondary to sitting at His feet and learning more about Him.

It is through prayer that spiritual warfare is waged so that the fruit of our serving not only is received by those we serve but also bears lasting results.

☐ “When ye fast . . .”

Going without food for the purpose of seeking the Lord is a necessary discipline if we are to bring the desires of the flesh under God’s control and become sensitive to the promptings of the Holy Spirit.

As Christians, we are to be zealous unto good works; however, these good works must be directed by the Lord and not by our own inclinations. The reality that a person has a need does not necessarily mean that God wants us to meet it.

Scripture points out that there were many invalids by the Pool of Bethesda, but Jesus was directed by His Father to heal only one.

7 The test of a servant



Many Christians are willing to serve the Lord if they receive financial benefits from their serving. Jesus warns that it is impossible to serve both God and money at the same time. Therefore, the greatest test of a servant is whether he is serving the Lord or serving money.

☐ “Lay not up for yourselves . . .”

We all have a collector’s instinct and tend to heap to ourselves earthly treasures. God reminds us that earthly things will be taken away by moths, rust, or thieves, and that the only real treasures are those things that we give to others in the course of our serving.

When we are generous to others, we have a “good eye” and will receive a lasting inheritance that cannot be destroyed or taken away.

☐ “Take no thought for your life . . .”

The more burdened we are with our own needs and concerns, the less able we are to give attention to the needs of others. Paul commended the serving ability of Timothy by saying, “. . . I have no man like-minded who will naturally care for your state. For all men seek their own, not the things which are Jesus Christ’s” (Philippians 2:20–21).

The very way in which God takes care of our needs gives us joy and motivation to serve others. “Freely we have received; therefore, freely we can give.” (See Matthew 10:8.)

☐ “Seek first the kingdom of God . . .”

Many people will serve in order to gain experience for a future vocation. In their minds, their vocational goals will provide the security they need to do the things they want to accomplish in life.

By seeking a vocation first, we violate the order of God’s priorities and we miss the skills and opportunities which would have come by serving the Lord and others. Our primary goal must be to advance the Kingdom of God in whatever we say or do.

8 The discernment of a servant



If we view serving from our own perspective, we will often become discouraged. We may be discouraged because we lack the right opportunities, because we do not see “good results,” or because we serve in the wrong way with wrong attitudes.

☐ “Judge not . . .”

When one who serves is weary with his serving and looks around at others who are standing idly by or who do not seem to appreciate his sacrifice, it is quite easy to pass judgment on them and even try to correct them. God warns such a servant that those who judge will be judged.

Those who serve must first cast out the “beams” of wrong attitudes that are in their own eyes, and then they will see clearly how to help others with *their* shortcomings.

☐ “Give not that which is holy . . .”

Before we help a person, we must discern the deeper needs of that individual. If we serve an angry man but fail to help him conquer his anger, we will probably receive a backlash of wrath.

If we serve a person who is given to lust or riches, he may look beyond our good intentions and determine how he can take advantage of us.

☐ “Ask and it shall be given you . . .”

Discernment is required in knowing what to ask God for, because it is so easy to ask for the wrong things. James warns of asking for things which we want to use for our own lusts. Such prayers will not be fulfilled by God; however, the desires may motivate us to serve in order to receive what God will not give us.

God gives practical direction to help us discern when and what service is appropriate: “. . . All things whatsoever ye would that men should do to you, do ye even so to them: for this is the law and the prophets” (Matthew 7:12).

9 The obedience of a servant



Based on our discernment of the truth, we must choose what is best and obey God in following it. The initial choice to obey God relates to salvation. Yet throughout the Christian life there will be the need to overcome our natural inclinations.

☐ “Enter ye in at the strait gate.”

The purpose of our serving should be to help as many as we can to find the road which leads to life. God reminds us, however, that a majority of people will not choose the strait way. Thus, those who do choose it must be ready to give up their reputation, their friends, and the approval of the world.

☐ “Beware of false prophets.”

There are many ways that a servant needs to be aware of false prophets. The first and most obvious way is to recognize their false teachings and reject them. The servant is then responsible to serve others by warning them about the false prophets.

A second danger for a servant is being deceived into thinking that he can work with a false prophet in order to accomplish some good for the Lord.

God warns us in II Corinthians 6:14 not to join with unbelievers and try to work with them: “. . . For what fellowship hath righteousness with unrighteousness? and what communion hath light with darkness?”

10 The will of a servant



The most critical factor in any serving is the will of the servant. If he is serving by the motivation and direction of his own will, he is committing iniquity, regardless of how good his serving might be or how beneficial the results may appear.

☐ “Do the will of my Father.”

We are to learn from Jesus how to serve. He did nothing of His own will.

THE SERVANT'S GREATEST DANGER— DOING INIQUITY

Jesus concluded His Sermon on the Mount with an astonishing statement which has special application to everyone who serves.

“Many will say to me in that day, Lord, Lord, have we not prophesied in thy name? and in thy name have cast out devils? and in thy name done many wonderful works? And then will I profess unto them . . . depart from me, ye that work iniquity” (Matthew 7:22–23).

When is it iniquity to serve God?

Imagine the shock of being told by Jesus that you are a worker of iniquity after you have preached in His name, cast out devils in His name, and done many wonderful works in His name.

The fact remains that we commit iniquity when we do our own will rather than discerning and doing the will of our Heavenly Father.

Doing our own will even for good things is actually what put Jesus on the cross. “. . . We have turned every one to **his own way**; and the Lord hath laid on him the **iniquity** of us all” (Isaiah 53:6).

Not only are our iniquities damaging in our lifetimes, but we pass them on to our children. God explains this transfer of the willful bent of parents to their children in Exodus 20:5: “. . . Visiting the iniquity of the fathers upon the children unto the third and fourth generation. . . .”

How to deal with inherited iniquities

When the nation of Israel gathered before the Lord in the days of Ezra and Nehemiah, they “. . . confessed their sins, and **the iniquities of their fathers**” (Nehemiah 9:2).

Daniel did the same in his great prayer: “. . . Because for our sins, and for **the iniquities of our fathers** . . . Thy people are become a reproach . . .” (Daniel 9:16).

How God is transforming a family by the acknowledgment of iniquities

A twenty-year-old lady was asked, “What do you suppose was the iniquity of your father?” (Her father and mother had been in mental hospitals since she was born. She had been raised by her aunt and uncle.)

She replied, “I think his biggest problem was laziness.” On further questioning, she realized that her father was not lazy; he just could never make a decision. He was always trying to figure out what he wanted to do.

The young lady was then asked, “Do you have a problem making decisions?” She immediately responded, “Oh yes, that is my biggest problem. I am always asking others what I should do when I have to make a decision.”

After learning how important it was to acknowledge the iniquities of her forefathers, she prayed in the following manner.

“Heavenly Father, I acknowledge the iniquity of my father in doing his own will rather than discerning Your will for each decision. I claim the blood of Christ as the full payment for this iniquity, and I ask You to help him regain the ‘ground’ that was given to Satan through this iniquity and to tear down every stronghold that he has built on that ground against our family.”

A few days later this young lady was faced with an important decision. For the first time in her life, she had the freedom to determine the Lord’s will and to make the decision.

Several days later her father called from a mental hospital and explained how he had been going to church. The first sermon he heard was entitled, “How to Make Decisions.” He then gave her spiritual counsel for the first time in his life.

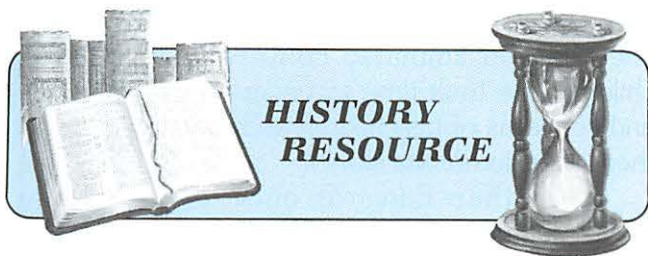
When she explained to him about the iniquities of the forefathers, he recognized other iniquities that had been passed on to him and gained freedom from them through a similar prayer.

PROJECT

Because we are to build our house on the rock of Christ’s statements rather than on the inclinations of our own willfulness, it is important to recognize and acknowledge the iniquities of our forefathers.

As a family, discuss the particular iniquities of your forefathers, and follow the testimonies of Scripture in acknowledging them. Claim the blood of Christ for them, and reclaim the ground that was given to Satan through them.

Date completed _____ Evaluation _____



HISTORY RESOURCE

HOW DO THE MARRIAGES OF GREAT CHRISTIANS ILLUSTRATE BUILDING A HOUSE ON ROCK OR ON SAND?



John Bunyan's years of imprisonment failed to destroy his marriage to Elizabeth. She is pictured above appealing to the king in behalf of her husband.

Husbands and wives view life from different perspectives, fulfill different roles, and experience different emotional needs. Only as a marriage is built on the solid rock of Christ's words will these incompatibilities build up each person in the marriage and in the family.

The testings of sickness, financial reverses, and pressures are God's ways of revealing to the couple what parts of their marriage are vulnerable and need to be strengthened.

As you study the marriages of Jonathan and Sarah Edwards, John and Idelette Calvin, John and Elizabeth Bunyan, Hudson and Maria Taylor, John and Molly Wesley, and Billy and Nell Sunday, evaluate each event on the basis of whether it was consistent with the principles of God's Word or whether it violated the spirit of the marriage. Discuss what things each couple did or could have done to build a strong marriage.

1 JONATHAN AND SARAH EDWARDS



Billy Graham Center Museum

Jonathan and Sarah Edwards

Jonathan Edwards is well known as one of the key figures in America's Great Awakening. His sermon "Sinners in the Hands of an Angry God" is a classic which has been read by millions.

His marriage to Sarah Pierrepont, the daughter of a prominent New Haven minister, was no less of a classic relationship. Their marriage was admired for its harmony and the mutual love and esteem which Sarah and Jonathan had for each other.

While Jonathan Edwards, the theologian, was one of the greatest spiritual leaders America has ever known, those who knew him well often found him lost in his own world. He tended to be impractical, shy, socially inept, and moody.

His wife, Sarah, however, was graceful, outgoing, and a natural conversationalist. She managed the household and family calmly, never losing her composure. She was so cheerful that once, when she had been gone from the house for a few days, one of her daughters wrote, "all is dark as Egypt" since her mother left.

Jonathan joined the faculty of Yale when he was twenty years old. At the time, Sarah was only thirteen and had a number of suitors "standing in line." However, she was interested only in Jonathan. After a four-year courtship, they were married on July 20, 1727, when he was twenty-three years old and she was seventeen. They were married for thirty-one years, until his death parted them in 1758.

Jonathan rose early each day. In fact, he is reported to have said, "Christ has recommended rising early in the morning by His rising from the grave very early."

He also felt very strongly about wasting time and valued the benefit of physical labor. Although much of his day was devoted to praying and reading his Bible, he spent one hour each day in physical work. Chopping wood was a favorite wintertime chore.

Sarah was the manager of the household, gardens, and fields. Jonathan once asked, "Isn't it about time for the hay to be cut?" Sarah responded, "It has been in the barn for two weeks."

Sarah was known as a "most judicious and faithful [mother] of a family, managing her household affairs with diligence and discretion. While she uniformly paid a becoming deference to her husband and treated him with entire respect, she spared no pains in conforming to his inclination and rendering everything in the family agreeable and pleasant."



Bernicke Rare Books and Manuscript Library, Yale University

Pictured above is the Edwards' home on King Street in Northampton, Massachusetts.

Jonathan loved to ride horses. In order to make the best use of his time, he often wrote notes as he was riding and pinned them to his coat. It was Sarah's job to unpin all the notes and help him sort out his ideas.

They had eleven children in twenty-two years. In order to have time alone with each other, Jonathan would frequently take Sarah riding with him in the late afternoon. During their rides, he would discuss his ideas with her and seek her opinion. Late at night, when all the children were in bed, Sarah and Jonathan would share a devotional time together in his study.

Jonathan himself also set aside an hour each evening to be with his children. A stern preacher from the pulpit, Jonathan relaxed into

cheerful and animated conversations with his children. He took time to understand the feelings and concerns of his children and often entertained them with humorous stories.

Jonathan Edwards once wrote, "Every family ought to be a little church, consecrated to Christ and wholly influenced and governed by His rules. And family education and order are some of the chief means of grace. If these fail, all other means are likely to prove ineffectual."

In 1734, the Great Awakening began in Jonathan Edwards' church in Northampton. Three hundred people were converted during a six-month period.

Yet just as quickly as the revival began, it faded away. Many who had expressed an interest in spiritual matters not only returned to their old vices, but began to voice opposition to Jonathan and his ministry. Jonathan became discouraged, and the normally calm and encouraging Sarah became irritable, finicky, and picky.

Jonathan described Sarah as "subject to unsteadiness and many ups and downs . . . often subject to melancholy." She even developed an uncharacteristic "disposition to censure and condemn others."

Opposition to Jonathan continued to build, and Sarah had more and more difficulty coping with it. She had always been well liked, had never had enemies, and did not know how to respond to the opposition she encountered on the streets and while shopping.

Jonathan, on the other hand, had always had plenty of foes. Opposition was nothing new to him, and he often hid in his study and avoided the daily situations which Sarah encountered.

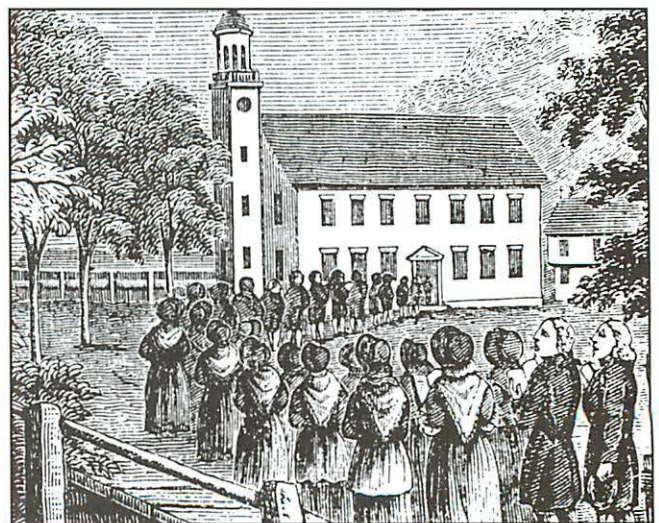


Illustration courtesy of Follen Library, Northampton, Massachusetts

A meetinghouse in Northampton

Jonathan was often called away from home to hold evangelistic services in other New England churches. It was during one of these trips that he delivered his famous sermon entitled, "Sinners in the Hands of an Angry God." Sarah struggled with her husband's being away from home, yet she knew she could not ask him to stay in Northampton. She could see that God was using him wherever he went.

When Jonathan recognized Sarah's need, however, he began to accept fewer speaking engagements, explaining to those he had to turn down that he had been away from his family too often.

While away, Jonathan wrote intimate letters to Sarah which contained such vivid details of his trips that it was easy for her to imagine that she was right there by his side.

During Jonathan's absence, the church at Northampton invited others to preach. Although Sarah wanted revival to return to Jonathan's church, she feared that the guest speakers might be better preachers than her husband and cause the opposition toward Jonathan to grow.

Before leaving on one of his many trips, Jonathan reproved Sarah and instructed her not to be so negative about the visiting preachers. She crumbled under his words, and later explained, "It seemed to bereave me of the quietness and calm of my mind not to have the good opinion of my husband."

Sarah struggled for victory over her fears, yet remained cheerful and outgoing. However, on one occasion, the guest preacher was exceptionally good, and revival did break out while Jonathan was gone. At first, Sarah was heartsick and jealous for Jonathan's reputation, but she too was soon caught up in the revival and the marvelous preaching of the visitor.

Before long, Sarah found herself actually able to rejoice and thank the Lord that such great results had come from the preaching of the guest evangelist. As oppressed as her spirit had previously been, now her "soul dwelt on high, [and] was lost in God. . . ."

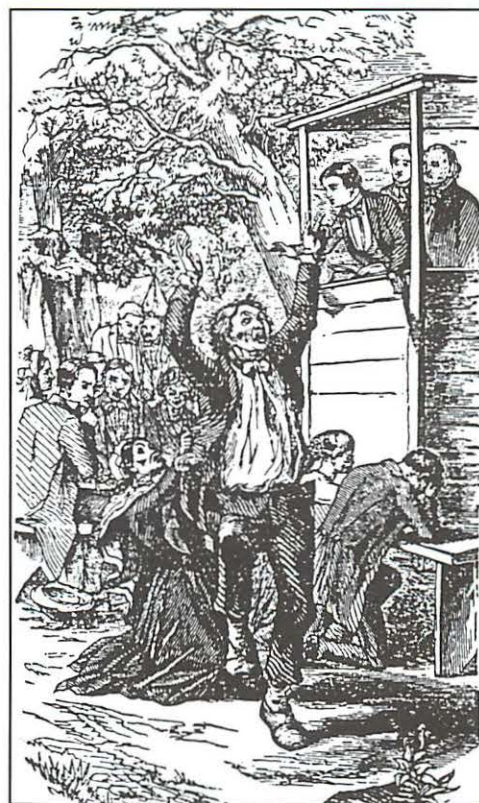
Sarah emerged from this time with a renewed spirit, saying that she had a "sense of the infinite beauty and amiableness of Christ's Person and the heavenly sweetness of His transcendent love." As a result, she said later, "I never felt such an entire emptiness of self-love, or any regard

to any private selfish interests of my own. I felt that the opinions of the world concerning me were nothing."

Jonathan had tried very hard to keep his preaching in Northampton free of emotional excesses, and Sarah had greatly valued his efforts to do so. However, during the revival, Sarah became quite emotional in public. (She had even fainted one day, because of an extreme sense of joy.) She then feared that Jonathan might think she had made a fool of herself. What would he say when he returned?

Jonathan's response was very sympathetic and encouraging. Instead of condemning her display of emotion, he recognized God's work in her life. While he believed that in almost every emotional experience "there is a mixture of that which is natural and that which is corrupt, with that which is divine," he accepted the change in his wife as undeniably spiritual.

Jonathan was amazed at Sarah's "constant sweet peace, calm, and serenity of soul." Everything she did now was for the glory of God, not the admiration of men. Her fear of opposition was gone.



The response to Jonathan's preaching was often full of great emotion.

From 1745 to 1750, it was Jonathan's turn to suffer and Sarah's turn to help her husband to keep founded on the Rock.

There had always been financial problems in the Edwards' household. Although Sarah and Jonathan were not reckless spenders, Sarah had been raised in a wealthy home and was accustomed to dressing well and furnishing her home in taste. The townspeople disapproved and felt great uneasiness about how the family handled their money.

In addition, a problem arose over Jonathan's decision not to accept the "non-committed" into church membership. He had discussed the matter with Sarah, and both decided that he could not in good conscience admit anyone to church membership who did not truly have a profession of saving faith.

The Edwards realized that great difficulties would come, but they were committed to doing what was right, even if it meant being dismissed from the church.

Most of his life, Jonathan struggled with headaches, colitis, and moodiness. The stress of increased unrest in the church intensified Jonathan's physical condition, and he grew irritable even over insignificant matters.

The townspeople began to shun the Edwards family in public, and church attendance dropped to only a fraction of what it had been. The congregation circulated a petition asking for Jonathan's dismissal as their pastor.

Within a short time, Jonathan was unemployed. The citizens of Northampton had rejected the greatest theologian America had yet known.

Not only was Jonathan unable to find another church, but Northampton was unable to find another minister. For a while, Jonathan remained in the pulpit of the church which had fired him. Although the situation produced some awkward moments, Jonathan was able to preach without bitterness. In order to provide for family needs, Sarah and her daughters made lacework, embroidery, and painted fans to sell in the market in Boston.

Eventually a call came from a small missionary church on the western frontier of Massachusetts. The church consisted of several white families and forty-two Indians. Jonathan and Sarah moved their family from a large church near Boston to this primitive congregation in Stockbridge.

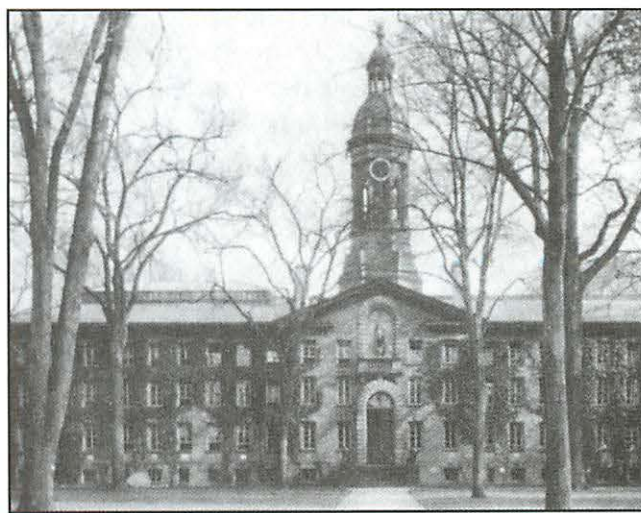
Jonathan may have wondered why God would take a scholar like himself and put him in

such humbling circumstances. Sarah may have wondered why God would take a woman accustomed to finer things and place her in a log cabin.

Living in relative isolation, free from the winds of adversity which had so plagued them in Northampton, Jonathan had time to do some serious writing. One of his most famous pieces, *On the Freedom of the Will*, was written while they lived in Stockbridge.

Their mission work there came to an end suddenly in 1754 with the outbreak of the French and Indian War. The Edwardses' home became a virtual fort in which the entire family was imprisoned for three years. The family lived under siege with settlers coming from miles away to camp with them and their soldiers.

At the end of the war, the board of directors of the school in New Jersey which later became Princeton University extended an invitation to Jonathan to become the president of the school.



Oren Jack Turner

Nassau Hall, built in 1756, was one of the university buildings over which Jonathan presided.

Jonathan wrote a reply informing them about his weak physical condition and its accompanying "low tide of spirits; often occasioning a kind of childish weakness and contemptibleness of speech, presence, and demeanor, with a disagreeable dullness and stiffness, much unfitting [him] for conversation, but more especially for the government of a college."

Princeton's board sent a delegation to Stockbridge to convince the little mission church that Jonathan Edwards was needed in New Jersey more than on the western frontier. In January of 1758, the church council finally released him, and

he was inducted as the new president the following month.

Sarah stayed behind to take care of the family's affairs in Stockbridge, intending to bring the rest of the family to New Jersey as she was able.

In March, just one month after Jonathan took office, he was stricken with smallpox. As he lay dying, he talked much of his wife and children who were still in Stockbridge. "Give my kindest love to my dear wife, and tell her that the uncommon union that has so long subsisted between us has been of such a nature as I trust is spiritual. . . . And as to my children, you are now like to be left fatherless, which I hope will be an inducement to you to seek a Father who will never fail you."

Two weeks after Jonathan's death, Sarah wrote to one of their children, "My very dear child: What shall I say? A holy and good God has covered us with a dark cloud. He has made me adore His goodness that we had him so long, but my God lives, and He has my heart."

Sarah found comfort in her favorite Scripture verse, "Who shall separate us from the love of Christ?" The verse became her "rock" against the winds and floods that might have otherwise overwhelmed her. Six months later, Sarah became violently ill with dysentery, and at the age of forty-eight, she, too, joined her Savior.

Jonathan and Sarah had been each other's best friend and companion during their thirty-one years of marriage. They heard and obeyed Christ's commands to husbands and wives, and the house that God built through them influenced the world.

THE "HOUSE" THAT THE EDWARDSSES BUILT

A study of 1,400 descendants of Jonathan and Sarah Edwards revealed that they had a profound impact on Colonial America.

From the foundations of their family came hundreds of Godly Christians who were influential in the direction and decision making of the nation. The descendants include a Vice President of the United States, three governors, three senators, thirteen college presidents, thirty judges, sixty-five professors, sixty-six physicians, eighty holders of public office, and one hundred lawyers.

2 JOHN AND IDELETTE CALVIN



John and Idelette Calvin

By the time John Calvin met Idelette, John had already changed occupations three times. He had been run out of town by angry mobs twice, and he had been accused of using his studies as a selfish excuse for avoiding people. Scholarship was the delight of John's heart, and his greatest treasures were his books. His favorite pastime was to be alone with books in his study.

John and Idelette met while he was teaching theology at the University of Strasbourg in Germany. During that time John also took on the pastoral responsibilities of a small congregation of French refugees. At first John stayed in a private home with a very happily married couple who felt that it was their responsibility to see that he marry as well.

However, John Calvin was not ready for marriage, so he moved out, sold a portion of his library, rented a large house, and turned it into a dormitory for university students. John soon discovered that running a boardinghouse full of people with problems distracted him from his studies and teaching.

In order to avoid interaction with people, he hired a woman to do cooking and housework. Unfortunately for John, this first housekeeper had a sharp tongue and often screamed at his tenants. John did not know what to do with her, nor did he know what to do *without* her.

When John sought advice about his problems, everyone encouraged him to marry. Marriage, they said, would solve all his problems and give him the time he craved for studying his books. Not knowing exactly how to go about finding a wife, John formed a "search committee." He

made a list of desirable qualities and instructed his friends to find the right woman.

After three failed attempts on the part of his friends, John finally took matters into his own hands. Looking for an experienced woman who could cook and keep house, he turned to Idelette—a widow from his own small congregation of French refugees. Within two months, they were married.

Both John and Idelette were thirty-one years old when they married. Idelette was a native of Holland, where she had married Jean Stordeur when she was just sixteen years old. The couple had two children, a boy and a girl, before her husband died of a plague.

While still in Holland, Idelette had been converted from Catholicism by Anabaptist missionaries. As a result of her convictions, she had known great persecution. Thousands of Anabaptists had been slain in Belgium and the Netherlands during that time.

In an effort to protect their children, Jean and Idelette had fled from Holland and joined Calvin's refugee church in Strasbourg. A year later Jean died, leaving Idelette a widow in need of care.

Immediately after the wedding, both John and Idelette became quite ill. They had barely recovered when a dispute between the housekeeper and John's brother caused John such stress that he suffered a severe digestive attack.

John recognized the source of his sickness, as he later wrote: "I am wont when heated to anger, or stirred by some great anxiety, to eat to excess . . . which so happened to me at that time."

When Idelette became ill again, John wrote, "While I was still suffering under the weakness, my wife took a fever. The last eight days she has been so exhausted . . . that she can with difficulty sit up in bed."

The Calvins' marriage endured not only much sickness, but also much separation. In November of 1540, two months after they were married, John was urged to attend an important theological gathering in Worms, Germany. He was hesitant to go but felt he had no choice in the matter.

Emperor Charles, ruler of the Holy Roman Empire, had summoned the leading Catholic and Protestant scholars to a conference to discuss how they might resolve their differences and unite against the threat of the Turks.

While the conference was more concerned with politics than with religion, John felt compelled to leave his bride—not knowing that it would be three long months before he would return.

After being back home for just a month, he was invited to another conference. Again, John felt compelled to go and left Idelette at home alone in Strasbourg to care for her two children and his boardinghouse.

This time John was gone for four months and did not return home until the end of June. The "newlyweds" had been married for forty-five weeks, and John had been away from home for thirty-two of them!

News of another plague sweeping through Strasbourg reached John while he was away. Mindful of how Idelette had cared for him when he was ill and how she was caring for his personal matters while he was gone, he wrote, "Day and night my wife has been constantly in my thoughts." He encouraged her to leave the city for a while, which she did, taking her children with her to visit her brother for a few weeks.

The previous plague had struck Idelette's first husband. John feared that this one might take Idelette, who was already weakened by her recent illnesses. However, she was spared.



John Calvin, who experienced the birth and death of a vision several times, was welcomed back to Geneva, Switzerland, in September of 1541.

No sooner had John arrived home than a delegation from Geneva begged John to consider returning to Geneva to help with the Reformation movement there. The decision was a very difficult one for the two of them. John had

resolved never to return to Geneva after previous bad experiences there. He also knew how much Idelette had already suffered.

If John returned to Geneva, he could not be sure that new problems might not arise. The decision weighed so heavily on him that he wrote, "The very thought of Geneva is agony to me."

However, the city council promised a handsome salary, purchased John and Idelette a house, and guaranteed their family's safety. Eventually John relented, and in September of 1541, a year after they were married, they bravely moved to a city where further reaction was sure to arise.

The following summer, John and Idelette had a son. He was born prematurely and lived only two weeks. John wrote, "The Lord has certainly inflicted a bitter wound in the death of our infant son. But He is Himself a Father and knows what is good for His children."

Idelette was barren for three more years. Then a daughter died at birth, and two years later, a third child was born prematurely and also died.

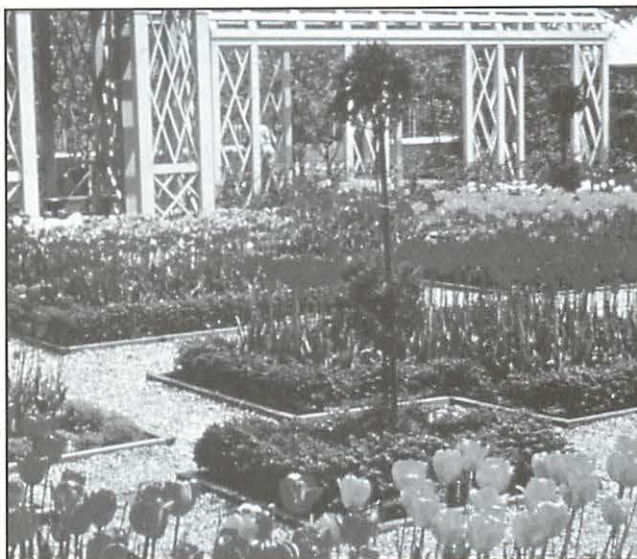
Idelette's physical problems worsened, but she faithfully continued caring for John and their home. The house was small, and there was always a guest staying in their third bedroom. Although hosting a guest meant extra work for Idelette, she was used to running a boardinghouse, and by comparison, guests were a delight.

Idelette had to draw water and wash clothes in a fountain at the end of the street. She grew her own herbs, flowers, and vegetables in a garden behind the house. When she was well enough, she accompanied John in visiting the sick and those in prison. John greatly appreciated his wife's faithfulness. He especially enjoyed showing their guests Idelette's garden.

Idelette had purposed to please her husband by caring for him during his many illnesses and by attending to the little things which made their home a comfortable haven away from the crowds. John, in turn, greatly appreciated Idelette's diligence and was always thoughtful to let her know how much it meant to him.

John brought a worldwide dimension to his home and family as he maintained correspondence with people he met during his travels. He wrote so many letters that their home actually became a branch post office.

Idelette's health continued to deteriorate to the point that in August of 1548, John



Philadelphia Horticultural Society

John praised the work of his wife's hands as he showed her garden to guests.

wrote, "She is so overpowered with her sickness that she can scarcely support herself."

Idelette had never wanted her health problems to burden John, but in 1549, she realized that she was dying, and she asked John to continue to care for her two children. Although she was reluctant to add to John's load, she entreated him by saying, "I have committed them to the Lord, but I want you to promise that you will not neglect them." He promised.

As John knelt next to her bed, Idelette's last words were, "O glorious resurrection." When she could no longer speak, John quietly spoke to her about Christ's love and the eternity which awaited her, and he reminisced with her about the nine years they had shared together.

After Idelette's death, John was grief-stricken. "I do what I can to keep myself from being overwhelmed with grief. . . . May the Lord Jesus . . . support me under this heavy affliction, which would certainly have overcome me had not He who raises up the prostrate, strengthens the weak, and refreshes the weary, stretched forth His hand from heaven to me."

John lived fifteen more years and never remarried. He threw himself into his ministry and became busier than ever, reshaping the city of Geneva, revising his *Institutes of the Christian Religion*, and preaching verse by verse through thirty books of the Bible.

For Idelette, her marriage to John had brought meaning and purpose to her life. For

John, it had brought out the more tender side of him that was often hidden from the public. John had already known God the Father as the Sovereign Lord of his world. Through Idelette, he came to know the ministry of the Holy Spirit as the Comforter in his home.

3 JOHN AND MOLLY WESLEY



The Wesleys in Picture and Story, John Wesley Farnham

John and Molly Wesley

John Wesley was the father of the world-wide Methodist movement, a tireless evangelist, an exhorter of good works and personal holiness, and the brother of the famous hymn writer Charles Wesley. During his fifty-three years of ministry, he traveled a quarter of a million miles on horseback, preached 42,000 sermons, and rose at four each morning for devotions.

While God used John Wesley mightily, the marriage that John built could not withstand the winds and rain that fell upon it.

John did not marry until 1751, when he was forty-seven years old. He had been interested in marriage on three previous occasions but each time had chosen to remain single.

While still single, John formulated his own philosophy of marriage by identifying seven principal functions of a wife: a housekeeper, a nurse, a companion, a friend, a fellow-laborer in the Gospel of Christ, a gifted spirit, and a fruit-bearer. John rated women on each of these seven categories and promised the other members of his Holy Club at Oxford University that he would not marry without their permission.

Charles Wesley, a fellow member of the Holy Club, was completely opposed to the idea of

his brother marrying, and he told John that the entire Methodist movement would fail if John ever married. Charles was convinced that marriage “would destroy himself [John] and the whole work of God.” This conviction severely tested the relationship between the two brothers. Before long, John abandoned his thoughts of marriage and was soon back on his evangelistic circuit.

Fifteen months later, John’s thoughts of marriage returned. Vincent Perronet, who was active in the Methodist movement, approached John and urged him to reconsider marriage as a duty. This time John did not seek the advice of his brother Charles. When Charles heard of the matter, he “groaned all the day, and several following ones, under [his] own and for the people’s burden. [He] could eat no pleasant food, nor preach, nor rest either by night or by day.”

Vincent Perronet already had a wife in mind for John: Molly Vazeille, the widow of a wealthy London merchant. During their courtship of only sixteen days, John assured Molly and her four children that he was not interested in their ten-thousand-pound inheritance. He also informed her of his evangelistic ministry, which would keep him away from home most of the time.

While John agreed to allow Molly to make her own choice of staying home with her family or accompanying him on his trips, he made it quite clear he would not “preach one sermon or travel one day less in a married than in a single state.” In other words, John would not compromise his ministry or make any adjustments as a result of his married life—Molly would have to make the adjustments.

The week before the wedding, John fell and sprained his ankle. On Sunday he preached as usual, but on his knees. On Monday he and Molly were married, and on Tuesday he preached again, on his knees.

Although he kept a diary for over sixty years, he never once mentioned his marriage in it. John did write in his diary, “In respect of traveling abroad, the Methodist preacher who has a wife should be as though he had none.”

Molly was forty-one years old and had four children when she married John. The Sunday after the wedding, John tried to explain to his congregation why he had married so suddenly. He spoke of his marriage as “a cross that he had taken up” for their sakes and that he had married to “break down the prejudice about the world and him.”

The explanation, however, so confused his fellow Methodists and so angered Molly that she went to several other men, including Charles, to complain about John's lack of sensitivity.

Charles arranged a meeting between Molly and John. Molly listed all of John's faults, comparing him to her former husband. John complained that he could not stop his ministry to meet Molly's excessive needs. He compared her to other more faithful travelers who had accompanied him in ministry. The meeting accomplished nothing but to strain the marriage even further.

Soon afterward, as John was preparing to leave on another trip, Molly impetuously decided that their marriage would be strengthened if she went along. Unfortunately, she was unprepared for the way John traveled. He always traveled by horseback, through pouring rain, driving winds, and winter cold, undaunted by angry mobs who taunted him and threw stones at him.



The Wesleys in Picture and Story, John Wesley Fainston

Molly's greatest surprise was the "adoring women, all arrayed in remarkable neatness," who graciously greeted John wherever he went.

Arriving at a preaching point after a fifty-mile horseback ride, Molly felt embarrassed and was quick to notice how the women gathered around her husband and looked askance at her mud-splattered clothes and windblown hair.

As one who had "a penchant for complaining," Molly found much to complain about and was wont to complain directly to her husband.

John wrote, "In my last journey, all my patience was put to the proof again and again. I am content with whatever I meet with, and this must be the spirit of all who take journeys with me. I never fret. I repine at nothing. I am discontented with nothing. And to have persons at my ear, fretting and murmuring at everything, is like tearing the flesh off my bones."

When at home, Molly helped with John's personal matters and with his permission opened his mail while he was gone.

However, the letters John received were one of Molly's greatest sources of complaint. John had always counseled women and did not feel he should forsake that ministry because of marriage. Molly discovered that his letters to other women were exceptionally warm and loving.

The fact that strange women were also writing equally warm and loving letters back to her husband made her jealous. When she discovered that John had openly shared some of his personal marriage problems with other women, she became furious.

Molly publicly confronted one of the ladies who had been writing to John and then published some of the more provocative letters in one of the London newspapers as revenge against John.

John eventually came to the point that he could no longer appear with Molly in public for fear of what she might do or say. It did not help matters when others in the Methodist movement reminded Molly that she was not the wife they thought she should be.

John often wrote to her about her personal problems, suggesting that her afflictions had come from God "to break the impetuosity and soften the hardness of her heart." Although grieved over the condition of their marriage, she was so bitter toward John that she was not willing to accept his leadership in the matter.

John and Molly endured one another for more than twenty years. However, in 1776, when he was seventy-three and she was sixty-seven, they separated. John wrote, "The water is spilt, and it cannot be gathered up again." Two years later he wrote her his last letter. "If you were to live a thousand years, you could not undo the mischief you have done."

In 1781 Molly died at the age of seventy-two. Her last request was to bequeath John her wedding ring as "a token that I die in love and friendship toward him."

John continued his ministry. At the age of eighty he was still preaching. Looking back, he viewed his marriage from the same perspective as it had begun: "as a cross to bear." The way he reasoned, it seemed that, rather than being a "helpmeet" for him, Mrs. Wesley had succeeded only in driving him to preach more often away from home. In his final years, he concluded that "if Mrs. Wesley had been a better wife," he might have been unfaithful to the great work to which God had called him.

PROJECT



Entering into marriage and training up children is compared in Scripture with building a house. (See Proverbs 14:1; 24:27; and I Timothy 3:4–5.) The test of the house is seen not only in the fruitfulness of the parents but also in the continuing success of their children.

The daily attitudes and responses of the husband and wife toward each other and toward their circumstances will determine to a great degree whether they are building their house upon the rock of Christ's commands or on the sands of self-will.

Evaluate the marriages of the Edwardses, the Calvins, and the Wesleys on the basis of the Scriptures which they applied or failed to apply.

- 1 God commands a man not to lust after the outward beauty of a woman (see Proverbs 6:25) but to desire the inward beauty of a virtuous woman. *"Favour is deceitful, and beauty is vain: but a woman that feareth the Lord, she shall be praised"* (Proverbs 31:30).
 - What qualities did Jonathan Edwards, John Calvin, and John Wesley desire in a wife?
- 2 Wise courtship is a vital factor in building a successful marriage. The purpose of courtship is to ensure that God is bringing the marriage together, as He did in the cases of Adam and Isaac. The counsel of Proverbs 19:2 is vital on this point: *"... He that hasteth with his feet sinneth."*
 - How did the courtship of each couple influence their marriage? In particular, consider the brief time that John Wesley knew Molly before he married her.
- 3 Each of these three was in full-time ministry. Therefore, the instructions to priests on the type of woman to marry would have special application: *"Neither shall they take for their wives a widow, nor her that is put away [divorced]; but they shall take maidens of the seed of the house of Israel, or a widow that had a priest before"* (Ezekiel 44:22).
 - Both John Calvin and John Wesley married widows. In light of this passage, how did each previous marriage affect the new relationship?
- 4 The first year is vital to the continuing success of a marriage; thus, God gives the instruction: *"When a man hath taken a new wife, he shall not go out to war, neither shall he be charged with any business: but he shall be free at home one year, and shall cheer up his wife which he hath taken"* (Deuteronomy 24:5).
 - How did "cheering up his wife" during the first year of marriage establish proper priorities in Jonathan Edwards' marriage?
 - Neither John Calvin nor John Wesley "stayed home" during the first year of marriage, yet each marriage had a different outcome. What were the compensating factors?
- 5 When a man is married, he is to see how he can please his wife. *"But I would have you without carefulness. He that is unmarried careth for the things that belong to the Lord, how he may please the Lord: But he that is married careth for the things that are of the world, how he may please his wife"* (I Corinthians 7:32–33).
 - How did Jonathan Edwards and John Calvin demonstrate care for their wives and thus build the spirit of their marriages?
 - How did John Wesley greatly damage his marriage by stating in effect, "I will be no different married from how I was single"?
- 6 For couples in the ministry, the following charge is important: *"I charge thee therefore before God, and the Lord Jesus Christ, who shall judge the quick and the dead at his appearing . . . Preach the word; be instant in season, out of season. . . . Make full proof of thy ministry"* (II Timothy 4:1–5).
 - In what way did each wife help her husband to "make full proof of [his] ministry"?
- 7 Each marriage partner will have strengths, and each one will have weaknesses which, if not compensated for, will damage the "house." Thus, God instructs: *"Wives, submit yourselves unto your own husbands, as it is fit in the Lord. Husbands, love your wives, and be not bitter against them"* (Colossians 3:18–19).
 - In what special ways did the wives demonstrate submission to their husbands?
 - What happened to John Wesley's "house" when his wife did not submit to him?
 - What could have caused each husband to become bitter toward his wife?

4 JOHN AND ELIZABETH BUNYAN



Courtesy of Institute of Art

John and Elizabeth Bunyan

Few men in history have had a greater impact on the Church and on the world than John Bunyan. Also, few men have willingly suffered more persecution than did John Bunyan.

God used John Bunyan's first wife (her name is thought to be Mary) to bring him to salvation. Then John experienced the sorrow of losing her in death.

God brought a second wife into his life who stood by him during his persecutions and strengthened him for his writing of the books which would have a worldwide outreach.

When John was nineteen years old, he lost both his mother and beloved sister in death. When his father remarried, John felt displaced and left home to join the army.

After nearly three years of military service, John returned to his home in England to learn his father's trade as a tinker. He became skillful in crafting and mending pots and kettles, but he was quite unhappy living at home.

Within the year, John decided to marry and move out on his own. His wife, "Mary," was as poor as, if not poorer than, he was. However, his wife's father had been a very religious man who was rich in faith.

When he died, he had left his daughter only two books, *The Plain Man's Pathway to Heaven* and *The Practice of Piety*. These two books established the rule by which Mrs. Bunyan measured John's every word and deed.

John tried to live up to his wife's expectations and strived to be as virtuous as his father-in-law had been. He became a good churchman and "fell in very eagerly with the religious practices of

the times, to wit, to go to church twice a day . . . and there very devoutly both say and sing as others did." Yet, John retained a hidden and wicked life inside.

Mary knew that he was not as Godly as he appeared on the surface. Certainly he was not as Godly as her father. She reproved John often by telling him "what a Godly man her father was and how he would reprove and correct vice, both in his house and amongst his neighbors; what a strict and holy life he lived in his day, both in word and in deed."

John knew that he was a "poor painted hypocrite," and finally at a nearby Baptist church in Bedford, John was saved. His conversion however, was followed almost immediately with great despondency when he realized that he "was more loathsome in [his] own eyes than was a toad."

About this time, Mary was expecting their second child, and she became very ill. John wrote, "Her pangs . . . were fierce and strong upon her, even as if she would immediately have fallen in labor." As his wife lay groaning in pain, John prayed that her affliction would be removed.

No sooner had the prayer left his lips than her pain was eased and she fell into a deep sleep. John was powerfully moved by this demonstration of God's hand at work and wrote, "At this time I saw more in those words 'heirs of God' than ever I shall be able to express while I live in this world."

As John continued to grow spiritually, he accepted more responsibility in the church, including preaching on occasion. However, after the birth of two more children, Mary died, and John was left with four children under the age of eight. Even though John's congregation was quite small and poor, they assisted him and cared for his children.

One of the believers who helped care for John's children was a young woman named Elizabeth. She handled the children well and greatly enjoyed talking with John about spiritual matters. John and Elizabeth were married in 1659.

The first year of their marriage was a happy one. John worked as a tinker during the week and as a lay preacher on the weekends. Elizabeth cared deeply for him, and they enjoyed private moments discussing spiritual matters together. John was especially pleased to have found such a good mother for his children. Both were content to lead a quiet life of service.



Colonial Williamsburg

John spent the first year of his marriage at home with his wife while he practiced the trade of a tinker, as shown in the colonial picture above.

However, 1659 was the same year that Englishmen were ordered to worship exclusively in the Church of England. All other religious services were declared illegal. Anyone who was not of the Church of England was labeled a *Nonconformist*.

Oliver Cromwell had protected Nonconformists while he held the office of England's Lord Protector. However, when Cromwell died in 1658 and Charles II came to the throne, religious freedom came to an end and religious persecution of the Nonconformists began.

In November of 1660, a small Nonconformist church asked John to preach in a home about twelve miles from Bedford. When a local judge heard of John's "disobedience" to the king, he issued a warrant for John's arrest. Although he could have fled, John Bunyan believed he could not run away after having told his congregations to be strong in the face of persecution.

Though imprisonment meant separation from his wife and children, John concluded that he could not compromise. So after only a year of marriage, John was taken to the Bedford jail to serve a three-month sentence. Elizabeth, who was with child, so grieved over John's absence that she miscarried.

Elizabeth and the children visited John every day. During that first incarceration, John wrote, "The parting with my wife and poor children has often been to me in this place as the pulling of my flesh from my bones. . . . But yet I must venture

all with God, though it goeth to the quick to leave you."

After three months, the judge offered to release John if he agreed to stop preaching. John refused, and the judge extended his prison term indefinitely. John's heart grieved for his family, but he felt called to preach the Word of God and could not compromise his convictions.

When King Charles II announced that he would release hundreds of prisoners in celebration of his coronation, Elizabeth went to London to appeal in John's behalf. Appearing before the judges, Elizabeth, still a teenager, tried valiantly to convince them that John had been wrongfully imprisoned.

Throughout her appeal, she remained strong. Finally she could no longer hold back her tears, not "because they were so hard-hearted against [her] and [her] husband, but to think what a sad account such poor creatures will have to give at the coming of the Lord."

The judges were deeply moved, but the issue remained the same. One judge asked, "Will your husband stop preaching if he is released?" Elizabeth knew that John would never stop preaching. She missed him so dearly that she was tempted to make the compromise for her husband, yet, in good conscience she could not lie. With tears rolling down her youthful cheeks, she had to answer, "No. No, he dare not as long as he can speak."

Elizabeth's efforts were fruitless, but not forgotten by her husband. John was greatly touched by her support and loyalty during this extremely difficult time. For most of the next twelve years, John remained in jail.

To provide income for his destitute family, John made bootlaces. He also preached to the other prisoners and wrote ten works, including his autobiography, *Grace Abounding to the Chief of Sinners*.

In 1672, John was finally pardoned under Charles II's Declaration of Indulgence. John returned home immediately and quickly reopened his tinker's shop. However, he was more and more in demand as a preacher, because his willingness to stand for principle had made him a hero in his community.

John preached with a renewed vigor and confidence, assured that not even prison could stand in the way of the Gospel. Four years later, he was imprisoned again, this time for six months. During this imprisonment, he wrote *The Pilgrim's*

Progress, which was published two years later. This allegory made him famous throughout all of England, was influential in the lives of the early Americans, and is a classic which continues to inspire readers today.

Anticipating yet another imprisonment when Charles' brother James became King in 1685, John transferred all his property to his "well-beloved wife, Elizabeth," and took the precaution of disguising himself when he traveled. Nonconformists changed their meeting places every few weeks, posted sentinels to provide warning of raids, and discontinued hymn-singing.

Not until 1688 did William III and Mary II reestablish religious tolerance, giving John the freedom to preach without the threat of prison. John was now almost sixty years old. He had never denied the faith nor compromised his call to preach, and, in spite of his several prison terms, he had always kept Elizabeth first in his life.

Now that religious freedom had come, John was free to preach openly wherever he was invited. John had caught a terrible cold while riding through cold, rainy weather to help a young man mend his relationship with his father. Three days later, John died of a high fever, never having had the opportunity to experience the freedom for which he had suffered.

John Bunyan had exalted the position of a wife. He had taught that a wife "is to be subject to her husband, but not to be her husband's slave; she is his yoke-fellow, his flesh and bones. The wife is master next to her husband, and is to rule in his absence; and even in his presence she is to guide the house and to bring up the children. The husband, if his wife is a believer, should so love her that their life together may preach the marriage of Christ to His Church." Not only had John given this teaching about marriage, but he had practiced it in his home as well.

Elizabeth's determination, gracious spirit, and tenderness had been a tower of strength for her husband while he was in prison. In his marriage to Elizabeth, John had found a strength and consistent support that he had never known before.

Before John met Elizabeth, he had preached "against man's sins and their fearful state because of them." After they were married, however, he greatly altered his preaching because, as he explained, "the Lord came in upon my own soul with some staid peace and comfort through Christ, for He did give me many sweet discoveries of His blessed grace."

5 HUDSON AND MARIA TAYLOR



In Memoriam Rev. J. Hudson Taylor



Hudson Taylor and the China Inland Mission

Hudson and Maria Taylor

Hudson Taylor's first two years on the mission field were discouraging. The Chinese people were unresponsive. Political upheavals hindered his ministry and endangered his life as well.

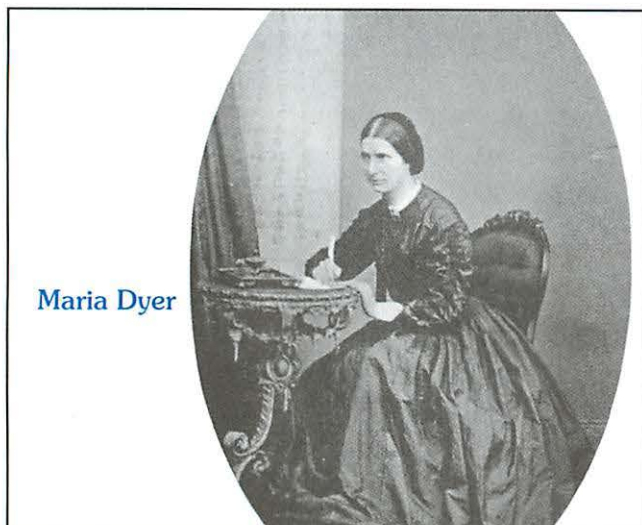
The year 1856 was particularly frustrating for Hudson. A servant robbed him of almost everything he owned, and a fire destroyed his Shanghai apartment and all of his medical equipment.

Hudson was very lonely. He had been corresponding with a young woman back in England and had finally asked her to marry him. However, no reply came, and the relationship ended. He felt so rejected that he wrote, "At times I have felt so discouraged that I have even thought of giving up the missionary work."

As that dismal year came to an end, it marked a turning point in Hudson's life. During Christmas of 1856, Hudson met Maria Dyer, the sister of a missionary teacher in Ningpo. Maria's missionary father had died preaching to the Chinese in Malaysia when she was six, and her mother had died when she was ten. Maria, her brother, and her sister had made the long journey back to England to be raised by their uncle.

When her sister, Burella, had decided to become a missionary teacher at Ningpo, Maria chose to go with her. She knew that her parents would have been pleased for her to become a missionary, especially to China.

At the Christmas dinner in Ningpo that year when Hudson was present, Maria and her sister played a piano duet. Hudson's interest in her was sparked, but he did not say anything at that time. It was not until the following March that he ventured to write her a letter.



Maria Dyer

Hudson Taylor and the China Inland Mission

When Maria received the letter, she later said, "I had a sort of hope that it might be from Mr. Taylor, but I could not think that it was—that was not likely. . . . I then opened my letter and read of his attachment to me and how he believed that God had given him that love for me which he felt. He asked me to consent to an engagement to him. He begged me not to send him a hasty refusal, which he intimated would cause him the greatest anguish."

Excitedly, she shared the letter with her guardian, Miss Aldersey. Miss Aldersey, however, instructed Maria to turn Hudson down at once because, in her opinion, he was not a gentleman, he was not educated, he had no position, he wore Chinese clothing, he was short (Maria was tall), and he was associated with the Plymouth Brethren (Maria belonged to the Anglican Church).

Maria was crushed, but she obeyed. When Hudson received her letter of refusal, he too was crushed. Having been twice rejected, Hudson threw himself into his missionary efforts with even greater zeal.

Upon returning to Ningpo, Hudson discovered that it was Miss Aldersey, not Maria, who had prompted the letter of rejection. Hudson was elated. He quickly appealed to Maria's uncle and legal guardian back in England. Hudson did not know that Maria had already written her own letter of appeal to her uncle. So had Miss Aldersey!

Since no reply could be expected from England for at least four months, several of the missionaries at Ningpo suggested that Maria and Hudson not see each other until they received word from Maria's uncle.

Hudson, feeling rejected once again, returned to Shanghai and drove himself with such fervor that his health broke. Yet God used this time in a very special way. While recuperating, Hudson adopted two Hebrew words as his *rhemas*: *Ebenezer*, meaning "Hitherto hath the Lord helped us," and *Jehovah-Jireh*, meaning "The Lord will provide." These two words later became the foundation of the China Inland Mission.

When the letter finally arrived from Maria's uncle, suspense had mounted throughout the settlement. Everyone wanted to know if Maria and Hudson were going to be married. The long-awaited verdict was that yes, she could marry Hudson, but she would have to wait until her twenty-first birthday. Because Maria's twenty-first birthday was only two months away, the whole town rejoiced.

When the wedding was only two weeks away, Hudson found himself without any money. He and a fellow missionary had been providing breakfasts every morning for sixty to eighty Chinese. Thoughtfully Hudson asked Maria if she wished to reconsider marriage, writing, "I cannot hold you to your promise, if you would rather draw back. You see how difficult our life may be at times."



Martyred Missionaries of the China Inland Mission

Children won to Christ by Hudson Taylor and his co-workers

Maria wrote back, "Don't forget that I was an orphan in a faraway land. God has been my Father all these years. Do you think I shall be afraid to trust Him now?"

Two weeks later, they were married. Maria wore a silk gown, and Hudson wore a plain cotton robe. He had sold everything else, even his clothes, to buy food for the Chinese.

Six weeks later, Hudson wrote of his marriage to Maria, "Oh, to be married to the one you do love, and love most tenderly and devotedly, that is bliss beyond the power of words to express or imagination conceive."

In 1860, two years after they were married, Hudson, Maria, and their one-year-old daughter returned to England because of his poor health. During their stay, Hudson finished medical school, revised the Ningpo New Testament, recruited more missionaries for China, and founded the China Inland Mission.

Six years later, Hudson, Maria, and their growing family of four children, together with fifteen missionary recruits, sailed back to China. One of the recruits wrote that Hudson "was quite one with the young men of the party. Mrs. Taylor, quieter, in some ways perhaps more mature, such rare judgment; calm sweetness about her face always; most restful. She was very thoughtful and gave much time to study of the Bible and prayer; gave a good deal of time to the children too—used to gather them to the cabin for reading."

Upon their return to China, Hudson, who had worn Western clothes while in England, adopted his customary Chinese style of dress once again. It was clear in his own mind that this removed a major obstacle to the Gospel. However, he hesitated to ask Maria and the other women to make the same commitment.

Hudson greatly valued Maria's opinion and asked her for her advice. Maria had reservations about the change in dress, but she so admired her husband's convictions that she agreed to try it for a while. When she made the change, she too was convinced that it was the right choice.

In its early years, China Inland Mission faced many problems. Other established missionary societies severely criticized Hudson and Maria. The Chinese attacked the mission on several occasions, and the small group of missionaries suffered dissension within their own group.

One of the missionaries wrote about the Taylors: "If he were not in the habit of casting his burdens upon the Lord, I quite believe that what he has passed through he would have sunk under." Of Maria they said, "She was the backbone of the mission at the time. Hudson had so learned to value her judgment and prayerfulness that he never took a step without consulting her."

When the Taylors returned from England, Maria contracted tuberculosis. Her struggle with it so weakened her that she was unable to withstand

the other diseases which often swept the missionary community.

Maria's friends called her "a woman of indomitable perseverance and courage, through troubles of every kind." They said of her, "She always sympathized with everyone and everybody. It showed often in little things." She was also described as "humble, retiring, almost to shyness."

God blessed Maria and Hudson with a fifth child shortly after their return to China. But in 1867 their oldest child, Gracie, suddenly became seriously ill and died. Her death drew the Taylors and their staff even closer to God.

Hudson wrote home to England saying, "I know not how to write. Our dear little Gracie! How we miss her! As I take the walks I used to take with her tripping by my side, the thought comes anew like a throb of agony, 'Is it possible that I shall never more feel the pressure of that little hand?' And yet she is far holier, far happier than she could ever have been here."

In June 1868, the Taylors made a bold move into the heart of China. They set up a new mission headquarters in Yangchow. Few Westerners had been seen there since the time of Marco Polo (1254–1324). In spite of the Taylors' Chinese dress and gracious spirits, some of the Chinese people began to spread rumors about the foreign doctor, his staff, and the message they were proclaiming.

Those who opposed the Gospel launched an anti-missionary handbill campaign, which resulted in a major international incident. Angry mobs threw stones through the windows of the mission and set the mission ablaze with flaming torches, forcing the staff to climb out a back window with knotted sheets and blankets.

Through it all, Maria, who was six months pregnant, calmly put her children to bed. However, before help could arrive, one of the rioters broke into the room and attacked Maria, forcing her and her children to jump fifteen feet to the ground.

The riot brought British gunboats up the Yangtze River. The *Times* of London denounced Hudson Taylor and the China Inland Mission for provoking the conflict. The British government, embarrassed by the incident, looked for some "efficient and stringent mode of dealing with these missionaries."

Other missionaries in China were also angry with the Taylors, because they felt that the Taylors' boldness had placed *all* mission work in jeopardy. These accusations were a great emotional burden

for Hudson. Of that time of turmoil, he later wrote, "Instead of growing stronger, I seemed to be getting weaker and having less power against sin; and no wonder, for faith and even hope were getting very low. I hated myself."

The one constant that Hudson could always count on was Maria's love. In fact, he sometimes feared that they loved each other too much. "Oh, may He ever give us both to love Him best, most constantly and with unfailing constancy. Then we shall not love one another too much."

When asked if she wanted the rioters punished, Maria replied, "The revenge I desire is the wider opening up of the country to our work." Her only prayer was "that we might be allowed to return in time for our baby to be born here in Yangchow." Ten days before Charles Edward Taylor was born, Hudson and Maria returned to the burned remains of the mission in Yangchow.

Finally, Hudson understood the secret of "abiding, not striving or struggling." He wrote, "Ah, there is rest. . . . I have striven in vain to rest in Him. I'll strive no more. For He has promised to abide with me, never to leave me, never to fail me, and . . . He never will."

As for Mrs. Taylor, she wondered what Hudson and the others were all searching for. Maria had long ago discovered that Jesus had suffered and died for her sins, and that God the Father was fully satisfied with Jesus' substitutionary work. Her quiet, meek, servant's spirit was a constant encouragement to Hudson.

Maria taught Hudson the secret of what "full identification with Christ brings." As she put it, "Can Christ be rich and I be poor?" It was the same lesson that the Holy Spirit had taught Maria when she lost both parents as a child. By teaching this lesson to both Hudson and Maria, God prepared the Taylors for their greatest trial.

Mrs. Taylor was with child again. Yet, she continued teaching her usual classes. Despite the tuberculosis that ravaged her body, she also completed a Chinese-English dictionary which was finally ready for printing. The baby was born in mid-July but died two weeks later. Hudson could see that his beloved wife had absolutely no strength remaining. He gently asked her, "Darling, do you know that you are dying?"

"Dying? Do you think so? What makes you think that?"

Hudson responded, "I can see it, darling. Your strength is giving way."

"Can it be? I feel no pain, only weariness."

Hudson, with tears falling uncontrollably onto Maria's bed, reassured her, "You are going home, Maria. Soon you will be with Jesus."

Maria whispered, "I am so sorry."

Hudson answered, "You are not sorry to go to be with Jesus."

"Oh no, it is not that. But it does grieve me to leave you alone at such a time. Yet He will be with you and meet all your needs."

As she lay dying, he committed his wife to the Lord and gave thanks to Him for the twelve and a half years of marriage they had been able to have together.

Over a period of just a few months, Hudson had lost a child, a baby, and his wife, and he had sent his other children back to England. He wrote, "I cannot describe to you my feelings. I do not understand them myself. I feel like a person stunned with a blow, recovering from a faint, and as yet but partially conscious. . . . My Father has ordered it, so . . . therefore I know it is. I feel utterly crushed. . . . Oftentimes my heart is nigh to breaking, but withal I had almost said I never knew what peace and happiness were before—so much have I enjoyed in the very sorrow."

Hudson was thirty-eight when Maria died. Two years later, he married a fellow missionary by the name of Jennie Faulding, and he continued his work in China until he died at the age of seventy-three.

The afternoon before Hudson died, a group of missionaries were talking with him about bringing everything to God in prayer. One of them said that sometimes he found it difficult to bring the small things to God.

Hudson responded, "There is nothing small, and there is nothing great; only God is great, and we should trust Him fully."

"Trust in the Lord with all thine heart; and lean not unto thine own understanding. In all thy ways acknowledge him, and he shall direct thy paths" (Proverbs 3:5-6).

6 BILLY AND NELL SUNDAY



Billy Sunday, D. Bruce Lockerbie, ©1965 Word, Inc.

Billy and Nell Sunday

By the end of Billy Sunday's career in 1935, he had preached to over one hundred million people. Conservative estimates suggest that at least one million people accepted his invitation to come forward and pray to receive Christ as their Savior.

Billy Graham was saved in one of Billy Sunday's clubs. He reached out to Black Americans and also founded the Winona Lake Bible Conference. Yet the years of fame and money seemed to poison everyone in the Sunday family except for their daughter.

Billy's son and assistant business manager, George, attempted suicide in 1923. In 1929, George was arrested for auto theft and bail jumping. In 1930 he was divorced and, in 1933, plunged from a window to his death.

Billy's second son, Billy, Jr., was divorced in 1927, remarried in 1928, and was divorced again in 1929 on the grounds of cruelty. The youngest son, Paul, absconded to Europe after graduation from college, leaving his parents to pay his outstanding debts.

The Sundays' only daughter, Helen, died of pneumonia in 1932. This loss was especially painful because she was the only child to remain faithful to her parents.

Billy and Nell Sunday sought the applause of the crowd and the security of one another, but they were blind to the needs of their children, indulging them rather than nurturing them.

The phrase "hitting the sawdust trail" is thought to have originated from the sawdust which covered the dirt floors of Billy Sunday's tabernacles. As people came forward to confess



Billy Sunday, D. Bruce Lockerbie, ©1965 Word, Inc.

Billy Sunday

their belief in Jesus, they were said to "hit the sawdust trail." However, loggers used the term long before this time. They would carry a bag of sawdust into the woods with them each morning, leaving a trail behind them which they could follow back out of the woods at the end of the day. (An analogy could be made between the two uses of the phrase.)

Billy's early years were laden with loneliness and sorrow. His father died of pneumonia just five weeks after Billy was born. Although his mother remarried and had two more children, Billy spent much of his time with his grandparents. His younger sister, Libby, died from burns suffered when her clothes caught fire. Tuberculosis claimed the lives of four aunts, an uncle, and his beloved grandmother. Then his stepfather died. All these tragedies occurred before Billy was ten.

Billy spent the rest of his childhood in orphanages, traveling from home to home either alone or with one of his older brothers. This separation was so painful for Billy that he remembered it in detail, mentioning it in his sermons years later. For the rest of his life, he greatly feared being separated from those who were most dear to him.

As a young man, Billy played professional baseball. He established himself as a dynamic player, circling the bases in a mere fourteen seconds and stealing ninety-five bases in one season, a record that, until 1962, was topped only by Ty Cobb. One night, when Billy was a player for the Chicago Whitestockings, he heard a group of street musicians from Pacific Garden Mission playing Gospel music in Chicago's Loop. They gave an invitation for salvation, and Billy responded.



Billy Sunday, D. Bruce Lockerbie, ©1965 Word, Inc.

Large crowds came to hear Billy Sunday preach at his tabernacle at Winona Lake Bible Conference.

After that night, it became apparent to everyone that something dramatic had happened in Billy's life. He stopped drinking, swearing, and gambling, and he began attending morning and evening church services. Once it was known that he had become a Christian, he was in great demand by the area churches and YMCA to give his testimony.

It was at one of these church services that Billy met Nell Thompson, the daughter of William Thompson, owner of Chicago's largest dairy business and a leader at the Jefferson Park Church where Billy gave his testimony. Nell was seventeen; Billy was twenty-two.

Nell taught Sunday school and led the youth group. After attending services there for several weeks, Billy "braced up one evening and asked Miss Thompson if [he] could see her home." She smiled and said, "Yes," and from that time on, Billy was very interested in Nell.

At first Nell was not as interested in Billy as he was in her. Each day when the team played in Chicago, Billy walked past Nell's house on the way to the ballpark. He walked from his hotel to the park for morning practice, then back for lunch, then back for another practice or a game, then back to the hotel again at night.

Although they continued to see each other for the next two years, Nell's father did not approve of Billy. Mr. Thompson recognized Billy's commitment to Christ, but he had no use for professional baseball players.

Whenever Billy went on a road trip with the team, he grew desperately lonely and felt increasingly sorry for himself. Eventually Nell tired of this self-pitying attitude and told him so in no uncertain terms. She wrote to Billy to "brace up

and throw off that burden that pulls you down and be the strong, stout-hearted man that you are."

Nell recognized that it hurt his feelings for her to tell him off, but it was important that Billy's attitude change. This was just what he needed to hear. It reassured him of her love and gave him courage to continue until the next time he was away from her. This was only the first of many times that Billy would rely on Nell to bring balance into his life.

With Mr. Thompson's approval, the two were finally married in Chicago on September 5, 1888. Nell accompanied her husband on his road trips with the baseball team, and Billy was delighted that his source of security was always in the stands rooting for him. That season, Billy had eighty-four stolen bases.

In January of 1890, Nell gave birth to their first-born daughter, Helen. Nell could no longer travel with Billy, and his insecurities began to grow once again.

During the winter of 1890, Billy worked for the local Chicago YMCA. He was at home and content. However, the more he became involved with Christian work, the more he felt that this was what the Lord would have him do with his life.

Together Billy and Nell asked the Lord to make it very clear to them how and when he should leave baseball. Billy asked the team he was playing for at that time to release him from his contract, although it seemed unlikely that such a request would be granted.

The release came in the mail exactly one week before spring training was scheduled to start, but on the same day, Billy received an offer from Cincinnati for a one-year contract at quite an increase in salary. Because Billy had been released from his previous contract, he was free to move if he so desired.

Not knowing how to interpret this "sign from the Lord," Billy went to Nell and asked her what to do. *She* had no doubts at all as to the right decision. They had made a covenant with the Lord, and they should be faithful. "There is nothing for you to consider; you promised God to quit."

For the next two years, Billy continued to work at the local YMCA, passing out tracts, holding prayer meetings, leading men to the Lord, and helping them find employment. He was secure being at home with Helen and Nell.

The financial crash of 1893 found the YMCA unable to pay Billy a salary. By then, the Sundays'

second child, George, was born. God continued to provide for them. The evangelist and hymn writer J. Wilbur Chapman asked Billy to be his assistant. Billy would precede him in each city to organize committees, raise money to rent a hall, pay for advertisements, and train volunteer workers.

Billy loved the idea, but the thought of traveling and being separated from Nell brought him to the point of despair. Once again it was Nell who made the decision.

Convinced that God had called Billy to service, she encouraged him to step out in faith. For the next two years, Billy traveled with the Chapman ministry, listened to the rich preaching, and learned the “how to’s” of running an evangelistic meeting.

When Reverend Chapman decided to return to the pastorate, Billy and Nell once again found themselves with no income. Just six days later, Billy received an invitation from Garner, Iowa, to conduct his own evangelistic campaign.

Later, Nell would write, “Would he go? It was just as if that telegram were sent like manna from heaven. I remember being so happy about it, I put my arms around Billy’s neck and I hung on so tightly that I dragged him to the carpet. We both had a great laugh together over our joy at getting the telegram. And, of course, I went right away to send the word ‘Yes!’”

Billy’s lifelong evangelistic ministry to millions of people had begun. For the next forty years, Billy Sunday was never without an invitation to preach.

Between January, 1896, and November, 1907, Billy held sixty-six revival campaigns in small midwestern towns. For the first ten years, Billy traveled from one city to another without any staff. To the people who lived in these small communities, Billy was “one of them.” He was “The Baseball Evangelist” who was willing to roll up his sleeves and work side by side with anyone.

In his letters to Nell, Billy frequently expressed his self-doubt, discouragement, and depression. It was Nell, or “Ma,” as he called her, who would calm his insecurities by writing back, encouraging him in his ability and her assurance of God’s call in his life.

Nell also grieved when she was not with Billy. When she was not there to help him with administrative decisions, she knew he felt inadequate. Before long, Billy began to put pressure on Nell to find ways to join him.

Billy had been home for the first six years of his daughter Helen’s life and the first four of his son George’s. However, when Billy, Jr., was born in 1901, Billy was so busy that he did not even get home to see the baby until he was ten days old. Even then, Billy was gone again almost as soon as he had unpacked.

Nell was a strong person, but by late 1907 she began breaking out in hives and suffering nervous exhaustion. Torn by guilt at being home when Billy needed her on the road, she was equally devastated when she joined him and left the children in someone else’s care.

Both Billy and Nell agreed that God had called him to do evangelistic preaching. They believed that God was blessing the work and using Billy’s messages to change lives. Nell especially wanted him to obey this calling. Yet they could not harmonize both family and ministry.

Eventually Nell chose Billy over the children and returned to the evangelistic circuit. She managed the business end, but more importantly, she managed Billy, keeping him calm and happy.

Their choice brought fame, wealth, and impressive statistics but also sowed the seeds which produced the fruit of spoiled children, broken marriages, tarnished reputations, nervous disorders, and ultimately dishonor to Billy’s own name as an evangelist. If Billy Sunday had given his family the spiritual leadership God requires of husbands, his apparently successful public ministry could have reached a far greater potential.

“Husbands, love your wives, even as Christ also loved the church, and gave himself for it; That he might sanctify and cleanse it with the washing of water by the word, That he might present it to himself a glorious church, not having spot, or wrinkle, or any such thing; but that it should be holy and without blemish. So ought men to love their wives as their own bodies. He that loveth his wife loveth himself”
(Ephesians 5:25–28).

PROJECT



If a husband is going to build his family on the solid foundation of Scripture, he must demonstrate to his wife the love which Christ had for the Church. This type of love is described in I Peter 3:7:

"Likewise, ye husbands, dwell with them according to knowledge, giving honour unto the wife, as unto the weaker vessel, and as being heirs together of the grace of life; that your prayers be not hindered."

If a woman is going to build her house and not tear it down by her own efforts, she must follow the directives given in I Peter 3:1-6:

"Likewise, ye wives, be in subjection to your own husbands . . . While they behold your chaste conversation coupled with fear. Whose adorning let it not be that outward adorning . . . But let it be the hidden man of the heart, in that which is not corruptible, even the ornament of a meek and quiet spirit, which is in the sight of God of great price. . . ."

1 As they were growing up, John Bunyan, Maria Taylor, and Billy Sunday all were separated from their parents through death. As difficult as such loss is, God has promised to give grace in times of need. *"And God is able to make all grace abound toward you; that ye, always having all sufficiency in all things, may abound to every good work"* (II Corinthians 9:8).

- How did John's, Maria's, and Billy's responses to the grace of God during their youth impact their marriages?

2 In James 1:2-4, we are instructed: *" . . . Count it all joy when ye fall into divers temptations; Knowing this, that the trying of your faith worketh patience. But let patience have her perfect work, that ye may be perfect and entire, wanting nothing."*

- How did health problems, persecutions, and hardships help "build" the marriages and ministries of the Bunyans, the Taylors, and the Sundays?

3 When we suffer we are to *" . . . follow his [Christ's] steps: Who did no sin, neither was guile found in his mouth: Who, when he was reviled, he reviled not again; when he suffered, he threatened not; but committed himself to him that judgeth righteously"* (I Peter 2:21-23).

- What type of "revenge" did Elizabeth Bunyan and Maria Taylor desire to have on those who persecuted their families?

4 Jesus said, *"He that loveth father or mother more than me is not worthy of me. . . . And he that taketh not his cross, and followeth after me is not worthy of me"* (Matthew 10:37-38). The Bunyans, the Taylors, and the Sundays all chose the Lord over their families.

- What insight do you have about Jesus' words when you compare the way the Bunyans and the Taylors applied this Scriptural directive to their families and the way the Sundays applied the passage to their family?

5 Each couple in the ministry faces the challenge of how to harmonize family and ministry needs. Because God designed both the family and ministry, His Word reminds us of the need of: *"casting all your care upon him; for he careth for you"* (I Peter 5:7).

- How did the Bunyans, the Taylors, and the Sundays cast their burdens upon the Lord?

6 A prudent person is someone who is able to meet the practical needs of life with wisdom. God states, *"Houses and riches are the inheritance of fathers: and a prudent wife is from the Lord"* (Proverbs 19:14).

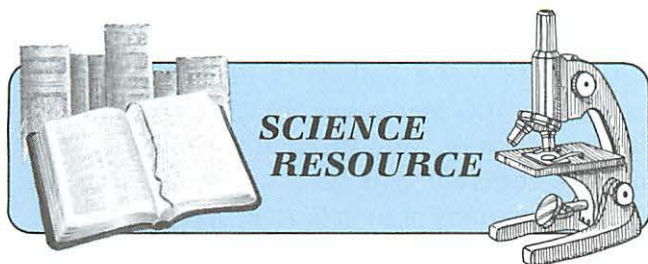
- How did Elizabeth Bunyan, Maria Taylor, and Nell Sunday demonstrate prudence in their marriages?

7 Elizabeth, Maria, and Nell were all virtuous women. *"Who can find a virtuous woman? for her price is far above rubies. The heart of her husband doth safely trust in her . . ."* (Proverbs 31:10-11).

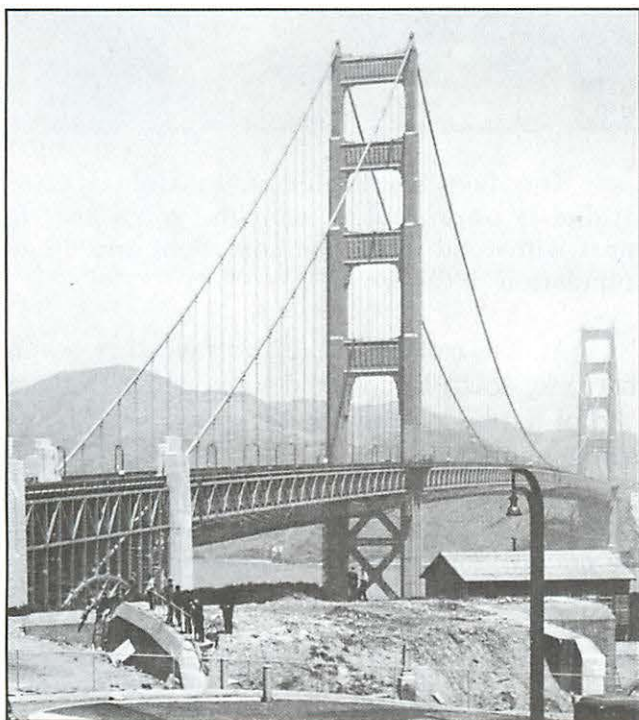
- In what ways did each wife build her house by giving strength, consistent support, and valuable counsel to her husband?

8 As a result of this study, what Scriptural courtship and marriage standards do you believe God would have you establish?

Date completed _____ Evaluation _____



HOW DOES THE GOLDEN GATE BRIDGE ILLUSTRATE THE IMPORTANCE OF BUILDING YOUR HOUSE UPON A ROCK?



Golden Gate Bridge and Highway District

The Golden Gate Bridge is one of the most beautiful bridges in the world. It has stood the test of time because its delicate superstructure stands upon a firm foundation which storms, floods, winds, and even earthquakes have not affected.

Powerful forces beat upon the Golden Gate Bridge. In fact, waters from as far away as Mount Shasta and the Sierra Nevada Mountains eventually wind their way to San Francisco Bay. The small rivulets start out serenely as melting snow, but they eventually combine to form the raging waters of the Sacramento and San Joaquin Rivers, which drain 59,000 square miles of mountains—almost 40 percent of the state of California.

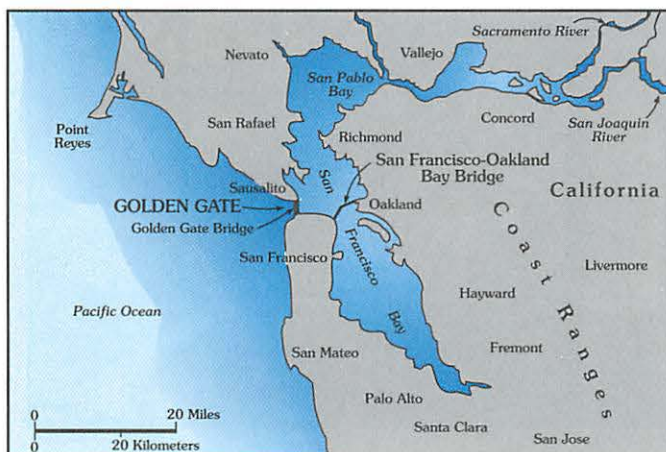
Enough water beats against the foundations of the Golden Gate Bridge in a single year to flood an area the size of the state of Maine one foot deep. The pressure of this water is maximized as it passes through the narrow passage of the Golden Gate.

The Golden Gate is a deep channel, ranging from 43 to 313 feet deep, running about four miles long and about one mile wide. Its undulating bottom creates treacherous currents that pound against the bridge's foundation.

The steep hills around San Francisco also funnel the constant winds of the Pacific Ocean into the Golden Gate's constricted gap, creating hurricane-force gales.

At the same time that winds beat against the superstructure of the bridge and wild currents pound against its foundation, ocean waves from as far away as Antarctica create ocean swells with incredible power.

These waves are compounded by the gravitational attraction of the moon, which forms exaggerated tides that whip the channel into a confusion of riptides, whirlpools, and whitecaps twice a day.



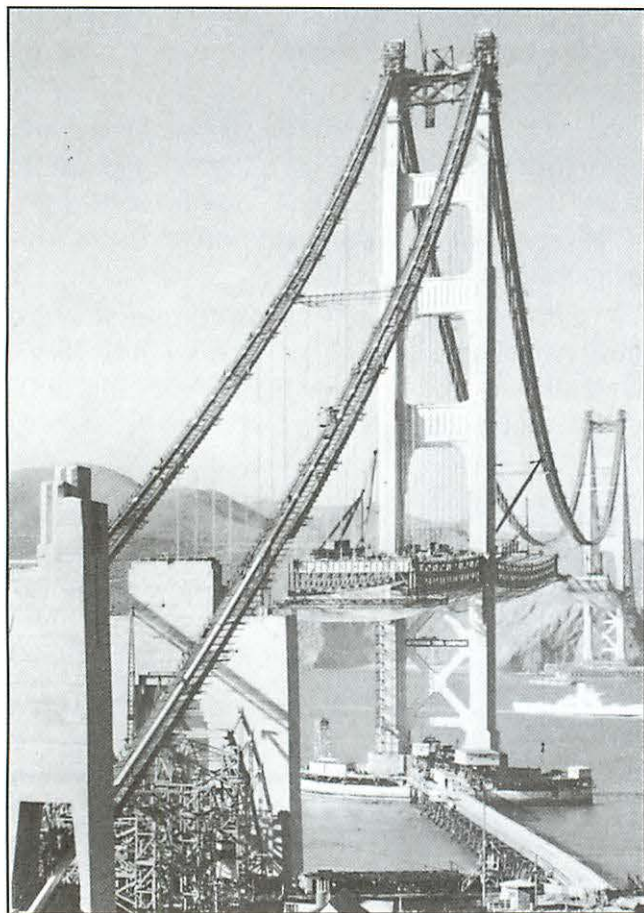
The Golden Gate Bridge provides access to San Francisco from the north.

Though turbulent floods and twisting currents beat against its foundation, though strong winds blow with hurricane force against its superstructure, and though earthquakes shake its twin towers and stretch the steel cables that hold the bridge in place, the Golden Gate Bridge, built in 1937, continues to stand firm.

How does this world-famous bridge illustrate principles of building upon solid Rock?

1 ***Tons of rubble had to be removed before building could begin.***

The enormous towers of the Golden Gate Bridge rise almost 750 feet above the chilly waters of the San Francisco Bay. Without the support of the foundation below, however, these towers would have been toppled long ago by the surging tides and gale-force winds that roar through the narrow opening in which they stand.

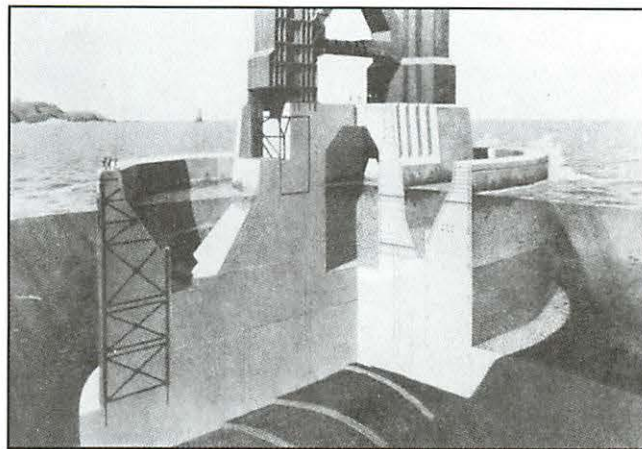


Golden Gate Bridge and Highway District

The Golden Gate Bridge, which connects northern California to the city of San Francisco, has a total length of 8,891 feet. Its towers hold up two steel cables 36.5 inches in diameter. The section between the towers is one of the world's longest, spanning 4,200 feet. The roadway is 90 feet wide and is suspended 220 feet above the water. The bridge was designed by Joseph B. Strauss and was completed in 1937 at a cost of \$35.5 million.

Engineers measure structural height from the bottom of the foundation, not just the visible portion. For example, the south tower is actually

850 feet tall. The bottom of its foundation lies more than 100 feet below the choppy surface of the bay. There, anchored into bedrock, is a massive concrete pier base which supports the tens of thousands of tons of steel above it.



Golden Gate Bridge and Highway District

The deep south pier of the Golden Gate Bridge is unprotected from the open sea. It must withstand more pressure than any other foundation in the world.

At first, builders argued over whether or not the rocky south ledge could support the crushing load of the bridge without being pulverized by its vibrations and weight.

Finally Andrew Lawson, of the University of California, the man who discovered and named the famous San Andreas Fault, submitted a study which indicated that the strength of the underlying rock was adequate to support the bridge. The superficial rubble would have to be blasted away to access a firm foundation.

A suspension bridge like the Golden Gate Bridge actually has two foundation systems: one supports the towers, and the other provides secure mooring for the cables. All together, builders had to construct six major foundations for the bridge. In every instance, rocky rubble had to be removed in order to uncover the reliable foundation that was hidden beneath the surface.

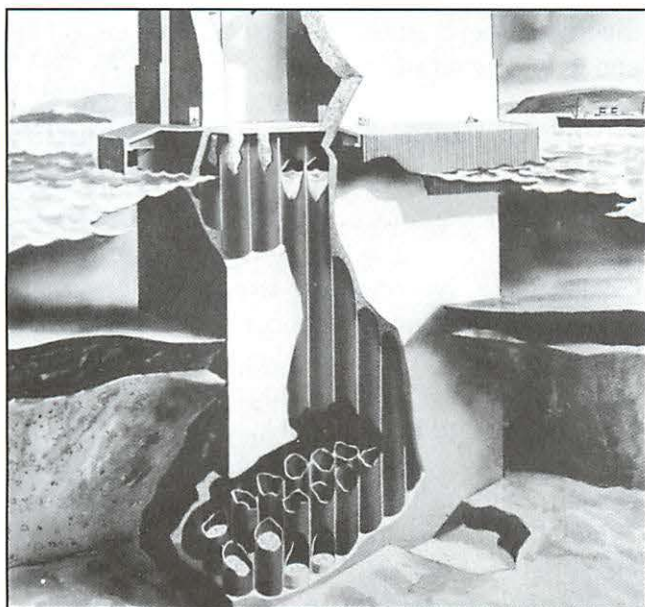
To begin construction of the four major foundations anchoring the giant suspension cables, engineers blasted holes in the ground large enough to consume a twelve-story building. The rubble was removed, and 50,000 tons of concrete was poured into each of the cavernous pits. The result produced foundations that could resist a pulling force of 63,000,000 pounds without budging an inch.

The footings of the towers, however, presented much greater challenges. They had to bear the weight of 43,000,000 pounds of steel, plus the weight of roadway, plus the weight of the traffic. (The traffic weight was calculated at 9,500,000 pounds, based on a situation in which the bridge would be lined end-to-end with fully loaded trucks.)

The north pier was built on solid rock only 20 feet under water. The only major difficulty was contending with the bay's tidal currents. Four times a day, waters swept in and out of the Golden Gate with velocities exceeding seven knots. Only during four twenty-minute periods each day were the currents reasonably slack enough for the builders to work.

The south pier of the bridge was quite another matter—it had to be located in deep water more than 1,100 feet from shore. At that point even deep-sea divers would be swept away by the tidal currents. Yet divers were able to find an outcropping of bedrock 300 feet wide and 155 feet long about 100 feet below the twisting currents.

The biggest difficulty was removing the serpentine rock that covered the top of the firm bedrock. An average thickness of 15 feet of this rubble had to be removed before builders could lay a proper foundation.



California Division of Highways

This diagram of the central anchorage of the San Francisco-Oakland Bay Bridge shows how much superficial rock had to be removed before engineers reached solid bedrock in building the Golden Gate Bridge. The steel cylinders supporting this bridge had to be founded more than 200 feet below the surface of the bay.

To remove the unstable material, builders drilled small holes two feet deep in the rock and used small bombs (charges) to blow cracks in the rock. They then drilled larger holes and rammed more explosives deeper into the rock. Eventually they were able to drill holes large enough to accommodate six charges eight inches in diameter and twenty feet long. By detonating these charges simultaneously in adjacent holes, builders finally uncovered a firm foundation of bedrock that would support the bridge.

Once the superficial rock was shattered and dredged, builders maneuvered a large caisson, measuring 180 feet by 90 feet and weighing 8,000 tons, directly above the newly excavated foundation. However, the incoming waves of the Pacific Ocean were so powerful that they tossed the caisson around like a cork.

Builders had to abandon the caisson technique and instead had to pour a thick concrete cylinder 65 feet deep down to the bedrock. They could then pump out the water and construct the massive footing that would support the bridge on a firm foundation.



Golden Gate Bridge and Highway District

There is enough concrete in the six major footings of the Golden Gate Bridge to build a five-foot-wide sidewalk from San Francisco to New York.

If engineers had taken the easy way out and built upon the exposed rock on the surface, the bridge would have collapsed long ago. Instead, they blasted away and discarded almost half a million tons of rubble in order to reach rock which would provide a reliable foundation.

2 ***Criticism strengthened the resolve of the builders to finish the project.***

"The Golden Gate Bridge, the bridge which should not and could not be built, which the War Department would not permit, which the rocky foundation of the pier base would not support, which would have no traffic to justify it, which would ruin the beauty of the Golden Gate, which could not be completed within my cost estimate of \$27,165,000, stands before you in all its majestic splendor in complete refutation of every attack made upon it."

**—Joseph B. Strauss,
Chief Engineer for the Golden Gate Bridge**

It is hard to believe that one of the most famous and beautiful bridges in all the world could have been confronted with major opposition. However, the statement made by Joseph B. Strauss upon completion of the bridge characterizes the battles that raged before and during its construction.

- ***"The bridge which should not and could not be built . . ."***

The first recorded idea for a bridge across the Golden Gate came in 1872 from railroad and banking magnate Charles Crocker. Mr. Crocker had already played a major role in the trans-continental railroad. Four decades later, as a San Francisco newspaper editor, he began an editorial campaign for the bridge.

A year earlier, the Panama Canal had opened, and many far-thinking individuals realized that world trade routes would be forever changed. Mr. Crocker could see how San Francisco would become a major world-class city involved with trade from both the east and west.

However, in 1927, a lawsuit slowed plans for the bridge. When the Great Depression hit in 1929, almost everyone in support of the bridge lost enthusiasm, and the bridge plans seemed doomed. To make matters worse, some engineers sneered at the plans for the world's largest suspension bridge, claiming that it would fall into the bay.

- ***"which the War Department would not permit . . ."***

The United States Department of War [later incorporated into what is now the U.S. Department of Defense] was also against the project from the very start. Its concern was with the strategic importance of the entrance to San Francisco Bay. They feared that enemy bombers might blow up the bridge, thereby dropping it into the channel and blocking navigation in and out of Fort Winfield Scott.

However, their concerns were eventually overcome by engineering calculations which demonstrated that the depth of the channel was great enough to "swallow" the debris from a destroyed bridge without affecting ship traffic.

- ***"which the rocky foundation of the pier base would not support . . ."***

Opposition was directed at the very foundation of the project. Many professional engineers derisively referred to Mr. Strauss merely as a visionary and promoter rather than an engineer. They belittled him by declaring that he had misinterpreted government geological surveys about the rock's outcropping in the channel.

Critics said that the rock formations on the south side of the entrance were so unstable that they could never support the weight of the bridge and its projected traffic load.

- ***"which would have no traffic to justify it . . ."***

In 1919, a total of only 123,000 automobiles for the entire year had been ferried across the Golden Gate. No one ever expected Californians to develop such an affection for the automobile. When the Golden Gate Bridge was built six lanes wide, opponents of the bridge said there would never be enough traffic to fill it.

By 1928, the number of cars crossing the Golden Gate by ferry had risen to two million—sixteen times more traffic than in 1919.

- ***"which would ruin the beauty of the Golden Gate . . ."***

The architecture of the bridge would be largely determined by the physics of the span, but architect Irving Morrow was hopeful that the bridge could *add* to the beauty of the Golden Gate. Instead of the traditional cross-bracing of the towers, he introduced fluted cover plates and

cover brackets, providing a beautiful tiered effect. For the benefit of sightseeing motorists, he broke with tradition and designed an open-baluster railing.

Mr. Morrow also designed lighting that would not call attention to the bridge itself but would lead the eye across the channel. He achieved this effect by using occasional globes which would suggest only the lines of the bridge. To ensure that the roadway would continue to be illuminated during the infamous San Francisco fogs, he employed recently invented sodium vapor lamps.

- “*which could not be completed within my cost estimate of \$27,165,000 . . .*”

Mr. Strauss had claimed that the great span could be built for a little over \$27,000,000. This figure was so startlingly low that it was derided by many who had estimated the cost to be \$29,000,000 for the foundation alone.

Adding the costs for the superstructure and other associated costs, opponents of the bridge claimed that it would cost an overwhelming \$112,000,000. In actuality the bridge was completed at a total cost of \$35,500,000. This figure was more than Mr. Strauss had estimated, because it includes all the approaches, tunnels, and highway work.

- “*stands before you . . .*”

Another innovation of the Golden Gate Bridge was the departure from the utilitarian black or gray paint that others had used to protect the steel from rust. Architect Morrow decided on a new color, officially dubbed “International Orange.” This orange-vermilion tone contrasted warmly with the cool tones of the green waters, blue skies, and grey clouds. Even the amber light of the bridge’s sodium vapor lights contributed to its majestic splendor.

Those who at first condemned the bridge as a terrible eyesore came to admire its grace and beauty. The bridge is now as much a symbol of San Francisco as is the Golden Gate itself and is one of the most photographed scenes in the world.

- “*in complete refutation of every attack made upon it.*”

Opposition to a virtuous work is best refuted by successful completion. The Golden Gate Bridge is no exception. It stands as a testimony to the perseverance of those who built it. As Noah and

Nehemiah built in the face of great opposition, so anyone who desires to build a house on an immovable foundation must anticipate and wisely respond to opposition.

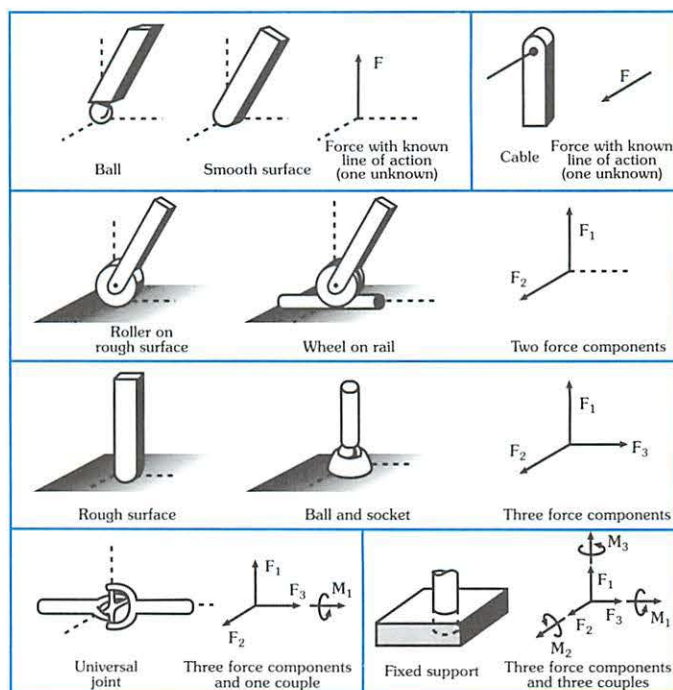
Had Noah and Nehemiah quit before their building tasks were completed, they would have had no testimony for us today of God’s faithfulness. Anyone who faints in the face of opposition forfeits God’s testimony and allows false accusations, criticisms, and scornings to go unanswered.

3 Every force had to be counteracted with an equal and opposite force.

Bridge builders must analyze the forces within a bridge in order to ensure that it will not fail. For every force, there must be an equal and opposite resistance. Thus, engineers establish what is called a *state of equilibrium*.

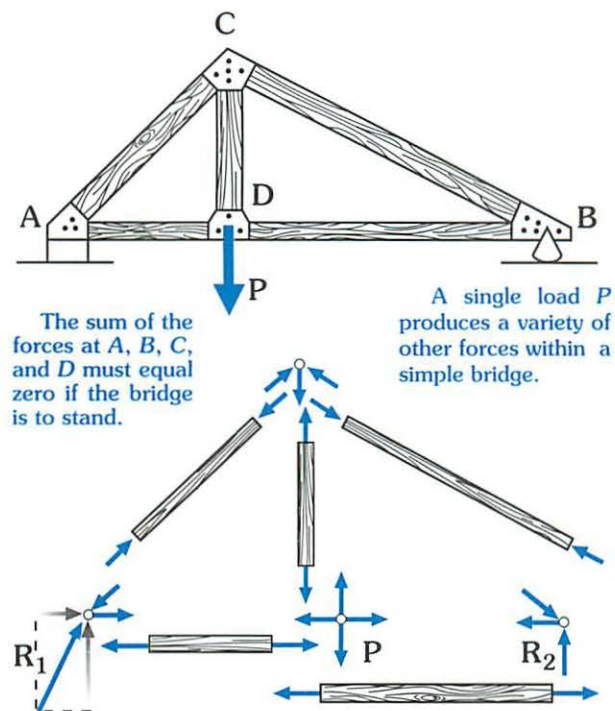
Equilibrium is determined by solving a set of equations for each set of unknown forces. In three dimensions, there are a possibility of six unknown forces and six equations to solve for those unknowns. If bridge builders encounter more than six unknowns, the condition is said to be *statically indeterminate*.

TYPES OF FORCES IN A BRIDGE



Bridge connections produce many different kinds of forces. Some connections are free to move, while others are not. Equilibrium results only when the forces balance each other.

Engineers use *free body diagrams* to help determine the forces in a structure and develop equations which describe them. These diagrams are schematic drawings using arrows, called *vectors*, to illustrate the direction and magnitude of the forces within a bridge.



The sum of the forces at A, B, C, and D must equal zero if the bridge is to stand.

A single load P produces a variety of other forces within a simple bridge.

A bridge is in equilibrium if the sum of its forces equals zero.

4 Freedom to move was balanced with protective constraints.

Engineers can often account for all the forces on short, simple bridges. However, longer bridges, such as suspension bridges, are too complex to calculate all the possible forces that might push against them.

In order to maintain equilibrium among unknown forces, engineers design certain added liberties that allow suspension bridges to move more freely than other types of bridges.

For example, when suspension bridges experience a heavy load, they can sag considerably without breaking. When the wind blows, they can sway from side to side without tipping over.

Engineers know, however, that the constraints and freedoms within a bridge must be carefully balanced. On the one hand, a bridge with

too many constraints may fail to yield to unforeseen pressures and crumble under its own internal stress. On the other hand, a bridge with too many freedoms can oscillate enough to be ripped to shreds.

Equilibrium of constraints and freedoms allows a bridge to endure unforeseen pressures without compromising its strength. This is the case with the Golden Gate Bridge. During construction of the bridge, for example, an earthquake set the towers oscillating as much as thirty feet without damaging them.

In 1938, soon after the bridge was opened to traffic, winds of 62 mph sent a series of ripples as high as 2 feet running lengthwise across the span. In 1951, 69-mph winds lifted the bridge 10 feet above its normal position and caused the deck to swing as much as 12 feet in either direction. On warm days, the bridge can become as much as 26 feet longer and 16 feet lower than it is on cold days.

To calculate the amount of freedom a bridge may have, engineers use a *coefficient of rigidity*. Suspension bridges with a coefficient of less than 15 have been subject to damaging vibrations from the wind.

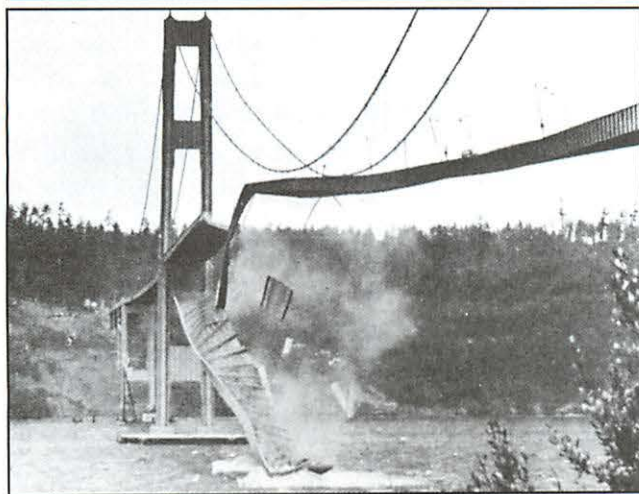
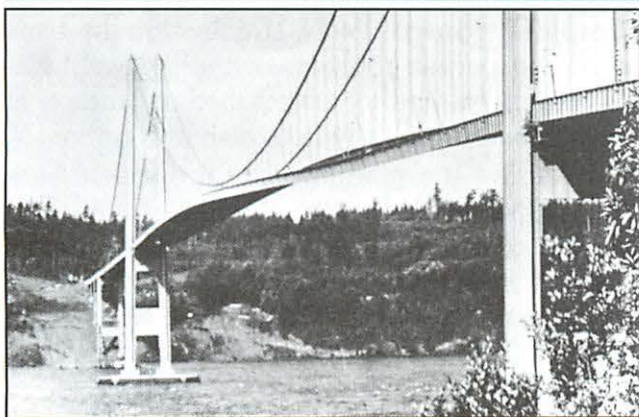
A BRIDGE WITH TOO MUCH FREEDOM

The Tacoma Narrows Bridge in Tacoma, Washington, exhibited such freedom of movement that engineers nicknamed it "Galloping Gertie." Not only did the deck sway sideways, but rhythmic vertical waves also appeared. Drivers reported that vehicles ahead of them completely disappeared beneath the crests of its "waves."

On November 7, 1940, only four months after the bridge was completed, it collapsed under a wind of only 42 mph—less than one-ninth the force it was designed to withstand. On the day it collapsed, the bridge was heaving up and down as much as thirty feet and twisting around to an angle of nearly 45° on either side.

As the rhythmic motions increased, one thousand feet of the center span suddenly snapped loose and crashed into the water below. The repetitive oscillating movements had so weakened the structure that the rest of the main span collapsed within minutes, leaving the wrecked bridge as a vivid testimony to the danger of too much freedom.

"And great was its fall . . ."
Collapse of the Tacoma Narrows Bridge



Wide World Photos

Engineers began rebuilding the Tacoma Narrows Bridge in 1949. They increased its width from 39 to 60 feet, making the bridge heavier, and added 33-foot-deep stiffening trusses. These trusses were 4 times as deep as the previous girders and provided 37 times the stiffness.

5 Great personal sacrifice was required in order to complete the bridge.

The steelworkers who worked hundreds of feet in the air during the construction of the

Golden Gate Bridge knew full well that their lives were in danger. Assuming a person could survive a fall, the treacherous current was sure to swallow up anyone unfortunate enough to be caught in its icy jaws.

Fog could swirl in without warning, creating super slick surfaces for the men who riveted, welded, fitted, blasted, and painted the bridge. The sun glaring off the water below could create "snow blindness," and the gusty winds could easily knock a man off balance.

The bridge planners took every precaution against accidents. They provided special diets to counteract dizziness, issued tinted goggles to mitigate the brightly reflected sun, and suspended a huge trapeze net underneath the floor girder. The net cost \$130,000, but it saved the lives of nineteen men and revolutionized the use of safety nets for steelworkers.



The Bridge Builders, Peter Stackpole, Pomegranate Artbooks

Because the safety net gave the workers added security, they were able to put up as much as 640 tons of steel a day. The entire bridge floor, over one mile long, was completed in less than five months.

However, in spite of all the safety precautions that were instituted, building the Golden Gate Bridge exacted personal sacrifices. The following eyewitness account of an incident which occurred during construction of the bridge describes how unexpectedly the sacrifices came.

AN EYEWITNESS ACCOUNT

"I decided to go up to the deck and look for the guy I was supposed to find. I was still talking to Slim as I climbed the ladder. Slim said something, but I didn't hear it. So I leaned closer, cocked my head to one side, cupped my hand to my ear, and asked, 'What did you say?' I didn't get an answer.

"When I looked down again, Slim wasn't there. Nothing was, no men, no net, no nothing. You couldn't hear much with all the noise on the bridge, the rivet guns, the compressors, the wind, and the like. All I heard was somebody yelling, 'Run, Andy, Run!'

"Then I saw. The platform had collapsed, spilled into the net, and broken it. The net had fallen 200 feet into the water and had gotten caught in the outgoing tide, which was pulling it so taut that Andy, who was in the net at the time, could run up it like a slide.

"But the net was coming apart at the outriggers too: Bing! Bing! Bing! at the same time Andy was running. Then all of a sudden Andy stopped running and looked up at us. Right then the net broke completely, wrapped him up, and took him into the 'hole.'

"We found him three or four days later still wrapped up in a section of net."

—Pete Williamson, steelworker

As this accident occurred, workers on the deck frantically hauled up two men who had grabbed onto girders just as the platform started to tilt. Their yells brought rescue lines, and both men were reeled to safety. Twelve men fell into the San Francisco Bay that day. Only two survived the 200-foot fall.

6 **Continuous reward has resulted for those who invested in the project.**

When the Golden Gate Bridge was first proposed, no one had the authority to construct or pay for it. For that matter, no one even had the authority to own the bridge. It took an act of the

California State Legislature to create a proper authority to govern the bridge.

In December of 1928, the state of California formed the Golden Gate Bridge Highway and Transportation District. It had the authority to enter into contracts; generate revenue; employ, discharge, and prescribe the duties of employees; adopt rules, regulations, and ordinances; establish fines and penalties; elect governing officers; and do whatever was necessary to complete the bridge.

Even so, the newly formed District remained under the authority of the United States. The bridge District had to give the federal government complete control over the bridge in time of war, to permit government traffic at all times free of charge, and to subject the construction of the bridge to the military defense of the harbor.

During the planning of the Golden Gate Bridge, five northern coastal counties agreed to pay the cost of the bridge through county-wide taxes. However, Humboldt and Mendocino Counties pulled out of the District, leaving Del Norte County, almost 400 miles away, financially responsible for an increased share of the project.

Even today, the residents of remote Del Norte County remain a part of the Golden Gate Highway and Transportation District. Few of the residents use the bridge, because they live seven hours' drive from it; yet, the benefits to their timber and agricultural economies have made it well worth their investment.

Today the Golden Gate Bridge averages between 45,000 and 60,000 crossings a day and generates between \$80,000 and \$105,000 per day in tolls.

PROJECT

Building the Golden Gate Bridge on rock seemed safe until the weight was calculated and the rock was tested. Then it was discovered that the surface rock had to be cleared away in order to reach the solid rock.

What things in our lives must be removed before God can build a major work in our lives?

"Surface rock" which must be removed:

- Seeking good things, but not *eternal* matters
- Being busy for God, but not *effective* for God
- Having good friends, but not *Godly* friends
- Giving offerings, but not *sacrificing*
- Worshiping, but not with the whole heart

Date completed _____ Evaluation _____



HOW IS BELIEVING IN A WORLD-WIDE FLOOD LIKE A WISE MAN BUILDING A HOUSE ON THE ROCK?



Measurable earthquakes shake the foundations of the earth every ten minutes. Hundreds of lightning bolts split the sky every second. Billions of raindrops fall simultaneously around the world. However, nothing has ever altered the face of the earth with the same magnitude as Noah's Flood.

Foolish men do not reject the reality of Noah's Flood on the basis of geological evidence. They reject the Flood because they reject God. By denying His powerful intervention in the past, they attempt to deny the reality of His intervention in the present and the certainty of His intervention in the future.

The geological evidence against Noah's Flood is merely lip service. In fact, overwhelming evidence exists to support a Biblically accurate description of a worldwide catastrophic flood. Only Noah, his family, and an ark full of animals escaped God's wrath.

By denying the reality of Noah's Flood, foolish men also attempt to deny the reality of a Savior. Just as God provided an ark to rescue Noah from the destruction of the Flood, He provides salvation in the person of Jesus, the Christ.

Learn how compromises have led men to ignore obvious contradictions in "scientific data" and to believe Satan's lie. Learn how false interpretations of Noah's Flood reveal the faulty thinking of foolish men.

CHRONOLOGY OF NOAH'S FLOOD

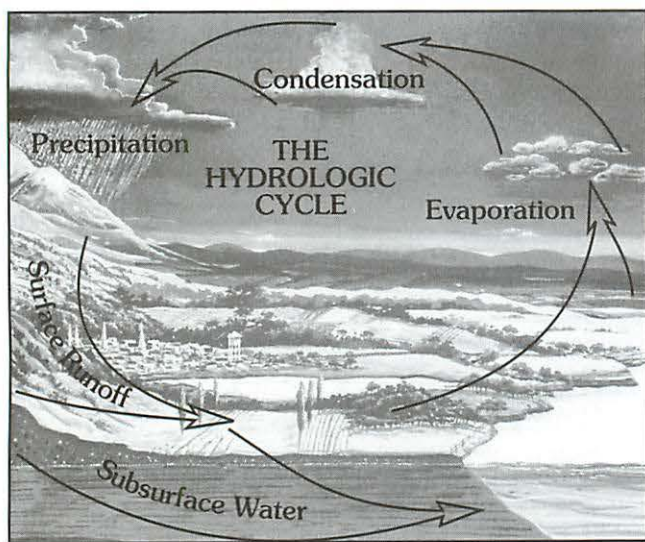
- God spoke to Noah about the coming Flood.
- Noah worked one hundred years on the ark.
- Noah entered the ark on the seventeenth day of the second month of Noah's six hundredth year.
- The fountains of the deep broke up, and the windows of heaven were opened.
- Intense rain fell for forty days and nights.
- The waters rose for another one hundred ten days to a point fifteen cubits higher than the highest hill.
- The heavens and fountains were shut.
- The water began receding after 150 days.
- The ark rested on the mountains of Ararat.
- Noah waited an additional forty days.
- Noah released a raven and a dove which returned to the ark.
- Noah waited seven days and again released the dove, which returned with an olive leaf.
- After another seven days, Noah released the dove again. She did not return.
- Noah waited twenty-nine more days, then removed the covering of the ark and saw that the earth was dry.
- The floodwaters required seventy-four days to recede.
- Noah and his family were on the ark a total of 371 days—over one year!
- It took fifty-seven days to empty the ark.

(See Genesis 5:28–8:22.)

1 **Pre-Flood conditions explain the potential for a flood.**

Those who deny the reality of Noah's Flood suggest that there is not enough water in all the clouds of the entire world to sustain a continuous downpour of rain for forty days. Surprisingly, they are right. If worldwide storms suddenly released all the water in our present atmosphere, it would cover the ground to an average depth of only about two inches.

However, the Bible teaches that the world before the Flood was much different from the world we know today. In fact, there was sufficient water, sufficient power, and sufficient time for a worldwide flood.



Because the hydrologic cycle is not sufficient to fuel a flood of worldwide proportions, there had to be another source of water. At any given time, only about 16,000 cubic miles of water is directly involved in the hydrologic cycle. That is about 0.005 percent of the earth's 326 million cubic miles of water.

• The source of the Flood

It is quite clear that clouds were not the source of the floodwaters. Genesis 2 says that the earth was watered by a mist: “. . . *The Lord God had not caused it to rain upon the earth . . . But there went up a mist from the earth, and watered the whole face of the ground*” (Genesis 2:5–6).

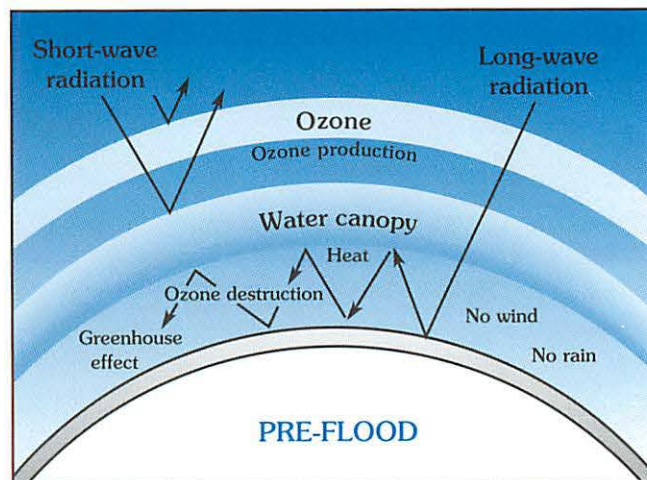
It is quite possible that a lack of dust or salt particles in the air may have prevented any water vapor from forming into droplets. We know that without these tiny nuclei around which droplets form, there is no rain or clouds.

So where did the floodwater come from? Genesis declares that God divided the water into two sources: “*And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament: and it was so*” (Genesis 1:7).

God gathered the waters under the firmament together as great seas so that the dry land appeared. However, the waters above the firmament remained until the days of Noah's Flood.

A line of reasoning that is consistent with scientific evidence and with Scripture indicates that waters above the firmament formed a canopy of water vapor surrounding the earth. The canopy may have remained at an altitude as high as eighty miles above the earth. At that height, intense heat from the sun sends temperatures soaring to 3,000°F. Such high temperatures could easily support huge quantities of invisible water.

Others believe that the canopy was a thick layer of low-lying vapor or tiny ice crystals which separated the lower, oxygen-rich atmosphere from the harmful carbon dioxide and ozone layers above.



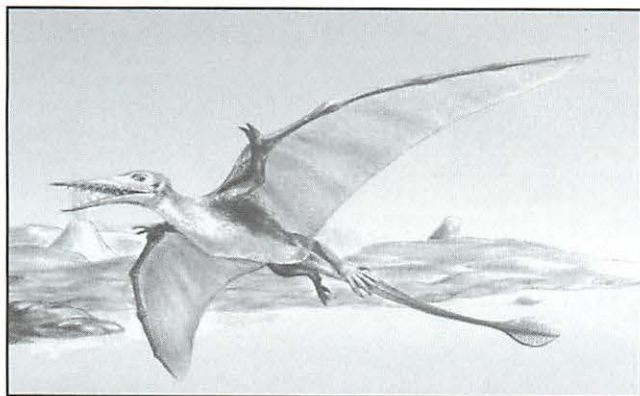
The three primary heat regulators of the earth are water vapor, carbon dioxide, and ozone. These gases tend to trap energy and disperse it evenly like a warm electric blanket.

The blanketing effect of a water canopy, whether high or low, would have produced a uniformly warm climate across the face of the earth, creating a garden-like tropical paradise at even the north and south poles. With all the air at about the same temperature, the lack of warm fronts and cold fronts would have prevented any significant wind. There would have been no violent storms, no winters, no polar ice caps, no rain, and no rainbows.

A water canopy would not only have supplied enough water for a worldwide downpour lasting forty days, but it would also explain many other environmental conditions. By reflecting harmful incoming ultraviolet light and isolating poisonous ozone, a water canopy would have dramatically reduced aging and promoted much longer life spans in both plants and animals.

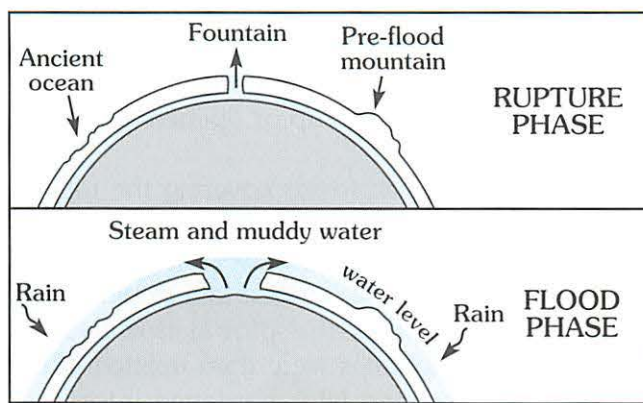
A canopy of water also would have kept solar radiation from generating carbon 14 in the upper levels of the atmosphere. This would explain the low levels of C₁₄, which causes fossils to appear much older than they really are.

The weight of a canopy of water would have dramatically increased atmospheric pressure. Water vapor sufficient for forty days of rain would produce an atmospheric pressure 2.4 times greater than we have today. Medical experience indicates that hyperbaric conditions such as those which existed before the Flood are very beneficial to healing wounds and general health.



The increased air pressure would have made it possible for large birds to fly. Even bird-like reptiles without hollow bones might have flown in the denser air. Under today's conditions, the 53-foot wingspans of these birds would cause them to stall at speeds of less than 25 mph. However, under a water canopy of denser air, their takeoff speed would have been a mere 11 mph.

In addition to the waters above the firmament, there were also vast deposits of water hidden under the earth's surface. (See Genesis 1:7; 7:11.) These deposits included both pockets of pressurized steam and great underground caverns of water. Any point of weakness in the earth's crust would have triggered a chain reaction, cracking open these fountains of the deep, shooting water several miles high, and causing lengthy gaps in the earth's thin crust.



Breaking open the fountains of the deep precipitated torrential rains over the entire face of the earth. Pressure within the earth's crust may have also triggered vast mountain formations and deep ocean trenches as the fountains erupted.

Scripture records that the fountains of the deep actually broke forth first (see Genesis 7:11), carrying tons of debris aloft and planting the seeds of dust around which water droplets could form, thus causing the vapor canopy to condense in an unprecedented deluge.

The two catastrophes are thus intimately tied together. The water rose up from the fountains of the deep, and the rain fell down from the canopy above.

• The depth of the Flood

It is quite clear that there is enough water on the face of the earth to cover the entire world. The ice cap covering Antarctica alone contains about seven million cubic miles of ice. That is enough water to flood the United States to a depth of two miles.

However, those who deny Noah's Flood suggest that there is no way water could cover the top of every mountain in just forty days. They point out that the tallest mountain in the world, Mount Everest, is five and a half miles above our current sea level.

They also note that the bottoms of the deepest oceans are almost seven miles below sea level. That is a total elevation from the lowest to the highest points of more than twelve miles.

Those who deny Noah's Flood are blind to the fact that even with such high mountains and deep trenches, the earth is really quite smooth. In fact, the earth is smoother than a plastic ball. If a plastic ball 2 1/4 inches in diameter were enlarged to the size of the earth, its own relief of mountains, ridges, and trenches would dwarf anything on the face of the earth today.

However, it is quite likely that before the Flood, the earth was even smoother than it is today. In fact, many of the mountains and ocean trenches have been lifted up or opened as a direct result of the Flood.

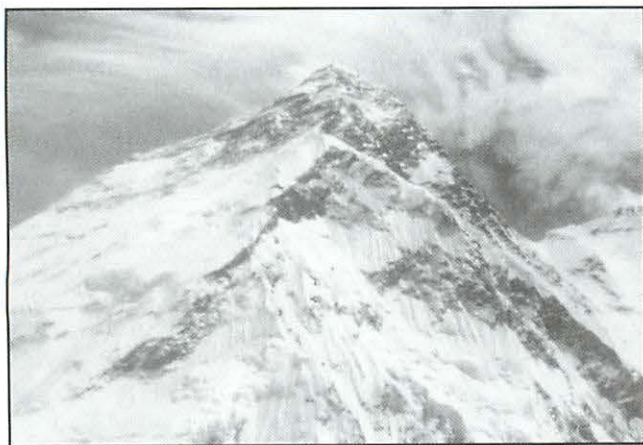
Evidence of fish fossils covering the tops of the highest mountains serves as proof that all of our current mountain chains were once covered with water. These fossils were laid down in the form of sediment as the global floodwaters receded. The mountains were then uplifted at the end of the Flood and later hardened into solid, sedimentary rocks.

If indeed the earth's surface was much more uniform than it is today, that is, the ocean basins were lifted up and the mountains flattened out, water from a deluge easily could have covered the entire face of the earth.

Obviously, the earth was not perfectly smooth, but the oceans must have been quite shallow. Psalm 104 explains that it was only after the Flood that God opened up a place for the waters so they would never again engulf the earth.

In that regard, geological evidence affirms that today's ocean floors have sunk several miles below their pre-Flood levels. Likewise, mountaintops once found themselves under shallow oceans.

Geological data demonstrates that if our current ocean basins were lifted back up to sea level, the water contained in just the Pacific, Atlantic, Indian, and Arctic Oceans would be sufficient to cover the entire earth to a depth in excess of 8,500 feet. (See *Parent Guide Planner* for details of the calculations.)



High Adventure, Sir Edmund Hillary, E. P. Dutton & Co., Inc.

Today Mount Everest stands almost 30,000 feet above sea level. However, at its summit, geologists find fossils of creatures which once lived in the ocean. These fossils are powerful evidence that Mount Everest was once covered by water.

"Who laid the foundations of the earth, that it should not be removed for ever. Thou coveredst it with the deep as with a garment: the waters stood above the mountains. At thy rebuke they fled; at the voice of thy thunder they hasted away. They go up by the mountains; they go down by the valleys unto the place which thou hast founded for them. Thou hast set a bound that they may not pass over; that they turn not again to cover the earth"

(Psalm 104:5-9).

• The power of the Flood

The astonishing hydrodynamic forces which scour and transport material are rarely appreciated today. Even though historical accounts abound of floodwaters washing away whole towns, men continue to deny the power of the Flood.

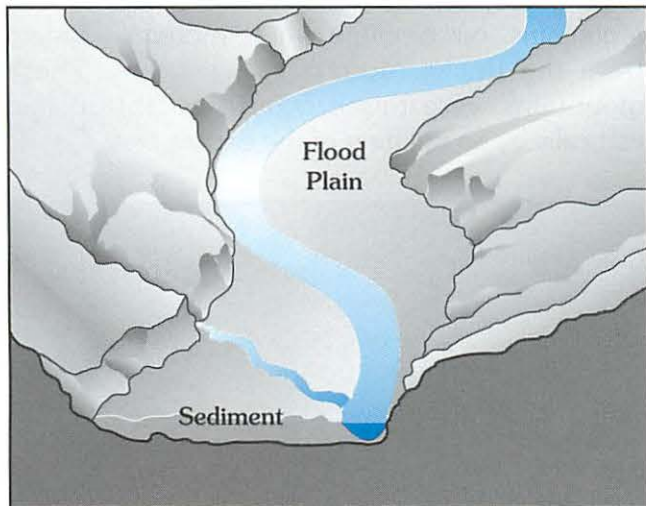


UPI/Bettmann Archive

Nine inches of rain in a twenty-four-hour period created such a powerful flash flood in Lynmouth, England, that the rush of waters filled Main Street with boulders weighing several tons. In Johnstown, Pennsylvania, floods in 1889, 1936, and 1977, all involving the same river, demonstrated the awesome power of raging floodwaters by killing a total of more than 2,100 people and destroying \$350 million worth of property.

Noah's Flood was of such cataclysmic scope and power that it accomplished an immense amount of geologic work. The Flood would have carried away all the original soils that existed from the time of Eden to the days of Noah. Even many of the crustal rocks of Creation must have been broken up, scattered, and redeposited by the tremendous power of the floodwaters.

Examining the characteristics of contemporary floods provides only a glimpse of the power of Noah's Flood. For example, the bottom of a river is a transitory thing—dependent upon the velocity of the water and its level at flood stage. A small river in flood stage can flush out sediment fifty to one hundred feet below its normal bed level. As the floodwaters subside, however, the riverbed fills up again with fresh sediment.



Floods today rarely last more than a few days. However, as a riverbed fills with more and more sediment, flooding becomes more likely. The flat plain next to a river is a prime location for flash floods. Any time such a river overflows its banks, floodwaters spread out in all directions.

To comprehend the magnitude of the Great Flood, one must visualize flood action, not of small rivers, but of a worldwide scale; not for merely a few hours or days, but continuing for weeks and months on end. If a river can take boulders up to fifty feet in diameter and toss them around like tennis balls, imagine what a worldwide flood could do.

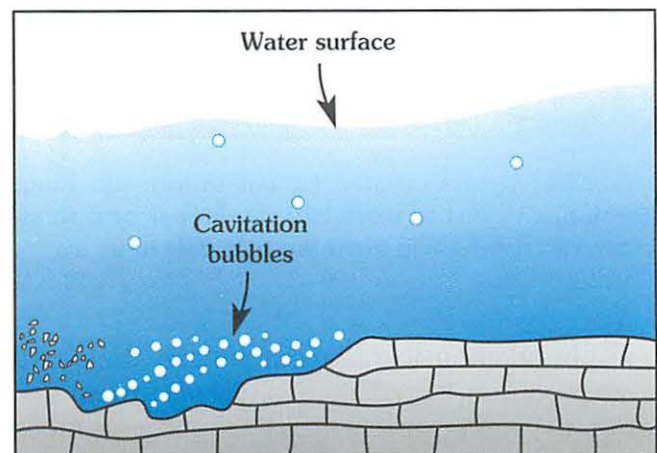
A long, continuous soaking and pounding undoubtedly saturated and weakened the original soil to the point that the vegetation was uprooted and carried away.

Without a protective network of roots to hold it together, the exposed soil crumbled and yielded to the onslaught of the water. The Flood must have been something like a giant washing machine, sloshing, agitating, spinning, and erasing every vestige of that wicked world.

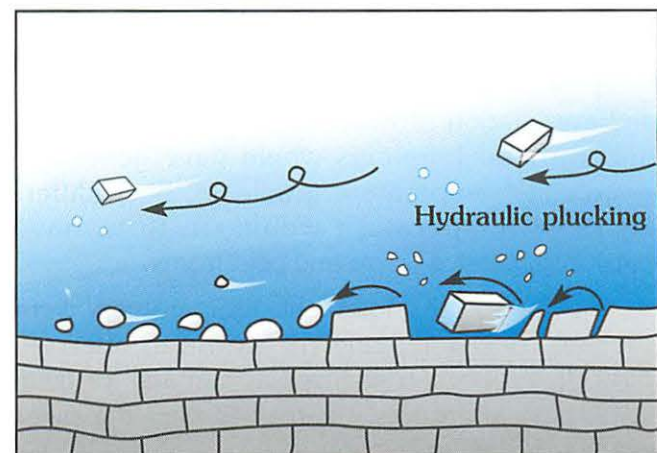
Air and water trapped in microscopic joints and cracks of rocks would have worked as wedges to break the rocks apart as powerfully as dynamite. When suddenly compressed and then released, the rocks would have expanded with explosive force.

Powerful currents from all directions must have generated immense rivers which swirled unchallenged across the face of the earth. Fast-moving waters such as those would have created vacuum bubbles which implode, resulting in a series of hammer-like blows which would have shattered even solid bedrock.

These blows, called *cavitation*, would have created pressure as great as 30,000 times normal atmospheric pressure. Cavitation is so powerful that it once eroded 62,500 cubic feet of steel-reinforced concrete of the Glen Canyon Dam in just a few minutes.



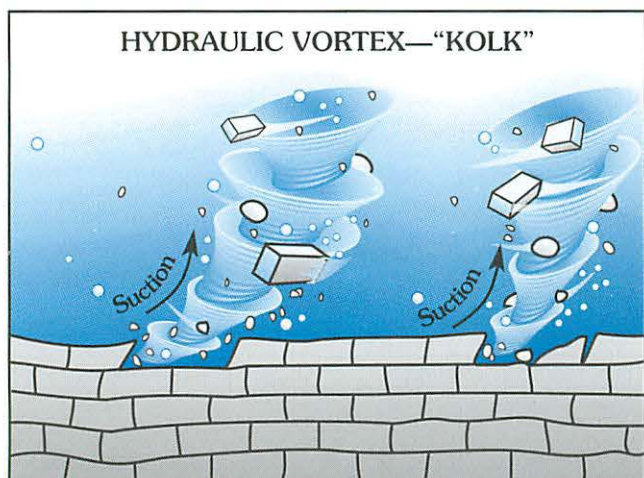
As water flows across the irregular surface of rock, empty pockets form between the water and the rock. These empty pockets create powerful vacuums which implode with the force of a jackhammer.



Water flowing at a high velocity is also capable of lifting or plucking large blocks of bedrock right out of their "beds."

Under the right conditions, floodwaters can form the equivalent of an underwater tornado. The vortex, called a *kolk*, has a very low pressure

near its tip. Working somewhat like a vacuum cleaner, it exerts such tremendous lifting power that it can drill holes in solid rock.



The debris created by cavitation, plucking, and kolks begins to work like sandpaper or a sandblaster to wear away anything that gets in its way.

In addition to turbulent waters, the Flood also produced incredibly destructive waves. For example, undersea earthquakes and volcanoes created when the fountains of the deep broke open could have generated waves, called *tsunamis*, traveling 400–525 miles per hour in the open sea and “standing” 50–500 feet high near land.

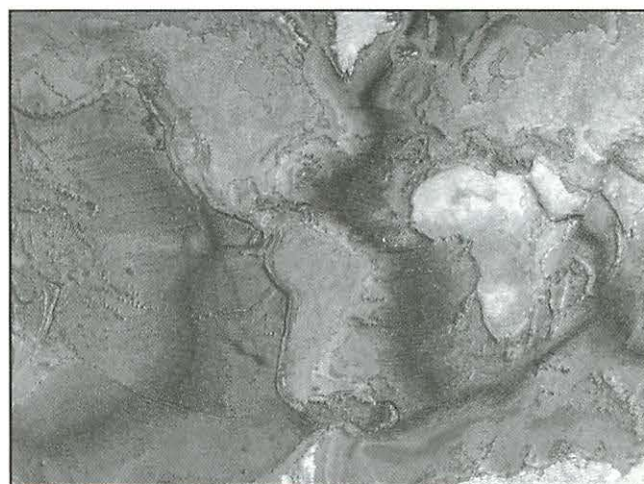
Because temperature differences are the primary cause of wind and windstorms, it is likely that changes in temperature resulting from the dissipation of the water canopy, the condensation and evaporation of water, and steam vented from underground fountains would have generated large-scale temperature gradients. Such differences in temperature would, in turn, have produced massive warm and cold fronts.

Prior to the Flood, the temperatures were probably relatively uniform. However, after the protective canopy condensed as rain and for quite some time afterwards, air masses near the poles would have begun to cool.

Air near the equator would have heated up intensively, and soon a great complex of thunderstorms, tornadoes, and hurricanes must have been stirred up by the rapidly changing temperatures. The Bible speaks of just such a tremendous wind associated with the receding floodwaters. (See Genesis 8:1.)

The only way land could reappear was for mountains to rise and ocean basins to sink, causing the floodwaters to rush into the newly formed ocean basins. This, once again, is precisely what is described in Psalm 104.

The geological features we see today are undoubtedly the results of catastrophic events which occurred during the Flood or as the floodwaters receded. The North American uplift, for example, produced not only the Cascade Mountains, but also the whole mountain system from the Rocky Mountains westward. These mountains were raised 5,000 to 10,000 feet vertically by an uplifting of the earth’s crust.



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A relief map shows the deep trenches and sharp ridges created by the Flood. Mountains such as the Alps, the Himalayas, the Andes, and the Urals appear to be folded rather than lifted. Whether uplifted or folded, they were all created in recent earth history.

To explain away the Flood, three main theories of mountain building have been concocted to suggest that long-term thermal contraction of the crust, or sub-crustal convection currents (“continental drift”), are responsible for these mountains. However, none of these theories is based on measurable processes. They all find their foundation in hypothetical speculations.

The origin of submarine canyons is more completely explained by a Great Flood than it is by any “modern” theory. As the mountains rose above the plains and the ocean basins fell below “sea level” at the close of the Flood, powerful rivers would indeed have eroded great gorges in the soft sediments as their waters poured into the sea.

• The duration of the Flood

Most people think of the Great Deluge as lasting only forty days. However, from the time the doors on the ark closed until the animals disembarked was 371 days. Scripture reveals that the waters prevailed exceedingly upon the earth; they did not just rise and fall. The action of giant waves created by the fountains of the deep would be enough to erase completely every geological feature from the face of the earth.

2 *The convincing evidence of fossils affirms a worldwide flood.*

Fossils provide one of the best and most convincing testimonies of a worldwide flood. In fact, it is not too strong a statement to suggest that most, if not all, fossil remains are records of the Great Flood. Of particular significance is the fact that geologists find rich fossil remains everywhere in the world.

However, those who deny the Flood suggest that these fossils were laid down gradually over millions of years. These people are blind to the unique conditions required for fossil formation and perpetuate one of the greatest hoaxes ever suggested in the name of science. Fossils did not accumulate over millions of years; they were all formed simultaneously in one Great Flood.



All rights reserved. Photo Archives, Denver Museum of Natural History

Geologists divide the rocks which contain fossils into separate ages. However, such neat divisions rarely exist in nature. In reality, fossil remains of organisms from different "geological ages" are often piled together.

The word *fossil* comes from the Latin word *fossilis*, meaning "dug up." The root meaning suggests that fossils were once covered. Indeed, one of the conditions required for their preservation is complete and immediate burial. Such a condition fits well with the Genesis record of the character and magnitude of the Great Flood.

For example, billions of marine fossils are found piled up and entombed in the rocks of one small South African deposit. The dinosaur beds of the Black Hills show that countless animals were destroyed simultaneously and covered suddenly by vast amounts of sediment-carrying water.

Deposits near Florissant, Colorado, contain a wide variety of insects and several hundred species of plants, fish, and birds. Each one retains minute details that are truly remarkable. Such detail could not have been captured and preserved by slow processes over long periods of time.

There are six types of fossil formations. Each has its own means of burial and preservation. Each of the methods also requires conditions which are catastrophic rather than gradual.

Six types of fossil formations

• Remains of the entire organism

Some animals and plants have been frozen in their entirety. They have been preserved in *permafrost*—an environment which has never thawed. This is the case with one mammoth which was apparently buried alive with unswallowed food still in its mouth.



Courtesy of H.F.G. Witherby, Ltd., London

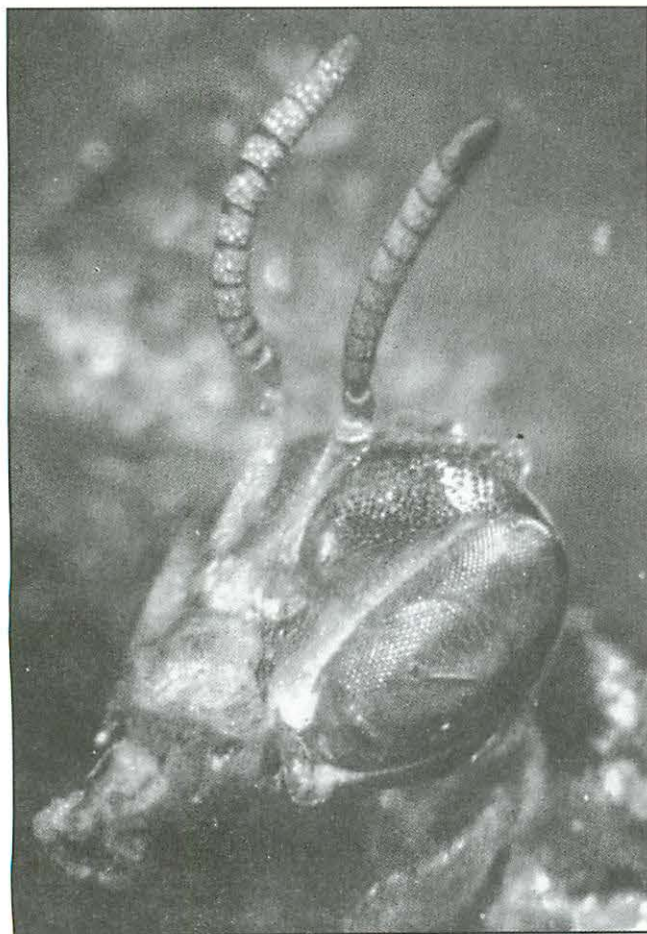
Thousands of woolly mammoths remain preserved in the permanently frozen areas of Siberia and Alaska.

One mammoth has been uncovered standing in an upright position after it apparently fell into a deep crevasse. Mammoth tusks are so plentiful in Siberia that merchants have carried on a regular trade in the ivory of these tusks for centuries. The tusks weigh 180 to 200 pounds apiece and are up to ten feet in length and two feet in circumference.

It is quite clear that few, if any, animals are now being fossilized in the same way. Yet some catastrophe in the not-too-distant past preserved the remains of as many as five million of these giant animals along the coastline of northern Siberia and into Alaska.

In addition to being frozen, some animals have been preserved in tar or amber. (Amber is a yellow-brown substance which is secreted by plants.) For example, geologists have found a woolly rhinoceros buried in a tar pit with parts of its flesh still attached to its skeleton.

Insects have also been found embedded in the sap of trees. As the resin hardens into a clear amber, the insects' bodies are protected from decay. The details are so well preserved that it is actually possible to count tiny hairs and wing scales.



Hal Roth

A bee preserved in amber

• Remains of only hard parts

The most common types of fossils are the remains of bones and shells. These often appear in great graveyards as if they had been swept together by some gigantic broom. Hard parts such as teeth, scales, claws, shells, and bones decay more slowly than do flesh and skin. This fact allowed these parts to survive the rigors of the Flood, which probably shredded the remains of anything less substantial.

Deposits in Lincoln County, Wyoming, contain palm leaves; fish such as long nose gar, pike, sunfish, chubs, pickerel, and herring; crustaceans; turtles; mammals; birds resembling chickens, snipe, and plover; and many varieties of insects piled together in one mass grave.

It is hard to imagine any kind of gradual process which could have assembled and preserved such a mixture of modern and extinct organisms requiring such widely divergent habitats.



Courtesy of American Museum of Natural History

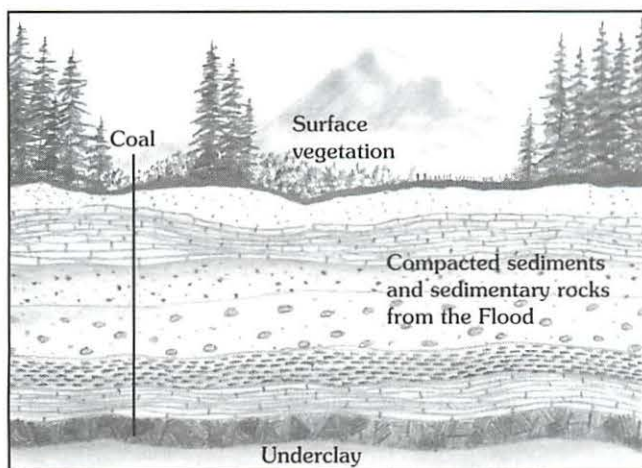
Mass graveyards of bones were buried and "glued" together in the same way that small stones are cemented together to form a conglomeration of stone.

Fish, for example, do not simply die and sink to the bottom. They are usually quickly devoured by other fish within hours after dying. If not devoured, they float to the surface and decay. However, the remains (bones, fins, and scales) of entire shoals of fish over large areas, numbering *billions* of specimens, have been found intact, not having been destroyed by scavengers or bacteria.

• Remains of only carbon atoms

Some fossils are only representations of the organisms which were once buried. In a process called *carbonization*, the hydrogen and oxygen atoms react chemically with other elements and are removed from the organic remains. Thus, only the original carbon atoms are left behind.

Coal, for example, is one such type of fossil. Coal is the carbonized remains of tremendous quantities of dead plants. Under the action of temperature and pressure, hydrogen and oxygen atoms are “cooked” out, leaving high concentrations of carbon behind.



Because each foot of coal represents many feet of compressed plants, the earth's coal reserves testify of a once-luxurious environment of great fertility. The theory that coal developed from slow-growing peat bogs which were buried, then reformed, and buried again over countless ages is simply not substantiated with scientific evidence.

Most coal fields contain alternating layers of coal interbedded with strata of other materials. The coal seams vary from a few inches to several feet in thickness. It is as if vast amounts of vegetation were once stripped from the land by rising floodwaters, deposited in thick mats, and then buried as the waters receded.

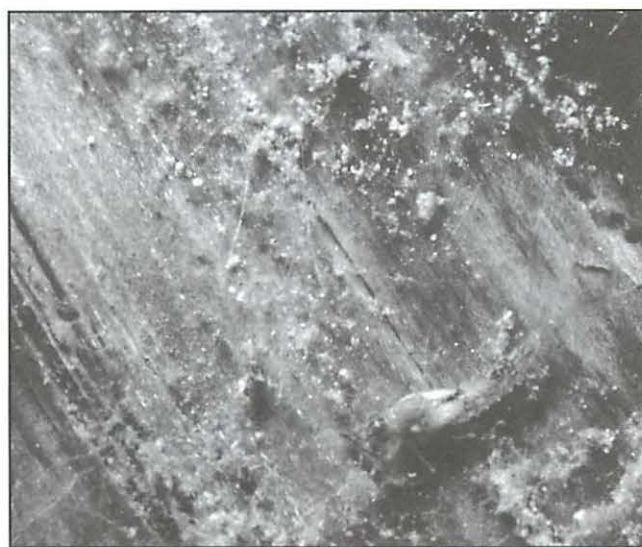
This is precisely what happened during the 1980 eruption of Mount St. Helens. As the volcano erupted, the waters of Spirit Lake “sloshed” out of their basin, creating an avalanche of destruction which flattened everything in its path.

As the water drained back into the mud-filled basin, it carried with it the remains of countless trees. These trees formed a floating log mat of dead vegetation. Within a matter of days,

the constant friction between the logs began to remove the bark, peeling them as neatly as a logger's ax.

Within just a matter of weeks, the bark created a layer of organic material several feet thick on the bottom of Spirit Lake. That layer of bark, once covered and compressed, will carbonize into a thin seam of coal. In fact, some areas are already exhibiting characteristics of coal.

It is reasonable to propose that a worldwide flood lasting about a year could easily shred, deposit, and bury the massive amounts of vegetation required to produce the large quantities of coal we mine today.



Courtesy of Joe Libardi/Ocea Publications

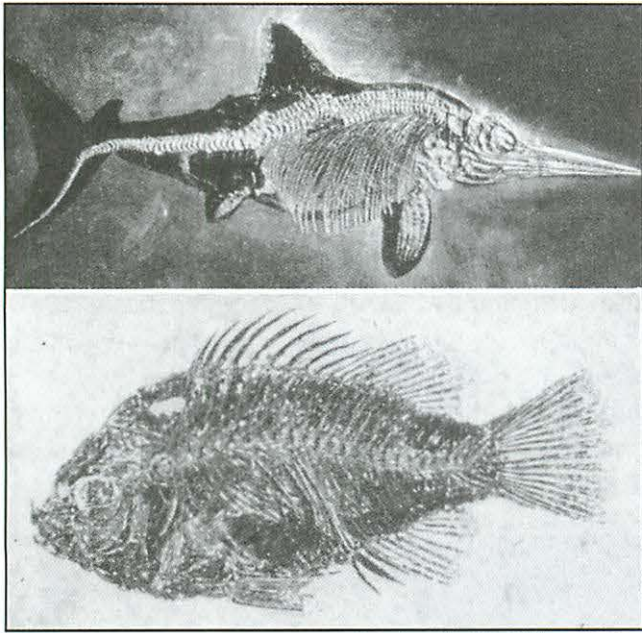
An underwater photograph of a tree at the bottom of Spirit Lake

• Remains of the form by means of casts and molds

Many fossils are merely the preserved casts or molds of an organism. The original substance has been dissolved, leaving only its form behind. Sometimes only a hollow cavity remains. In other cases, various kinds of mineral solutions may fill the cavity to produce a perfect cast of the original organism.

Once again, this sort of fossil requires sudden or catastrophic burial, followed by rather rapid cementation of the surrounding sediments in order to preserve the mold. Any disturbance could break or disfigure the mold.

Those who believe that the mold developed slowly over eons of time are ignorant of the process of how molds and casts form.



American Museum of Natural History/Field Museum of Natural History

Molds of these two fish were preserved in their entirety. Their actual flesh and bones have decayed. Only their forms remain.

- **Complete replacement of the organism by minerals**

Petrification occurs when minerals made of silicate replace the organic material trapped inside a cast. Groundwater carrying silicate seeps through the deposit, dissolving the organic elements and replacing them with others. The replacement is so detailed, almost molecule for molecule, that the remaining fossil is a perfect copy of the original.

The famous Petrified Forest National Park in Arizona testifies to the beauty and intricacies of these fossils. However, Mount St. Helens is producing its own petrified forest right before the astonished eyes of geologists and paleontologists.

As logs from the floating log mat covering Spirit Lake become waterlogged, they tip upright. Weighed down by the heavier root ends, these trees sink vertically into the soft layers of bark which cover the depths of the lake. They give the appearance of a forest of trees growing out of the "muck."

Those who deny the reality of Noah's Flood suggest that petrified forests developed over thousands of years, as one generation of trees after another died and became buried by successive volcanic eruptions. The evidence of Mount St. Helens refutes that explanation. In Spirit Lake are the beginnings of a mature petrified forest within a matter of ten years.



USDA Forest Service

Trees float upright in Spirit Lake. As they sink vertically, they give the appearance of an underwater forest. They provide powerful evidence that a Great Flood created the petrified forests of northern Arizona.

- **Preservation of an organism's tracks**

Many thousands of animal tracks have been found preserved in stone. Even the tracks of men have been preserved in these same stones as evidence of man's presence prior to their hardening. In some instances the human tracks cross those of creatures which are now extinct, including many tracks of dinosaurs.



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"Hundred-million-year-old" dinosaur tracks appear as fresh as if they were made yesterday. Nearby in the same bed have been found tracks resembling human prints.

These tracks were apparently made when the mud or sandy mud was moderately soft. As it dried and hardened, it was covered with other sediment which filled in the prints and preserved them. In some cases the impressions of raindrops and ancient ripple marks have also been preserved in this way.

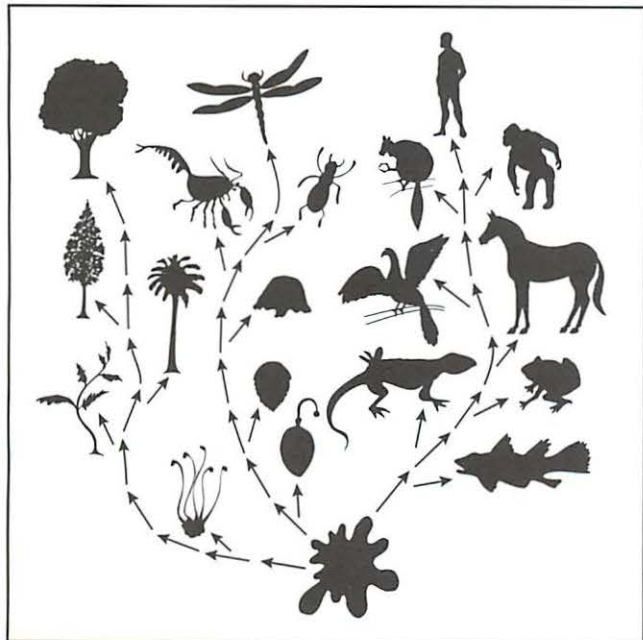
The only way such prints or markings could be preserved is by means of actions permitting rapid hardening and some subsequent and rapid burial.

The abundant presence of fossils in the geological record reveals that the geological processes of the past must have been quite different from what they are today. Nothing comparable to the tremendous fossiliferous beds of fish, mammals, reptiles, and other creatures is being formed today.

3 The layers of sediment reveal a worldwide flood.

To support the need for boundless periods of time, geologists have developed theories that measure time in circles—circles of circuitous logic, that is.

MYTHICAL EVOLUTIONARY TREE



The mythical “evolutionary tree” shows a distinctive pattern of development. It assumes that certain organisms are older than others and uses this order to determine the ages of rocks where fossils are found.

Based on the assumption that evolution produced unique varieties of plants and animals

during different “periods,” geologists have identified what they call *index fossils*. Wherever these index fossils are found, geologists assign the surrounding rock to the “period” from which the index fossil is theorized to have developed. A trained paleontologist can identify these geological ages by careful study.

The circuitous logic comes into play when geologists determine the ages of rocks using the fossils they contain and determine the ages of the fossils by the rocks in which they are found.

Put another way, biologists determine the evolutionary succession of organisms by the order their fossil remains appear in various layers of rock, yet geologists determine the order of the layers by the fossils they contain.

GEOLOGY'S IMAGINARY GEOLOGICAL COLUMN

SHOWING	DIVISIONS	OF	GEOLOGICAL	TIME	LIFE
ERA	PERIOD	ROCKS	PLANT AND ANIMAL	DOMINANT LIFE	
10,000,000 Years	QUATERNARY				AGE of MAMMALS
CENOZOIC					
100,000,000 Years	TERTIARY				AGE of MAMMALS
200,000,000 Years	CRETACEOUS				AGE of AMMONITES
MESOZOIC					
300,000,000 Years	JURASSIC				AGE of REPTILES
400,000,000 Years	TRIASSIC				AGE of SEED PLANTS
500,000,000 Years	PERMIAN				AGE of AMPHIBIANS
600,000,000 Years	CARBONIFEROUS				AGE of BEATING PLANTS
700,000,000 Years	DEVONIAN				AGE of FISHES
PALAEZOIC					
800,000,000 Years	SILURIAN				AGE of CORALS
900,000,000 Years	ORDOVICIAN				AGE of INVERTEBRATES
1,000,000,000 Years	CAMBRIAN				AGE of SEA WEEDS
PROTEROZOIC					
800,000,000 Years	PRECAMBRIAN				AGE of INVERTEBRATES
ARCHAEOZOIC					AGE of INVERTEBRATES

From The Flood in the Light of the Bible, Geology, and Archaeology. ©1951 Concordia Publishing House. Reprinted by permission from CPYI

In geology's circular reasoning, fossils alone are used to determine the age of a strata of rock, and yet the order of the strata and their presumed evolutionary sequence provide the sole basis for determining the ages of the fossils themselves.

Not many people realize that the geological time scale we so often see pictured in textbooks was fixed in essentially its present form by 1840. That was long before much of the world had ever been studied. In fact, most of the layers of the imaginary geological column are limited to England and a few small areas of Europe. Nowhere on the face of the earth has such an arrangement ever been documented in its entirety.

Obviously there is another explanation. It is quite clear that the animals and plants which became fossilized were sorted and layered in various strata by a means other than evolution.

In fact, they could have all coexisted with one another, having been destroyed and deposited by one Great Flood over a period of not more than a few months.

The carefully constructed system of geological history is filled with contradictions. Fossils have been found which are grossly out of place in the time scale. Many creatures which supposedly became extinct millions of years ago have been discovered alive today. According to evolutionary theory, they lived all the way from very early periods to the present without leaving any fossilized traces of their existence during the intervening periods. This idea is simply not reasonable.

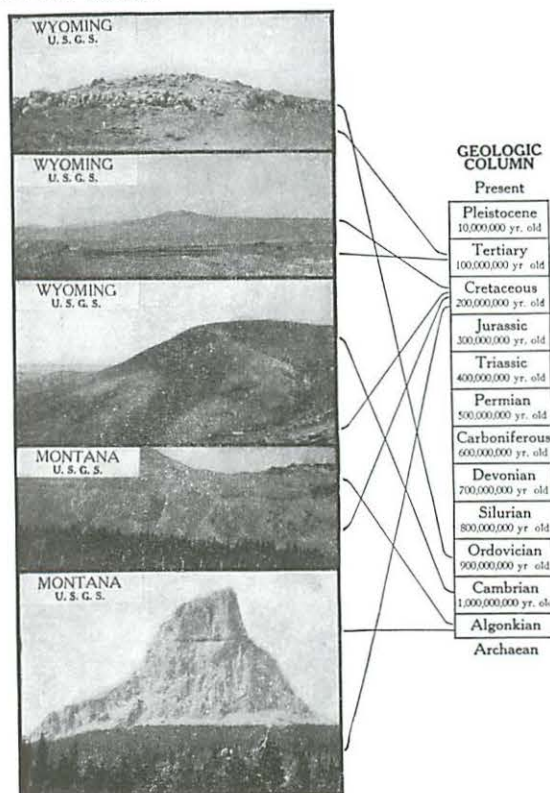
These false interpretations of Noah's Flood blind many people to the truth. They see millions of years passing between layers of sedimentary rock rather than recognizing the reality that the various layers, or perhaps the entire record, were laid down in a matter of a year or so by a Great Flood. They literally cannot see the forest (Flood) for the trees (layers).

"For this they willingly are ignorant of, that by the word of God the heavens were of old, and the earth standing out of the water and in the water: Whereby the world that then was, being overflowed with water, perished. But the heavens and the earth, which are now, by the same word are kept in store, reserved unto fire against the day of judgment and perdition of ungodly men. But, beloved, be not ignorant of this one thing, that one day is with the Lord as a thousand years, and a thousand years as one day" (II Peter 3:5-8).

The Biblical account of Noah's Flood clearly explains how complex flows of waves and tides could have easily laid down a variety of stratified layers. Each different layer was deposited by changing sources of sediment, alternating directions of the depositing currents, dissolved chemicals in the floodwaters, and other such processes.

Either the rocks and fossils were laid down slowly and gradually by uniform processes and the Flood of Noah's day never happened, or the Flood laid down these stratified deposits and the earth is relatively young. It cannot be both ways. While there are many inconsistencies in the evolutionary theory of these layers, the Flood explains them all clearly and concisely.

When we first see a geological chart showing all the various strata of rocks piled on top of one another in sequential order, one layer fitting perfectly upon the next, we can easily be deceived into believing that such evidence actually exists. However, nothing could be further from the truth. Nothing resembling such a series has ever been found together in one place anywhere on the face of the earth.



Byron C. Nelson

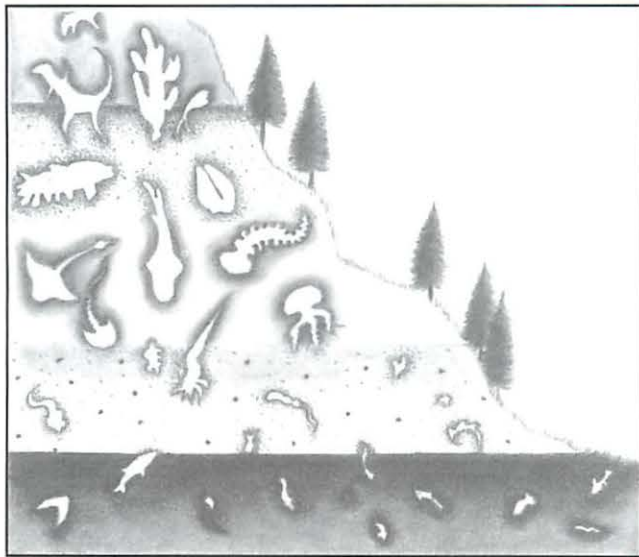
In Wyoming and Montana is found the evidence of ten major inconsistencies in the theoretical geological column. These inconsistencies are explainable in evolutionary terms only by extremely unlikely events. However, the inconsistencies fit the Flood sequence quite well.

The names *Cambrian*, *Devonian*, *Silurian*, and so forth are arbitrary names given to certain rocks depending on the fossils they contain. The mineral composition of the rock or the degree of its hardness has nothing to do with its age.

In reality, most of the geological evidence does not require a standard geological sequence of ages. For that matter, actual layers found in real situations always have one or more important layers missing or out of order.

When geologists discover strata that are out of order, they often attempt to explain the paradox with the assumption that the layers must have been inverted or overthrust. In reality, there are many places where layers are inverted by folding or interrupted by faulting, but these cases are quite obvious and do not account for the gross errors found throughout the world.

Evolutionists also point to the systematic layering of fossils as "proof" that organisms evolved. They suggest that the simplest forms of life are found in the oldest layers and that more complex animals and plants are found only in the higher, newer layers. The data on this matter is quite clear. There are distinctive fossil patterns found in various layers throughout the geological record.



Although this is not always the case, fossils do appear to be sorted according to a systematic order.

There is an explanation other than evolution. Hydrologists (those who study the flow of water) have demonstrated that the settling velocity of large particles or organisms is directly proportional to the square root of the diameter of the particle; directly proportional to the roundness of the particle; and directly proportional to the

difference between the densities of the particle and the fluid in which it is suspended.

In other words, the smaller, rounder, and denser a particle or organism, the faster it will sink to the bottom of the liquid.

It is more than coincidence that organisms found in the lowest strata, such as trilobites and brachiopods, are relatively rounded and quite dense. These physical characteristics would allow the shells of these and most other marine organisms to sink to the bottom of floodwaters at the first opportunity.

These factors alone would segregate particles of similar sizes and shapes, forming distinct layers of common organisms. Local differences in turbulence, environments, and composition would cause small variations in the pattern, but in general, the layers might very well appear quite uniform over large areas. This is precisely what we find in the fossil record.

It is reasonable also to expect that more mobile animals would be found at higher layers. Their ability to escape the floodwaters for a short period of time, their lower density, and their non-spherical shapes would prevent their being deposited in the deepest sediments.

Because the remains of land animals are first encountered in the Permian and Carboniferous layers near the top of the Paleozoic strata, their presence may mark the point where floodwaters finally rose above havens of safety to which they had fled.

The smallest and least agile amphibians and reptiles likely succumbed to the floodwaters soonest and were buried in earlier layers. However, all this occurred in weeks or months rather than millions of years.

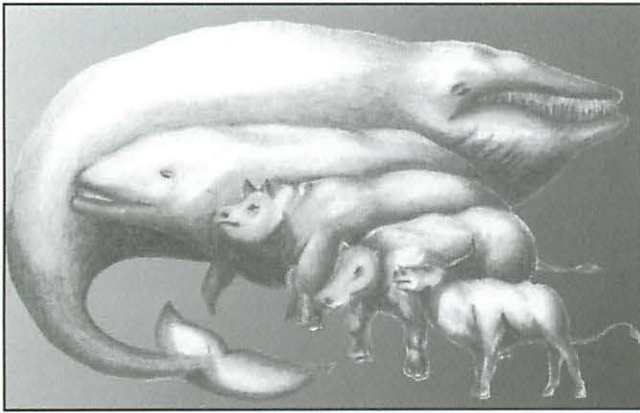
This evidence is very important. Those animals living on the pre-Flood sea floor would be trapped and buried first. Next, fish and other sea creatures would be buried, then coastal dwellers, followed by land creatures. This is precisely the order of index fossils shown in the chart on page 2943.

In reality, the vast majority of fossils are those of sea creatures, which occur almost uniformly from the bottom of the series all the way to the top, without any evolutionary pattern at all.

Those who deny the Flood also point to the fact that smaller animals are typically found buried in layers lower than the remains of larger animals. This phenomenon of increasing size is considered to be so universal that evolutionists have established it as *Cope's Law*. Cope's Law reflects an

evolutionary bias, which assumed that animals have evolved from smaller to larger creatures.

The three most famous examples of the imagined Cope's Law series are those of the alleged evolutionary development of the horse, whale, and elephant.



Recent evidence indicates that many of the supposed "in-between forms" of horses, whales, and elephants are found fossilized in the same layers of sediment. This indicates that they lived at the same time and suggests that they could not have been progressive evolutionary stages of the same species.

Dr. Niles Eldredge of the American Museum of Natural History said, "I admit that an awful lot of that [fantasy] has gotten into the textbooks as though it were true. For instance, the most famous example still on exhibit downstairs [American Museum of Natural History] is the exhibit on horse evolution prepared fifty years ago. That has been presented as literal truth in textbook after textbook.

"Now, I think that that is lamentable, particularly because the people who propose these kinds of stories themselves may be aware of the speculative nature of some of the stuff. But by the time it filters down to the textbooks, we've got science as truth and we've got a problem."

While Cope's Law is presented as being universal, such a progression seldom exists. The evidence comes from scattered examples which are dovetailed together on the basis of evolutionary presuppositions rather than fact.

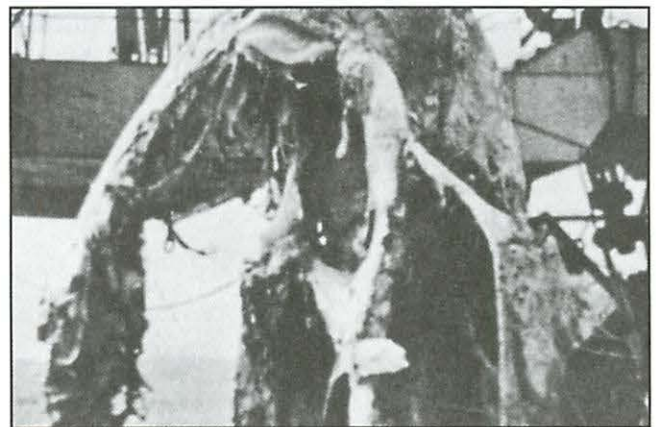
There is obviously an alternative explanation for Cope's Law. The selective sorting of sediment predicts that smaller, more dense, and

more spherical objects are deposited first. Larger, less dense, and non-spherical objects are deposited later.

Today we find living proof that the sedimentary layers are not the result of evolution. In many, many documented instances, organisms which were reportedly extinct according to geological strata have been discovered still living. Examples include the tuatara (a lizard), the coelacanth (a fish), and *Neopilina glatheae* (a deep-sea mollusk).

Much to the amazement and embarrassment of evolutionists, no remains of these animals have been found between the supposed ancient past and the present. That is especially important because these animals were thought to be extinct more than 135 million years ago, 70 million years ago, and 280 million years ago, respectively.

A LIVING DINOSAUR?



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In 1977, Japanese fishermen netted the remains of a "dinosaur" weighing about two tons and closely resembling drawings of a plesiosaur, which was supposed to have been extinct for millions of years.

Fossil remains of an extinct tree, the *metasequoia*, have been found in Alaska, Oregon, and California in the United States, and Germany, Switzerland, Manchuria, Japan, Greenland, Spitzbergen, and northern Siberia. Paleontologists date these fossilized trees to be between 60,000,000 and 340,000,000 years old.

Even though they were thought to have become extinct millions of years ago, living metasequoia trees have been found in remote regions of China. Some of these trees have now been transplanted to America—we know them as dawn redwood trees.

4 Carbon 14 dating points to a worldwide flood.

Radioactive (or radiologic) dating estimates age by carefully measuring microscopic amounts of selected radioactive elements in a given sample. The processes assume that we know how much radioactive material was present at the sample's origin and that its rates of radioactive decay have remained constant.

However, radioactive dating techniques are questionable, not because of a lack of technology or precise measurements, but because of inherent errors in the assumptions which underlie the very foundation of the technique.

Radioactive dating techniques assume that we know how fast a given radioactive material decays, that it decays at a constant rate, and that we know precisely how much of it existed when the radioactive "clock" began ticking.

Consider, for example, a racehorse which starts a one-mile race and runs at a speed of 30 mph. It is obvious that the racehorse would near the three-quarters pole in about a minute and thirty seconds. However, such a conclusion requires certain assumptions. We naturally assume that the horse started at the regular starting gate, had a smooth start, and ran at a fairly constant rate.



If you knew where a racehorse started, how fast it could run, and its present position, you could make a good guess about how long it has been running. These assumptions seem reasonable enough, except for the fact that we do not know where the racehorse actually did start or how fast it ran in the past.

That may or may not be true. If the horse had started running from the second turn instead of the starting gate, had been poorly trained and run in circles, or had slowed to a walk and then started all over again, the result would be much different.

The most important geological time clocks involve several different radioactive decay reactions. These include uranium and thorium, which decay into radium, helium, and lead; rubidium, which decays into strontium; potassium, which decays into argon and calcium; and carbon 14, which decays into nitrogen 14.

Unfortunately the theoretical assumptions involved in radiologic dating do not work out in practical application. In fact, the false assumptions make samples appear much older than they are.

For example, weak acids leach as much as 40 percent of the lead out of fresh igneous rocks. Most radioactive minerals also contain substantial amounts of lead which are not the result of decay. Finally, some of the intermediate products of the radioactive decay process such as radon and argon are gaseous and easily escape from the system.

One particularly unique method of estimating age involves comparing relative amounts of two lead isotopes. Because lead 206 and lead 207 are produced at different rates through different reactions, their relative amounts should indicate the age of a sample.

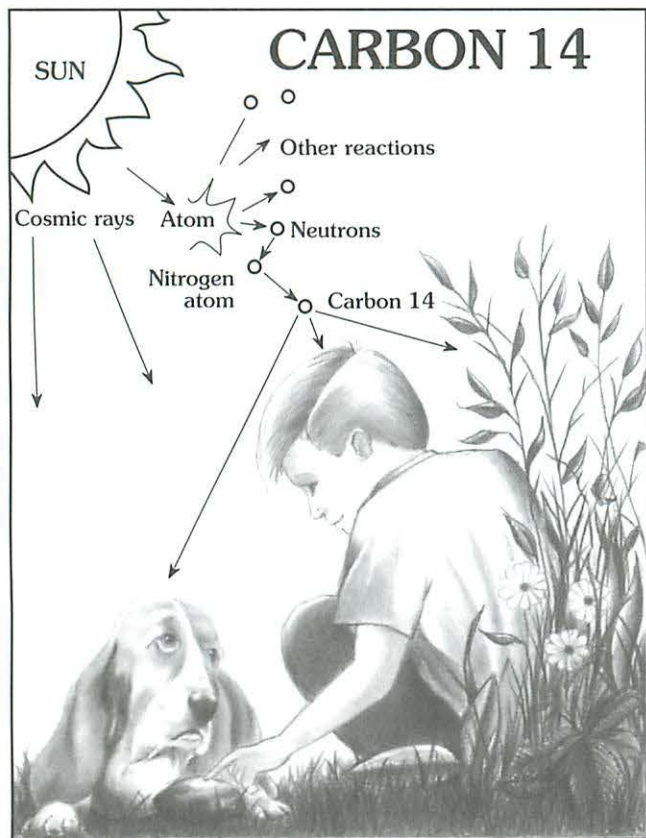
This mathematical process is like comparing two racehorses running at different speeds. The faster of the two gets farther and farther ahead. By measuring the difference between the position of the two horses, it is possible to calculate how long they have been running.

However, this assumes that the horses started running from the same point, although there is no way to substantiate that assumption. If the faster horse had a major head start, it could easily appear that the horses had been running for a long time.

The actual results which these dating techniques provide are surprisingly unreliable. The rubidium technique, for example, yields errors which vary by more than 200 percent.

Comparing ages using different techniques also leads to confusing results. The fact that so many calculations fail to agree or to fall into proper place is strong testimony that something is wrong with the researchers' basic assumptions.

The only reliable radioactive measure of age is carbon 14 (C_{14}). When nitrogen atoms capture neutrons, they form a radioactive isotope (another form of the same element) which looks and acts just like carbon. The only difference is that it has a mass of 14 and is radioactive. C_{14} has the same electron configuration as normal carbon, so it exhibits all the same chemical properties. The only difference is that it has a radioactive half-life of about 5,700 years.



Carbon 14 forms from an interaction of cosmic radiation and normal carbon atoms. These special atoms of carbon 14 become incorporated in the structure of all living things. However, because C_{14} is not uniformly distributed, some organisms have less of it than others. Therefore, even living organisms may appear thousands of years old.

Carbon is present in all plants and animals and moves freely in and out of living organisms in the form of food and carbon dioxide. Because it moves freely between an organism and its environment, scientists assume that every living organism has the same relative amount of C_{14} as its surrounding environment.

However, the exchange process stops when the organism dies, and the percentage of radiocarbon begins to decline as the radioactive

C_{14} atoms decay back into nitrogen. By comparing these differences, scientists attempt to date the length of time since the organism died and stopped renewing its supply of C_{14} .

Surprisingly, C_{14} dating has been remarkably accurate for dates less than about 3,000 years. However, for dates beyond 3,000 years it becomes erratic and unpredictable. The reason for such a discrepancy may be that something major, such as a catastrophic flood, took place more than 3,000 years ago and altered the basic concentrations of C_{14} .

The assumptions for carbon dating are basically three. One is that the C_{14} concentration in the carbon dioxide cycle is constant and uniform. Another assumption is that there is the same amount of C_{14} in the environment today as there was when the fossilized plant or animal lived or died. A third is that there is a constant rate of decay from C_{14} to N_{14} .

Prior to the Flood, there were far fewer C_{14} atoms than there are today. The shielding effects of the water vapor canopy would have prevented the formation of radiocarbon in the high atmosphere. The lack of wind and storms also would have limited the mixing of C_{14} sufficiently to prevent it from being uniformly distributed.

A catastrophic flood would have washed the atmosphere clean of the C_{14} atoms which built up before the Flood. Many of these atoms were trapped in vast limestone deposits, completely upsetting the world's $C_{12} - C_{14}$ balance and making "modern" equilibrium equations invalid for dates older than the Flood. This explains why C_{14} dating appears to make things look older than they are. Organisms prior to the flood simply had less C_{14} to begin with than do animals and plants today.

• Understanding the concept of half-life

Explaining what scientists mean by a half-life and understanding how they measure time using radioactive decay is often quite confusing.

One simple, effective way of looking at the process is to take a single sheet of paper and tear it in half several times at thirty-second intervals. The sheet of paper represents the amount of a radioactive isotope in a sample. After a certain

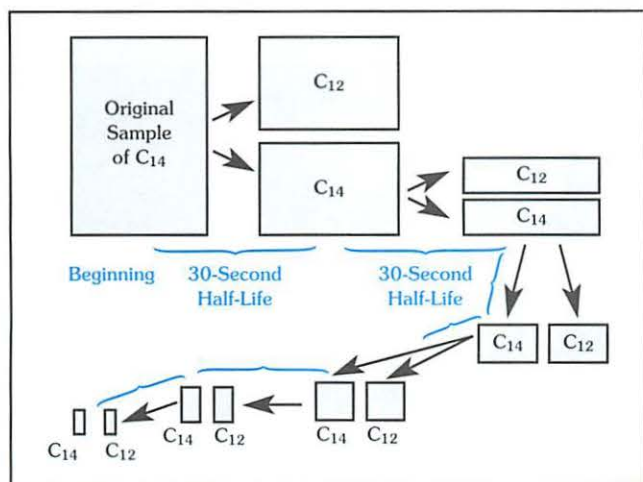
period of time (a half-life), half of the isotope decays, leaving only half as much as was originally present.

After a second half-life, only a half of a half of the original amount remains. After a third half-life, only a half of a half of a half remains, and so on.

• Step-by-step instructions to illustrate radioactive dating

Begin with an $8\frac{1}{2}" \times 11"$ piece of paper. Start a stopwatch. After thirty seconds, tear the sheet of paper in half. You will now have two sheets $8\frac{1}{2}" \times 5\frac{1}{2}"$ or $4\frac{1}{4}" \times 11"$, depending on which way you tore the paper.

Discard one piece and keep the other. The discarded piece represents the atoms of the radioactive isotopes which have decayed into their stable counterparts. The piece you keep represents the atoms of the radioactive isotope which still remain in the sample. Thirty seconds represents the half-life of the decay process.

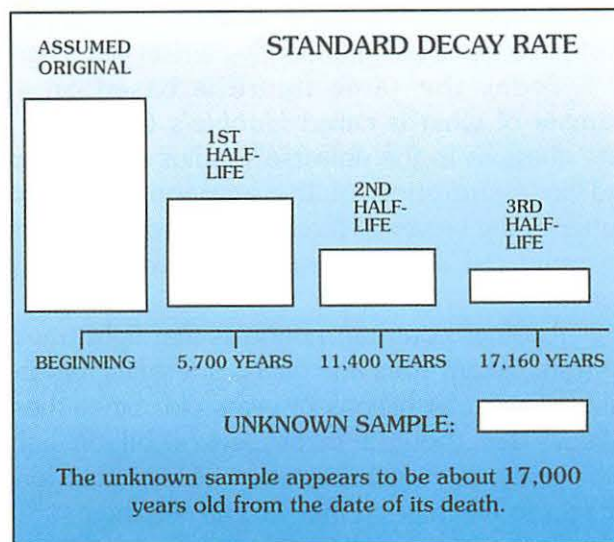


If a piece of paper is divided in half six times and the half-life for each division is thirty seconds, then $6 \times 30 = 180$ seconds, or three minutes, have elapsed since you first began tearing the paper into pieces.

Note that in reality the decay process is continuous. Half of the atoms do not wait until the half-life is up and then suddenly change. Individual atoms decay randomly, but on the average, half of them change sometime during each half-life time period.

After thirty more seconds, tear the remaining piece of paper in half again. Discard one piece and keep the other. After another thirty seconds, tear the remaining piece in half again. Keep the one half and discard the other. Continue the process until the remaining piece is too small to tear in half again.

Time would be measured by comparing the size of the paper when you started to the size of the paper when you ended.



Scientists determine the age of an organism by comparing its actual proportion of C₁₄ to an assumed standard. It is like comparing the size of a piece of paper to a standard to see how many times it has been torn. However, if any of the basic assumptions are violated, the results are meaningless.

Obvious errors enter into this illustration. If you start with a smaller piece of paper than an $8\frac{1}{2}" \times 11"$, each half-life, the paper would appear smaller than it should be. This suggests that the paper is "older" than it really is. Starting with a larger piece of paper means that the paper will always be larger than it should be. This suggests the paper is "younger" than it should be.

If you are not careful to follow an accurate half-life, for example, if you tear the paper every forty-five seconds instead of every thirty seconds, other errors enter into the illustration. If the half-life is accelerated, the paper appears "older." If the half-life is too slow, the paper appears "younger."

Failure to tear the paper evenly also introduces errors. The problem arises especially when the paper gets small. Such errors are analogous to the leakage and contamination of the products of the actual radioactive decay process.

These errors are precisely the same errors which create problems for radioactive dating. For example, we do not know how many radioactive isotopes various minerals have in the beginning. Likewise, we are not sure that half-lives have always been constant in the past. Nor do scientists agree that contamination and leakage have not altered the samples at some time during their history.

Another common claim of those who deny the reality of Noah's Flood is that the rate of the universe's expansion suggests that its beginning must have taken place about five billion years ago.

Today the same figure is based on an estimate of what is called *Hubble's Constant*, a pure guess as to the universe's radius of curvature and an assumption of the average density of matter in the universe. If any one factor is in error, the estimated age of the universe would change dramatically.

Another common notion is that light traveling from distant stars and galaxies testifies that the universe must be billions of years old. Since these galaxies are thought to be several billion light years away, it must have taken at least that long for light to reach us so that we can see them.

Such reasoning denies that the universe could have been created as a functioning entity with light already in progress from star to star and galaxy to galaxy. It is reasonable to believe that the universe was created in a mature state.



The Milky Way is a cluster of more than a hundred billion stars. Some scientists insist that the Milky Way is one hundred thousand light years in diameter. However, their measurements require certain assumptions which are difficult to confirm or deny.

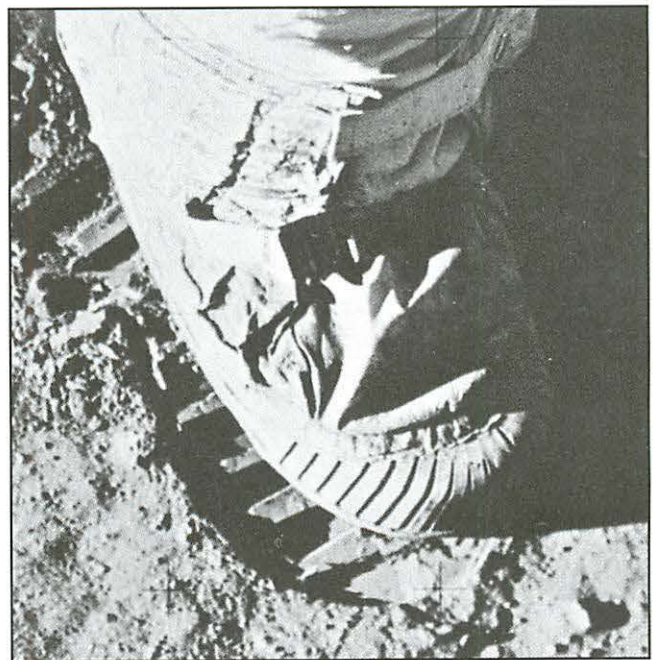
Few people realize that the question of star distances and the time required for light to travel to the earth requires certain basic assumptions,

such as the consistency of the speed of light and the geometry of the universe. Evidence exists which suggests that the speed of light is decreasing exponentially and has been much greater in the past. Other geometric theories of space also exist, such as *Riemannian space*, which requires only about fifteen years for light to reach us from the most distant stars.

Those who deny the occurrence of Noah's Flood also misinterpret scientific evidence that our atmosphere is rich in a substance known as *tritium* (TRIH-tee-um). Tritium is an isotope of hydrogen which is three times heavier than normal hydrogen.

Tritium has a half-life of about twelve years and decays naturally to form helium. Because the current rate of decay is greater than its rate of production, there should be very little tritium left in an atmosphere which is billions of years old. The abundant supply of tritium suggests that our atmosphere is still quite young.

Likewise, dust from meteors showering a five-billion-year-old earth should be about 54 feet thick over the entire face of the earth. Strong evidence indicates that about 14,300,000 tons of meteoric dust settles to the earth each year. Yet no such layer of material has accumulated.

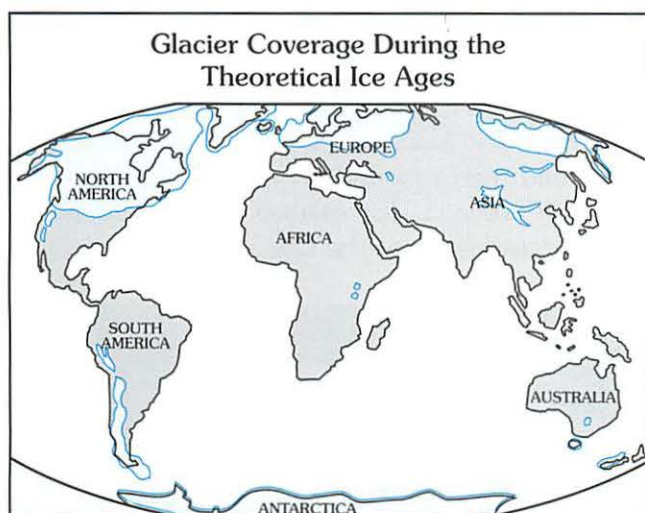


The first lunar landers had massive pads on their landing gear in anticipation of thick layers of soft meteoritic dust. However, when man finally set foot on the moon, the surface was covered with only an inch or so of dust. Such a small amount of dust suggests that the moon is quite young.

5 The "ice age" emphasizes the reality of a worldwide flood.

There is hardly any geological phenomenon better established than the "ice age." The geological features associated with it could not have been formed by any known water mechanism. However, geologists remain puzzled over the events which caused glaciers to cover major portions of North America, Europe, and Siberia. In fact, there are some sixty different theories which attempt to explain their origins.

These explanations range from fluctuations in our sun, to encounters with frozen asteroids, to decreases in the concentration of carbon dioxide in the air, to changes in the earth's orbit.



Most geologists claim that four million square miles of North America, two million square miles of Europe, and much of Siberia were once glaciated. These scientists point to geological features and a lowering of sea level by about 400 feet as proof. However, every aspect of the ice age can also be explained by a worldwide Flood.

The environment which existed at the end of the Flood was a barren world with no trees, no plants, and no animals or birds except those from the ark. The landscape consisted of soft, muddy deposits of buried debris in the process of being fossilized. A thick shroud of volcanic dust and aerosols made up of sulfur and halogen compounds filled the sky, creating a dark, depressing world.

Without a protective canopy, the atmosphere in mid and high latitudes would have cooled quickly with the volcanic dust and aerosols acting like

a reverse greenhouse. These particles would have reflected sunlight back into space and allowed infrared radiation to escape from the earth's surface, causing a dramatic drop in world temperature.

However, the hot rainwater and steaming fountains of the deep would have left the oceans quite warm and the atmosphere humid. This combination of low surface temperatures and warm oceans would have led to massive snowstorms and blizzards which would have dumped so much snow during the winter months that it could not all melt during the summer.

Such snow cover, in turn, would act as a reflector to drop temperatures even further. Snow, for example, increases the reflectivity, or *albedo*, of the earth's surface. Fresh snow actually reflects up to 80 percent of solar radiation. If snow and ice covered the whole surface of the earth, even for a short period of time, average temperatures would drop to -121°F .

The net result of these falling temperatures and blizzards was the rapid formation of large glaciers over much of the northern hemisphere. The absence of trees and vegetation in the remains of these glaciers indicates that the glaciers covered an essentially barren and denuded world, similar to that which existed immediately after the Flood.



U.S. Geological Survey

One of the puzzling issues involving the ice age is the theory that there were several different ice ages separated by relatively warm periods of thousands of years and that the ice sheets were several miles thick and moved extremely slowly. This theory is simply not supported by the evidence.

Thick ice sheets would insulate the base from the cold atmosphere above and allow geothermal heat to warm the base from below. The melting substructure would cause the glacier to move relatively fast and wear away massive amounts of soil and rock.

This simply did not happen. In reality, very little erosion took place. For example, *till* (clay, sand, gravel, and boulders from glacial drift) left along the edge of the glacier's farthest advance is only 20 to 40 meters deep. The only exceptions are in valleys and some end moraines where the depths reach up to 400 meters. However, these are found only in unique circumstances.

The time required for such deposits to accumulate is less than ten years. A seven-meter-high *esker* (mound of drift deposited by water near a stagnant glacier), for example, would have formed in just five years. *Kame* terraces (ridges of glacial deposits) would have required only a year or two.

A better explanation is to consider that the ice age was a temporary rebound of the earth's climate immediately after the Flood, lasting only a few years. It is hard to believe that 20 to 30 ice sheets repeatedly thawed and refroze.

• Dating the ice age

Dating the ice age has led to many conflicting reports. Radioactive decay measurements greatly exaggerate the duration, suggesting that multiple ice ages lasted about two million years. However, other dating techniques reveal a much different time scale.



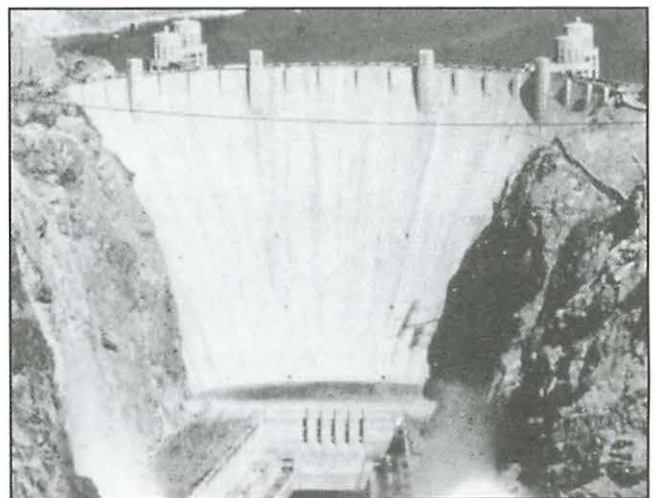
Niagara Falls has eroded away a seven-mile canyon-like gorge from its point of origin. The origin of the falls, called the *Niagara Escarpment*, was created during the catastrophic events of Noah's Flood.

For example, the erosion of Niagara Falls has been measured carefully for the past 150 years. The average rate of recession of the Horseshoe Falls at Niagara is about five feet per

year. If this rate is assumed constant, and we know how far the falls has "traveled" along Niagara Gorge, it is easy to calculate the date that the ice age ended. That figure comes to 7,000 years.

However, the flow of water over the falls has not been constant. Historical evidence indicates that the flow in the past was much greater and the rate of erosion much more pronounced than it is now, especially with the rapidly melting ice at the end of the ice age. Some of these unknown variables can be eliminated by comparing the American Falls to the Horseshoe Falls. While such calculations still require major assumptions, they provide an even better estimate than either of the falls alone. The best estimate is that the ice age was quite recent, ending only about 3,000 to 4,000 years ago. Other falls and riverbeds left by the ice age yield similar dates.

Another way of dating the ice age is to measure the vertical motion of the earth's crust. Geologists call this up-and-down movement *isostasy* (eye-SAHSS-tuh-see). Isostasy results from changing loads which cause the crust to sink down and then rebound. The crust beneath Lake Mead in Nevada, for example, dropped about twenty centimeters as the lake filled with water.



As water backed up behind Hoover Dam to form Lake Mead, the weight of the water actually forced the earth's crust to sink.

Ice buildup during the ice age caused the same kind of isostasy. Measurements of the earth's crust reveal that areas covered by the ice in the ice age are still rebounding from the burden of ice they once carried. This data demonstrates a quite recent departure of the melting ice. Estimates of the time required for the isostatic

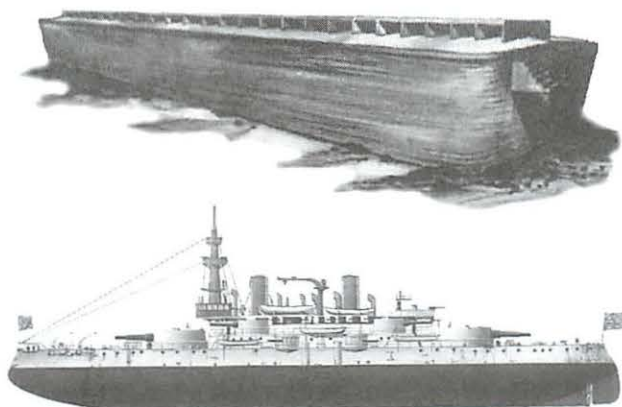
rebound to reach its present level indicate that the ice sheet began to melt 3,000 to 4,000 years ago.

Because so many scientists deny the occurrence of a worldwide flood, they ignore one of the best and most consistent descriptions of what might have caused the ice age to happen.

6 *The ark and the olive tree give clear testimony to a worldwide flood.*

Those who deny the Flood often argue over the details of Noah's ark. They argue about its size, its shape, its seaworthiness, and its very existence.

Conventional models of Noah's ark look more like a box than a boat. However, the Bible does not speak about the ark's actual shape.



Institute for Creation Research/Genesis, Inc.

Many modern ships, from racing sailboats, to battleships, to barges, are built with the same proportions as Noah's ark, because the ratio of length to width lends itself to such stability.

Arguments over the size of Noah's ark arise out of different interpretations of the length of a cubit. Scripture indicates that "... the length of the ark [was] three hundred cubits, the breadth of it fifty cubits, and the height of it thirty cubits" (Genesis 6:15).

The royal cubit of the Babylonians was 19.8 inches, while the Egyptians had cubits equal to 20.65 inches and 17.6 inches. The Hebrew cubit confused the issue even more with a *long cubit* of 20.4 inches and a *common cubit* of 17.5 inches. A cubit is essentially the distance from a man's

elbow to his fingertips. Regardless of these variations, the ratio of the ark's dimensions is clearly 300:50:30.

That means that the ark could have been anywhere from 437.5 to 516.25 feet long, 72.9 to 86 feet wide, and 43.75 to 51.62 feet high. Using the smallest measure of a cubit, the ark had a total deck area of almost 100,000 square feet and a displacement of almost 14,000 tons.

Challengers to the existence of Noah's ark suggest a ship of this size could not have been made of wood. They point to the fact that it was not until 1884 that shipbuilders were able to build a ship which exceeded the dimensions of Noah's ark. Others argue that even if Noah could have made a ship this size, it could not hold all the world's animals.

The carrying capacity of the ark translates into about 522 standard-size railroad stock cars. The number of animals required to fulfill God's command of two by two for the unclean animals and seven by seven for the clean animals totals about 35,000 animals. That averages out to only sixty-seven animals per boxcar.

According to Scripture, Noah did not have to take two of every kind, only those kinds "... wherein is the breath of life" (Genesis 7:15).



From The Flood in the Light of the Bible: Geology, and Archaeology. ©Concordia Publishing House. Reprinted by permission from CPH.

There was more than enough room on the ark to carry animals after their own kind. For example, there are hundreds of breeds of dogs. However, all the shapes, sizes, and colors of dogs result from the selective breeding of only one kind. Noah needed just one pair of dogs to maintain their genetic characteristics. The same is true of other "kinds" as well.

A few argue that Noah and his family could not have survived on an ark that floated as high as the highest mountains. They reason that the air at those latitudes would be so rare that even the hardest yeti Sherpa would lose consciousness after prolonged exposure.

However, they ignore the fact that the floodwaters would have lifted the atmosphere with it. As the waters rose, so did the blanket of air surrounding the earth. Therefore, Noah, his family, and the animals remained at “sea level” throughout the Flood.

It was only after the waters receded, leaving the ark stranded on the mountains of Ararat, that the air pressure might have begun to decrease. However, at this point Noah was on the slopes and not above the mountains. He also had weeks to acclimatize as the waters slowly receded. Furthermore, today’s high mountains rose up from the ocean floor in the years immediately following the Flood—and not necessarily while Noah was still in the ark.

Skeptics of Noah’s Flood also ask how an olive tree could survive the Flood. If the Flood created so much havoc as to kill fish in their own environment, how could Noah’s dove find a fresh olive leaf so soon after the waters receded? The answer lies in the indestructible nature of the olive tree. Olive trees are so hardy that they can survive in the poorest soil, through drought, pests, and even fires.

Olive branches can be pruned back to blunt stubs. Their roots can be chopped off so that only the burl remains. Yet when transplanted in fertile, well-watered soil, they send out new roots and bear fresh fruit within just one season.

Olive tree cuttings are the most popular means of propagating new olive trees. These cuttings may be several inches in diameter and five to six feet long. When planted, they grow prolifically.

In other cases, nurserymen have merely chiseled off pieces of the large knots (called *ovoli*) which grow at the base of olive trees. Within a matter of a few weeks, these pieces produce sprouts and fresh leaves.

As for Noah, he knew that any piece of olive tree which was not completely buried by the Flood’s sedimentation would quickly sprout and produce fresh leaves as soon as the waters receded and sunlight could reach it.

7 *The events of history indicate a worldwide flood.*

Geologists who deny Noah’s Flood claim that there have been twelve major periods in the geological history of the earth. These periods date

back several hundred million years. Beyond that, they assign everything else to a mammoth period of several billion years called the *Precambrian Period*. According to this theory, various forms of life evolved during these twelve periods, while the face of the earth changed quite slowly.

Geologists date the mountains of Vermont as the oldest mountains in the continental United States—dating back to the Cambrian Period. They date the Cascade Mountains of the Northwest as the youngest mountains—arising out of the Quaternary Period.

Yet they suggest that these two mountain ranges, separated by only three thousand miles, developed from events separated by more than 500 million years. In the vast time between these two periods, the Urals of the Soviet Union, the Rockies of the Continental Divide, the Alps, and the Himalayas appeared. None of these mountains were seen by man until the most recent periods of time.

Scripture, on the other hand, suggests that there are only six great periods of geological history and that man was present for all but the first five days. These epochs of geological history include the original six days of Creation, the environment of the Garden of Eden period, the period between the Fall and the Flood, Noah’s short but catastrophic Flood, the current period between the Flood and the end of the earth, and finally, a new Heaven and a new Earth, which are yet to come.

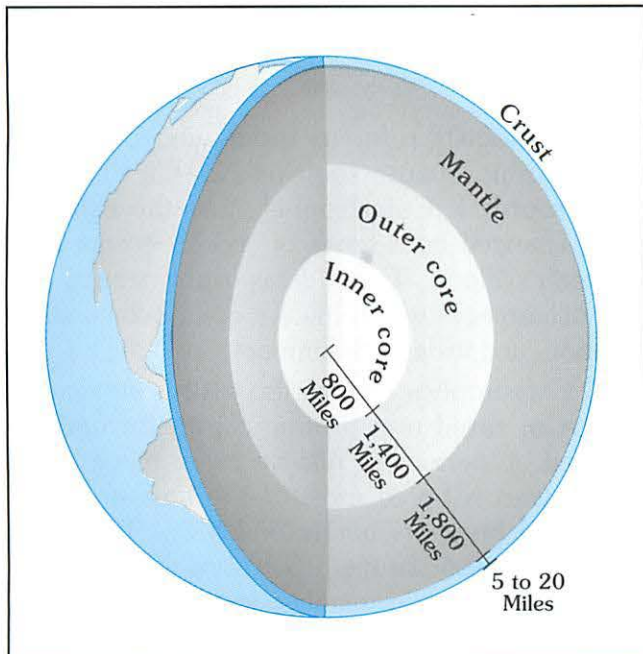
• CREATION

The first three days of Creation constitute most of the geological work which brought the earth into existence and arranged its interior construction in essentially the same form that it is today. The earth has a diameter of about 8,000 miles. However only the top 20 to 25 miles constitutes its *crust*.

Beneath the crust down to a depth of about 1,800 miles lies the *mantle*, and below that, with a radius of about 2,000 miles, is the earth’s *core*. All three of these regions—the core, the mantle, and the crust—were apparently formed on the first day of Creation.

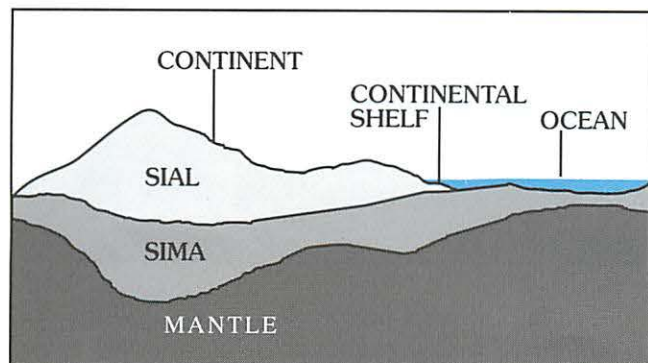
During the second day, God made the earth’s atmosphere, which separated the waters of the earth into two vast storehouses. One storehouse was located above the firmament in the atmosphere. The other storehouse was hidden below the firmament underground. The upper

storehouse created a protective canopy of water vapor above the earth. The lower storehouse became the oceans and the fountains of the deep which broke open during the Great Flood.



Density and temperature increase with depth. However, temperature appears to reach a maximum and remains relatively constant at about 2,500°C. The core and mantle are probably essentially the same today as when they were created.

God formed the continents on the third day. The phrase "let the dry land appear" (see Genesis 1:9) suggests that the crust rose in some places and sank in others, forming vast continents in some places and oceans in others. It is important to note that these pre-Flood continents were much different from the ones we know today.



At this time, however, the earth was still geologically new. There were no fossil rocks and probably few faults and folds in the earth's crust. This condition is perhaps what Scripture speaks of in Isaiah 48:13 and Jeremiah 31:37.

The primary difficulty with modern man's view of history arises from man's refusal to accept that God's creation of the world and of its living creatures was accomplished by processes which are no longer in operation.

• THE GARDEN OF EDEN

The time after Creation and before the Fall contained proportionately far more habitable land than there is today. There were no vast deserts, wastelands, or polar ice caps. Nor were the land masses separated by great expanses of ocean.

It was a time of peace and luxurious vegetation. Since death had not yet entered the world prior to the Fall, it is very unlikely that any fossils or fossil-bearing rock came from this period.

• AFTER THE FALL

The term *antediluvian* means "before the Flood." (From the Latin, *ante* means "before," and *diluvium* means "flood.") Civilization may very well have reached great heights before the Flood. In fact, the people who lived before the Flood may have easily numbered in the billions. The destruction caused by the Flood, however, must have erased all evidence of pre-Flood civilization and its inventions, leaving only Noah and his family.

The Biblical record indicates that the time period between the Fall and the Flood was one of comparative geological quiescence. The waters both above and below the firmament were in large measure restrained. There were no heavy rains or winds. Temperatures were uniform across the face of the earth, and there were probably few, if any, earthquakes or volcanic eruptions.

• NOAH'S GREAT FLOOD

Even though the Flood lasted only about a year, its effects were devastating. Almost all of the sedimentary rocks, fossils, coal, oil, continents, mountains, oceans, and soil are the products of this one period. It is clearly the greatest physical convulsion the world has ever undergone.

The Flood marks the end of one world and the beginning of another. Today, only about 60 percent of the current land surface is suitable for human habitation. This area is considerably less fertile than pre-Flood land, and its natural resources are found only in limited areas.

• POST-FLOOD

The Flood not only changed the geological features of the earth, but it also brought about a new cycle of seasons and a new hydrologic cycle as well. The loss of the protective canopy around the earth caused new variations of temperature. The polar ice caps formed, ocean currents began flowing, deserts formed, and rain forests developed.

Harmful radiation reached the surface of the earth for the first time, and man began to age much more rapidly. The newly deposited sediments were still relatively soft and had not yet formed into rock. Great canyons formed as the last of the floodwaters receded. Fossils were preserved on a large scale as a reminder of God's judgment. Earthquakes and readjustments of faults continued to equalize pressures in the crust.

With the conclusion of the Flood, God promised that the earth would never again be inundated with water. In general, the uniform processes of nature would once again be the rule.

• THE NEW HEAVEN AND EARTH

Scripture also speaks of a future time of great change and renovation: “. . . *The heavens shall pass away with a great noise, and the elements shall melt with fervent heat, the earth also and the works that are therein shall be burned up*” (II Peter 3:10).

Other references such as Psalm 102:25–26; Isaiah 34:4, 51:6, 65:17, 66:22; and Matthew 24:35–39 describe a time in the future, appointed by God, when the earth will be much different from the earth we know. Unfortunately, those who deny the past also fail to comprehend the future. However, those who understand God's past work can have confidence also in His future work.

8 *The Grand Canyon is a monument to a worldwide flood.*

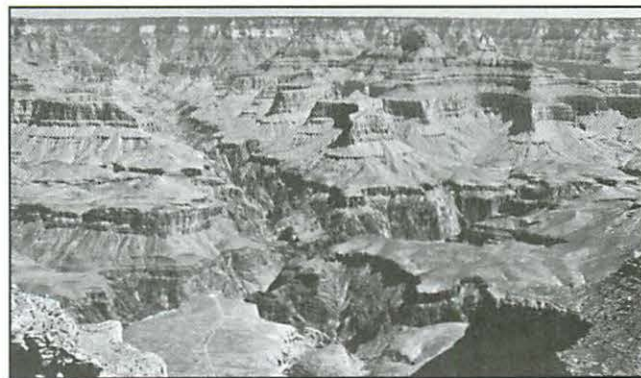
The processes of change in the earth have been discussed since the time of Job. (See Job 12, 28, and 38.) However, as late as 1697, Western nations unanimously agreed that God, the Creator, was responsible for shaping the earth through His divine intervention. Papers by Cambridge scholars in 1681, 1693, and 1696 affirmed without reservation the historical reality of Biblical accounts.

In 1697, John Harris, a noted scholar, wrote regarding the existence of fossils: “All sober and judicious men are now convinced that the exuviae [fossils] of sea animals, so plentifully found at this day in the strata of the earth, and in the most hard and solid stone and marble, are the lasting proof of the Deluge itself and of its universality.”

Geologists refer to those who believe in catastrophic events such as Noah's Flood as *catastrophists*. Catastrophists see the earth as being changed by a series of sudden events such as Noah's Flood. These catastrophic events are rare occurrences which involve great power, short duration, and widespread impact.

Catastrophes change the earth's surface by means of rapid and dramatic transformations followed by periods of relative calm, much like a soldier who is bored most of the time and then terrorized by short bursts of action. This phenomenon is also like the heavy rains that wash out a gravel driveway in minutes, leaving large gullies which serve as visual reminders for years to come.

Uniformitarianism, on the other hand, is characterized by a belief in gradual processes. Simply stated, this theory suggests that the present is the key to interpreting the past. It proposes that the geological processes we see today are the only events which could have changed the face of the earth. In short, it interprets geological history by man's limited observations rather than by the Biblical record.



National Park Service

The Grand Canyon serves as an awesome reminder of God's judgment. It was carved when, soon after Noah's Flood, three large lakes of trapped floodwater broke through a natural dam. The lakes, known as Hopi, Grand, and Vernal Lakes, poured about 3,000 cubic miles of water through the canyon, causing catastrophic erosion of the soft sediment.

For example, the doctrine of uniformitarianism interprets the origin of the Grand Canyon by observing the current conditions of the Colorado River, which flows through it. It suggests that the Colorado gradually cut its way down through layer after layer of sedimentary rock over millions of years.

Uniformitarianism denies the possibility that the Grand Canyon could have been cut by a single catastrophic event (such as Noah's Flood and its aftermath) over a period of days or weeks. Uniformitarians assume that only currently observable processes can be applied to the study of origins.

A more detailed look at uniformitarianism reveals four distinct tenets. The first tenet affirms that the same physical laws of matter and energy have been constant throughout history. The second assumes that only currently observable geological processes have been at work in the past. The third postulates that the rates, scales, and intensities of all geological processes are consistent with those occurring today. The fourth tenet says that only known geological conditions existed in the past.

The first tenet of uniformitarianism is common to all science. However, the last three tenets are mere speculation and, in fact, have been refuted with substantial evidence.

Uniformitarianism is one way of denying the supernatural intervention of God in the lives of men. Because uniformitarianism denies God's past involvement in world affairs, it also allows men to deny God's future involvement and judgment.

It is important to note that the Bible does not deny the basic laws of physics nor bring into question the actual data of geological science. After all, the basic laws of physics are an integral part of God's creation. The issue is over the interpretation of how those laws worked to bring about the evidence we see.

It should also be noted that it is not the *physical* branches of geology such as mineralogy, petrology, geophysics, seismology, geochemistry, or sedimentation and groundwater geology that are at odds with Scripture. It is only the *historical* branches of geology, such as paleontology, geomorphology, and stratigraphy that often disagree with Biblical accounts.

Because these historical branches of geology are more philosophical than they are experimental, they are based upon principles which are assumed rather than tested. That is to say that most historical theories are based upon what man

wants to believe rather than on what the data actually reveals.



Historical geology, unlike other sciences, cannot reproduce or observe the events of creation and change. Therefore, it is impossible to prove by the scientific method any hypothesis relating to geological history.

9 *The enemies of truth are further witnesses of a worldwide flood.*

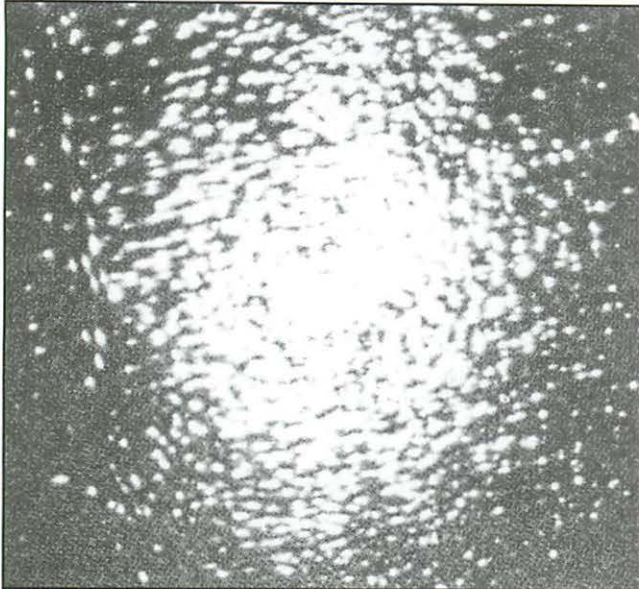
The rejection of Noah's Flood and the rise of uniformitarianism did not take place overnight. It occurred over a span of about one hundred years. During that time, individuals made compromises which attempted to "harmonize" Biblical history with man's reason and intellect.

The compromises, surprisingly enough, did not begin with geologists. They began with ministers, mathematicians, lawyers, and physicians who interjected their philosophical ideas into the study of geology.

For example, one of the first appearances of uniformitarian principles began with Emanuel Swedenborg in 1730. Swedenborg (1688–1772) was a psychic who claimed to have contacted men on both Saturn and Jupiter.

During one of his seances, he reportedly received a vision that the earth was five billion years old and that it and the other planets had formed from gases given off by the sun.

Swedenborg had been interested in Halley's study of comets and Newton's theories of gravitation. He apparently put the two ideas together without any evidence or scientific research and came up with his "Nebular Condensation Theory of the Solar System."



Unlocking the Mysteries of Creation, Dennis R. Peterson

The Nebular Condensation Theory suggests that gases condensed into planets. However, scientific evidence suggests that gases tend to expand rather than contract.

According to the Nebular Condensation Theory, all planets should have identical compositions—but they do not. There should not be any leftover dust in outer space—but there is. The angular momentum of the planets as they orbit the sun and spin on their own axes should be consistent—but it is not. Furthermore, if this theory were true, comets should have vanished long ago, but they are still with us.

By just about every criterion, the Nebular Condensation Theory fails to explain the data scientists have collected, and yet it persists even today, because man wants to deny God's hand at work in Creation.

At about the same time that the Nebular Condensation Theory was introduced, a rebellious young man who had rejected Christianity began searching for evidence by which he could rationally deny his parents' faith. This young man read Swedenborg's ideas, covered up their satanic origins, and presented the ideas as his own scientific discovery. In 1755, the young man published a "General History of Nature and Theory of the Heavens."

This same young man also carried the seeds of atheism and communism. His work greatly influenced men such as Hegel, Nietzsche, and Marx. His name was Immanuel Kant. Kant's rebellious background gave birth to the heresies of both rationalism and Higher Criticism.



Courtesy of German Information Center

Immanuel Kant (1724–1804) is responsible for many of the philosophies of our day. His books *Critique of Pure Reason* and *Critique of Practical Reason* were especially influential in the development of modern atheistic views.

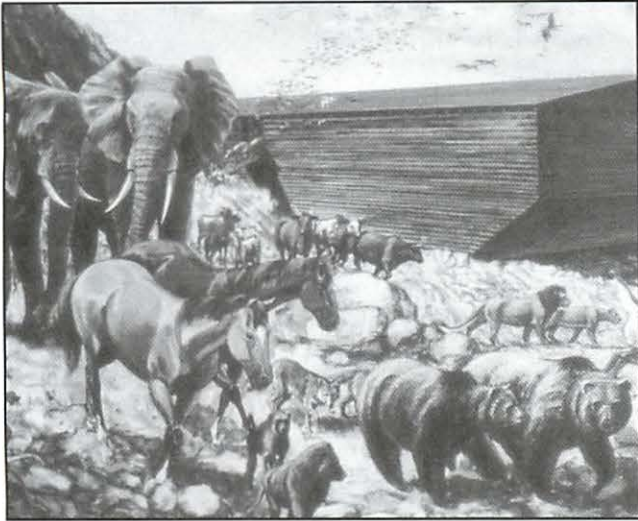
In 1785, John Hutton (1726–1797), a Scottish physician, read Kant's work and prepared a manuscript entitled *Theory of the Earth*. Without evidence or documentation, he proposed a compromising hypothesis suggesting that the earth was changing gradually over long periods of time.

His book might have gone unnoticed had it not been for a Scottish mathematician named John Playfair. In 1802, Playfair picked up on Hutton's ideas and added attractive illustrations. Because of its appealing nature, the book became a great success and a leading authority on geology.

At about the same time, another Scotsman, by the name of John Fleming, had personal doubts about whether Noah's Flood was powerful enough to have produced the worldwide layering

of sedimentary rock and fossils we find in the geological record today.

Because Fleming was a minister, his preaching and writing on the subject precipitated the compromises of others.



Courtesy of Bob Jones University Press

Foolish men suggested that there must have been several floods, not just one. Those ideas opened the door for others to suggest that the Flood was local, not global. Before long, it was popular to deny the occurrence of the Flood altogether.

To harmonize Fleming's misgivings and Hutton's theories, a French anatomist, George Cuvier (1769–1832), suggested that there must have been several great floods, not just one.

Cuvier held firmly to the idea that the earth changed as the result of catastrophes rather than uniform processes. However, he taught that the major fossils found in different strata were the result of several smaller floods rather than just one great flood. Then, in order to harmonize his ideas with those of Hutton's, he added that the floods must have been separated by immense periods of time.

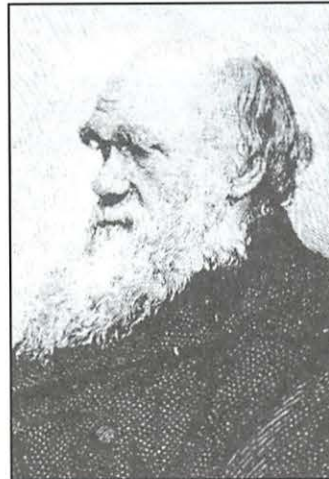
This compromise opened the way for others to suggest that after each of these major catastrophes, a new creation of animal life had followed.

Encouraged by the compromises of Cuvier and others, John Pye Smith (1774–1851) later added that the Flood was probably only a local flood. He attempted to harmonize Noah's Flood with the "new" philosophies of the day by suggesting that the Flood was "anthropologically universal, though geologically local." In other words, the Flood destroyed all mankind but did not cover the entire world.

Only a few years earlier, Sir Charles Lyell (1797–1875), a Scottish lawyer, had openly

denied the Flood altogether. In his book *Principles of Geology*, Lyell consciously presented what men wanted to hear. He stated that whatever could not be harmonized with reason must be rejected.

The compromises of Hutton, Playfair, Fleming, Cuvier, and Smith gave credence to his work. Lyell was immediately elected Secretary of the Scottish Geological Society, and a few years later he became its president.



Charles Darwin (1809–1882) was greatly influenced by Lyell and the principle of gradualism. Lyell's work in geology was just what Darwin needed to help him develop his theory of evolution.

The record shows that in his position as president, Lyell carefully controlled the publications of the society based on politics rather than geological evidence. He systematically suppressed scientific research favoring Noah's Flood and supported only papers written against it.

In just fifty years, the Scottish Geological Society made a complete about-face. At one time they embraced the Biblical account of one great universal Flood. By the mid-1800s, they denied that the Flood ever happened.

Catastrophism did not lose favor because of some important geological discovery—quite the contrary. The geological evidence has always pointed to catastrophic processes in the past. Belief in the Flood lost favor because of compromises which began to erode away its Biblical foundation.

These same changes were also at work in the social structure of governments. For example, England found itself shifting away from a government based on the sovereignty of God. Instead, a new liberalism developed in which rights ascended from the people through Parliament, and only then to its ministers. Instead of authority from above, the new philosophies encouraged rebellion from below.

There is good evidence that Lyell had political motives. By undermining the Bible, he also undermined the sovereignty and authority of the "king."



Permission of Baedeker

The basic compromises in politics were the same as those in science. Instead of exalting God, men exalted “the people”—looking to rule themselves rather than submitting to God’s sovereignty. The new “rationalism” exalted man, his ideas, and his “rights.” Marxism and Communism are the political stepchildren of uniformitarianism.

Finally in 1865, six years after Darwin published his theory of evolution in the book *The Origin of Species*, at a meeting of the British Association of Scientists, a group of 617 concerned scientists attempted to regain lost ground. They drew up and signed a manifesto declaring their “belief in the truth and authenticity of the Holy Scriptures.” However, the declaration was too late. The compromises of others had so weakened their Biblical position that they would never regain control of their scientific association.

The geological arguments which were used to try to discredit the Biblical account of the Flood were unsubstantiated. The main force behind the rise of uniformitarianism was the desire to eliminate God as Creator and Judge of the universe.

The Apostle Peter gives a precise definition of uniformitarianism: “*All things continue as they were from the beginning of the creation*” (II Peter 3:4).

He then declares that because those who deny the Flood are determined to fulfill their own sensual desires, they are *willingly ignorant* of the fact that the Flood was God’s judgment on the earth.

However, Peter reminds us that each of us must be careful to “hear and do God’s Word,” for another judgment is coming. This time, instead of rain, flood, and wind causing the “house” to have a “great fall,” it will be fire.

“*But the day of the Lord will come as a thief in the night; in the which the heavens shall pass away with a great noise, and the elements shall melt with fervent heat, the earth also and the works that are therein shall be burned up*” (II Peter 2:5; 3:1–12).

PROJECT

Noah was a wise man who built his house on the rock. As a result, his house stood firm in the face of rain, winds, and floods. Noah’s “house” was his family. His foundation was his obedience to what God told him to do. The building process of the ark required approximately one hundred twenty years.

The climatic conditions and land features were much different before the Flood. There were no polar ice caps, no deserts, and no major mountain barriers. Because the climate was warm and relatively uniform, it is likely that animals were also distributed more uniformly and none had to travel very far to reach the ark.

When everything was ready, God’s judgment came upon the earth in the form of rains, winds, and floods. Yet Noah’s “house” stood firm—safe inside the ark. Obviously Noah did not have any chances to test God’s design. He had to build the ark by faith. There were no opportunities to modify or change the design once the heavens opened and the fountains broke loose.

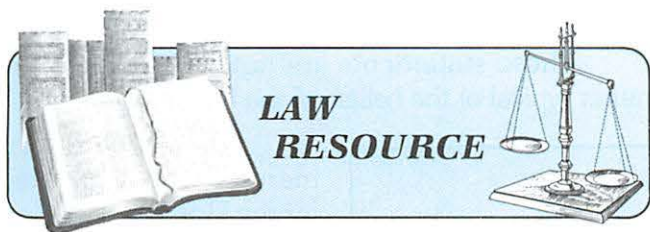
Each of us is building our “house.” The ark of protection is the Person of Christ. The foundation is the testimony of God’s Word. Sand is anything that comes between us and Christ. The rains, winds, and floods are the distractions and deceptions of the world. Like Noah, we have no opportunity to test God’s design. We have to build by faith, trusting that God’s dimensions are precise and perfect.

It is not difficult to imagine what must have been going through Noah’s mind as he and his family stepped off the ark. They were the only living people on the face of the earth. They had no idea what changes the Flood had wrought. Nor did they have any idea how God would provide for their immediate needs of food, water, shelter, and clothing.

However, Noah remained faithful to God’s design and prepared an altar upon which he offered sacrifices of thanksgiving.

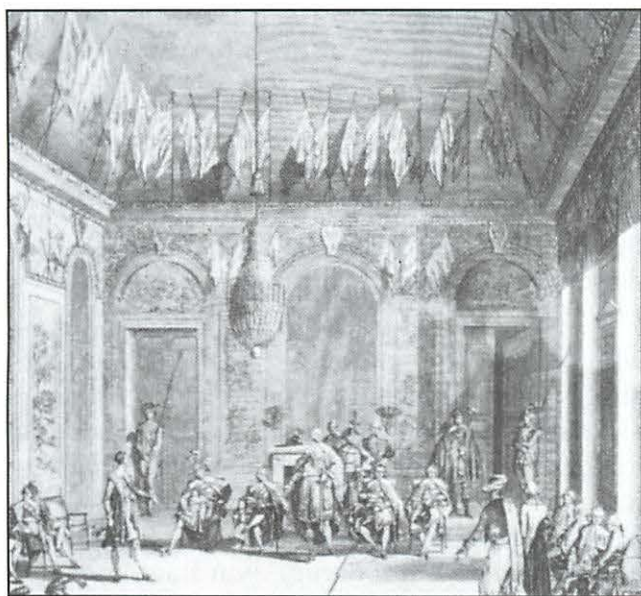
Read Psalm 104 and meditate on it as if it were a prayer of Noah as he stepped off the ark. Discuss how each verse might express Noah’s heart after witnessing God’s judgment and provision of salvation.

Date completed _____ Evaluation _____



LAW RESOURCE

HOW DOES THE FOUNDATION OF AMERICA ILLUSTRATE BUILDING ON ROCK AND THEN ON SAND?



Engraving: Audience du Directoire en Costume (Bullot, Paris)

France has experienced seven completely different forms of government in the last 200 years. Italy has had forty-eight changes of government. America is still on its first form of government. What has made the difference?

The Founding Fathers of America include the men who wrote the Declaration of Independence, the men who made up the Continental Congress, and the first elected officials of the new republic called the United States of America.

The Founding Fathers developed a system of government with a remarkably strong foundation, as attested to by the fact that it has lasted for over 200 years under the same Constitution, which is almost unheard of for contemporary nations.

Researcher David Barton has gleaned a wealth of information about the founding of America which gives powerful motivation to rebuild the nation upon the "Rock" of God's Word.

How did the Founding Fathers of America build the nation on the "Rock" of Scripture?

Where did American government have its origins? This question was asked by political science professors at the University of Houston. They wanted to see where the Founding Fathers' ideas originated. They rightly felt that if they could collect writings of the Founding Fathers and see whom the Founders were quoting, they would know the answer.

The professors collected 15,000 writings of the Founding Fathers which they determined had a significant impact on the founding of America. They planned to analyze the writings to see whom the Founders had quoted. In these writings they found 3,154 direct quotes.

After ten years of research, the professors had identified the source of each quotation of the Founders. They then tabulated all the sources from which the Founders quoted.

The three men quoted most often by the Founders were Baron Charles de Montesquieu, Sir William Blackstone, and John Locke. The fact that they were quoted so often is a tribute to these three men. However, much to the professors' surprise, they discovered that 34 percent of all the quotations given by the Founding Fathers came directly from the Bible. Another 60 percent of their quotations were from men who were quoting the Bible. Thus, 94 percent of their quotations were based on Scripture.

For example, one of the three whom the Founders quoted most often was Sir William Blackstone. Blackstone's *Commentaries on the Laws* was the law "text-book" of America for 160 years. These *Commentaries* were so influential that supreme courts quoted from them regularly to settle disputes, define words, and study procedure.



Library of Congress

Sir William
Blackstone
1723-1780

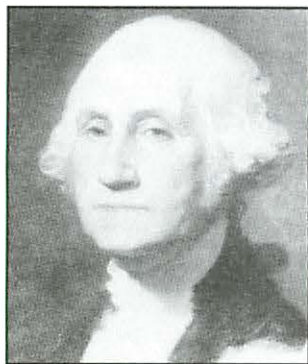
Mr. Blackstone's ideas came from the Bible. Consider the effect that Blackstone's *Commentaries* had on Charles Finney.

Charles Finney was an evangelist and preacher who was influential in leading one of America's greatest revivals. However, he did not begin as a minister—he had wanted to be a lawyer.

Young Finney entered law school and studied Blackstone's *Commentaries*. When Blackstone's *Commentaries* presented the laws, it presented the Biblical concepts on which the laws were based. Charles Finney studied so much Scripture in the process of becoming a lawyer that he also became a Christian.

We learn, then, that the concepts which have caused America to last are ideas the Founders took directly from the Bible. This is how America was built.

In our time it is often said that America's Founding Fathers were atheists, agnostics, and deists; however, the truth is that most of them were God-fearing Christian men.



George Washington
First U.S. President
1732–1799

George Washington is considered the Father of His Country. He spent forty-five years of his life in public service, including serving as Commander-in-Chief of the Continental Army and two terms as President. As President of the United States, he called for and oversaw the formation of the First Amendment and the Bill of Rights.

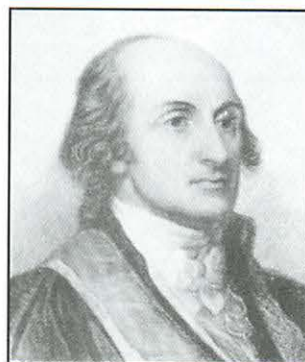
In George Washington's Farewell Address, which many consider to be the most significant political speech ever given to the nation, he said: ". . . Religion and morality are indispensable supports. In vain would that man claim the tribute of patriotism who should labor to subvert these great pillars." In other words, "Do not let anyone claim to be a true patriotic American if he attempts to remove religion from politics."

Patrick Henry, who is famous for the cry, "Give me liberty or give me death," also made this compelling statement: "It cannot be emphasized too strongly or too often that this great nation was founded, not by religionists, but by Christians; not on religions, but on the Gospel of Jesus Christ."



Patrick Henry
Statesman and Orator
1736–1799

These statements are not isolated but are rather typical of the beliefs of the Founding Fathers.



John Jay
First U.S. Chief Justice
1745–1829

One of the three men most responsible for the U.S. Constitution is John Jay, who later became the first United States Chief Justice. Mr. Jay said, "**Providence has given to our people the choice of their rulers, and it is the duty—as well as the privilege and interest—of our Christian nation to select and prefer Christians for their rulers.**"

In essence, Chief Justice Jay was saying, "Make sure you elect Christians to office."

In 1811 the Supreme Court of New York declared in a ruling, ". . . **Whatever strikes at the root of Christianity tends manifestly to the dissolution of civil government.**"

The case before that court involved a man who had become angry and profane in his language. He had written out and distributed copies of what he had said. The court ruled that what he said and wrote was blasphemy, and they further reasoned, in so many words: "**If you attack Jesus Christ, you have attacked Christianity. If you have attacked Christianity, you have attacked the foundation of the United States. Therefore, an attack on Jesus Christ is equivalent to attacking the United States.**"

Notice that the date on this case was 1811, nearly two decades after the First Amendment was in place.

In 1844 another case came before the Supreme Court which challenged the foundation of America. In *Vidal v. Girard's Executors*, officials of a school in Philadelphia declared that they were going to teach their students morality, but that they did not need the Word of God to do so.

Notice what the Court told that school in Philadelphia: "**Why may not the Bible, and especially the New Testament . . . be read and taught as a divine revelation in the [school]—its general precepts expounded . . . and its glorious principles of morality inculcated? . . . Where can the purest principles of morality be learned so clearly and so perfectly as from the New Testament?**"

The Supreme Court's ruling on a case in 1892 included the following comments: **"Our laws and our institutions must necessarily be based upon and embody the teachings of the Redeemer of mankind. It is impossible that it should be otherwise. To this extent, our civilization and our institutions are emphatically Christian."**

The Court gave eighty-seven different historical precedents from which they drew the above conclusion, and then they stated: **"There is no dissonance in these declarations. There is a universal language pervading them all. . . . They affirm and reaffirm that this is a religious nation. . . . These and many other matters which might be noticed add a volume of unofficial declarations to the mass of organic utterances that this is a Christian nation."**

How has modern America turned the foundation of its government into sand?

The Founding Fathers of America made a clear distinction between Biblical principles and sectarian teaching. They understood the fact that a nation will not stand unless it is built on the universal truth of Scripture. However, they did not want a state church such as they had had in England.

In modern times, a subtle attack has been waged upon the nation by those who have combined Biblical principles and sectarian teaching under the word *religion*. With this unfortunate union, the catchphrase *separation of church and state* has been promoted.

The false assumption has been made that we must separate from government not only sectarian teaching but also any mention of God or the Bible. The "sand" of modern thinking is the factitious thinking regarding a "wall of separation."

How has the "Wall of Separation" replaced "rock" with "sand"?

The words *separation*, *church*, and *state* are not found in the First Amendment. The First Amendment says simply:

"Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof. . . ."

The background of the First Amendment is very clear as to the intent of Congress. Before they

passed the wording we now have, Congress considered nearly twelve different iterations. Some of the earlier iterations stressed that Congress could make no law establishing one denomination of Christians higher than another denomination and that Congress could make no law respecting one society of Christians more than another society.

The intent was clear: They were saying that they wanted God's principles; however, what they did not want was one denomination running the nation, as had been the case in Great Britain.

This fact was so well understood that even Court rulings several years after the First Amendment made statements such as the following (from *Runkel v. Winemiller*, 1799): **"By our form of government, the Christian religion is the established religion; and all sects and denominations of Christians are placed upon the same equal footing and are equally entitled to protection in their religious liberty."**



Thomas Jefferson
Third U.S. President
1743–1826

Where then did we get the phrase *separation of church and state*? This phrase came from a statement President Thomas Jefferson made to the Danbury Baptist Association of Danbury, Connecticut, in 1802.

In 1801, the Danbury Baptist Association heard a rumor that the Congregationalist denomination would soon be declared the national denomination of America.

The association sent a letter to President Jefferson to express their concern. On January 1, 1802, the President addressed the group of Danbury Baptists. He assured them of the meaning of the First Amendment by stating:

"Believing with you that religion is a matter which lies solely between man and his God; that he owes account to none other for his faith or his worship; that the legislative powers of the Government reach actions only, and not opinions, I contemplate with sovereign reverence that act of the whole American people which declared that their Legislature should 'make no law respecting an establishment of religion or prohibiting the free exercise thereof,' thus building a wall of separation between Church and State."

In 1853, another group came to Congress with a petition to separate Christian principles from government. Their petition for a separation of church and state was referred to the House and Senate Judiciary Committees for review.



Architect of the Capitol

United States Capitol Building, Washington, D.C.

House of Representatives in session

After studying the issue for a year, the House and Senate presented their reports. The House report said, **“Had the people, during the Revolution, had a suspicion of any attempt to war against Christianity, that Revolution would have been strangled in its cradle.”**

“At the time of the adoption of the Constitution and its amendments, the universal sentiment was that Christianity should be encouraged, but not any one sect [denomination]. . . .

“In this age, there is no substitute for Christianity. . . . That was the religion of the founders of the republic, and they expected it to remain the religion of their descendants.”

The Judiciary Committee later declared, **“The great, the vital, and conservative element in our system [the thing that holds our system together] is the belief of our people in the pure doctrines and divine truths of the Gospel of Jesus Christ.”**

The Committee thus concluded that in no way would there be a separation, because Christianity is what has made the nation so successful. Christianity has been its foundation, its base, and its root.

In present-day America, the only part of Thomas Jefferson’s speech which is quoted is the first half of his definition of the First Amendment—that the First Amendment has built a wall of separation. The second half of his definition, that the First Amendment was to protect the church from the government and to make sure that Christian principles will always remain in the government, is not being mentioned.

Until 1947, the Supreme Court used Thomas Jefferson’s speech to make sure Christian principles remained a part of government. In *Everson v. Board of Education*, the Court said, **“The First Amendment has erected a wall between church and state. That wall must be kept high and impenetrable.”**

For the first time in the Court’s history, it used only the first eight words from Thomas Jefferson’s speech. Always before, the First Amendment had been used to protect the church from the government, but now the Court adopted a new philosophy that the purpose of the First Amendment is to protect the government from the church.

Why would the Court misuse Jefferson’s words in this way? Dr. William James, called “the father of modern psychology”—and a strong opponent of religious principles in government—perhaps explained the Court’s new strategy. He said, “There is nothing so absurd but [that] if you repeat it often enough, people will believe it.”

This is the tack that the Court began to take after 1947. They began to talk about separation, stating that separation of church and state was the great intent of the First Amendment. They did not quote any of the Founding Fathers but simply said that this is what the Founding Fathers wanted.

In the 1958 case called *Baer v. Kolmorgen*, one of the judges gave a rather prophetic warning in words to this effect: **“If this court doesn’t stop talking about the separation of church and state, someone is going to think it is part of the Constitution.”**

Because of the way God designed law, there will always be someone’s religion in government. The Supreme Court’s definition of *religion* is “whatever you believe with all your heart, whatever affects the way you act, whatever you believe so strongly that it changes the way you act.”

On that basis the Court ruled in *Torcaso v. Watkins* in 1963 that secular humanism is a legitimate religion equivalent to Christianity and protected by law. Humanism is simply a religion which says God has no place in our philosophy. Humanism is based on man, not on God.

Atheism, having no belief in God, was also defined by the courts as a religion. In 1977 in *Ther-iault v. Silber* and *Malnak v. Yogi*, the courts ruled that atheism is a religion protected by law.

In recent years there have also been rulings which have declared satanic groups as legal religions equivalent to Christianity under the First Amendment. People who give contributions to these satanic groups now receive the same tax deductions as people who give money to Christian churches.

In the 1962 *Engel v. Vitale* decision, for the first time in America's history, the Court ruled that there must be a separation of Christian principles from education and from government. That was the case which removed school prayer.

The whole issue was over the following twenty-two-word prayer: "Almighty God, we acknowledge our dependence upon Thee, and we beg Thy blessings over us, our parents, our teachers, and our country."

In 1892 the Court used eighty-seven precedents to say that America was to be a Christian nation built around the teachings of Jesus Christ. In this 1962 case, the Court gave no precedents. It quoted no previous legal cases. It gave no historical incidents. It simply made an announcement stating, in essence, "We will not have prayer in school anymore because it violates the Constitution."

By June 17, 1963, the Court completely removed prayer, Bible reading, religious classes, and religious instruction from the schools. These decisions resulted from the *Abington v. Schempp* and *Murray v. Curlett* cases.

How did the Court in 1963 justify removing the Bible from the school? In *Abington v. Schempp*, the Court gave this explanation: ". . . **If portions of the New Testament were read without explanation, they could be, and [have] been, psychologically harmful to the child.**"

What a shocking statement! The Bible must be removed from schools because it causes psychological damage to children? Yet the Court gave no historical or legal base for their decision.

The Court went on to say that at that time only 3 percent of the nation professed no belief in

religion or in God. That means that although 97 percent of the nation believed in God, the Bible, and prayer, the Court decided to side with the 3 percent against the 97 percent.

When the Court says that an idea or practice is unconstitutional, they are saying that our Founding Fathers would have opposed it.



Thomas Givens Institute of American History and Art, Tulsa, Oklahoma
James Madison
Chief Architect
of the Constitution;
Fourth U.S. President
1751-1836

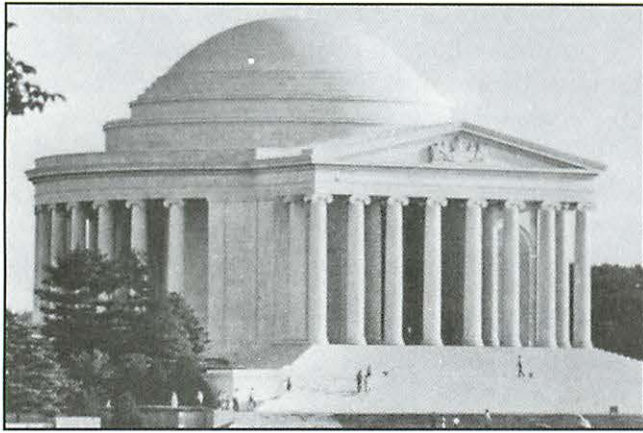
Yet James Madison, the chief architect of the United States Constitution, had said: "**We have staked the whole future of American civilization, not on the power of government, far from it. We have staked the future of all of our political institutions upon the capacity of each and all of us to govern ourselves . . . according to the Ten Commandments of God.**"

Thus, James Madison made it clear that the future of America is not in the Constitution; it is in hearing and doing the laws of God. If we will not hear and do God's Word, the Constitution will not work.

Does a nation answer to God? Scripture clearly teaches that it does. The Founding Fathers understood this as well. George Mason, Virginia delegate to the Constitutional Convention, once explained this concept: ". . . **As nations cannot be rewarded or punished in the next world, they must be in this. By an inevitable chain of causes and effects, Providence punishes national sins by national calamities.**"

The Founding Fathers firmly believed that the nation would be dealt with on the basis of the stands it takes, because a nation has no other time to answer to God.

In his most famous speech, Benjamin Franklin reminded the delegates to the Constitutional Convention that the nation needs God to be her Friend, not her Enemy. "**Do we imagine we no longer need His assistance? . . . The longer I live, the more convincing proofs I see of this truth: that God governs in the affairs of men. And if a sparrow cannot fall to the ground without His notice, is it probable that an empire can rise without His aid?**"

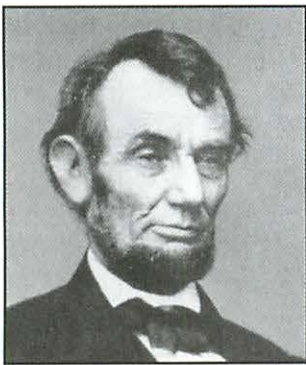


Abbie Rowe, National Park Service

Jefferson Memorial

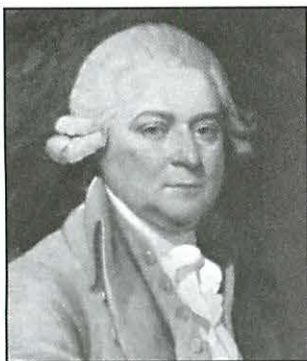
Engraved on a wall inside the Jefferson Memorial is Thomas Jefferson's statement: **"Indeed, I tremble for my country when I reflect that God is just, and that His justice cannot sleep forever."**

One hundred years after Jefferson made this statement, President Lincoln, during the Civil War, overheard someone say that he hoped God was on the Union side.



Matthew Brady, Library of Congress

Abraham Lincoln
Sixteenth U.S. President
1809-1865



Courtesy of the Boston Athenaeum

John Adams
Second U.S. President
1735-1826

Lincoln replied, **"Sir, I am not at all concerned about that, for I know that the Lord is always on the side of the right. But it is my constant anxiety and prayer that I and this nation should be on the Lord's side."**

America's Founding Fathers understood that as a nation they needed to take stands which lined up with what God wanted so that God's blessings would be on the nation and the nation would not fall.

As the first President of the United States concluded, **"Reason and experience both forbid us to expect that national morality can prevail in exclusion of religious principle."**

John Adams, the second President of the

United States, stated: **"We have no government armed with power capable of contending with human passions unbridled by morality and religion. . . . Our Constitution was made only for a moral and religious people. It is wholly inadequate to the government of any other."**

This is an amazing conclusion and has proven to be accurate by what has happened to America since the nation has rejected the Word of God.

The United States has the highest violent crime rate in the world, the highest divorce rate in the world, the highest teenage-pregnancy rate in the Western world, the highest rate of voluntary abortions in the world, the highest rate of illegal drug use in the world, and the highest illiteracy rate in the industrial world.



Dictionary of American Portraits

Benjamin Franklin
Statesman; Philosopher
1706-1790

Benjamin Franklin served as Ambassador to England and later as Commissioner to France. He acknowledged the importance of Biblical principles in a society when he said, **"Whoever will introduce into public affairs the principles of . . . Christianity will change the face of the world."**

PROJECT

Understand the importance of the following statement: "Our nation was founded on Biblical principles, not on sectarian teaching." Explain how blurring this distinction has turned the United States from the solid foundation of Scripture to the shifting sands of humanistic philosophies.

The most quoted book of the Founding Fathers was Deuteronomy. Read Deuteronomy 5 and 28 to see why the nation which follows God's ways will be blessed and the nation which rejects God's ways will be judged. List the types of judgment, and notice how the final judgment is the erosion of the family.

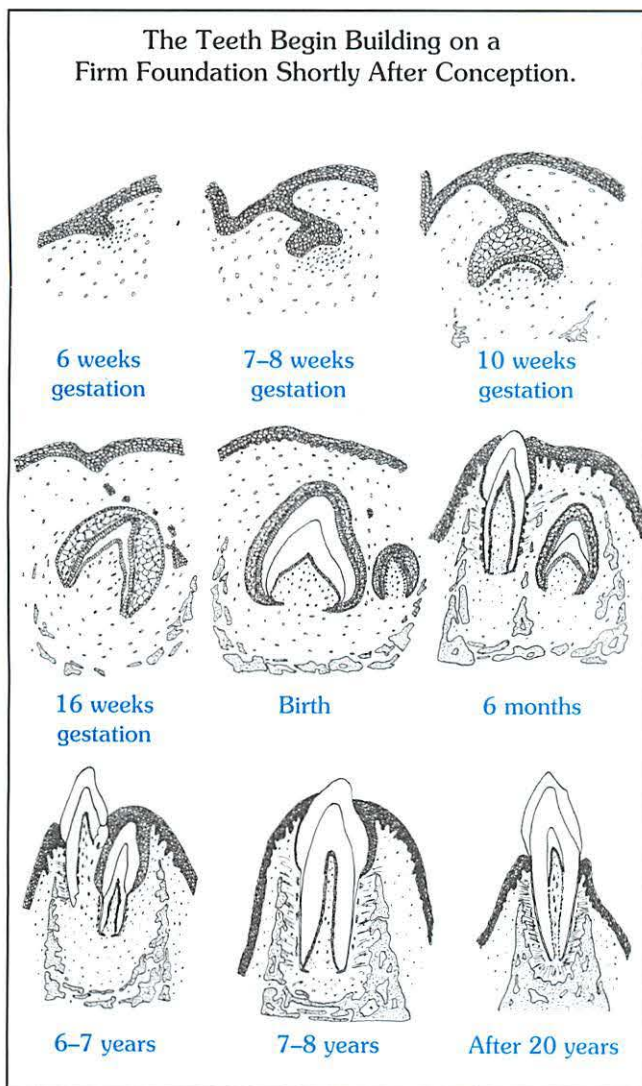
Look for an article or editorial which refers to the "separation of church and state," and write a letter to the editor. Wisely, clearly, and graciously state the inaccuracy of the presuppositions of the article.

Date completed _____ Evaluation _____



MEDICINE RESOURCE

HOW DOES PERIODONTAL DISEASE ILLUSTRATE THE CHARACTERISTICS OF AN ERODING FOUNDATION?



Individual teeth are identifiable as early as six weeks after conception. Deciduous teeth (baby teeth) begin erupting through the gums at about six months after birth.

As permanent teeth develop, they gradually replace the deciduous teeth. However, if uncared for, permanent teeth may fall victim to periodontal disease, which will destroy their foundations, causing the teeth to loosen and fall out.

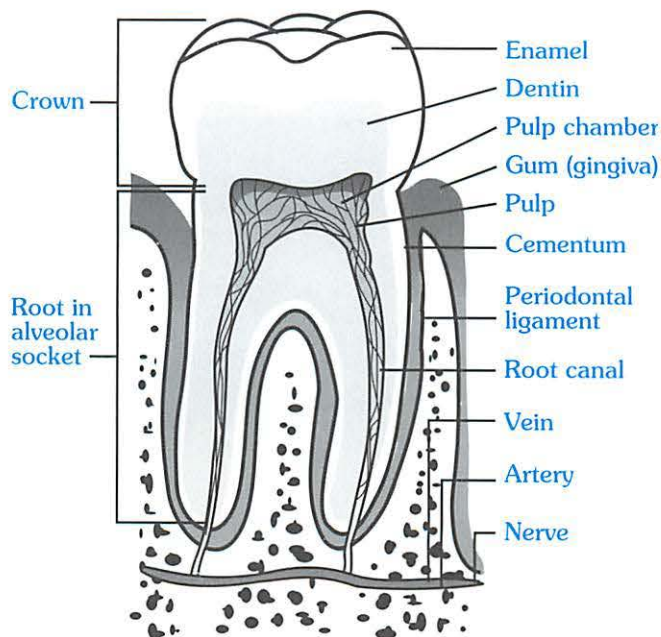
Teeth are the hardest members of the body. They are stronger than bone, and they are able to withstand pressure in excess of two hundred pounds per square inch.

A tooth's incredible strength is derived partly from prism-shaped crystals that make up its outer coating of enamel. Each prism runs the entire thickness of the enamel, growing larger as it extends toward the surface of the tooth. Even though the prisms are microscopic, they are large in comparison to other crystals.

However, the real strength of a tooth lies in its foundation. Surrounding the roots of each tooth is a bone-like coating known as *cementum*. Cementum is made up of coarse bundles of collagen fibers (similar to that of bone) which are intertwined with non-elastic ligaments called *periodontal ligaments*.

Within these periodontal ligaments are individual fibers called *Sharpey's fibers*. One end of the fiber is wrapped around the coarse fibers in the cementum, and the other end is anchored around the bony tissue that makes up the surrounding jaw bone (*alveolar socket*). These fibers literally tie a tooth to its foundation.

PARTS OF A TOOTH



Periodontal disease attacks vulnerable tissues such as the gingiva (gum), cementum, periodontal ligaments, and the alveolar bone.

Because the fibers are attached somewhat lower on the root than they are to the surrounding bone, a tooth is slung in its socket somewhat like a hammock. However, instead of just two points of attachment as with a hammock, the teeth have millions of attachments running in every direction, supporting the teeth from every side.

Although Sharpey's fibers are not elastic, God designed them to "give" with pressure. Thus, they straighten under stress and allow the teeth freedom to move rather than break while in the process of chewing.

Learn how periodontal disease attacks the structures that secure teeth to their foundation.

1 ***Periodontal disease threatens everyone's teeth.***

Periodontal disease is the major cause of tooth loss after the age of forty. The potential for this disease is present in everyone's mouth to one extent or another, from the moment the teeth erupt through the gums until the time of death.

Studies show that 80 percent of men and women over age forty have measurable breaches between their teeth and the foundations that anchor them in place. As many as 15 percent of those between the ages of sixty and sixty-four have significant loss (six millimeters or more) of their tooth attachments through periodontal disease.



While periodontal disease can strike at almost any age, it is most likely to begin after age forty. If periodontal disease starts earlier than forty, it often progresses quite rapidly and does considerable damage.

2 ***Periodontal disease produces painful symptoms that disguise root problems.***

Periodontal disease was at one time known as *pyorrhea*. The word *pyorrhea* is a combination of two Greek terms: *pyo*, meaning "pus," and *rhoia*, meaning "flow." At least 50 percent of American adults are affected with *pyorrhea*.

The term *periodontal disease* actually encompasses a number of related diseases that affect the gums, periodontal ligaments, and the supporting bone.

Even the ancient writings of Egyptian and Chinese scholars describe the afflictions of periodontal disease. These writings explain in detail the formation of pus-filled pockets, profuse bleeding, bad breath, painful swelling, and the loss of teeth associated with the disease.

Today *pyorrhea* is referred to technically as *gingivitis*. *Gingivitis* is the earliest sign of periodontal disease and usually begins with changes in the color and texture of the gums. The gums, called *gingivae*, swell slightly and start to separate from the teeth.

This separation, however small, exposes the cementum and periodontal ligaments to bacteria in the mouth. Thus, the recurring inflammation of the *gingivae* threatens the teeth's attachments to their foundation.

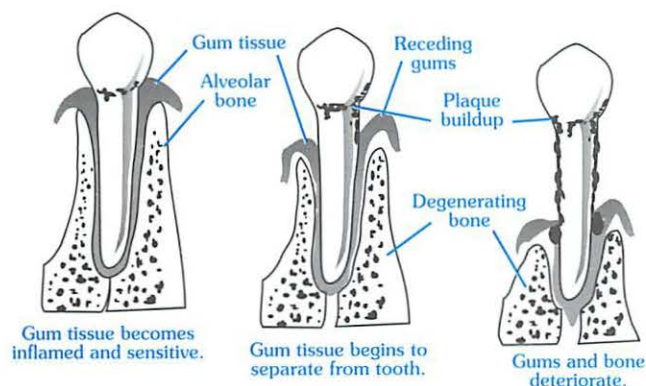
As periodontal disease progresses, the gums become hypersensitive (overly sensitive) and bleed profusely at the slightest irritation, such as brushing and flossing the teeth.

Unfortunately the painful symptoms often discourage a person from brushing thoroughly, which would help to keep the infection under control. Thus, the decay worsens.

The bacteria then spread to the teeth's roots. Once *gingivitis* extends into the periodontal ligament and alveolar bone, the periodontal disease is called *periodontitis*.

In some cases, the condition progresses to *acute necrotizing ulcerated gingivitis* (ANUG), an infection so serious that a dentist must reduce the bleeding before any treatment can begin. Otherwise the bleeding is so profuse that the teeth cannot even be seen to be cleaned.

3 Periodontal disease spreads through hidden pockets of impurity.



As periodontal disease advances, it continues to separate the gingivae from the cementum and detaches the cementum from the bone which anchors the tooth. By destroying the periodontal ligaments, the decay separates the tooth from its foundation.

As a tooth gradually separates from its foundation, hidden pockets form beneath the gums. These *periodontal pockets*, as they are called, are the perfect environment for more bacteria to accumulate and multiply. The pockets collect the remnants of decaying food particles and are usually so difficult to reach that only a dentist can cleanse them.

While gingivitis is painful and bloody, it is periodontitis and the hidden pockets it produces that destroy the surrounding tissue, including the the gingiva, the periodontal ligaments, and the alveolar bone itself. As more and more separation takes place, the periodontal pockets become larger and larger.

Interestingly, although one tooth may begin to loosen, adjacent teeth may remain unaffected. Likewise, some people with deep-seated periodontal disease have deceptively healthy gums on the surface. The first symptoms in such cases are loosening teeth.

Dentists have known for more than a hundred years that periodontal disease is the result of bacteria, sugar, and food particles (plaque) that accumulate on the surface of the teeth. They have also observed that in some instances, rather large amounts of plaque were built up without any subsequent destruction of periodontal tissue.

Researchers have recently demonstrated that of the more than 300 kinds of bacteria that normally reside in the mouth, many are beneficial. Only a few are responsible for periodontal disease.



Courtesy of R.J. Payton

A photomicrograph (magnification 150) of the beginning of a periodontal pocket.

Adult periodontal disease is associated with the following bacteria: *Bacteroides gingivitis*, *B. intermedius*, *B. forsythus*, *Actinobacillus actinomycetem-comitans*, *Hemophilus* species, *Wolinella* species, *Selenomonas sputigena*, *Eikenella corrodens*, and spirochetes (a general term).

Juvenile periodontal disease is notably associated with the single bacteria *Actinobacillus actinomycetem-comitans*.

These bacteria are *anaerobic*. That is to say that they thrive in the absence of oxygen. As the bacteria grow in the protective, oxygen-free environment of periodontal pockets, they produce

harmful toxins, including *histiolytic enzymes*, *endotoxins*, *exotoxins*, *sulfides*, and *ammonia*.

These toxins interfere with normal cell functions, causing healthy tissue to *atrophy* (lose vitality and function). The sulfides and ammonia released by the bacteria in the periodontal pockets may actually kill the cells that make up the periodontium (all tissue surrounding teeth). Other toxins inactivate the body's defense mechanisms, allowing the bacteria to grow unchecked.

The bacterial toxins attack the connective tissue that holds cells together. Many of the bacteria release a substance called *collagenase*—an enzyme which dissolves healthy tissue in a way similar to how salt melts ice. As the periodontal ligaments disintegrate, the tooth loses its grip on its foundation and eventually falls out.

4 *Periodontal disease creates a false sense of wellness by temporary periods of remission.*

While periodontal disease is progressive, it does not worsen at a steady pace—quite the contrary. There are periods of marked development and intervals of remission, followed by other cycles of growth and remission.

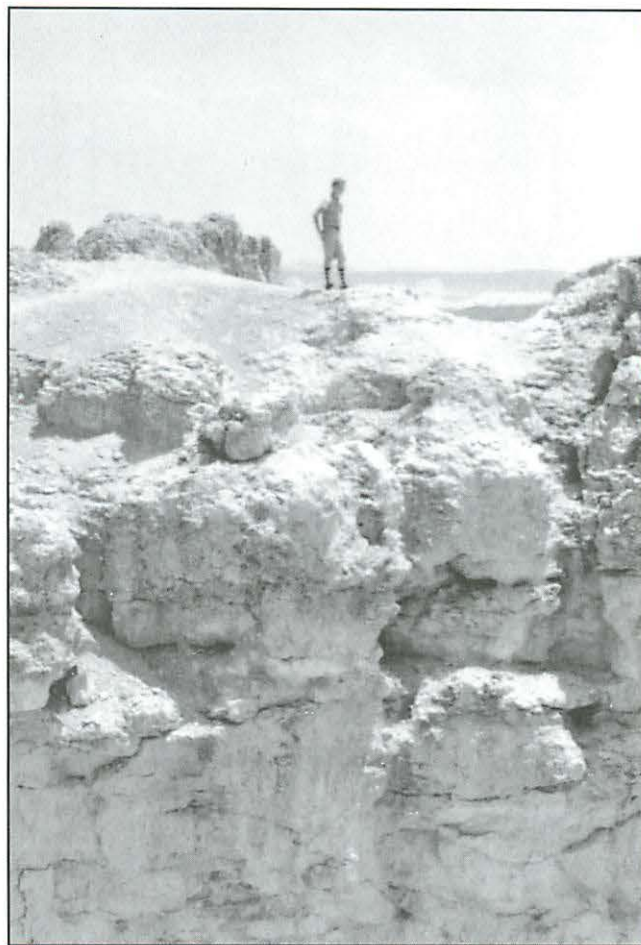
Dentists say that periodontal disease is *episodic*. That is, it is characterized by recurring episodes followed by seasons of relatively few symptoms. The actual detachment of the gingiva and the reabsorption of bone (which usually follows) also proceeds in uneven patterns.

Researchers believe that the bursts of activity range in length from a few days to a few months. The episodes may consist of a single burst of activity with no recurrence, or the episodes may be repeated over and over again.

In some cases, periodontal disease affects only one tooth, leaving adjacent ones unaffected. In another person, periodontal disease may involve the whole mouth.

Unfortunately for many people, the symptoms of periodontal disease subside just about the time these people are ready to go to the dentist. Thinking that the problem has taken care of itself, the victims are lulled into a false sense of security.

Thus, when the symptoms surface again, the person with the disease does not take prompt action. With each recurring episode, however, each affected tooth loses more and more of its grip on its firm foundation.



Union Pacific Museum Collection, image 2 265

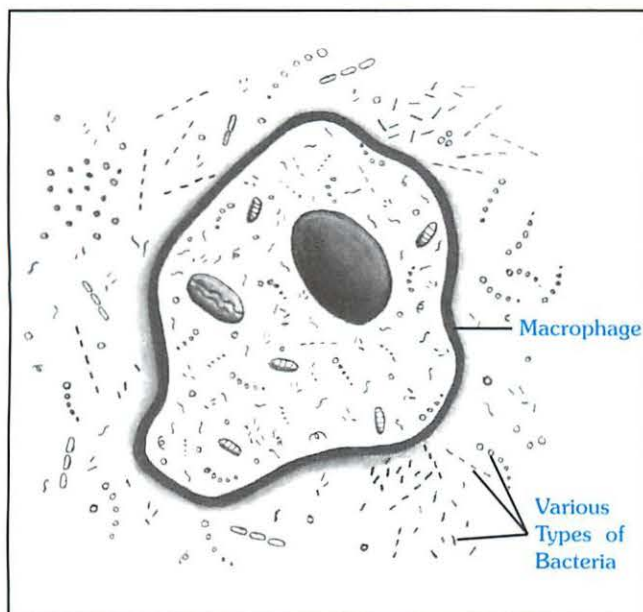
Because the pain of periodontal disease comes and goes, a person is often led into a false sense of security.

5 *Periodontal disease causes the body to fight against itself.*

While bacteria play a role in periodontal disease, it is not clear how much of the damage is caused by the direct presence of unchecked bacteria and how much is caused by a person's reaction to the bacteria.

It is well documented that some bacterial toxins interfere with normal defense mechanisms by "turning off" protective antibodies. Other bacterial by-products poison white blood cells, destroy platelets, and attack bone cells.

However, the greatest threat from bacterial toxins may result from those that cause *macrophages* (the “soldiers” of the immune system) to attack their own kind. Normally macrophages identify and destroy foreign agents. When “blinded” by bacterial toxins, macrophages apparently are unable to distinguish between themselves and the enemy. Macrophages then attack and destroy friendly tissue instead of the disease organisms.



Normally macrophages collect and destroy foreign bacteria. However, certain bacteria are capable of turning macrophages against themselves. When this happens, the body is not only defenseless, but actually self-destructs.

Bacterial toxins also alter the functions of *fibroblasts*. Fibroblasts produce *collagen fibers*, which are the building blocks required for strong Sharpey's fibers. Without a supply of fresh collagen, the body is unable to repair infected tissue.

Finally, bacterial toxins are known to stimulate the formation of *osteoclasts*. Osteoclasts are cells which break down bone tissue, tearing it apart cell by cell, as a demolition team tears down a building.

Osteoclasts are normally friendly cells that contribute to the development of healthy bone. However, when disrupted by bacterial toxins, the balance tips toward reabsorbing healthy bone tissue. This action erodes the very foundation that holds the teeth in place.

6 Periodontal disease takes full advantage of inherited vulnerability.

Some people are so susceptible to periodontal disease that even if they brush and floss three times a day, they continue to suffer from its influence. In these cases, hereditary factors cause vulnerability to the bacteria in such a way that even a small number of bacteria may lead to a loss of teeth.



Genetic characteristics make some people more susceptible to periodontal disease than others. Those who have inherited vulnerability must guard their teeth and their teeth's foundation very carefully.

“Hereditary factors” are defects in the immune system (antibody and white-blood-cell function). Persons with these defects experience many kinds of illness—including severe forms of periodontal disease. Even slight hereditary immune deficiencies have been linked to advanced periodontitis.

7 Periodontal disease intensifies its attack during times of major change.

Periodontal disease is also associated with hormonal imbalances that accompany major functional changes within the body. For example, individuals are almost universally susceptible during puberty and pregnancy.

The physical stress that occurs during these periods of major change leaves the body vulnerable to opportunistic bacteria that might otherwise be kept in check.

Those who take medications that reduce salivary flow, such as antidepressants and antihistamines, frequently experience painful gingivitis. Phenytoin (an anticonvulsant drug) may reduce the flow of saliva, drying out the mouth and increasing the likelihood of periodontal disease.

Likewise, numerous medical conditions have been associated with advanced periodontal disease, such as lazy leukocyte syndrome, cyclic neutropenia, Chediak-Higashi syndrome, epilepsy, diabetes, Down's syndrome, Crohn's disease, various forms of cancer, and AIDS.



©Jim Whisner

Bringing new life into the world is a time of major change.

Times of physical and spiritual maturity are also times of great change.

Satan often capitalizes on these times of change to intensify his attack.

In some cases, especially those occurring between puberty and age thirty, periodontal disease may progress very rapidly. Mild gingivitis progresses to advanced periodontitis in just a few months. In cases involving the AIDS virus, periodontal disease destroys tissue so rapidly that teeth may loosen and fall out in less than three months.

8 **Periodontal disease cannot be detected through self-examination.**

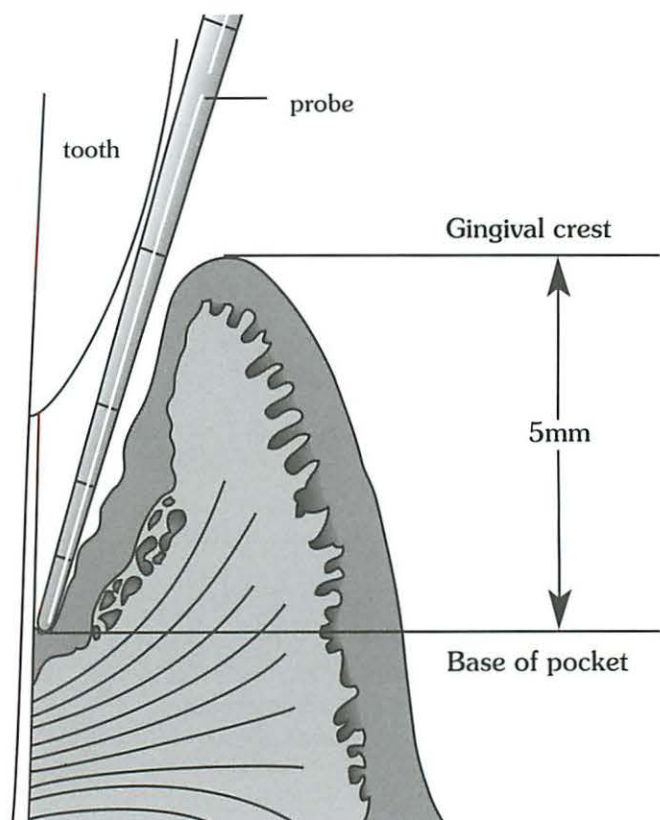
Accurate self-examination for periodontal disease is not possible. Severe gingivitis does not necessarily indicate that underlying structures are being destroyed. Likewise, healthy-appearing gums may disguise considerable loss of the periodontal ligaments.

A professional clinical exam usually involves a dentist, oral hygienist, or periodontist who uses a special probe.

The probe is a small instrument with a blunt end. It is marked in millimeters with color-coded stripes to indicate the depth of its penetration. By gently inserting the probe between the gingiva and tooth until it meets resistance, a dental hygienist can measure how far a tooth has separated from its foundation.

Penetration of **less than three millimeters** indicates healthy tissue. However, penetration of between three and five millimeters indicates the presence of periodontal pockets. A separation of greater than five millimeters suggests advanced periodontitis. In these advanced cases, surgery may be required to correct the problem.

When the probe is inserted between the tooth and gum, it reveals the profuse bleeding that is often associated with gingivitis. Bleeding indicates the presence of inflammation and irritation; healthy tissue does not bleed when probed.



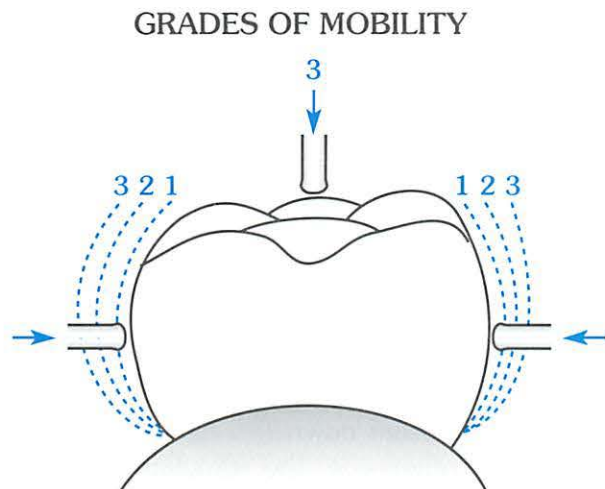
A periodontal probe measures the degree of separation between a tooth and its foundation.

In some cases, a hygienist can detect bone that has receded past a tooth's *furcation*. Furcation is the point at which the two roots emerge from the base of a tooth. If a probe slips between the roots, advanced periodontal disease is likely.

During diagnosis, the examiner may use the handle of the probe to check a tooth's *mobility*. The degree to which a tooth moves in its socket is an indication of how much the cementum and periodontal ligaments have been separated.

Finally, an X ray may be necessary to confirm and measure the actual extent of bone loss.

9 Periodontal disease requires complete removal of infected tissue.



Periodontists check the looseness of a tooth to help determine the degree of its loss of attachment.

Superficial treatment of surface problems is not sufficient to arrest the progress of periodontal disease. All infected tissue must be removed, regardless of how deeply it lies. In cases with less than five millimeters of pocketing, a clinician uses a specialized scraper (curette) to remove infected debris below the gum line.

Periodontists call these processes *scaling* and *root planing*. They remove any calcified plaque, known as *calculus*, and any infected tissue, including the dead tissue, that sloughs off and becomes trapped in the periodontal pockets.

Clinicians then use a disinfectant containing 0.12 percent chlorhexidine gluconate, known as Peridex™. Peridex™ must be administered below the gum line into the base of the pocket in order to be effective.

Normally a periodontist treats one-fourth of the mouth at a time. Each treatment requires about an hour. An anesthetic helps to alleviate any discomfort.

Periodontal pockets deeper than five millimeters require surgery to give access to the pockets. Periodontists use a scalpel to lay back tissue so they can scrape roots clean. Surgery is also useful when bone craters are present. If not

corrected, the craters continue to collect infected tissue, allowing bacteria to multiply, fester, and create deeper pockets.

Another goal of periodontal surgery is to restore a smooth, favorable gingival contour around the teeth. When the gingivae are loose (*hyperplastic gingivae*) or pocked with holes (*gingiva cratering*), a patient has great difficulty maintaining adequate plaque control.



Michael and the Dentist, Bernard Will

Periodontal treatment requires diligent attention to every detail of impurity.

Unfortunately there is no evidence that antibiotic therapy alone can arrest periodontal disease. Antibiotic therapy with penicillin and tetracycline is effective only in conjunction with complete removal of infected tissues. In some cases, periodontists have inserted synthetic fibers containing tetracycline into periodontal pockets for a ten-day period.

10 Periodontal disease prevention requires a lifetime of daily "filth" control.

Successful long-term arrest of periodontal disease depends on a daily program of plaque control. The key is the word **daily**. Once the gums become inflamed and pockets begin to develop, there is little a person can do to rid himself of the infection.

Hydrogen peroxide and Listerine™ mouthwash are somewhat effective in preventing the occurrence or return of periodontal disease after it has been treated.

Over-the-counter Peroxyl™, which is flavored hydrogen peroxide in gel or liquid, is also useful. Yet these products are not a substitute for brushing, flossing, and good nutrition, all of which contribute to an overall program of good daily dental hygiene.

• Brushing cares for the surface of the teeth.

Prevention is much easier than correction and is far less expensive. Learning how to brush teeth properly after every meal or snack will go a long way toward preventing periodontal disease as well as cavities.

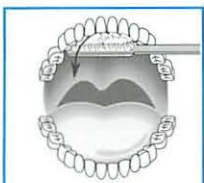
• Flossing cleanses between the teeth.

Dental floss is made up of a series of fine filaments which can be drawn between the teeth.

DAILY "FILTH" CONTROL



Outside surfaces of upper teeth: Use a downward, sweeping motion.



Inside surfaces of upper teeth: Use a downward, sweeping motion.



Outside surfaces of lower teeth: Use an upward, sweeping motion.



Inside surfaces of lower teeth: Use an upward, sweeping motion.



Biting surfaces of premolars and molars: Scrub back and forth.



The tongue: Brush to remove food particles and bacteria.

Prevention is more simple than correction and is far less expensive.

The hard-to-reach spaces between the teeth can hide bits and pieces of food that harbor and feed harmful bacteria. Flossing removes these food particles and breaks up the colonies of plaque-forming bacteria.

The axiom "You don't have to floss all of your teeth—only the ones you want to keep" is quite true in relation to periodontal disease.

• Massaging stimulates circulation to the teeth.

Periodontists often suggest that their patients use a *prophylactic stimulator* to help increase blood circulation in their gums.

A prophylactic stimulator is simply a pointed rubber tip. When it is inserted gently below the gumline and twisted down to one side and then down to the other side, the stimulator increases blood circulation throughout that area of the gums.

Increased blood flow not only removes harmful toxins but also restores damaged tissues and strengthens the gums to resist future infection.

PROJECT

Match the following aspects of periodontal disease to their spiritual counterparts, and work out as many analogies as you can from Scripture.

- | | |
|----------------------|---|
| 1. Gums | <input type="checkbox"/> Belief |
| 2. Teeth | <input type="checkbox"/> Truth |
| 3. Plaque | <input type="checkbox"/> Sin |
| 4. Cementum | <input type="checkbox"/> Full armor |
| 5. Roots | <input type="checkbox"/> Carnality |
| 6. Bone | <input type="checkbox"/> God's Word |
| 7. Blood | <input type="checkbox"/> Christians |
| 8. Enamel | <input type="checkbox"/> Accountability |
| 9. Periodontal probe | <input type="checkbox"/> Meditation |
| 10. Bacteria | <input type="checkbox"/> Church |

Date completed _____ Evaluation _____