Scientific Creationism

An Introduction

Introduction

* Scientific Creationism - most "scientists" today dismiss the study of the creation from the perspective of the existence of a Creator as nonsensical, ignorant and something best left in the realm of myth. *

This class is intended to present information for the purpose of equipping the saints to make a logical, reasoned, scientific defense of the Biblical view of Creation. In a society growing increasingly skeptical of Biblical precepts it is important that we, as Ambassadors of Christ, be able to adequately defend the Biblical teachings concerning Creation. As with most things, we must begin by breaking down the dogmas of science and theology under which people live and this is where the information I will present plays a major role. The ability to present reliable scientific evidence supporting your faith and the creationistic teachings of the Bible is amazingly powerful when engaged in a discussion with a lost and curious soul. * This class will serve primarily as an introduction to a few of the scientific approaches used to explain the physical creation and it origins. This is not intended to be comprehensive – merely an introduction.

*There are five major sections that we will cover in some degree: **Cosmology**, the **Origins of Life**, **Dinosaurs and Man**, the **Fossil Record** and finally, the **Hydroplate Theory**. The material presented throughout this class is widely available and is not of my own creation or discovery. Much of the information has come from several sources – all of which are noted in the printed bibliography.

To facilitate a truly beneficial and legitimate discussion of scientific evidence on any subject, one must have a basic understanding * of the "Scientific Method" or the process by which scientists, collectively and over time, endeavor to construct an accurate (that is, reliable, consistent and non-arbitrary) representation of the world. *

The scientific method has four steps:*

1. Observation and description of a phenomenon or group of phenomena. *
2. Formulation of an hypothesis to explain the phenomena. *
3. Experimentation to demonstrate the truth or falseness of the hypothesis. *
4. Formulation of a conclusion that validates or modifies the hypothesis. *

If the experiments bear out the hypothesis it may come to be regarded as a theory or law of nature. If the experiments do not bear out the hypothesis, it must be rejected or modified. * This will inevitably bring the researcher/observer back to step one. What is key in the description of the scientific method just given is the predictive power of the hypothesis or theory, as tested by experiment. It is often said in science that theories can never be proved, only disproved. There is always the possibility that a new observation or a new experiment will conflict with a long-standing theory.

I bring up the scientific method because while it is the most basic method of scientific discovery it is not always applied as it should be when new observations and hypotheses are presented that challenge current theories. This is due to many reasons, some blatantly arrogant and others are more subtly ignorant. So when your current understandings are challenged through the course of this study, take some time to do some investigation and experimentation of your own. *

Another important nuance in research is understanding the "observer effect" - also called "observer bias" or the "observer-expectancy effect". This phenomenon can be defined in this way: "*The observer-expectancy effect, in science, is a cognitive bias that occurs when a researcher expects a given result and therefore unconsciously manipulates an experiment or misinterprets data in order to find the expected result.*" * This basically means that in any given situation or observance of some phenomena, the person who is observing said phenomena will have preconceived notions or expectations about the outcome and will therefore notice things that support their subconscious preconceived notion and tend not to notice the things that could refute the desired result. So as Charles Darwin aptly noted, "The observer is always biased".

This observer-expectancy effect is important to understand when studying the subject of origins of creation – especially when the subjects of evolution and the origin of life are discussed. As many of you saw in the "Icons of Evolution" video – the data refuting evolution is simply ignored or dismissed by the "scientific community" as religiously-influenced ignorance. Yet, as you will see throughout our discussion, the evidence, when viewed objectively with an open mind, exposes the junk science and preconceived notions of evolution and many other long-held beliefs.

To continue our discussion, let us examine the Universe around us and attempt to explain its existence.

I) Cosmology – Specifically an Examination of the genesis of Physical Creation
An initial examination of the most universal and most certain law in all of science is necessary.
   A) The Law of Causality (Cause and Effect)
      1) Every Effect needs a Cause and Every Cause Needs an Effect
         a. Cause first, then effect – never happens the other way around
      2) Every material effect must have an adequate antecedent cause
         a. There must be a sufficient cause to explain an effect
            i. The river did not turn muddy because the frog jumped in
            ii. The book didn't fall off the bookshelf because the fly landed upon it
            iii. An example from the kids would be great here – an "Emmasuism"
      3) Contingent Entities
         a. If an entity cannot account for its own being it is said to be "contingent" because it is dependent upon something outside of itself to explain its existence.

i. The Universe is a contingent entity because it is inadequate to **cause**, or **explain**, its own existence.
~ **This begs the question…**

B) What **caused** the Universe?

1) One of **Three Propositions** can be considered
Prop 1 ~ It is eternal and has always existed
Prop 2~ It is not eternal; it created itself out of nothing
Prop 3 ~ It is not eternal; rather, it was created by something (Someone) anterior and superior to itself.

a. **Proposition 1:** It is eternal and has always existed
i. In June of 2001, Time Magazine announced to the world that astronomers had solved "the biggest mystery in the Cosmos"
(1) June 25th, 2001 cover of Time Magazine
ii. What, pray tell, was "the biggest mystery in the Cosmos"?
(1) How it would end!
(a) With this "answer" comes two important implications
(i) That the WILL end
(ii) That it had a BEGINNING
iii. The *Time* magazine article was based upon the book *God and the Astronomers*, by Dr. Robert Jastrow, and while the article offered an answer as to how the Universe would <u>end</u>, it did not offer an explanation of how it <u>began</u>.
(1) While Dr. Jastrow and his collegues do not now ***<u>how</u>*** it began, they do know that the universe ***<u>had</u>*** a definite beginning and ***<u>will have</u>*** a definite end.
(a) This "discovery" brings up many questions uncomfortable to atheists, agnostics, evolutionists and the like.
(2) In his book, *God and the Astronomers*, Jastrow offers three reasons why attempts to prove an eternal Universe were inadequate at best and miserable failures at worst:
(a) The motion of galaxies
(i) Most galaxies are spinning in the same direction
(ii) Most galaxies are moving away from our galaxy
(b) The life cycle of stars
(i) Science has observed and continues to observe the "birth and death" of stars
- This means that we KNOW what it takes to create stars and that the process offers no sufficient evidence of an eternal universe
(c) The laws of thermodynamics
(i) The First Law (also called Conservation) states: *Energy can be changed from one form to another, but it cannot be created or destroyed. The total amount of energy and matter in the Universe remains constant, merely changing from one form to another*.

- This negates the theory of an eternal universe.

(ii) The Second Law (also called Entropy) states: *"In all energy exchanges, if no energy enters or leaves the system, the potential energy of the state will always be less than that of the initial state."* Entropy is a measure of disorder and entropy wins when organisms cease to take in energy and die.

- For example: A watchspring-driven watch will run until the potential energy in the spring is converted, and not again until energy is reapplied to the spring to rewind it.
- So if the Universe can be viewed as a gigantic wound clock, the Second Law requires that it had a beginning and also that it at one time contained MORE order and MORE energy. Which cannot be explained within the scope of the Universe itself.

- **~ important to note that each of the three arguments against an eternal universe are OBSERVABLE and all point to the conclusion that the Universe had a beginning**

iv. **The conclusion of our consideration of Proposition 1 – THE UNIVERSE IS NOT ETERNAL**

(1) Evolutionists heavily favor the concept of an eternal universe because the concept of a universe with a beginning and an end presents some bothersome questions because it implies a creation and therefore out of necessity a Creator.

(2) The universe is not eternal because eternal things do not wind down

(3) Steven Hawking, Great Britain's most eminent physicist, aptly concluded this same discussion in this manner, *"The odds against a universe like ours emerging out of something like the Big Bang are enormous. I think there are clearly religious implications".* ~ I agree!

b. **Proposition 2:** It is not eternal; it created itself out of nothing

i. The February 2001 issue of *Scientific American* magazine in an article titled, "The Big Bang: Wit or Wisdom?" issued the following statement: "We no longer see a big bang as a direct solution.

ii. Seven years earlier in the same magazine, Andrei Linde also wrote about the evidence supporting a Big Bang explanation for the creation of the cosmos and said that the scientific community "found many to be highly suspicious".

(1) Linde's comments were not met with jaw-dropped colleagues, mobs of physicists bent on destruction or the angry mob that would meet someone of the creationist perspective if they made such a statement.

(a) Why? Because cosmologists had long known that the Big Bang theory was "scientifically brain dead." They just weren't very excited about admitting such things publicly.

(2) Not surprisingly, this "revelation" did not put an end to its teaching in the public realm – instead, the big bang model was "tweaked" so as to possibly revive it.

(3) This tweaking gave rise to the "Inflationary Model" – **which is the idea of a self-created universe!**

(a) This idea is not a new one and George Davis, a prominent physicist of the past generation, explained why this idea was never seriously considered when he wrote: "No material thing can create itself." And "such a statement cannot be logically attached on the basis of any knowledge available to us."

(i) This was written in 1958, but has been reintroduced in our modern era!

(ii) Evolutionists are now actually suggesting that something came from nothing – that the Universe actually created itself from nothing!

(iii) G.K. Chesterton, after hearing in 1986 about such a nonsensical idea being considered by the cosmological community wrote: *"It is absurd for the evolutionist to complain that it is unthinkable for an admittedly unthinkable God to make everything out of nothing, and then pretend that it is **more** thinkable that nothing should turn itself into everything."*

(iv) Yet, some in the evolutionary camp were ready and willing to defend it. One such defender was scientist Victor J Stenger, professor of physics at the University of Hawaii, writing in the 1987 *Scientific American* said…

- "…the universe is probably the result of a random quantum fluctuation in a spaceless, timeless void…So what had to happen to start the universe was the formation of an empty bubble of highly curved space-time. How did this bubble form? What *caused* it? Not everything requires a cause. It could have just happened spontaneously as one of the many linear combinations of universes that has the quantum numbers of the void… Much is still in the speculative stage, and **I must admit that there are yet no empirical or observational tests that can be used to test the idea of an accidental origin.**"
- One must dismiss the most universal and most certain law in all of science, the Law of Causality, to accept that something had no cause, as well as dismiss validity of the Scientific Method.

- So, how can nothing take form as a highly curved space-time irregularity in a spaceless, timeless, void? It appears as though "nothing" had special extension and mass!
- Through the years there were many additional tweaks to the Inflationary Model that gave rise to the New Inflationary Model, Chaotic Inflationary Model and the Eternal Inflationary model. These expansions of the original thought were still based upon the same flawed approach as their predecessor – therefore eliminating the need to discuss them further.

iii. **Our conclusion from our study of Proposition 2 – THE UNIVERSE DID NOT CREATE ITSELF OUT OF NOTHING**

(1) Science is based on observation, reproducibility, and empirical data. But when pressed for the empirical data that document the claim that the Universe created itself from nothing, evolutionists are forced to admit as Dr. Stenger did, that "…there are yet no empirical or observational tests that can be used to test the idea..."

(2) Ralph Esting summarized the problem quite well when he stated: *"There is no evidence so far, that the entire universe, observable and unobservable, emerged from a state of absolute Nothingness."* ~ Again, we agree!

c. Proposition 3: The Universe is not eternal; rather, it was created by something (Someone) anterior and superior to itself.

i. The examination of our first two propositions to explain the existence of the Universe have shown two things:

(1) The universe is NOT Eternal.

(a) It either had a beginning or no beginning

(i) All available Evidence suggests that it did have a beginning

(ii) If it had a beginning, it either had a cause or did not have a cause.

(iii) One thing we know, it is correct both scientifically and philosophically to acknowledge that the universe had a sufficient antecedent cause because the universe is an effect and every effect requires a cause.

ii. The Universe did NOT create itself out of nothing. This implies that there was a <u>Superior</u> and <u>Anterior</u> Creator of the Universe.

(1) Or put another way; to be consistent logically, we have to say that the assembled Universe did not contain the intelligence to assemble itself.

(2) Being a caused effect implies 3 things about the Creator:

(a) The Creator existed before it – an Eternal, Uncaused First Cause

(b) The Creator is superior to the Universe – the created cannot be superior to the creator

(c) The Creator is of a different nature that that which it created
(i) The universe is a finite, dependent creation unable to explain itself

iii. **Our conclusion from our study of Proposition 3: The Universe was created by an eternal, superior Creator**

Our examination of the three propositions to explain the cause of the Universe has led us to the obvious conclusion that the Universe was in fact created by the eternal God who is adequate to be the Cause. This now leads us to the next section of our study that will show that the Universe exhibits obvious intentional order for the purpose of sustaining life on our planet. This train of philosophical thought is called ***Teleonomy or Teleology***.

C) Teleology or Teleonomy – The reality of the existence of God can be proven through many different methods. The evidence of His existence can be extrapolated through various avenues because God is the ultimate reality and His "signature" is on everything He created. The Teleological Argument has reference to purpose or design. Thus, the approach suggests that where there is purposeful design, there must be a designer. The deduction being made, of course, is that order, planning, and design in a system are indicative of intelligence, purpose, and specific intent on the part of the originating cause. In logical form, the theist's teleological argument may be presented as follows:

1. If the Universe shows purposeful design, there must have been a designer.
2. The Universe does show purposeful design.
3. Thus, the Universe must have had a designer.

1) The "Watch Argument" Presented by William Paley in the 1800's
   a. If one were to discover a watch lying upon the ground and were to examine it, the inherent design would logically lead you to conclude that there was a watchmaker.
   b. In the same way, the design inherent in the Universe should be enough to force the conclusion that there must be a Great Designer.
2) Immensity of the Universe
   a. Voyager 1 Space Craft – February 14, 1990 and the "Pale Blue Dot" Photo
      i. Taken from 4 billion miles away at 32 degrees above the Earth's elliptical orbit
      ii. The seemingly insignificance of this "Pale Blue Dot" might lead one to believe that due to the immensity of the Universe we are not at all unique – or that the Universe pays no attention to us.
      iii. Carl Sagan wrote the book entitled "Pale Blue Dot" – in which he postulated that we are not significant and that there are "hundreds of thousands" of other planets sustaining complex life forms.
   b. Our Universe is Tremendously Large
      i. Estimated to be as much as 20 billion light years in diameter

(1) A *light year* is the distance light travels in a vacuum in a year (given a constant speed) or 186,000 miles/second
(2) 31,536,000 seconds in a year (60*60*24*365)
(3) A light year is approx 5,865,696,000,000 miles
(4) The estimated diameter of the Universe: 117,313,920,000,000,000,000,000,000,000 miles
(a) 117 octillion, 313 septillion, 920 sextillion

ii. There are an estimated 1 billion galaxies

iii. Even when the Immensity of the Universe is Considered, the Inherent Design of it all is Even More Impressive!

c. What Makes our Earth Special?

i. Factors in Having a Habitable Planet in a Solar / Planetary System are Numerous and Very Complex – but they all operate within three foundational truths:
(1) Basic Laws of Science (all fields) are the same everywhere in the Cosmos
(2) Unchanging Physical Laws Apply Everywhere in the Universe
(3) The Factors Necessary for Life on Earth are the Same Factors Necessary Anywhere Else

ii. There is a very complex set of Factors involved in creating the perfect circumstances for the existence of Life – we will examine 6 of those factors:
(1) Existence of Plentiful Liquid Water
(2) Molten Core and Magnetic Field
(3) Large Moon
(4) Type of Star
(5) Atmosphere
(6) Placement within Our Galaxy

iii. Foundational Element in all Discussions of the Necessary Conditions for Life is *<u>Liquid Water</u>*
(1) The Chemical Properties of Water are Exquisitely Suited for Carbon Based Life
(a) The Existence of Liquid Water on a Planet Hinges Upon It's Distance from the Sun
(i) Too Close to the Sun, water is boiled off
(ii) Too Far Away, water is permanently Frozen
(iii)The Earth exists in the "Goldie Locks" Zone called the "Circumstellar Habitable Zone"
- Not too close to the Sun
- Not too far away from the Sun
- 5% closer and the Earth would suffer the same fate as Venus – with daytime temperatures rising to over 900 degrees Fahrenheit

- 20% further away and Carbon Dioxide clouds would form and Earth would undergo the same cycle of Freezing that Sterilizes Mars

(iv) ***<u>The Earth is in the perfect location for the existence of Liquid Water and the continuation of the Water Cycle as well as having a mild enough climate and gradual seasonal changes to allow for complex life forms</u>***

(2) Molten Core and Magnetic Field
   (a) Without the Magnetic Field, the Earth would be Stripped of the Atmosphere and Lifeless
   (b) Our Magnetic Field Protects the Earth from Damaging Solar Winds comprised of protons and electrons traveling at an extremely high rate of speed.

(3) The Earth's Moon, at ¼ the size of the Earth, helps to regulate the rotation and maintain the perfect 23.5 degree tilt of the earth.
   (a) This also helps to maintain a mild climate and gradual seasonal changes
   (b) The pull of the Moon's gravity circulates the Earth's Oceans ensuring that they remain habitable as well as regulating the day and night temperatures.

(4) The Earth Revolves around a Spectral Type G2 Dwarf Main Sequence Star
   (a) The Sun is like a Giant Nuclear Engine.
      (i) It gives off more energy in a single second than mankind has produced since the Creation.
      (ii) 8 Million Tons of Matter is converted into energy **every single second**!
      (iii) The Sun's Internal Temperature is more than 20 million degrees Celsius.
   (b) It is the Right Size to ensure that the earth will continue to rotate
      (i) If our sun was less massive, as 90% of other Stars in our Solar System, the earth would need to be closer to maintain life.
      (ii) However, with a closer distance, the increased pull of Gravity from the Sun would stop Earth's Rotation
         - One side would be perpetually bombarded by radiation and therefore barren
         - The other side would be perpetually dark and frozen
         - Making the Existence of Complex Life Forms nearly impossible.

(5) The Earth's Atmosphere is designed to allow us to absorb the right amount of radiation to produce complex life.
   (a) One of the outer layers of the Atmosphere called the mesosphere (about 12-18 miles above the earth) contains a

special form of oxygen known as ozone, which filters out most of the ultraviolet rays from the Sun that would be harmful, or fatal, in larger amounts.

(b) The "inner layers" are approximately 1% the size of the earth's diameter and is comprised of the perfect mix of
  (i) 78% Nitrogen
  (ii) 21% Oxygen
  (iii)< 1% Carbon Dioxide
  (iv)Trace amounts of other Gases
  (v) Our Atmosphere is Unique as it allows us to see out.

[The Formula for the probabilities of the factors necessary for creating a planet that can sustain life can be expressed in this manner:

N x fsg x fghz x fcr x
fsp x fchz x Np x fj x
fc x fo x fm x fcp x
fmn x fw x ft x f1 x
fi x fr x flc x flt

One one-thousandth of one one-trillionth chance having a planet such as earth.]

(6) The placement of our solar system within the Galaxy is also essential to the existence of complex life forms.
  (a) The Milky Way Galaxy is a highly flattened, spiral galaxy with a spherical bulge at its center.
  (b) Our solar system exists within the "Galactic Habitable Zone"
    (i) At the center of the Galaxy, the conditions are very dangerous with very High Density stars, super novas (exploding stars) and a giant black hole.
      - Immense radiation at the center.
    (ii) At the outer edge of the Galaxy there isn't enough heavy elements to facilitate the creation of a Terrestrial Planet such as Earth that would be large enough to support life.

iv. Our Conclusion to this section is that the presence of obvious design in the universe allowing for the existence of complex life forms leads us to the logical deduction that there was/is a Creator.
(1) The multitude of Factors Necessary for Complex life to exist are often referred to as "Finely Tuned"
(2) It is equally amazing that the Earth is in the perfect location to allow for Scientific Discovery of the very laws that govern the Universe.
  (a) "The most incomprehensible thing about the Universe is that it is comprehensible." – Albert Einstein

II) **An Examination of the Origins of Life** – *Man, being a conscious and self-aware being, has always sought to know from whence we came. *The Origin of Life on this planet has been the subject of great discussion and debate in every culture in every region since the very creation. *Every culture has had its own ideas about how the Universe and life came to be and many times these cultural beliefs have been at odds with one another. *Despite the differences in opinion, at the core of these beliefs is a desire to understand not just the "how," but the "why." This desire to know our origins and the reason for our existence is rooted in the created's inherit connection to the Creator. *From the ancient Egyptian creator god "Ra," to the Greek god "Gaia," to today's god of "Chance," all cultures have attempted to answer the great cosmic question of our existence and at the same time explain the Creator. With every advancement in technology and science comes new revelations illustrating the awesome complexity and amazing beauty of the creation around us. *All of which continues to lead mankind to an understanding of the Truth of the One True Creator – the One God of the Bible.

A) *Two different, totally opposite explanations for the origin of the Universe and the origin of life in the Universe. *Each of these opposing explanations has, at its core, and entire world view, or philosophy, of origins and destinies, of life and meaning. *One is Evolution and the *other Creation.

B) *Basic Philosophies and Properties of Examination.

1) **Evolution** – The evolution world view involves the following beliefs:
   a. *Everything in the Universe has come into being through random processes without any kind of supernatural involvement
   b. *The origin and development of the Universe (and all life in it) can be explained by time, chance, and *continuing* natural processes.
   c. *All living things have arisen from a single-celled organism that originated from something non-living (such as an amino acid or a protein).
2) ***Creation** – The creation world view is centered around these beliefs:
   a. *The Universe is NOT self-contained
   b. *Everything in the Universe has come into being through the design, purpose, and deliberate acts of a supernatural Creator.
   c. *The processes used to create the Universe are not continuing today
   d. *These processes are responsible for the creation of the Universe, Earth, and all life on earth (including all basic types of plants and animals, as well as humans)
3) ***Two Possibilities** - There are two and only two possibilities concerning origins. One or the other of them must be true and the one that best explains is the better model.
   a. All things either can, or cannot, be explained in terms of ongoing natural processes in a self-contained Universe.
   b. *If they can, then evolution is true.
   c. *If they cannot, then they must be explained by a process of creation.
4) ***Six Definitions of Evolution** – (As defined by Kent Hovind) One <u>is</u> supported by Creation.
   a. *Cosmic Evolution – the origin of time, space, matter. Big Bang.

b. *Chemical Evolution – the origin of higher elements from hydrogen. (This is why there is such angst over the discovery of water on Mars).
c. *Stellar and Planetary Evolution. The origin of stars and planets.
d. *Organic Evolution. Origin of life. (Our examination will focus on this one.)
e. *Macro Evolution. Changing from one kind into another.
f. *Micro Evolution. Variations within kinds (i.e. dogs). Only this one has been observed.

5) ***Organic Evolution** – Before considering the origins of life, we must understand the term "organic evolution." *Organic evolution, as theorized, is a naturally occurring, beneficial change that produces increasing and inheritable complexity and is the mechanism responsible for the origin of life. *Organic evolution is also referred to as *macroevolution* or *vertical evolution*. These terms are interchangeable and will be used as such in this section.
   a. *Basis for Discussion
      i. In order to study the origin of the Universe and specifically Life, we must remember that we cannot speak as first hand observers because *none of us was there. Thus, any scientific *discussion must be based upon certain assumptions, hypotheses, or theories put in place after the fact.
         (1) *An <u>assumption</u> is something taken for granted, and represents a legitimate starting point for an investigation.
         (2) *A <u>hypothesis</u> is merely an educated guess or tentative assumption.
         (3) *A <u>theory</u> is a plausible general principle or set of principles that may be used to explain certain phenomena, and that is supported by at least some documented facts.
         (4) *A <u>fact</u> is defined as "an actual occurrence" or "something that has actual existence."
   b. Many evolutionists claim that evolution has been proven and is therefore a "fact of science"? *Is Organic Evolution a "Fact of Science"?
      i. Evolution cannot be considered a fact because it is based on a number of ***non-provable assumptions**. George Kerkut, an evolutionist from Great Britain, listed seven such assumptions; the first two assumptions were:
         (1) *Spontaneous generation MUST have occurred
         (2) *Spontaneous generation must have occurred ONLY ONCE
            (a) *Spontaneous generation is in direct opposition to ***The Law of Biogenesis** which states that living matter comes from living matter or living matter DOES NOT come from non-living matter. *(STEAK)
               (i) *For Example: In 1668 *Francisco Redi* demonstrated that maggots did not, contrary to Aristotle, arise spontaneously, but from eggs laid by adult flies. Meat covered so that the flies could not reach it was free of maggots, while meat that flies could reach developed them.

(ii) Also did experiments with wheat and dirty rags to produce mice

(b) *Spontaneous generation lies as the heart of evolution and once again, we see the evolutionary model in juxtaposition to proven scientific laws.

(c) *Spontaneous generation has never been observed

(i) *Any attempt to produce living material from non-living material has failed miserably.

- The Miller-Urey experiment (1953, University of Chicago) was able to produce some of the organic components of life, from an atmosphere of methane, ammonia and water vapor (assuming the makeup of earth's early atmosphere). The most basic amino acids were formed in millers test tube but the atmosphere required to make them killed them soon after. (By the way, the makeup of earth's early atmosphere is pure speculation without basis.)

(ii) *Because of the failure to replicate spontaneous generation, evolutionists *simply assume* that it happened.

(d) *Evolutionists claim that spontaneous creation not only happened, but that it happened (conveniently) ONLY ONCE.

(i) *Why this assumption?

- *All of life is composed of a singular genetic code called DNA. Because that code is so extremely complicated, and because it is virtually the same throughout all living things (with only minor variations), evolutionists are forced to conceded that the events that produced it must have occurred just once. To suggest that it could have happened more than once – and that it produce exactly the same code each time – would be ridiculous. No one would believe such – not even evolutionists.

ii. ***Conclusions on the "Factualness" of Organic Evolution**

(1) *The Theory of Organic Evolution is Invalid and therefore <u>cannot</u> be FACT

(a) *There are two serious problems

(i) *Something that is based upon an assumption never can be considered a "fact." At best, any idea based on an assumption forever remains just that – an assumption. It is not possible, logically, to build a concept upon an assumption and then assert that it is a fact. Since spontaneous generation is the basis of all of evolution (got to have life for it to "evolve"), and since spontaneous generation is nothing more than an assumption (it has never been scientifically documented and all available evidence points against it), then evolution cannot be a fact.

(ii) *One time events cannot be studied by using the scientific method and are therefore outside the realm of scientific study and therefore not a plausible explanation for observable phenomena. Science uses the five senses (touch, smell, sight, taste, and hearing) to study those things that are universal, dependable and reproducible. This means that no matter the location, scientists conducting the same experiment, using the same methods, will get the same results – today, tomorrow, next year, or ten years from now. Plus, the results can be repeated over and over again.

- One-time events are neither dependable nor universal and by definition cannot be reproduced.

*[EMPTY SLIDE]

C) What about **Genetic Mutations**?

1) The modern theory of evolution owes its existence in large part to a 19th century Moravian monk named *Gregor Mendel and his research on the hereditary traits of pea plants. * His concepts were originally published in 1865 in a little-known journal and were *"rediscovered" in 1900. *Some who began to study his work thought for the first time that they had the actual mechanism of evolution in their hands – *genetic mutations. Their suggestion was that species arose from genetic mutations and were then integrated into a living system by means of natural selection. With the convergence of these concepts we now have the supposed mechanisms of evolution - ***natural selection <u>and</u> genetic mutation**. *
   a. *In his 1982 book, *The Neck of the Giraffe*, Francis Hitching wrote in this regard:
      *i. *The theory is that a chance favorable mutation gradually spreads through a population of plants or animals by a process of natural selection of the fittest; and over **geological periods of time,** a new species emerges. Genetics provides the mechanism that supports Darwin's original insight.* (p. 34).
   b. *The central theme in the modern theory explaining the mechanics of evolution is that all the effects of evolution can be attributed to the accumulation of small genetic changes (or mutations). Through the years, many evolutionary scientists have taken similar stances and have repeatedly stated that *mutations are the only known source for new genetic variability, and hence, evolution.
   c. *Understand that mutations DO OCCUR and are observable, reproducible facts of science and must be *understood as such from a creationistic perspective. With this in mind, we must now deal with the issue of genetic mutation as it relates to the theory of evolution.
   d. *So, **what, precisely, is a mutation?**

i. *Simply put, a mutation is an error made when cells copy DNA – usually the loss, insertion, or change of a nucleotide in a DNA molecule.

ii. *With this definition in mind, we will discuss the following points:

(1) *Mutations are random.

(2) *Mutations are rare, not common.

(3) *Mutations may be good, bad, or neutral.

(a) *Good mutations are very, very rare.

(b) *Most mutations are harmful.

(4) *Mutations do not result in new genetic information.

2) *Mutations are Random.

a. *Evolutionary geneticist, C.H. Waddington, noted in 1962: "It remains true to say that we know of no other way other than random mutations by which hereditary variation comes into being…"

b. *In 2000, Paul Ehrlich wrote: "A key axiom of modern evolutionary theory is that mutations do not occur in response to the needs of the organism… Mutations are random".

c. *In other words, nature is not *selecting* anything, rather, *random chance* is responsible for errors produced during the duplication of genetic material.*

3) ***Mutations are rare, not common.**

a. *Geneticist Francisco J. Ayala of the University of California put it this way: "It is probably fair to estimate the frequency of a majority of mutations in higher organisms between one in ten thousand and one in a million per gene per generation".

b. *Mutations are a very, very rare occurrence in the natural world – making the probability that mutation is the mechanism of evolutionary change nearly zero.

4) ***Mutations, when they occur, may be good, bad, or neutral.**

a. Theoretically speaking, there are at least three types of mutations: good, bad and neutral.

i. *Obviously, bad mutations that cause damage to the cell (and thereby the entire organism) are of no use to evolutionists.

(1) *Such bad mutations cause diseases such as hemophilia, Duchenne dystrophy, etc.

ii. *Neutral mutations also are of little value to evolutionists because in order for the mutations to be "useful," (in an evolutionary sense) they must undergo additional mutations.*

iii. *Good mutations, or mutations that are helpful to the organism, are the "bread and butter" of upward genetic evolution.

[This begs the question, "How often do good mutations occur?"]

b. ***Good mutations are very, very rare.**

i. Numerous genetic researchers have stated in numerous publications for decades that less than 1% of genetic mutations actually provide a

benefit to the possessor. Instead, research clearly shows that mutations affect the viability and invariably affect it adversely.

ii. *Consider that those animals or plants that ought to show the most good mutations (because of their rapid reproduction) apparently show the least – which is a significant problem for evolutionists.

(1) *i.e., Bacteria – The study of these rapidly reproducing organisms formed a large part of the foundation of genetics and molecular biology. Because of their huge numbers, bacteria produce the highest number of mutants, but despite this occurrence, they exhibit a high fidelity to their species.

(2) *Even with the high rate of mutations, bacteria are still just bacteria and have NEVER produced a more complex, more viable organism as a result of genetic mutations.

(3) *The same is also true of fruit flies. Despite their distinction of being perhaps the most genetically well-known species, show no sign of change from even the remotest times.

(4) *In essence, we are asked to believe that organisms that have been in a period of stasis (i.e., no change) "somehow" provide the proof of evolution.*

(a) *After decades of experimentation, fruit flies retain their basic body plan as fruit flies.

c. ***Most mutations are harmful.**

i. *Of carefully studied mutations, most have been found to be harmful to organisms, and most of the remainder see to have neither positive nor negative effect.

ii. *Mutations that are actually beneficial are extraordinarily rare and involve insignificant changes.

iii. *Also, most mutations are recessive – that is, they will not manifest themselves unless present in <u>both</u> parents.

iv. *Furthermore, while mutations producing minor changes may survive, those causing significant modification are especially detrimental and unlikely to persist.

v. Overall, mutations are primarily a source of genetic degeneration and are most likely lethal.

d. ***Mutations <u>do not</u> result in new information.**

i. *David DeWitt of Liberty University observed: "Successful macroevolution requires the addition of new information and new genes that produce new proteins that are found in new organs and systems."

ii. *Listen to these quotes from noted evolutionary scientists and molecular biologists:

(1) *"The issue is not new traits, but new genetic information…. If evolution from goo to you were true, we should expect to find countless information-adding mutations. But we have not even found one" (2002). – Jonathan Sarfati.

(2) *"…mutations do not appear to bring progressive changes…. Despite enormous efforts by experimenters and breeders – mutations seem unable to produce entirely new forms of life" (1985). – Lester and Bohlin.

(3) *From evolutionists Lynn Margulis and Dorion Sagan in their 2002 book, *Acquiring Genomes: A Theory of the Origins of Species*: "We believe random mutation is wildly overemphasized as a source of hereditary variation…. Mutation accumulation does not lead to new species or even to new organs or new tissues…. Even professional evolutionary biologists are hard put to find mutations, experimentally induced or spontaneous, that lead in a positive way to evolutionary change."

They went on to say: "…this Darwinian claim to explain all of evolution is a popular half-truth whose lack of explicative power is compensated for only by the religious ferocity of its rhetoric. Although random mutations influenced the course of evolution, their influence was mainly by loss, alteration, and refinement… *Never, however, did that one mutation make a wing, a fruit, a woody stem, or a claw appear. Mutations, in summary, tend to induce sickness, death, or deficiencies. No evidence in the vast literature of hereditary chance shows unambiguous evidence that random mutation itself, even with geographical isolation of populations, leads to speciation."

(4) *"…mutations do not produce any kind of evolution" (1977). – Pierre-Paul Grasse, Chair of Evolution at the Sorbonne in Paris.

iii. *To sum up and put it another way, if there was an effective breeding population of 100 million individuals, and they produced a new generation every day, the likelihood of obtaining good evolutionary results from mutations could be expected only about once every 274 billion years!

e. ***Examples of Mutation**

i. Evolutionary science has long used a few instances of mutations within species as proof of mutation as the mechanism of evolution. However, with some examination, it can be seen that these mutations are already present in the species as recessive traits, are not beneficial in the long term and are usually fatal.

(1) *We will examine three instances of "Beneficial Mutations"
  (a) *Peppered Moths
  (b) *Insecticide Resistant Insects
  (c) *Malaria Resistant Humans

(2) Mutations Among Insects
  (a) *Peppered moths in England
    (i) *The peppered moth, Biston betularia, comes in various shades of gray. *One hundred and fifty years ago, the species consisted almost entirely of "typical" forms, with

predominantly light gray scales interspersed with black (hence the name, "peppered").

(ii) *In 1848, a coal-black "melanic" form was collected near Manchester, England, and by 1950 melanic forms made up more than 90% of the peppered moths in that area.

(iii)[Photo Caption:

- *Two moths (one typical and one melanic) resting on a beech tree covered by a combination of green algae and lichen in the industrial city of Liverpool, U.K. (top)
- *Typical and melanic moths resting on light-colored lichen on an oak tree in rural Wales. (middle)
  - Can you see the typical, light colored, moth?*
- *Two moths resting on the dark bark of an oak tree near the industrial city of Liverpool, U.K. (bottom)
  - Can you see the melanic moth?*
- Note the striking differences in camouflage efficiency.]

(iv) *This occurrence is often quoted by evolutionists as "proof" of mutation as a means for evolution. In the late 1860's the peppered moth was pale in color. ***However, a rare dark form of peppered moth was known to exist**. Over the next 100 years the dark form of peppered moth became more and more predominant. *Why? *The industrial revolution in that area brought with it a massive darkening of the bark on surrounding trees. *The dark peppered moth was able to blend in better with its surroundings and thus escape its predators. The lighter colored moth eventually reached the point of extinction. *Hence, a clear, convincing example of *natural selection. That is, *from the beginning, both dark and light colored moths are present. **

(v) *The net result of this phenomenon is a **loss of genetic information! Macroevolution requires that there is an addition of ordered genetic information, not removal!**

(b) *Insecticide Resistance

(i) *Some insects develop resistance to commonly used insecticides through the proliferation of insects carrying a mutated gene.

(ii) *Selective pressure will favor these mutants that are resistant.

(iii)*The temptation is to notice the resistance to the insecticide and conclude that the mutation is beneficial in the long-term.

(iv)*However, if the toxin is removed, the mutant population dies and is replaced by "normal" insects.

(v) *The toxin-resistant mutant has so many other weaknesses that it can't compete in a normal environment.

(3) In Humans
(a) *Resistance to Malaria brought on by Sickle Cell Anemia
(i) *A common mutation used to support evolution is sickle cell anemia wherein the possessor of the mutated gene is more resistant to some of the symptoms of malaria.
(ii) Sickle cell anemia is a usually fatal disease that affects the shape of hemoglobin produced in red blood cells. In turn, this affects the blood cell's ability to carry oxygen and nutrients to other cells in the body. During periods of increased activity, the red blood cells are unable to carry sufficient amounts of oxygen and the cells distort and turn sickle shaped. This change in shape causes "traffic jams" within the circulatory system and in turn, excruciating pain and often death.
(iii) The malformed hemoglobin is able to resist the parasitic malaria and symptoms of the disease are significantly reduced.
(iv) This, just as the mutation allowing toxin-resistance in insects, is a bad-trade. A person with sickle cell anemia may be resistant to malaria, but will die from anemia.

f. ***Final Thought on Mutations**:
i. *****Mutations presuppose creation.
ii. *****Mutations are alterations in already existing genes.
iii. *****A gene must be present for it to mutate.
iv. *What we do know and have documented about mutations is that they are damaging and destructive to what is already present.

D) *Comparative Arguments and the Case from Homology

While discussing evolutionary theory, one of the *most impressive arguments for the theory comes from the realm of comparative sciences or the process of comparing one organism or group with another and documenting the basic similarities. *The purpose of the next section of our study is to *provide a basic understanding of the evolutionists' case from homology and *analyze that case through the prism of truth for the purpose of making a defense of creationistic views.

1) *There are many related fields in the comparative sciences, such as *comparative anatomy, comparative embryology, comparative physiology, comparative cytology, comparative biochemistry, etc. *When making comparisons of organisms or parts of organisms, scientists commonly speak of **homologous structures**. *Evolutionary scientists use the presence of such similar structures to suggest that these particular structures go through similar stages of development and that both organisms have a common ancestor. To put it another way, *homology suggests that when a feature exists in two or more species it is the same because of descent and evolved from the same feature in the last common ancestor of the species.
a. In the words of *R.L. Wysong; (*The Creation-Evolution Controversy*)

   i. *"*Much of the case for amoeba to man evolution is built upon arguments from similarity. Evolutionists argue that if similarity can be shown between organisms through comparative anatomy, embryology, vestigial organs, cytology, blood chemistry, protein and DNA biochemistry, then evolutionary relationship can be proven."* (1976)

b. *Michael Denton, is his text, *Evolution: A Theory in Crisis*, wrote extensively about arguments from homology. Denton's assessment is as follows:
   i. *"*Since 1859 the phenomenon of homology has been traditionally cited by evolutionary biologists as providing one of the most powerful lines of evidence for the concept of organic evolution"* (1985)

c. *Charles Darwin himself thought of the argument from homology as one of the single greatest proofs of his theory. In his book, *Origin of Species*, Darwin wrote:
   i. * *"We have seen that the members of the same class, independently of their habits of life, resemble each other in the general plan of their organization… Is it not powerfully suggestive of true relationship, of inheritance from a common ancestor?"* (1859)

d. *Not surprisingly the phenomenon of similar structures between species continues to be the mainstay of the argument for evolution today. In the *1947 high school text book, *General Biology,* the authors suggested:
   i. * *"The greater the similarity of structure, the closer the relationship, and, wherever close relationship is found, a common ancestry is indicated."* (1947, p. 629)

e. More than three decades later in *1981, *Encyclopedia Britannica* gave similar prominence to the argument from homology in discussing evidence for evolution:
   i. * *"The indirect evidence for evolution is based primarily on the significance of similarities found in different organisms… The similarity of plan is easily explicable if all descended with modification from a common ancestor, by evolution, and the term homologous is used to denote corresponding structures formed in this way… [In] invertebrate animals, the skeleton of the forelimb is a splendid example of homology, in the bones of the upper arm, forearm, wrist, hand, and fingers, all of which can be matched, bone for bone, in rat, dog, horse, bat, mole, porpoise, or man. The example is all the more telling because the bones have become modified in adaptation to different modes of life but have retained the same fundamental plan of structure, inherited from a common ancestor."* (1981)

f. A quick search of the online encyclopedia, **Encarta,* returns this information concerning evolution and homology:
   i. * *"The study of comparative anatomy has revealed many instances of correspondence within various groups of organisms and these bodily structures are said to be homologous. Evolutionary biologists suggest that such homologous structures originated in a common ancestor.*

The differences arose as each group diverged from the common ancestor and adapted to different ways of life. The more recent the common ancestor, the more similar the species." (2007) (http://encarta.msn.com/encyclopedia_761554675_5/Evolution.html#p46)

g. From these few examples, we can see that the prevailing teaching of modern evolution is rather dependent upon homology as supporting evidence of evolution. *Denton acknowledged the importance of such thinking when he observed that:
   i. * *"Without underlying homologous resemblance in the fundamental design of dissimilar organisms and organ systems then evolution would have nothing to explain and comparative anatomy nothing to contribute to evolutionary theory."* (1985)

h. *Isaac Asimov, one of America's most prolific science writers, *suggested that our ability to classify plants and animals on a groups-within-groups hierarchical basis virtually forces scientists to treat evolution as a "fact" (1981).

i. When discussing homologous structures, *it appears to be a logical argument for decent from a common ancestor. After all, isn't that how we explain why brothers and sisters look more like each other than other relatives such as cousins? Obviously, they have parents closer in common. *And evolutionists have a large amount of data at their disposal. *One set of such data is that the wing of the bat, the forefoot of the turtle, the forefoot of the frog, and the arm of the man all have the same general structure. Evolutionists also point out, correctly, that the forefoot of the dog, the flipper of the whale, and the hand of the man contain essentially the same bones and muscles.

j. Michael Pitman observed:
   i. *"To the evolutionist, homologous structures are clear evidence of common ancestry and a family tree of life. *Bat wings, bird wings, flippers, and human arms are similar because the ancestors common to birds, bats and humans had just such a structure – a forelimb built on the pattern that biologists identify as 'pentadactyl' or 'five-fingered'* (1984).

k. In more recent times, *this argument has been carried to the molecular level as scientists begin to compare similarities in *blood groups, *cytochrome C composition, *enzymes, *cellular DNA and *many other micro-biology entities. *One such famous example from a study completed in 2002 suggests that the *DNA of the chimpanzee and human is similar 95% of the time. The conclusion we are supposed to reach is that evolution is true because we can trace our lineage back to a common ancestor who lived millions of years ago.* [3 billion base pairs – 2% would mean that in order to bridge the gap between humans and chimpanzees through mutations, 60 million base pairs would have to change, rearrange, correct or mutate in precisely the correct order.]

l. *Needless to say, as Creationists, we have a significant task in understanding homology and *being able to launch an apologetic rebuttal to the evolutionists' argument. Our next section will help us develop just such a defense. *

2) Our brief examination of the evidence from homology supporting evolution illustrates the strength of the evolutionist's argument in this regard. *In light of this evidence, what should our response be? *Do the similarities mentioned actually exist? *And if so, is the evolutionist's explanation of the data the correct, or the only, explanation that fits the case? *These are serious questions that must be answered. To answer these questions we will discuss *three areas in the realm of homology: *The Big Picture, *Genes and Chromosomes, and *Embryology. *Before we begin, let's discuss…

a. *What our response should NOT be…

i. *We CANNOT deny the existence of similarities between organisms; similarities DO exist.

ii. *Creationists cannot be ignorant of the facts of such science. Ignorance only leads to shaky arguments and easily rebutted arguments.

iii. *This situation provides a powerful lesson in the creation/evolution controversy. *The lesson is this: ***rarely is it the data that are in dispute – it is the interpretation placed on the data that is in dispute.**

(1) *This heralds back to one of our initial discussions in this class – that of the observer-expectancy effect – how the data are interpreted when discussing homology is crucial to developing an effect argument against homology as proof of evolution.

(2) *Denying that basic similarities exist serves no good purpose – and it makes one look foolish when attempting it.

(3) *Creationists and evolutionists have access to the same data.

(a) Evolutionists look at the data and say it offers proof of a **common ancestry**.

(b) Creationists look at the <u>exact same data</u> and suggests instead that it is evidence of **creation according to a common design**.

iv. *Given the same data and two seemingly legitimate explanations for the data, a stalemate exists with neither side claiming a clear victory.

[This predicament leads us to the next section in our discussion dealing with an examination of Homology from a different, wider perspective. Let us now examine…]

b. *Homology: The Big Picture

i. As with many seemingly effective arguments for evolution, if we look only at a few specific instances, we can get trapped in an endless cycle of debate that never allows a victory for the Creationist. *A narrow field of discussion is not profitable.

ii. *The best approach we can take is to widen the argument to include ALL of the data from homology because the *evolutionist's argument works only if certain portions of the data on homology are presented.

iii. *If **all** the available data are included in the argument, the evidence from homology fails.

iv. *T.H. Morgan, a committed evolutionist of Columbia University, openly conceded many years ago what evolutionists do not want to become common knowledge:

(1) **"If, then, it can be established beyond dispute that similarity or even identity of the same character [trait] in different species is not always to be interpreted that both have arisen from a common ancestor, the whole argument from comparative anatomy seems to tumble in ruins" (1926).*

v. *Evolution is a complete cosmogony. In order for evolution to be a legitimate answer for the variety of species and the similarities between them, it must answer also answer the question of differences between species.

(1) *As R.L. Wysong stated:

(a) *"If the law of similarity can be used to show evolutionary relationships, then dissimilarities can be used to show lack of a relationship" (1976)*

(b) In other words, *if similarities indicate a common ancestor, then dissimilarities indicate different ancestors. Plus, there should not be dissimilarities present within current evolutionary phylogenies that would indicate a non-common ancestor.

(i) *Phylogeny is the pattern of ancestry and descent of species in evolution commonly represented by a tree and branch system.

(2) Ferenco Kiss, as dean of the medical faculties at the University of Budapest, once stated that *"…it is necessary for the evolutionists – in order to maintain their theory – to collect only the similarities and to neglect the numerous differences" (1949).*

(3) *The real problem for evolution is not in the similarities – it is in the numerous differences.

(a) *Sir Alistair Hardy, former professor of zoology at Oxford University, wrote: *"The concept of homology is fundamental to what we are talking about when we speak of evolution, yet in truth* we cannot explain it all in terms of present-day biological theory" (1965).*

(b) *Dr. Hardy's assessment points out that *homology bolsters the case for evolution only when evolutionists are allowed to "pick and choose" similarities that fit their theory. When forced to include **all** the available data in the examination – *including those documenting dissimilarity – the argument for evolution from homology utterly fails.

(4) *The casualness with which evolutionists discard "unsatisfactory" or unflattering data in homology to make it appear as though it supports evolution is a well documented fact. *Now that the "pick and choose" or "cut and paste" method has been exposed, Lester and Bohlin have observed:
   (a) *"Another problem is that from the raw data alone, not one single phylogeny emerges, but several. The one that agrees most closely with the traditional phylogeny is **assumed** to be the most 'correct.' This hardly demonstrates the independent confirmation of evolutionary relationships. The combining of several phylogenies from different proteins combines not only strengths but also weaknesses" (1984 emp. in orig.).*
   (b) *What Bohlin is saying is that when all the available homology data are examined many, not one, root phylogeny, can be illustrated, thus casting serious doubt upon one ancestor common to all species.
(5) *In summary, adding up all the *available data from homology studies makes for an even weaker evolutionary argument than already is present when examining just a few of the data on this topic.

vi. *Examples of "Problem" Homologous Traits

To this point our discussion has brought us to understand that homology, in its numerous forms, *appears at first glance to present a very strong case for evolution. The intended conclusion is that similar structures, characteristics, features, function, form, etc, between different *species indicates that the species had a similar ancestor. From this assumption, organisms are commonly grouped according to supposed common ancestors into *"phylogenies" and presented in a branching tree structure. *Keeping this in mind, let us examine the true value of the *"proof" offered by similarity studies and some specific evidence from homology that does NOT support evolution.

(1) *Evolutionist Michael Denton has done much of the work for us and stated quite succinctly just how valuable the "proof" from homology is…
   (a) *"*…common geneology as an explanation for similarity has tended to grow ever more tenuous… Without the phenomenon of homology – the modification of similar structures to different ends – there would be little need for a theory of descent with modification…*
   …Like so much of the other circumstantial "evidence" for evolution, that drawn from homology is not convincing because it entails too many anomalies, too many counter-instances, far too many phenomena which simply do not fit easily into the orthodox picture…

*…the facts of comparative anatomy and the pattern of nature they reveal provide nothing like the overwhelming testimony to the Darwinian model of evolution that is often claimed. *…In the last analysis the facts of comparative anatomy provide no evidence for evolution in the way conceived by Darwin…" (1985)*

(b) *In describing another problem with homologous structures in terms of genetic control and their value as proof for evolution, *Gavin R. deBeer (formerly Professor of Embryology in the University of London and Director of the British Museum, Natural History and a devoted evolutionist) showed that *"*homologous structures need not be controlled by identical genes, and homology of phenotypes does not imply similarity of genotypes." (1938 and 1971)*

(c) *With such statements from evolutionists, let us examine a number of those anomalies, counter-instances and phenomena that do not fit into the orthodoxy of evolutionary thought:

(i) *The octopus eye, pig heart, Pekingsese dog's face, milk of the donkey, and the pronator quadratus muscle of the Japanese salamander are all very *similar to analogous human structures. *Do these similarities show evolutionary relationships?

(ii) *The weight of the brain in proportion to the body weight is greater in the *dwarf monkey of South America than in man. Since this proportion is used to show relationship between primates and man, is the marmoset, therefore, *more evolved than man?

(iii) *The plague bacterium, (*Pasteurella pestis)* *afflicts only man and rodent. *Does this similarity show close relationship? (Interesting to note that the disease is transferred from rats to humans through a common flea that feeds upon both rats and humans.)

(iv) *Plant nettle stings contain *acetylcholine, 5-hydroxytryptamine and histamine. These chemicals are also found in man. *Are man and plant closely related?

(v) *The root nodules of certain *leguminous plants (beans, peas, peanuts, etc) and the crustacean, *Daphnia, contain hemoglobin, the *blood pigment found in man. Are these organisms closely related to man?

(vi) *If certain specific gravity tests are run on the blood of various animals, the *frog and snake are found to be more similar to *man than the monkey is to man.

(vii) *If the concentration of red blood cells in animals is compared (millions per cubic millimeter of blood), *man is more similar to frogs, fish and birds than *he is to sheep.

(viii) *Since bones are often used to show relationships, bone chemistry should be useful in this regard. If the calcium/phosphorus ration is plotted against bone carbonate, *man proves to be close to the turtle and elephant, *the monkey close to the goose, and the *dog to the horse but distant from the cat.*

(ix) *The tetrapyrrole chemical ring is found in *plant chlorophyll, in hemoglobin and other animal respiratory pigments, sporadically as a coloring pigment in molluscan shells, and also in the feathers of some bird species. How does tetrapyrrole similarity speak for relationships?

(x) *Consider reptilian scales, bird feathers, and fur. The evolutionist holds that feathers and fur have evolved divergently, from scales. But can such different skin coverings be called homologous? For example, a feather and a scale develop from different layers of skin and follow different development paths; the feather's greater structural complexity must reflect a more complex genetic background. Yet the first know feather is entirely featherlike, not at all scale-like. The genes coding for each type of skin-covering must contain a sequence (subroutine) for keratin, because each is primarily of a form of keratin. Yet this subroutine could well be integrated into quite a different overall set of genes. If so, how could we explain their origin in terms of simple inheritance from a common ancestor?

(xi) *The entire genome of the tiny nematode C. Elegans has recently been sequenced. This is the first complete genome of a multi-cellular organism to be sequenced. It contained about 100 million base pairs and about 20,000 genes. *The problem for evolutionists is that some of the genes of C. Elegans are so similar to those for humans that scientists have substituted the human genes for the nematode genes, and the human genes have worked fine. Of the 5,000 best-known human genes, 75 percent have matches in the worm. If homology proves a common ancestor – does man have more in common with this worm than with other mammals? (By PAUL RECER, AP Science Writer 1998 Associated Press)

(d) While there are obvious similarities between species that might lead one to think of a common ancestor and evolution, there are a great deal more similarities that simply do not support the evolutionists claim of common ancestry of all species. Instead, what we find is that the shear number of similarities between varied species indicates a common designer.

c. Genes and Chromosomes

i. This next section of our examination of homology focuses on the molecular perspective specifically with genes and chromosomes. *Continuing advancements in technology is this area have allowed scientists to gain more and more insight into the makeup of genes and chromosomes. *With these advancements came a renewed hope by evolutionists that they would finally have the proof they needed to support their theory. *As we shall see, molecular biology does not provide the much coveted proof of evolution. Before we begin our examination – let's familiarize ourselves with a tour of the basics concerning DNA, Genes, and Chromosomes.

ii. *Tour of the Basics

(1) *What is DNA?

(a) *DNA is the fundamental blueprint of life and is found in every cell in your body that has a nucleus. *DNA is responsible for the creation of and the controlling of the function of every cell in your body.

(b) *Let's take a closer look at what DNA is and where it resides…

(i) *Here is a typical wall of tissue cells within the body and one cell from that tissue

(ii) *Inside the cell we see the nucleus.

- *Instructions providing all of the information necessary for a living organism to grow and live reside in the nucleus of every cell.
  These instructions tell the cell what role it will play in your body.
  What do these instructions look like?

(iii) *Going inside the nucleus we see the 46 chromosomes *present in every cell with a nucleus in a human.

(iv) *The instructions come in a form of a molecule called DNA. DNA encodes a detailed set of plans, like a blueprint, for building different parts of the cell.
How can a molecule hold information?

(v) *The DNA molecule comes in the form of a twisted ladder shape scientists call a "double helix." The ladder's rungs are built with the four-letter DNA alphabet: A, C, T, and G. These alphabet pieces join together according to special rules.
A always pairs with T, and C always pairs with G.
How can only four letters tell the cell what to do?

(vi) The DNA strand is made of letters…

(vii) The letters make words…

(viii) The words make sentences…

(ix) These "sentences" are called genes. Genes tell the cell to make other molecules called proteins. Proteins enable a cell to perform special functions, such as working with other groups of cells to make hearing possible.

(2) *What is a Gene?
  (a) Genes are instruction manuals for our bodies. They are the directions for building all the proteins that make our bodies function.
  (b) *Genes are made of DNA. One strand of our DNA contains many genes. All of these genes are needed to give instructions for how to make and operate all parts of our bodies.
  (c) Genes are small "snippets" or sections of DNA.
  (d) *Genes contain instructions for building proteins, which are involved in all sorts of things. Hemoglobin protein is just one example. Other proteins such as the enzymes that produce pigment in your eyes and keratin, responsible for growing hair and nails, are also produced by genes.
(3) *What is a Chromosome?
  (a) Each cell in our body contains a lot of DNA. In fact, if you pulled the DNA from a single human cell and stretched it out, it would be three meters long! That's about as long as a car! How does all of that DNA fit into a cell?
  The DNA is packaged into compact units called "chromosomes."
  (b) *The packaging of DNA into a chromosome is done in several steps, starting with the double helix of DNA. Then the DNA is wrapped around some proteins.
  (c) These proteins are packed tightly together until they form a chromosome. Chromosomes are efficient storage units for DNA.
  (d) *How many chromosomes does one cell hold?
    (i) The correct answer to this depends on whether you're a fish, fly, or a human.
    (ii) Each human cell has 46 chromosomes. All the DNA is organized into two sets of 23 chromosomes. We get genetic material from both of our parents – that's why children look like both their mom and dad.
    (iii) *Look at this set of chromosomes. You can see that matching chromosomes have been lined up in pairs – one each from mom and dad. Although the DNA double helix is too small to see, chromosomes can be viewed with a microscope, as in this picture.
    (iv) There are two sex chromosomes that determine whether you are male or female. In this picture the sex chromosomes are labeled "X" and "Y." The set of

chromosomes in this picture are from a male – you can tell because females do not have a Y chromosome. Instead, they have two X chromosomes.

(e) Thanks to the Genetic Science Learning Center at the University of Utah for the illustrations. (learn.genetics.utah.edu)

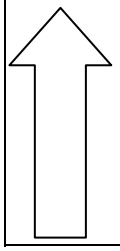
(4) *A Prediction…

* - An important component of any theory is the ability to generate predictions from the theory and test them. *This process helps provide valuable information to bolster or weaken the theories basic premise.

(5) If, as evolution demands, there has been a gradual change of all creatures from the simple to more complex, *then the evolutionary scheme would predict the increase in chromosome count and quality as one moves up the evolutionary scale.

(a) *What we find in this regard does not at all support such a prediction and thus presents a serious problem for evolutionists. *For instance, examine this chart comparing the actual chromosome numbers of several organisms with the evolutionary prediction.

(b)



PREDICTION **Simple to Complex**	**FACTS** **Chromosome Counts**
Man	Fern – 512
Dog	Crayfish – 200
Bat	Dog – 78
Herring Gull	Herring Gull – 68
Reptiles	Reptiles – 48
Fern	Man – 46
Crayfish	Bat - 32

(i) The chromosome count does not "fit" into the results predicted by the evolutionary model. *In response to the facts from chromosome counts evolutionist Ashley Montagu was forced to conclude and admit: "The number of chromosomes does not appear to be associated with the degree of complexity of an organism" (1960).

(ii) *To illustrate the difficulties with predicting chromosome counts, let's examine the genetic similarity between chimps and humans.

- If humans and chimpanzees are 95 – 98% geneticially the same, then the manner in which they store DNA would also be similar. Yet what we find is that it is not.
- A logical prediction from the statement that organisms that share a common ancestor is that they would possess the same *number of chromosomes.

- *As we have seen, *Humans posses 46 chromosomes. How many to chimpanzees have? *48. This is a difference of one pair of chromosomes.
- This relatively small difference may seem trivial, but remember, chromosomes contain genes, which themselves are composed of DNA spirals. As the blueprints for every process in the body even the *most minute changes can have significant effects on the body.
- With this in mind, *how can evolution account for the **loss** of two entire chromosomes? If we were to assume that this change occurred as a result of evolution, we *would have to assume that the original DNA did not do its job correctly or efficiently.
- Considering that each chromosome carries a number of genes for specific bodily processes, *losing chromosomes does not make sense physiologically, and would probably prove deadly for the "newly created" species. No respectable respectable biologist would suggest that a new species would be produced by removing one or more chromosomes from an already existing species.
- As a matter of fact, consistent chromosome count is one of the characteristics used to determine species identification (Eldon Gardner, 1968).

(c) *The bottom line is that the facts simply do not support or fit the predictions of evolution. Perhaps no one has done a more outstanding job of providing the evidence for that statement than evolutionist *Michael Denton.

(i) Evolutionists suggest that as one ascends the "tree of life," organisms should become increasingly separated by differences in biochemistry from the "earliest" and most "primitive" organisms. *In fact, no evolutionary trend can be observed in the biochemical data.

(ii) There is *no gradation from one group to another that would show any kind of evolutionary sequence. Denton's conclusion was that "*at a molecular level there is no trace of the evolutionary transition from fish to amphibian to reptile to mammal" (1985).

(iii) Dr. Denton also went on to say that *"at a molecular level, no organism is 'ancestral' compared with its relatives. Yet, in the face of this extraordinary discovery the biological community seems content to offer explanations which are no more that apologetic tautologies" (1985).

- *In other words, evolution is a "spin" with highly technical jargon aimed at making an evolutionist appear

more intelligent than those who do not subscribe to the theory.

d. **Comparative Embryology**

i. *As the name implies, embryology is the study of the embryo. *In *Origin of Species* (1859), Darwin asserted that similarity among the various embryos of animals and man was a primary proof of the theory of evolution. In *The Descent of Man* (1871), Darwin devoted the entire first chapter to this line of evidence, stressing how critical it was to the success of his theory. With this very confident assertion that embryology provides proof of evolution *comes a great deal of necessity to prove such an assertion. As we shall see, the truth of the matter is that this assertion is entirely false and the so-called "proof" that is provided in many biology text books is based upon the lie of a man bent on the support of Darwin's evolutionary theory.

ii. *Ernst Haeckel (1834-1919)

(1) *Known as the "Disciple of Darwinism in Germany"

(2) *Taught at the University of Jena in Germany

(3) *Popularized the "theory of embryonic recapitulation" or as he referred to it, the great "Biogenetic Law"

(a) NOT the same thing as the Law of Biogenesis that correctly states that all life comes from previous life of its kind.

(4) *Haeckel suggested that the successive stages of human embryonic development repeat the evolutionary stages of our animal ancestry.

(a) The catch-phrase he developed to popularize the idea was that *"ontogeny recapitulates phylogeny".

(i) Ontogeny – the development of one

(ii) Recapitulates – repeats

(iii) Phylogeny – the development of race

(b) *In other words, *the human embryo passes through all stages representing its ancestors – *from the one-celled stage to the human. Seeing a human embryo grow would therefore be like *watching a silent, moving picture of all our ancestral history.

(c) *Haeckel was an accomplished artist and to illustrate his findings *developed very detailed drawings of embryos at three different stages of development for (from left to right): fish, salamander, tortoise, chick, hog, calf, rabbit, and man (from 1876, Plates VI-VII).

(i) These plates illustrated what Haeckel referred to as evidence of his theory of embryonic recapitulation in what he called rudimentary gill slits that harkened back to the human's evolutionary stage as a fish.

- Notice the folds beneath the eye in the "neck" area

(d) Haeckel's drawings and terminology are still used today in many high school and college biology text books to describe the development of embryos.

(e) *This theory is also still prevalent in the media, for example:
  (i) *The cover story of the November 11, 2002 issue of *Time* magazine detailed what were at the time the latest findings in human fetal development. Juxtaposed between the illustrations and the article were photo-captions that contained references to this concept of "ontogeny recapitulates phylogeny".
    - *"32 days: … The brain is a labyrinth of cell-lined cavities, while the emerging arms and legs still resemble flipper-like paddles. *40 days: At this point, a human embryo looks no different from that of a pig, chick or elephant. All have a tail, a yolk sac and rudimentary gills"
    - *The article itself presented a "marvelous," seemingly "miraculous," and "vastly complicated" embryonic process. *But the glossy pictures that accompanied the article – the ones that are remembered by readers – painted a much different picture. *They instead portrayed a slide-show of human evolution from single cell to human and made the argument that the process was no different in other mammals.

(f) *So what is the creationist's response to such "evidence" of evolution? Thankfully, our job is done for us, for by as early as 1932, Haeckel's theory was shown to be completely fallacious.
  (i) *Sir Arthur Keith had this to say about embryonic recapitulation:
    - *"It was expected that the embryo would recapitulate the features of its ancestors from the lowest to the highest forms in the animal kingdom. Now that the appearances of the embryo at all stages are known, the general feeling is one of disappointment; the human embryo at no stage is anthropoid in appearance. The embryo of the mammal never resembles the worm, the fish, or the reptile. **Embryology provides no support whatsoever for the evolutionary hypothesis"** (1932, p. 94, emp added).*
  (ii) *A word of explanation is in order. *Haeckel was an accomplished artist who used his artistic talent to *falsify certain of the drawings* that accompanied his scientific articles! One writer summarized the matter as follows:
    - *"To support his theory, however, Haeckel, whose knowledge of embryology was self-taught, faked some of his evidence. He not only altered his illustrations of embryos, but also printed the same plate of an embryo three times, and labeled one a human, the second a dog*

and the third a rabbit to show their similarity" (Bowden, 1977, p. 128).

(iii) *Haeckel even went so far as to alter the drawings of some of his colleagues, including the famous embryologist, Professor L. Rutimeyer of Basel University, and Professor Arnold Bass. The two university professors, after realizing what Haeckel had done, publicly condemned his actions. In the end, as H.H. Newman of the University of Chicago put it, Haeckel's works "did more harm than good to Darwinism" (1932, p. 30).

(iv) *Haeckel's falsified drawings were published around 1866. *One of the major points stressed by Haeckel in his "research" – and one of the items that has remained ensconced in the evolutionary literature to this very day – *is the idea that the human embryo possesses gill slits that are leftovers from its past fish-like ancestor stage.

(v) *Evolutionist Irvin Adler, in his book, *How Life Began,* wrote:

- *"The embryo of each species seems to repeat the main steps by which the species developed from the common ancestor of all living things. All mammal embryos, for example, pass through a stage in which they have gills like a fish, showing that mammals are descended from fishlike ancestors"* (1957, p. 22).

(vi) *Fast-forward almost fifty years to the twenty-first century. In an educational (indoctrinational) program produced in 2001 by the University of Chicago for its Newton Electronic Community division, the following statement appeared: "All mammals have gill slits in their very early fetal development" (Myron, 2001, p. 1).

(g) To Sum Up:

(i) Haeckel falsified his drawings of embryos to support his theory

(ii) He altered the drawings of some of his colleagues

(iii) His theory is still present in modern-day high school and college biology textbooks

(iv) The media continues to use his theories to popularize evolution

E) Irreducible Complexity and Probabilities.

Darwin's theory of gradual evolution by natural selection is heavily dependent upon the observation of already existing biological systems for proof. And at the time of his writing, with technology available to him and other scientists, the evidence for a common ancestor as illustrated between differing species seemed to be the most logical answer outside of a creator. What Darwin and his contemporaries could not have known was that behind the relatively superficial

examinations they made was a world of enormously complex, finely calibrated, miniature biologic machines controlling all functions of life. Without the aid of immensely powerful microscopes, Darwin was left to assuming that the things too small for him to see were simple and therefore unimportant. Little did he know that the very things he considered unimportant ultimately unravel his theory. Now, nearly 150 years after Darwin's book, we can safely say that his theory has been reduced to fantasy in the exact manner he predicted when he wrote:*

"*If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."*

What we will examine today is two examples of just that sort – complex organs/systems that could possibly have developed over time through random mutation and natural selection.

1) *Irreducible Complexity
   a. These organs/systems are said to be *irreducibly complex* – unable to be reduced to a simpler form and still function. Michael Behe, in his book *Darwin's Black Box,* originally published in 1996, explains what is meant by the term *irreducible complexity:*
      i. The term describes *"a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning."*
      ii. These irreducibly complex systems are found everywhere in biology and show just how "wonderfully and fearfully made" (Psalm 139:14) we and all life are…
   b. To illustrate the concept of an irreducibly complex system let's examine a mousetrap.
      i. The purpose of a mousetrap is to catch a mouse and keep it from being able to chew on things and leave reminders of its presence.
      ii. The most common form of a mousetrap has several simple parts that work together to accomplish the trap's purpose.
         (1) Flat wooden base
         (2) A metal hammer which crushes the mouse
         (3) A spring with extended ends to press against the base and the hammer when the mousetrap is charged
         (4) A sensitive catch that releases when slight pressure is applied
         (5) A metal bar that holds the hammer back when the trap is charged
         (6) Assorted staples to hold the system together
      iii. In essence, the simple mousetrap is an irreducibly complex system because each of the parts listed above need to be present and working properly in order for the trap to function. If any one of the parts are removed, missing or faulty, the mousetrap ceases to function.

c. Bacterial Flagellum

A wonderful example of an irreducibly complex system found in some bacteria is a swimming device called the Bacterial Flagellum.

i. The bacterial flagellum functions as a rotary propeller, much like you would find on a boat.

ii. The structure of the bacterial flagellum is amazingly complex and contains many moving parts and requires the presence of over 40 proteins in order to function.

(1) The flagellum is a long, hairlike filament embedded in the cell membrane

(2) The external filament consists of a single type of protein, called "flagellin." The flagellin filament is the paddle surface that contacts the liquid during swimming.

(3) At the end of the flagellin filament near the surface of the cell, ther is a bulge in the thickness of the flagellum.

(a) It is here that the filament attaches to the rotor drive

(4) The attachment material is comprised of something called "hook protein."

(5) The hook portion of the filament uses a bushing method to pass through the cell wall.

(6) Connected to the hook and passing through the bushing is a rod or drive shaft of the propeller.

(7) The rod connects to the motor that contains both a strator (or non-moving part) and a rotor (a moving part) plus many other supporting proteins

iii. The bacterial flagellum is composed of many parts that are required for it to function – thus it is an irreducibly complex system.

iv. Gradual evolution by the process of random mutations and natural selection cannot explain the existence and much less the development of the many intricate parts of the bacterial flagellum.

d. Blood Clotting

Another amazingly complex system in nature that is an effective illustration of an irreducibly complex system is that of the blood clotting cascade. In his book, Michael Behe devotes an entire chapter to this wondrously complex system. We will attempt to sum up the process in an effort to provide a layman's perspective.

i. The process of blood clotting begins with the everyday wound – a scratch, paper cut, scraped knee or cut incurred while shaving.

(1) Without the blood-clotting process, every day injuries as these would literally cause you to bleed to death.

(2) At this point, a protein complex found in blood plasma called fibrinogen begins to form a network of fibrous connections. This in itself does not stop the bleeding

(a) Fibrinogen is a composite of six protein chains, containing twin pairs of three different proteins.

(b) Fibrinogen is a rod-shaped molecule with two round bumps on each end and a single round bump in the middle. Think of fibrinogen as a set of barbells with an extra set of weights in the middle.
(c) Normally, fibrinogen is dissolved in blood plasma like salt in the ocean.
(d) When a cut occurs and bleeding begins another protein trims the fibrinogen molecules revealing sticky ends that bond to other fibrinogen molecules to form an initial meshwork over the wound that traps red blood cells. Think of it as a fisherman's net.
(i) This process is regulated by two other proteins – without which the process of blood clotting would run rampant and would kill the organism.

ii. After the initial bleeding and simple clot is formed, several more proteins are activated and regulate the clotting process to keep all of the blood in the body from clumping together blocking vessels and causing death.
iii. The initial clot framework is strengthened by another regulated protein process and the clot eventually hardens.
iv. Once the clot is hardened, the entire clotting system is shut down and other intricate systems are initiated to begin the healing process.
v. This process is nothing new to us, and is often overlooked as a simple process. However, biochemical investigation has shown that this process is, in fact extremely complex, intricately woven system consisting of many interdependent protein parts. The absence of, or significant defects in, any one of a number of the components causes the system to fail: blood does not clot at the proper time or place and the unfortunate organism either bleeds to death or is killed when all of the body's blood supply clots.
vi. Again, evolution by random mutations and natural selection can offer no method of creation of such a system – much less account for the many mistakes that would have been made along the way.

e. Bombardier Beetles
i. The bombardier beetle squirts a lethal mixture of hydroquinone and hydrogen peroxide into the face of its enemy.
ii. The beetle has two special chambers in its abdomen that store the two chemicals safely apart from one another. The linings of these chambers contain a special chemical inhibitor.
iii. Without an inhibitor, these two chemicals, when mixed together, literally explode. So in order to store them inside its body, the Bombardier Beetle has evolved a chemical inhibitor to make them harmless. At the moment the beetle squirts the liquid out of its tail, an anti-inhibitor is added to make the mixture explosive once again.
iv. The chain of events that could have led to the evolution of such a complex, coordinated and subtle process is beyond biological

explanation on a simple step-by-step basis. The slightest alteration in the chemical balance would result immediately in a race of exploded beetles.

v. A Probability…
With all we have learned in connection with DNA and the many intricate processes associated with life and the questions surrounding the evolutionary stance on how it all began, it is useful to illustrate a probability associated with the random generation of just one component of life – a single rung on the DNA strand.

(1) Remember our basic illustration of DNA, with the sugar phosphate backbone, base pairs and hydrogen bonds? This enormously complex structure is the very basis for all life on this planet.
(2) It has been shown that the probability of all the necessary components coming together to form just one rung on the DNA strand is 1 in 10^87. (This is the number 10 with 87 trailing zeros…)
(3) The number of seconds in 4.5 billion years (the approximate age of the earth as put forth by evolutionists) is 10^25.
(4) Doing some simple math would show that if an attempt were made to create one rung once per second, it would take more than 7 billion years to create just one rung!
(5) Another way to look at this is in order to fit it into the 4.5 billion year time frame, the experiement would need to be conducted three times per second (or three different, concurrent attempts) to produce just one rung in 4.5 billion years!
(6) FYI – anything with the probability of 10^52 is considered mathematically impossible!

III) ***Dinosaurs and Man** –

A) Why This Discussion? Amidst all the many things we, as Christians, have to deal with, why would we spend our time discussing this subject of Dinosaurs and their relation to Man? The answer is really quite simple…
   1) *Dinosaurs are Fascinating – Men, women and children find the prospect of three-story tall, 100 ton reptiles lumbering around intriguing. Young people are especially interested in the topic. How many of us as kids pretended to be a **Tyrannosaurus Rex* chasing down some helpless prey? *Or imagined riding a *Triceratops* or *Apatosaurus?*
   2) Unfortunately, the interest kids show in dinosaurs has been used for decades to destroy their faith in a literal six-day creation when they are told that dinosaurs died out 65 million years ago. This misinformation works not only to alter our children's perspective of the age of the earth, but is an effective tool in destroying their faith in the validity of the scripture.

3) Of course, children aren't' the only ones with these "questions." As adults, most people, many of whom believe themselves to be Christians, believe the timeline proposed by mainstream science.

B) *Did Dinosaurs Actually Exist?
   1) *One of the greatest mistakes *we can make as adults is to tell young people that they did not exist or that they weren't as large as they are shown in the museums and described in the textbooks. *Not only is this a mistake, but saying they did not exist is to deny the word of God.
   2) *A common argument misconception is that because "Dinosaurs" aren't mentioned in the Bible they did not exist. This is a flimsy argument at least and downright ignorance at worst.
      a. *To begin with, the word *Dinosaur* was not invented until 1842 – so it would be inconceivable to imagine that the word in its current form would be used in the Bible. Secondly, there are numerous organisms are never mentioned in the scriptures such as aardvarks, bacteria and cats. Yet, just like the things that **are** mentioned in the Bible, they do exist and were created by God. *Furthermore, the Bible describes creatures that fit the description of what we would call dinosaurs.
      b. *Job 40:15-24; 41:1-34 describe creatures that are called *behemoth* and *leviathan*
         i. *both of which are clearly dinosaurs
         ii. *most likely an *Apatosaurus* and a *Plesiosaur* or some other similar water-dwelling dinosaur.
      c. Quite simply, dinosaurs did exist – and yes, there were that big, but also very small in some cases.
   3) *So dinosaurs did exist – but when?
      a. *Evolutionists advocate they evolved from some now extinct reptile 200 million years ago and they became *extinct themselves 65-70 million years ago.
      b. *Man, in one form or another, came into existence some 2-3 million years ago.
      c. *The 2 groups were supposedly separated by some 65 million years.
      d. This scenario is the most widely accepted, but what if evidence was presented that suggested just the opposite – that man and dinosaur were contemporaries? How would this effect this assumed timeline of events?

C) *Evidence of the Coexistence of Dinosaur and Man – As we have seen before, mainstream science and media have made bold statements concerning the age of the earth, evolution, creation, etc. The coexistence of man and dinosaur is no different…
   1) The January 1993 edition of *National Geographic* boldly proclaimed: "No human being has ever seen a live dinosaur." The evidence, however, reveals an entirely different story. Consider the following:
   2) *The Doheny Expedition of the late 1800's was led by Dr. Samuel Hubbard of the California Museum of Natural History in the Hava Supai Canyon in Arizona. On the walls of the canyon were drawings of an elephant, an ibex, a

*dinosaur and other animals. *Concerning the drawings, Dr. Hubbard said this:

   i. *"The fact that some prehistoric man made a pictograph of a dinosaur on the walls of this canyon upsets completely all of our theories regarding the antiquity of man… The fact that the animal is upright and balanced on its tail would seem to indicate that the prehistoric artist must have seen it alive (1925)."*

3) *Ica Burial Stones - Dr. Javier Cabrera came into possession of his first burial stone *(from the Ica section of the country of Peru) when he was given one as a paperweight for his birthday. Ironically, he could recall his own father also possessing similar oddly carved stones that his family found in their fields in the 1930's. *The rocks have been identified as ancient burial stones that the Inca Indians placed with their dead. Since receiving his first stone, he has *amassed a collection of nearly 1,100 of them – *a third of which depict specific types of dinosaurs (such as *Triceratops* and *Stegosaurus*) and various pterosaurs (winged). *What's remarkable about many of these stones is not only their amazing detail, but the illustration of dinosaurs interacting with humans. *The type of art and the area of their location have dated them to the time of the Inca Culture, c. A.D. 500-1500.

   a. *How could these ancient Indians have known the anatomy of these creatures if they had never witnessed them firsthand?*
   b. *The detail in these stones is such that several *Diplodocus*-like dinosaurs on the stones have what appear to be dermal frills – something never previously reported by scientists until 1992. These dermal frills were discovered to exist during an examination of fossilized remains of sauropods. In an article titled "New Look for Sauropod Dinosaurs," *paleontologist Stephen Czerkas noted:
      i. **"Recent discoveries of fossilized sauropod (diplodocid) skin impressions reveals a significantly different appearance for these dinosaurs. The fossilized skin demonstrates that a media row of* [dermal] *spines was present… Some are quite narrow, and others are broader and more conical (1992)."*
      *[Review Diplodocid Slide]
   c. *The stones also depicted the skin of many of the carved dinosaurs to have patterns *resembling bumpy rosettes. *This detail was used for many years as proof that these stones were not scientifically accurate. *However, further discovers of fossilized dinosaur skin and embryos have silenced the critics. In numerous reports, bumpy rosettes like the ones depicted on the burial stones have been identified and discussed. In fact, one of the studies came from the same continent where the stone originated!
      i. *Luis Chiappe and colleagues discussed sauropod dinosaur embryos and noted: *"The general skin pattern consists of round, non-overlapping, tubercle-like scales… A rosette pattern of scales is present in PVPH-130* [designation for one of the specimens]*(Chiappe, et al., 1998).*

d. *Again, how could the Incas have drawn such accurate pictures of dinosaurs if they never had seen the animals?

4) Natural Bridges National Monument Petroglyph – Natural Bridges National Monument is *located in extreme southeastern Utah. Those who visit the site will see where the sandstone rock has been carved away by the White River and other mechanisms of erosion. *This area boasts of three natural bridges, one of which has a petroglyph depicting a dinosaur. *The petroglyph is extremely weathered and when compared to the other drawings in the immediate vicinity, there is no question that the drawings were made at the same time.* Although the exact dating of the drawings is unknown, they were certainly made before modern times – well before dinosaur fossils were ever discovered and recorded.
5) *Montrose County, Colorado:
   a. *Petroglyphs attributed to the Fremont Indians who were contemporary with the Anasazi are found in Montrose county, Colorado and appear to depict a Triceratops, including the characteristic three horns and neck frill. Dr. Patton points to the etching.
6) *Dinosaurs in Ancient Cambodian Temple - The magnificent jungle temples of Cambodia were produced by the Khmer civilization, beginning as early as the eighth and extending through the fourteenth century A.D. One of, if not the greatest monarchs and monument builders of this empire was Jayavarman VII, crowned supreme king in 1181. These awesome temples were rediscovered by Portuguese adventurers and Catholic missionaries in the 16th century and many were restored in 19th and 20th centuries. Ta Prohm, one of the most picturesque, was left in it's natural state. It recently gained international attention as the setting for the first Laura Croft movie.
   a. *At the corner formed by the elaborate front entrance and the front wall is a ten-foot column covered with these decorative circles. * *
      i. *One of the animals enclosed in the circle is a stegosaurus. Ta Prohm abounds with stone statues and reliefs. Almost every square inch of the gray sandstone is covered with ornate carvings.
      ii. *Hundreds of decorative stone circles surround familiar animals, such as monkeys, deer, water buffalo, parrots.
      iii. *When they wanted to, they very clearly depicted lizards.
7) *Dinosaur Art From Ancient Tombs In Peru
   a. Large dinosaur tapestry - These textiles depict living dinosaurs as do their ceremonial burial stones and pottery, indicating that these awesome creatures were still alive at the time and ancient Peruvians saw them. **[Two close-ups.]
   b. *Dinosaur Pottery
      i. This pottery is on display at the Rafael Laredo Herrera Museum in Lima, Peru.
8) Nessy in Australia
   a. Dennis Fields, a former missionary to Far North Queensland's Kuku Yalanji tribespeople, told the Answers in Genesis ministry in Australia

some years ago of a story the elders of the tribe told him, of a creature called Yarru (or Yarrba).

b. The tribe inhabits the rainforest regions, where there are a number of waterholes in which, in earlier days, Yarru was said to live. There is a story of how the Yarru devoured a young maiden. The missionary asked one of the tribe's artists to paint the story for him. The tribal artist, with very little formal education, had no knowledge of what so-called prehistoric animals looked like, and was drawing only from the descriptions handed down in the ancient stories.

c. *Aborginal artist's impression of 'Yarru'The painting (later donated to Answers in Genesis) shows a creature with a remarkable resemblance to the extinct plesiosaurus. *

9) Dinosaurs of Acambaro, Mexico

a. Waldemar Julsrud

i. *In July 1944, *Waldemar Julsrud, a German merchant in Acambaro, Mexico, found himself riding on horseback on the lower slope of El Toro (The Bull) Mountain.

ii. *Acambaro, Mexico is approximately 175 miles south east of Guadalajara, and approximately 115 north west of Mexico City.

iii. From his elevated vantage point, Mr. Julsrud spotted some partially exposed, hewn stones a ceramic object half buried in the dirt. After climbing off his horse, he dug the stones (and a few ceramic pieces) out of the ground. Being somewhat archaeologically astute, Julsrud immediately realized that these artifacts were unlike anything that he had ever seen. The objects he held in his hand seemed distinctively different than those from other known Indian cultures. He eventually worked out a deal with a local farmer to excavate these precious pieces.

iv. Eventually, over 33,500 figurines and artifacts of ceramic and stone (including some in jade) were uncovered. *A key feature of this discovery was the fact that many of the artifacts were highly detailed dinosaur figurines.

b. The scientific community has attempted in many ways to dismiss the Acambaro figurines as a hoax perpetrated by Julsrud.

c. *Charles Hapgood, a *professor of history and anthropology at Keene State College in New Hampshire, *became interested in the figurines and decided to investigate firsthand.

i. *He made his first visit to Acambaro in 1955.

d. Initially, Hapgood was a self-confessed, while open-minded, skeptic. He expected to find nothing more than an elaborately created hoax. Instead, what he found would make him a *believer and captivate him for the next 18 years.

i. *Hapgood's research led him to eventually write a book on the subject. The book was originally self-published in 1972 and has since been re-released by Adventures Unlimited Press. *Today's version of the

book is titled “Mystery in Acambaro: Did Dinosaurs Survive Until Recently?”

ii. It is widely available and can be purchased for about $15.00 plus shipping

iii. It is interesting to note the description of the book as found on Amazon.com.

(1) *“…*The Acambaro collection comprises hundreds of clay figurines that are apparently thousands of years old; however, they depict such bizarre animals and scenes that most archaeologists dismiss them as an elaborate hoax. *The collection shows humans interacting with dinosaurs and various other "monsters" such as horned men. Both Hapgood and Gardner were convinced that the figurines from Acambaro were authentic ancient artifacts which indicated that men and dinosaurs had cohabited together in the recent past,* and that dinosaurs had not become extinct many millions of years ago as is commonly thought. David Hatcher Childress writes a lengthy introduction concerning Acambaro, the latest testing and other evidence of "living" dinosaurs…”*

(2) What’s wrong with this description?

(a) Let’s look at it again with some emphasis…* *[slide underlines the above phrase]*

(b) Amazon.com, one of the most widely used search engines for books on the planet, chooses to include in the description of this book a line that would cause any somewhat undecided person to disregard this important research as nonsense!

(c) What they fail to mention is the significant lengths to which the authors went to prove the authenticity of the findings, as we shall discuss briefly.

e. *Consider the following measures, enacted to establish the authenticity of the Acambaro collection:

i. *“*When Teledynes Isotopes Laboratories performed dating tests on the carbon deposited during firing on ceramic samples submitted by Hapgood, *dates of up to 4,530 B.C. [were] obtained. Arthur M. Young, the inventor of the Bell Helicopter, who had sponsored Hapgood’s investigation along with [Earle Stanley] Gardner [author of the Perry Mason mysteries], submitted Julsrud artifact samples[i.e., the Acambaro figurines] to the University of Pennsylvania for dating. Radiocarbon dating performed by Dr. Froelich Rainey in the laboratories of the University indicated that this culture may have been developed *between 6,400 and 3,500 years ago. Additional tests using thermoluminescence method of dating pottery were performed. They produced *dates of up to 4,500 B.P. (Before Present), or 2,500 B.C., which *upset the professional archaeologists and set off within the scientific and museum world a controversy over the accuracy of thermoluminescence dating. * Retesting was done, and it was*

*announced that because of *anomalous factors in the clays it was impossible to determine an accurate date" Hapgood, p 17).*

ii. According to David Childress, who penned the foreward to Hapgood's book, the most recent thermoluminescence testing done on Acambaro pottery fragments *(taken by Bill Cote and John H. Tierney during the filming of the video, *Jurassic Art*, in the early 1990s) obtained results of 3,975 +/- 55 B.P. (Hapgood, p. 18).
   (1) *Note that the more recent testing results fall within the range of 6,400 to 3,500 B.P. originally suggested by the earlier testing.

iii. Consider also the fact that teeth from an extinct ice-age horse, the skeleton of a wooly mammoth, and a number of human skulls also were found at the same site as the ceramic artifacts. *Hapgood noted:
   (1) *"I later took these teeth to Dr. George Gaylord Simpson, America's leading paleontologist, at the Museum of Natural History. He identified them as the teeth of 'Equus conversidans owen,' an extinct horse of the ice age." (p. 82).*
   (2) *Thus, the collection had evidence of extinct animals, human skulls, and dinosaur carvings from the same culture of people. But how could this be?

iv. In 1999, Dennis Swift made a trip to view the figurines. After receiving permission from the local authorities, he began to unwrap the ceramic figures. Dr Swift noted:
   (1) **"There was an absolutely astonishing moment of breathless magnitude as one object was unwrapped and there before us was an 'Iguanodon' dinosaur figurine."*
      (a) Why so much "astonishment" over this one particular figurine? Read on…
   (2) **"In the 1940s and 1950s, the 'Iguanodon' was completely unknown. No hoaxer could have known of Iguanodon's existence, much less made a model, for it wasn't until 1978 or 1979 that skeletons of adult Iguanodons were found with nests and babies (Swift, no date).*
      (a) Information on the *Iguanodon* discovery that Swift alluded to can be found in, *The Dinosaur Encyclopedia* (Michael Benton, 1992, New York: Simon & Shuster, p. 80).
   (3) It should come as no surprise, (considering what we have learned of the response from those who hold an evolutionary world view), that **"Despite evidence of their eyes, however, officials declared that because of the objects' "fantastic" nature, they had to have been a hoax! (no date)" .*

v. This archaeological "hoax" presents insoluble problems for evolutionists. As Childress puts it, *"Most, 'respectable' archaeologists will walk around the Acambaro mystery as if it were land mine. The very existence of the figurines threatens the ivory tower of the current paradigm of history"* (as quoted in Hapgood, 2000, p. 20).

IV) The Fossil Record

A) An Introduction

1) *An important component in the discussion of creation vs. evolution is the examination of what is known as the "Fossil Record."
   a. The Fossil Record is quite simply, *the name given to the history of life on Earth as shown by fossils preserved in the rocks.
   b. *As portrayed today, the fossil record is shown to span roughly 4.5 billion years, or the proposed age of the earth. *However, most paleontologists put the beginning of fossilized remains at around 650 million years ago as *illustrated in this diagram from Encyclopedia Britannica.
   c. As taught in the public education system today, fossils and the Fossil Record provide direct proof of evolution. Examine this quote taken from an elementary science book:
      i. *"Fossils offer the most direct evidence that evolution takes place… Fossils, therefore, provide an actual record of Earth's past life-forms. Change over time (evolution) can be seen in the fossil record." Biology: Principles and Explorations, Holt, Rinehart, Winston, 2001, p. 283
   d. *For ease of illustration, we will use the following diagram to illustrate the current design of the fossil record.

2) Basic Elements
   a. Two major divisions
      i. Precambrian - 4,500 to 543 million years ago (mya)
         (1) Divided into three major sections
            (a) Hadean (4500 to 3800 mya)
            (b) Archaean (3800 to 2500 mya)
            (c) Proterozoic Era (2500 to 543 mya)
               (i) It is during this era that the first fossilized remains of life are supposedly found
      ii. Phanerozoic Eon – 543 mya to present
         (1) *The Demarcation of the two major Divisions begins during the Cambrian Period and represents the Foundation of the Fossil Record
         (2) Divided into three sections
            (a) Paleozoic Era (543 to 248 mya)
            (b) Mesozoic Era (248 to 65 mya)
            (c) Cenozoic Era (65 mya to today)

3) Each section is further divided and categorized by the type of fossil supposed to be found in each of the layers. *
   a. Is this True?

4) This is the way in which the fossil record is presented today and is designed to back up the evolutionary theory.
   a. As we shall see, the creation model of the fossil record is considerably different.

B) *Two Opposing Theories

- You may remember a point we discussed about theories and the ability to make

predictions based upon those theories. These predictions are used to test the validity and strength of the theories. *With this process in mind, we can make predictions based upon the theories of evolution and creation and use those predictions to test both theories. *In order to properly test the two theories, they must be compared to the available facts – in this case evidence from the geologic time table as it relates to the creation/evolution controversy.

1) Predictions

   - Before we begin considering the evidence from geology, we need to understand the predictions that each theory makes.

   a. *Evolutionary Model

      i. In terms of the fossil record, the evolutionary model predicts that:

         (1) *The "oldest" rocks would contain evidence of the most "primitive" forms of life capable of fossilization

         (2) *"Younger" rocks would exhibit more "complex" forms of life

         (3) *A gradual change in organisms from "simple-to-complex" would be apparent

         (4) *Transitional forms should be readily present

      ii. Speaking in reference to these "simple-to-complex" transitional forms, *Charles Darwin noted in *The Origin of Species* that "the number of intermediate varieties, which have formerly existed, must be truly enormous." However, he went on to say, *"Geology assuredly does not reveal any such finely graduated organic chain; and this, perhaps, is the most obvious and serious objection which can be argued against this theory" [of evolution].

         (1) Darwin suggested that the reason for this lack of evidence was the "extreme imperfection of the geological record."

            (a) In other words, he figured it was because they just hadn't found the fossils yet.

         (2) *The truth is that since Darwin's day there has been an amazing effort to research and record the fossil record.

         (3) As evolutionary geologist, *T.N. George of Great Britain, stated more than 40 years ago: "There is no need to apologize any longer for the poverty of the fossil record. In some ways, it has become almost unmanageably rich" (1960).

      iii. This problem of a lack of evidence from the fossil record was a problem for *Darwin in 1859 and is still a problem today. After all, isn't it a bit ridiculous to expect people to accept a theory based on non-provable assumptions as truth when most of the hard critical evidence is missing?

         (1) It's a bit like accusing a person of murder but admitting that you cannot find a motive, weapon, body or any witnesses.

   b. *Creation Model

      i. In contrast, the creation model predicts that:

         (1) *The "oldest" rocks would not always contain evidence of the most "primitive" forms of life

(2) *"younger" rocks would not always contain evidence or more "complex" forms of life
(3) *A "simple-to-complex" progression of life forms would not always appear; instead, there would be a sudden "explosion" of diverse and highly complex forms of life
(4) *There would be a regular and obvious absence of transitional fossils, since there were no transitional forms of life

2) *Examining the Evidence
   a. An Accord
      i. *There is one thing that both evolutionists and creationists agree on: If there is every to be any **physical evidence** for evolution, by necessity it will have to come from the fossil record, for it is only here that the actual historical evidence of evolution can be located.
      ii. *Evolutionist LeGros Clark had this to say concerning the location of physical evidence of evolution:
         (1) "*That evolution actually did occur can only be scientifically established by the discovery of the fossilized remains of representative samples of those intermediate types which have been postulated on the basis of the indirect evidence. *In other words, the really crucial evidence for evolution must be provided by the paleontologist whose business it is to study the evidence of the fossil record*" (1955).
      iii. So, what has the fossil record shown? As more and more finds were discovered over the last century and a half, it became plainly obvious that the evidence from the fossil record strongly opposes the predictions of evolution and strongly supports the predictions of creation.
   b. Consider the Evolutionary prediction that the fossil record should reveal a simple-to-complex progression of life forms. With this claim in mind, let us examine **The Cambrian Explosion**
      i. The foundation for the geologic column and fossil record is the Cambrian and Precambrian time periods.
      ii. The Cambrian explosion (Biology's Big Bang) is the sudden appearance of complex multicellular animals and presents a fundamental problem for the evolutionary theory.
      iii. The entire period lasted 5 – 10 million years.
      iv. Every major body plan suddenly appeared during this period.
         (1) These same body plans (designs) still exist today.
      v. Geneticist John Klotz explains some of the difficulties presented by the Cambrian Explosion
         (1) "*All of the animal phyla are represented in the Cambrian period…*" (1972)
         (2) This means that every major grouping of animals are represented in the Cambrian Era leaving no room for "simple to complex" development of species and therefore specific phylum traits.

(a) Also, the Cambrian Explosion contains no evidence of thousands (or millions) of transitional creatures between a cell and complex creatures like trilobites and sea shells as Darwin's theory requires.

(b) The Cambrian/Precambrian time period does not support Darwinian evolution. There are no intermediate (transitional forms) found during this period.

vi. With such evidence staring them in the face, evolutionists are forced to admit that there are significant, obvious gaps in the fossil record:

(1) "*There is no question that such gaps exist. A big gap appears at the beginning of the Cambrian explosion, over 500 million years ago, when great numbers of new species suddenly appeared in the fossil record.*" - David Berlinski (evolutionist), *A Tour of the Calculus*, 1995.

(2) "*The Cambrian explosion is not just a case of all the major animal phyla appearing at about the same place in the geologic column. It is also a situation of no ancestors to suggest how they might have evolved.*" - Ariel Roth (Ph.D. Zoology), *Origins*,1998, p. 184.

vii. Again, we must ask, "Where are the thousands of observable intermediates?" - The model of evolution does not agree with the evidence. Nevertheless, note this quote:

(1) "*The Cambrian Period, which began 544 million years ago, is marked by an abundance of different fossils. Why the difference from earlier periods?*
By the Cambrian period, some animals had evolved shells, skeletons, and other hard body parts…" - *Biology*, Miller and Levine, 2002, p. 746.

(2) Even textbooks admit there was a sudden appearance of complex life forms and are unable to support the claim of evolution with real evidence.

(3) Great claims require REAL evidence

viii. What do the facts support? The Biblical model of "created after their kind".

c. Let us next examine the claim of evolution from Invertebrate to Vertebrate (Fish).

i. "*Fishes are considered to be the most primitive living vertebrates…*
…similarities in structure and embryological development show that fishes and modern invertebrate chordates <u>probably did evolve</u> from common invertebrate ancestors that lived many millions of years ago." - *Biology*, Miller and Levine, 2000, p. 680.

(1) Note the words "probably did evolve" in the above textbook quote. This is an admission that they do not have the evidence to support their claim that fish evolved from invertebrates.

(2) There is not one single intermediate in the textbook to support the claim of fish evolution.

ii. What do the facts (invertebrate to vertebrate) support? The Biblical model of "created after their kind".

iii. "*However, we have virtually no evidence in the fossil record or elsewhere for any of the changes proposed during this 'immensity of time'; but the public hears nothing of this problem.*" - Aerial Roth (Ph.D. Zoology), *Origins*, p. 189.

d. Finding no supporting evidence in the Fossil Record of Invertebrate to Vertebrate evolution, maybe we can evidence to support Fish to Amphibian evolution.

i. Textbooks claim that lobed-finned fish evolved into amphibians.

(1) "*Because of these similarities, <u>scientists think</u> the first amphibians were descendants of the lobe-finned fishes, a group whose modern members include the coelacanth and the lungfishes.*" - *Biology: Visualizing Life*, Holt, Rinehart, and Winston, 1998, p. 461.

(a) Note the words "scientists think." This is an admission there is not evidence to support the claim of fish to amphibian evolution.

ii. Evolutionists in the past used the Coelacanth as evidence fish were evolving into amphibians. The claim was that the front fins were "evolving" into legs.

(1) The Coelacanth was supposed to be extinct for 70 million years.

(2) In 1938 living coelacanths were found still living. The front fins were not legs, but fins. This is another misinterpretation of the fossil record by evolutionists.

iii. What do the facts support? Creation after their own kind!

e. "But Wait!" The evolutionist will cry. "What about the well documented 'Intermediate' species?" Without finding hard evidence in invertebrates, vertebrates, fish and amphibians, we move on to attempt to show evidence of mammalian and avian evolution and discuss three Famous Transitions. We begin with a discussion of the horse.

i. "*The horse is a well-documented case study in evolution. The fossil record shows clear steps in the progression from a four-toed, small browsing animal - one of a line that gave rise to tapirs, rhinoceroses, and other mammals in addition to horses - to the modern horse,…*" - "Evolutionary History of the Modern Horse," Microsoft® Encarta® Encyclopedia 2000. © 1993-1999 Microsoft Corporation.

ii. "*According to the theory of <u>gradualism</u>, new species of horses evolved slowly and continuously. Intermediate forms were common. . . According to <u>punctuated equilibria</u>, new species evolved rapidly during a short period of time. Intermediate forms were rare.*" - *Life Sciences*, Prentice Hall, 2002, p. 164.

(1) The above textbook quote claims that if we find many intermediate horse fossils it is support for evolution and if we don't find intermediate horse fossils it is also support for evolution. This is a nonsense statement because evolution is claimed to be true with or without evidence.

iii. *"As the biologist Heribert-Nilsson said, 'The family tree of the horse is beautiful and continuous only in the textbooks', and the famous paleontologist Niles Eldredge called the textbook picture 'lamentable' and 'a classical case of paleontologic museology'."* - Jonathan Sarfati (Ph.D. Physical Chemistry), Creation Ex Nihilo, 1999.
   (1) "*The popularly told example of horse evolution, suggesting a gradual sequence of changes from four-toed, fox-sized creatures, living nearly 50 million years ago, to today's much larger one-toed horse, has been known to be wrong… Transitional forms are unknown.*" - Boyce Rensberger (senior editor of *Science 80*), *Houston Chronicle*, Nov. 5, 1980, p. 15.

iv. What the textbooks don't contain…
   (1) Scientists find "fossil horses" mixed throughout all the different time layers, meaning they all lived at the same time
      (a) The rib count, vertebrae count, tooth count and the size of the animal, varies widely and does not show any direct line of progression (18, 15, 19, 18)

v. What do the facts support?
   (1) The Biblical model of "created after their kind".
      (a) Living horses come in a wide range of sizes: English Shire: over 6 ½ feet, Ponies: under 5 feet, Fallabella: under 2 feet.
      (b) Some horses today have 3 toes.
      (c) Many different varieties of horses exist today that resemble horse fossils.

f. What about another "well known" example of intermediary fossils in land mammal to whale evolution? As we shall see, the evidence to support such a claim is shaky at best and at worst an outright deception.

i. *"For instance, modern whales are the descendants of four-legged land animals that are also the ancestors of horses and cows. As you can see in Figure 10-4, fossil intermediates between modern whales and their 60-million-year-old ancestor reveal a history of slow transformation."* … Biology: Visualizing Life, Holt, Rinehart and Winston, 1998, p. 177.
   (1) Note the "hypothesized" change from four-footed carnivore to modern toothed-whale.

ii. Notice the things that this textbook and illustration do not mention or offer evidence as to how highly specified whale features developed from land-dwelling creatures. For instance:
   (1) Enormous lung capacity with efficient oxygen exchange for long dives
   (2) Powerful tail with large horizontal flukes
   (3) Eyes designed to see underwater and withstand high pressure
   (4) Ears designed to pick up airborne sound waves and eardrum to withstand high pressure
   (5) Skin lacking hair and sweat glands, but incorporate fatty blubber

(6) Whale fins and tongues have counter-current heat exchangers to minimize heat loss
(7) Nostrils on top of the head (blowholes)
(8) Breastfeed under water
(9) Sonar capacity

iii. With claims of such distinct and numerous changes, where is the evidence? Is there any, or is it all based on artists drawings?
(1) What about mutations? Surely over millions of years mutations could account for such changes…
(2) *"Insufficient time exists for such whale evolution to have occurred. Genetics calculations demonstrate that animals with 20 years between each generation could transmit to their offspring no more than about 1,700 mutations during a 10-million year period. However, almost all mutations are harmful to animals. … Even if these 1,700 mutations were helpful, the new genetic code needed for a land animal to 'become' a whale would be millions upon millions of beneficial mutations."*… Nicholas Comninellis, M. D., Creative Defense: Evidence Against Evolution, 2001, p. 172.

iv. Examination of the supposed intermediary fossils shows further deception… Take for instance the *Ambulocetus*, (the name means "walking whale that swims") claimed to be one of the transitional forms from land-dweller to sea dweller as described in Kenneth Miller's book, *Finding Darwin's God*, published in 1999.
(1) Ambulocetus skeleton, as drawn in Miller's book
(2) Ambulocetus reconstruction, as drawn in Miller's book
(3) Actual bones found (shaded portion)
  (a) The entire illustration was based upon the actual bones that were found – clearly some "license" was given to the illustrators.
(4) Then in 2001, intact skeletons were found – what did they look like?
  (a) A land animal about the size of a wolf!
  (b) Clearly NOT as previously illustrated.

v. Leaving this rather embarrassing situation behind, we move on to the next set of "evidence" of whale evolution – the claim that whales have legs!
(1) Some modern whales have a pair of bones embedded in their tissues – are these left over legs?
  (a) NO! They have a known function and differ in males and females
  (b) They are not attached to the vertebral column
  (c) They are used to strengthen the pelvic wall and act as an organ anchor for reproduction
(2) In 1956, a Sperm Whale was found with a 5-inch tibia projecting into a 5 ½ inch bump
  (a) Was this a leg?

(i) Sperm whales are large - up to 62 feet long
(ii) A 5 ½ inch bump on its side would look like a pimple
(iii) People are sometimes born with abnormalities such as an extra finger, or an extra rib

vi. So where is the evidence of land mammal to whale evolution?
(1) The changes required in the evolutionary belief system for a land animal to become a whale are incredibly complex and far reaching
(a) Develop a new mode of locomotion (from walking to swimming)
(b) A physiology to cope with a dense medium (water rather than air)
(c) New methods of detecting and catching prey
(d) A means of breathing efficiently at the sea surface
(e) In short, every part of the body has to change!

vii. In view of the obvious lack of evidence to support evolution, why do evolutionists believe what they do?
(1) Evolutionists want to believe in evolution so bad they will resort to deceiving their followers and anybody else they can control in the education system, including professors, teachers, and students by making up data that does not exist.

viii. What do the facts (horse and whale evolution) support? The Biblical model of "created after their kind".

g. Reptile to bird evolution
i. "To many paleontologists a bird is a dinosaur with feathers. That definition may sound odd, but it makes sense. The first fossil ever found of an early birdlike animal is in the genus *Archaeopteryx* and dates from late in the Jurassic period, about 150 million years ago." - *Biology*, Miller and Levine, 2002, p. 907.
ii. "Birds evolved from reptiles during the Jurassic period." - *Biology: Principles and Explorations*, Holt, Rinehart, Winston, 2001, p. 268.
iii. Archaeopteryx is one of the main evidences used by evolutionists to support reptile to bird evolution.
(1) "Like modern birds, it had flight feathers, but otherwise it was more like some small bipedal dinosaurs of its era; for instance, like those dinosaurs, Archaeopteryx had teeth, wing claws, and a tail with many vertebrae." - Biology: Concepts and Connections, Campbell, Mitchell, and Reece, 2000, p. 390.
(2) However, one of the leading experts in birds disagrees with archaeopteryx being the intermediate link between reptiles and birds.
(a) "Paleontologists have tried to turn *Archaeopteryx* into an earth-bound, feathered dinosaur. But it's not. It is a bird, a perching bird. And no amount of 'paleobabble' is going to change that." - Alan Feduccia (World authority on birds), *Science*, "Archaeopteryx: Early Bird Catches a Can of Worms", 1993.

(3) Archaeopteryx differs from reptiles.
   (a) "As for its 'reptile' characteristics, yes, it had claws on its wings, but so does the ostrich, [also the hoatzin] and nobody considers it part reptile. . .
   (b) True, Archaeopteryx had teeth, but so did other fossil birds, and its teeth differed distinctly from those of reptiles…
   (c) As to Archaeopteryx's tail, further inspection has shown it strongly resembles a swan's."
   - James Perloff, Tornado in a Junkyard, 1999, p. 18.
      (i) Also - Only birds have feathers and Archaeopteryx had perfectly developed wings.

(4) "The imprint they left in the rock, clear and sharp, makes it evident that the feathers of Archaeopteryx were already in Jurassic time exactly like those of birds flying today." - Barbara Stahl, *Vertebrate History: Problems in Evolution*

(5) Birds older than Archaeopteryx have been found.
   (a) "The first fossil ever found of an early birdlike animal is in the genus *Archaeopteryx* and dates from late in the Jurassic period, about 150 million years ago…"
   "A fossil resembling a modern bird has been found in Eastern Colorado in the same geologic strata as *Archaeopteryx*." - Jean L. Marx, *Science*, "The Oldest Fossil Bird: A Rival for Archaeopteryx?", 1978, p. 284.
   (b) Texas Tech researchers have reported discovering bird fossils in rocks dated much older [than Archaeopteryx].

iv. "Birds are so different from other creatures that there would have been hundreds of thousands of intermediate forms between birds and land animals if birds had evolved." - Stuart Burgess (Ph.D. Engineering Design, Professor of Combustion Theory, extensive study in the area of design in nature), *Hallmarks of Design*, 2002, p. 47.

(1) For a reptile to change into a bird the entire anatomy must change:
   (a) Development of feathers
   (b) Reform of respiratory system
   (c) Reform of skeletal system – hollow bones
   (d) Reform of digestive system
   (e) Reform of nervous system
   (f) Construction of bills & beaks
   (g) Mastery of nest building
   (h) Acquisition of flight
   (i) Development of sound producing organ

(2) The feather is an amazingly complex system designed with an interlocking structure to allow for tight yet flexible connections within and between feathers.

(3) The wing of a bird contains both primary and secondary feathers – both are necessary for successful flight

(4) "This creates a new problem for those who insist that dinosaurs were ancestors of modern birds. How can a bird hand, for example, with digits two, three and four evolve from a dinosaur hand that has only digits one, two and three? That would be almost impossible." - Alan Feduccia, (professor and former chair of biology at UNC), *The Origin and Evolution of Birds*, Yale University Press, 1999, p. 81.

v. "If one views a chicken skeleton and a dinosaur skeleton through binoculars they appear similar, but close and detailed examination reveals many differences. Theropod dinosaurs, for example, had curved, serrated teeth, but the earliest birds had straight, unserrated peg-like teeth. They also had a different method of tooth implantation and replacement." - Dr. Alan Feduccia, "Scientist Says Ostrich Study Confirms Bird 'Hands' Unlike Those Of Dinosaurs", EurekAlert, 14-Aug-2002.

vi. "And like other birds, both Archaeopteryx's maxilla (upper jaw) and mandible (lower jaw) moved, while in most reptiles, only the mandible moves. Archaeopteryx's brain had a large cerebellum and visual cortex – the same as that found in today's flying birds." - David Menton (Ph.D. Cellular Biology) and Carl Wieland (M.D.), "Bird Evolution Flies Out the Window," *Creation Ex Nihilo*, 1994.

vii. "It is often speculated that birds evolved from reptiles. However, there are enormous conceptual differences between the two classes of creature…" - Stuart Burgess (Ph.D. Engineering Design, Professor of Combustion Theory, extensive study in the area of design in nature), *Hallmarks of Design*,2002, p. 47.

viii. Bird Frauds

(1) Is there any real evidence that dinosaurs evolved into birds?

(2) National Geographic Society and the feathered dinosaur "Archaeoraptor" October 15, 1999

(a) "Red-faced and downhearted, paleontologists are growing convinced that they have been snookered by a bit of fossil fakery from China. The 'feathered dinosaur' specimen that they recently unveiled to much fanfare apparently combines the tail of a dinosaur with the body of a bird." - R. Monastersky, "All mixed up over birds and dinosaurs," *Science News*, January 15, 2000

(3) 1993 – *Mononkykus* the "flightless bird" (cover of *Time* magazine) - Not a bird but a theropod

(4) 1996 – "Feathered Fossil Proves Some Dinosaurs Evolved into Birds" (*Science*) *Sinosauropteryx prima* - The feathers turned out to be a array of fibers

(5) 1998 – China *Protoarchaeopteryx robusta*

ix. Reptile to bird conclusion

(1) "It's biophysically impossible to evolve flight from such bipeds with foreshortened forelimbs and heavy, balancing tails, Exactly

the wrong anatomy for flight." - A. Gibbons, *Science*, "New Feathered Fossil Brings Dinosaurs and Birds Closer," 1996.

C) Fossil Record Conclusion
   1) "Given the fact of evolution, one would expect the fossils to document a gradual steady change from ancestral forms to the descendants. But this is not what the paleontologists finds. Instead, he or she finds gaps in just about every phyletic series." - Ernst Mayr (Professor Emeritus in the Museum of Comparative Zoology at Harvard University, Hailed as the Darwin of the 20th century), *What Evolution Is*, 2001, p. 14.
   2) The intermediates needed to support evolution do not exist.
   3) Evolution is a matter of faith.

V) The Hydroplate Theory and the Great Flood

A) **Introduction** - To this point in our study we have discussed many facets of the young vs. old earth / creation vs. evolution debate. Beginning with an examination of the basic "First Cause" and obvious design of the universe to probing the question of the origins of life. From there we moved on to discuss the co-existence of dinosaurs and man and the fossil record. We now move on to another section of study that offers compelling evidence in support of the Biblical flood described in the book of Genesis. We will also examine the devastating effects of such a world-wide cataclysmic event. The effect of such an event would have far-reaching consequences and would leave a very visible mark upon the planet. Furthermore, dismissing the possibility of event of this magnitude would have a profound impact on how one would choose to interpret data drawn from the disciplines of science. The ramifications of this misinterpretation by those who control the government education system can be seen in the wide spread lack of faith in the truth of the Bible and the existence of God.

   The information for the section is entirely drawn from an excellent book written by Dr. Walt Brown, Ph.D., founder of the Center for Scientific Creation. His book can be found in entirety on his website, CreationScience.com. My sincerest and deepest gratitude to Dr. Brown for his wonderful work and willingness to answer my questions.

   Our study will provide and introduction to the Hydroplate Theory and examine in some detail a few of the related geologic features that cannot be adequately explained using today's widely accepted theories.

B) **The Hydroplate Theory: An Overview** – The Hydroplate Theory is based upon new evidence that shows that the earth has experienced a flood of truly Biblical proportions in which the waters of the flood burst forth from under the crust of the earth, leaving behind remarkable evidence of the world-wide deluge.
   1) **The Biblical Account** – The Bible describes in Genesis 6-9 the situation surrounding the flood including a brief mention of the source of the waters involved in the deluge.

a. Genesis 7:11, *"In the six hundredth year of Noah's life, in the second month, on the seventeenth day of the month, on the same day all <u>the fountains of the great deep burst open</u>, and the floodgates of the sky were opened."*
   i. There is an important part of this verse that presents a difficult question for some but also provides an important clue to the process that caused this amazing event.
      (1) Note the underlined section that states the "fountains of the great deep burst open" – a truly puzzling thought when thinking about this section of scripture.
      (2) There have been many explanations offered for this verse – and if we claim to believe that the Bible is the inspired Word of God we must also believe that the Holy Spirit inspired these words because He meant to.
      (3) It is my belief that The Hydroplate Theory offers the best, most complete explanation for this verse.

2) **Unexplained Mysteries** – As mentioned earlier, new evidence has been uncovered that helps to explain the flood and a number of astounding geologic phenomena including:
   - The Grand Canyon
   - Mid-Oceanic Ridge
   - Continental Shelves and Slopes
   - Ocean Trenches
   - Earthquakes
   - Magnetic Variations on the Ocean Floor
   - Submarine Canyons
   - Coal and Oil
   - Methane Hydrates
   - Ice Age
   - Frozen Mammoths
   - Major Mountain Ranges
   - Overthrusts
   - Volcanoes and Lava
   - Geothermal Heat
   - Strata and Layered Fossils
   - Limestone
   - Metamorphic Rock
   - Plateaus
   - Salt Domes
   - Jigsaw Fit of the Continents
   - Changing Axis Tilt
   - Comets
   - Asteroids and Meteoroids

a. When examined from the perspective of a world-wide flood, one can see that each of these phenomena were the consequence of a sudden and unrepeatable event (more on this later). We will discuss a few of these events in an effort to show that the Hydroplate Theory offers the best explanation of all of these events.
b. This event that helps to answer all of the aforementioned phenomona can be described as a global flood whose waters erupted from interconnected, worldwide subterranean chambers with an energy release exceeding the explosion of 30 trillion hydrogen bombs!

3) What is The Hydroplate Theory?
   a. See the QuickTime Movie that briefly illustrates the Hydroplate Theory – Go to www.creationscience.com.
      i. Note that the force described in the video says 10 billion hydrogen bombs – a number that was incorrectly ascribed and has been updated as new information has been discovered.
   b. **How to Evaluate Theories** - To explain scientifically an unobserved event that cannot be repeated, we must first assume the conditions existing before that event. From these assumed starting conditions, we then try to determine what should happen according to the laws of physics. Three criteria should then be used to evaluate the proposed explanation.
      i. ***Criterion 1: Process.*** - If we can explain all relevant observations better than any other proposed explanation, confidence in our explanation increases. However, if these starting conditions and the operation of physical laws (or known processes) should have produced results that are not present, then confidence in our explanation decreases.
         (1) **For Example: What caused the extiniction of the dinosaurs?**
            (a) The question of what caused the extinction of the dinosaurs is an interesting one and some dinosaur extinction theories assume large climatic changes.
            (b) While many types of climate variation might kill all dinosaurs, we must also (by Criterion 1) look at other consequences of large climatic changes.
               (i) Flowering plants and many small animals are even more vulnerable to large climatic changes.
               (ii) Because most plants and animals did not become extinct with the dinosaurs, "climatic change" theories for dinosaur extinctions are weakened.
      ii. ***Criterion 2:*** (*Parsimony* here means "the use of few assumptions.") If a few assumptions allow us to explain many things, then confidence in the explanation will be great. Conversely, if many assumptions are used to explain a few observations, or if we must continually add new assumptions or modify our proposed theory as new observations are made, then we should have little confidence in the explanation.
         (1) **For Example: A large asteroid or comet struck the earth and killed all the dinosaurs.**

(a) Supposedly, the asteroid or comet, containing the rare element iridium, kicked up a worldwide dust cloud that blocked sunlight for several years, reduced photosynthesis on earth, and choked off the dinosaurs' food chain.
(b) Support for this theory comes from layers of clay in Europe, New Zealand, and elsewhere containing iridium.
(c) Iridium-rich layers are found near many dinosaur fossils and are dated, using evolutionary assumptions, as about 65 million years old.
(d) An asteroid or comet striking the earth might explain the worldwide extinction of the dinosaurs and widespread iridium layers near many dinosaur fossils.
(e) In other words, one starting condition (an impact of a large asteroid or comet) explains two important observations: dinosaur extinctions and iridium layers. This is good.

(2) **Hidden Assumptions…**
(a) While most meteorites contain iridium, it has not been detected in asteroids or comets.
(i) So advocates of the impact theory must assume that asteroids or comets have large amounts of iridium (or that meteorites came from asteroids).
(b) Other iridium-rich layers have since been discovered too far above and below the layer thought to mark the extinction of the dinosaurs.
(c) Further studies have found few iridium-rich layers near known impact craters. (Surprisingly, scientists later learned that airborne particles expelled by volcanoes contain considerable iridium and other rare chemical elements in the iridium-rich layers.)
(d) Also, many marine plants require daily sunlight.
(i) How could they have survived a global dust cloud that killed the dinosaurs?
(ii) Each problem can be solved by making new assumptions. However, by Criterion 2, this reduces our confidence in the theory.

iii. ***Criterion 3: Prediction***. A legitimate theory allows us to predict unusual things we should soon see if we look in the right places and make the right measurements. Verified predictions will greatly increase our confidence in an explanation. *Published predictions are the most important test of any scientific theory.* Few evolutionists make predictions.

(1) **What predictions are made based on the "climatic variation" and "impact" theories?**
(a) Few, if any, have been made publicly. This does not inspire confidence in these explanations. Rarely do predictions accompany explanations of ancient, unobserved events.

(b) Some predictions can be associated with the impact theory.
(i) For example, a very large impact crater should be found whose age corresponds to the time of the extinction of the dinosaurs.
(ii) Extinctions and fossils of many forms of life should concentrate near the crater or, at least, in the hemisphere containing the crater.
(iii) However, it is recognized that other fossils and extinctions that accompanied the dinosaurs' demise are uniformly distributed worldwide, a point worth remembering.

(2) Other dinosaur extinction theories have even more problems. Our purpose in this section is not to settle this issue but to show how scientific reasoning should be applied to unobserved, nonreproducible events.
(a) Incidentally, another theory on dinosaur extinction will soon become obvious—a theory involving a global flood and the harsh conditions afterward.

c. Scientific explanations are never certain or final, and the overused word "prove" is never justified except possibly in mathematics or a court of law. Science is even less certain when dealing with ancient, unrepeatable events, because other starting conditions might work as well or better than the proposed starting conditions. Perhaps we have overlooked a physical consequence or have improperly applied the laws of physics. Certainly we can never consider all the possibilities or have all the data.

d. So to try to scientifically understand unobservable, unrepeatable events, we should consider many sets of starting conditions, estimate the consequences of each based on physical laws, and then see how well those consequences meet the above three criteria.
i. Ancient records, such as legends or the Mosaic account in the Bible, do not give scientific support for the truth or falsity of an ancient event.
(1) Such records may provide important historical support to those with confidence in a particular ancient record.
ii. This, however, is not science. Here in we will focus on science.

4) The Hydroplate Theory: Key Assumptions
a. The previous section explained why assumptions are always required to explain ancient, unrepeatable events. Only one starting assumption underlies the hydroplate theory. All else follows from that assumption and the laws of physics. Theories of past events always have some initial conditions. Usually they are not mentioned.
b. ***Assumption: Subterranean Water.***
i. About half the water now in the oceans was once in interconnected chambers about 10 miles below the earth's surface. Excluding the extensive solid structure of these chambers, which will be called

pillars, *the subterranean water was like a thin, spherical shell, averaging about* $^3/_4$ *of a mile in thickness. Above the subterranean water was a granite crust; beneath the water was a layer of basaltic rock.*

(1) **Slide: MOHO**

(a) **Description**: Cross Section of the Preflood Earth. Several aspects of the early earth are shown here.

(i) The chamber's thickness (exaggerated in the figure) varied.

(ii) Pillarlike formations, connecting the chamber's floor and roof, partially supported the roof. (Subterranean water provided most of the support.)

*(iii)*Below the basalt was the top of the earth's mantle.

(iv) An important distinction between the basalt and upper mantle was discovered in 1909 by seismologist Andrija Mohorovicic. He noticed that earthquake waves passing into the mantle suddenly increased in speed.

(v) This boundary is now called the Mohorovicic discontinuity, a term which, for obvious reasons, been shortened to "the Moho."

ii. With less water on the Earth's surface, Europe, Asia, Africa, and the Americas were joined across what is now the Atlantic Ocean.

(1) They were generally in the positions shown in the slide.

(2) On the preflood crust were seas, both deep and shallow, and mountains, generally smaller than those of today, but some perhaps 5,000 feet high.

iii. **Two Common Questions**

(1) How could rock float on water?

(a) The crust did not float on water; water was trapped and sealed under the crust. (Water pressure and pillars supported the crust.)

(b) The crust was like a thin slab of rock resting on and covering an entire waterbed. As long as the water mattress does not rupture, a dense slab will rest on top of less-dense water.

(c) Unlike a waterbed's seal, which is only a thin sheet of rubber, the chamber's seal was compressed rock almost 10 miles thick. Pressures in the crust 5 miles or more below the earth's surface are so great that the rock can deform like highly compressed, extremely stiff putty. The slightest crack or opening could not open from below.

(2) Temperatures increase with depth under the earth's surface. Subterranean water at a depth of about 10 miles would have been extremely hot. Wouldn't all life on earth have been scalded if that water flooded the earth?

(a) No. Today's geothermal heat is largely a result of the flood. To understand why and to see why life was not scalded, one must first understand **tidal pumping** and **supercritical water**

(SCW). (We will discuss more of why continents and preflood mountains sank as the subterranean water escaped when we discuss the four phases of the Hydroplate Theory.)

(b) **Tidal Pumping.**

(i) Just as the gravity from the moon create tides on earth's oceans today, the moons gravity created tides in the subterranean water that lifted the massive crust twice daily.

(ii) Each tidal lift transferred energy from the spins of the earth and Moon to the earth's crust.

(iii) At low tides, the crust settled, compressing and heating the pillars, so temperatures in the subterranean chamber steadily rose, generating much of today's geothermal heat.

(iv) Some gases and minerals dissolved in this hot, high-pressure, liquid water, especially carbon dioxide (CO2), salt (NaCl), and quartz (SiO2). (This process helps to explain how dissolved quartz petrified some wood and cemented flood sediments into sedimentary rocks and is described in the book.)

(c) **Super Critical Water.**

(i) At a pressure of one atmosphere—also called 1.0 bar or 14.7 psi (pounds per square inch)—liquid water boils at a temperature slightly above 212°F (100°C).

- As pressure increases, the boiling temperature rises. At a pressure of 220.6 bars (3,200 psi) the boiling temperature is 705°F (374°C).
- Above this pressure-temperature combination, **water is supercritical and cannot boil**.

(ii) After centuries of tidal pumping, the subterranean water exceeded the critical temperature, 705°F. (The initial pressure in the 10-mile-deep subterranean chamber was about 4,270 bars, 62,000 psi—well above the critical pressure.)

(iii) As the temperature increased, the pressure grew, the crust stretched, and the energy from tidal pumping increasingly ionized the water.

(iv) Most hot liquids cool primarily by evaporation from their surfaces. SCW consists of microscopic liquidlike clusters dispersed within water vapor. The rate those hot clusters and most hot objects cool off depends on their total surface area. The smaller a particle, the larger its surface area is relative to its volume, so more of its heat can be quickly transferred to its surroundings. The liquid in SCW has an area-to-volume ratio that is a trillion times greater (10^{12}) than that of water that might have covered the earth's

surface. *Consequently, the liquid in SCW cools almost instantaneously if its pressure drops.* This is because the myriad of liquid clusters, each surrounded by vapor, can simultaneously evaporate. A typical SCW cluster at 300 bars and 716°F (380°C) consists of 5–10 molecules with a volume of only 27–33 cubic angstroms. These liquidlike clusters break up and reform continuously.

(v) This explains how the escaping supercritical liquid transferred its energy into supercritical vapor. How did the vapor lose its energy and cool? Rapid expansion.

- A remarkable characteristic of supercritical fluids is that a small decrease in pressure produces a gigantic change in volume.
- So as the SCW flowed toward the base of the rupture, its pressure dropped and the vapor expanded and cooled. As it expanded, it pushed on the surrounding fluid (gas and liquid), giving all fluid downstream greater kinetic energy.

(vi) Eventually the horizontally flowing liquid-gas mixture began to flow upward through the rupture. As the fluid rose, the electrical energy of ionization was released, and the water pressure dropped to almost zero in seconds. The 10,000-fold expansion resembled a focused explosion of indescribable magnitude, accelerating the mixture, including rocks and dirt, into the vacuum of space.

(vii) In summary, as the flood began, SCW jetted up through a globe-encircling rupture in the crust—as from a ruptured pressure cooker. This huge acceleration expanded the spacing between water molecules, allowing flash evaporation, sudden cooling, and even greater expansion, acceleration, and cooling. Therefore, most of the vast thermal, electrical, and surface energy in the subterranean water ended up not as heat at the earth's surface but as extreme kinetic energy in "all the fountains of the great deep." As you will see, these velocities were high enough to launch much material into outer space—the final dumping ground for most of the energy in the SCW.

c. **The Four Phases of the Hydroplate Theory: Rupture, Flood, Drift, and Recovery**

- All 24 major mysteries described earlier, such as major mountain ranges, ice ages, comets, and the Grand Canyon, seem to be consequences of this basic assumption. The chain of events that flows naturally from this starting condition will now be described as an observer might relate them. The events fall into four phases.

i. Phase 1: Rupture

(1) The increasing pressure in the subterranean water stretched the overlying crust, just as a balloon stretches when the pressure inside increases.
(2) Eventually, this shell of rock reached its failure point. Failure began with a microscopic crack at the earth's surface. Because stresses in such cracks are concentrated at each end of the crack, each end grew rapidly—at about 3 miles per second.
    (a) Within seconds, this crack penetrated down to the subterranean chamber and then followed the path of least resistance around the earth.
    (b) The ends of the crack, traveling in opposite directions, circled the earth in about one hour.
    (c) Initial stresses were largely relieved when one end of the crack ran into the path left by the other end. In other words, the crack traveled a path that intersected itself at a large angle, forming a "T" or "Y" somewhere on the opposite side of the earth from where the rupture began.
    (d) As the crack raced around the earth, the 10-mile-thick crust opened like a rip in a tightly stretched cloth.
    (e) **Slide Illustrations – two slides**
        (i) Illustrates the rupture and jetting fountain
        (ii) Map with special significance of the ocean floor and the path of the rupture
(3) Pressure in the subterranean chamber immediately beneath the rupture suddenly dropped to nearly atmospheric pressure.
    (a) This caused supercritical water to explode with great violence out of the 10-mile-deep "slit" that wrapped around the earth like the seam of a baseball.
    (b) All along this globe-circling rupture, whose path approximates today's Mid-Oceanic Ridge, a fountain of water jetted supersonically into *and far above* the atmosphere.
    (c) Much of the water fragmented into an "ocean" of droplets that fell as rain great distances away.
    (d) This produced torrential rains such as the earth has never experienced—before or after.
    (e) **Slide Illustration –** Two Images
(4) Some jetting water rose above the atmosphere where it froze and then fell on various regions of the earth as huge masses of extremely cold, muddy "hail."
    (a) That hail buried, suffocated, and froze many animals, including some mammoths.
    (b) The most powerful jetting water and rock debris escaped the earth's gravity and became the solar system's comets, asteroids, and meteoroids.

ii. Phase 2: Flood
(1) Each side of the rupture was basically a 10-mile-high cliff.

(a) Compressive, vibrating loads in the bottom half of the cliff face greatly exceeded the rock's crushing strength, so the bottom half of the cliff continuously crumbled, collapsed, and spilled out into the jetting fountains.
(b) That removed support for the top half of the cliff, so it also fragmented and fell into the pulverizing supersonic flow.
(c) Consequently, the 46,000-mile-long rupture rapidly widened to an average of about 800 miles all around the earth.
(d) **Slide Illustration – two slides**
(i) Shows the rupture with water above and below continental crust, plus illustrates the location of extreme rain
(ii) Ocean floor map again – pointing out the distance between the continents and the mid-oceanic ridge (approximately 400 miles of cracked ocean floor on either side of the ridge – totaling approximately 800 miles)

(2) About 35% of the eroded sediments were from the basalt of the chamber floor.
(a) Sediments swept up in the escaping flood waters gave the water a thick, muddy consistency.
(b) These sediments settled out over the earth's surface in days, trapping and burying many plants and animals, beginning the process of forming the world's fossils.
(c) A phenomenon called *liquefaction* sorted sediments, animals, and plants into horizontal layers that are more uniform and cover a much larger area than sedimentary layers laid down today.
(i) Traces of these dead organisms are called *fossils*.

(3) The rising flood waters eventually blanketed the water jetting from the rupture, although water still surged out of the rupture.
(a) Because today's major mountains had not yet formed, global flooding covered the earth's relatively smooth topography.
(i) Given the example of a smooth topography (such as a billiard ball), there is currently enough water on the earth to cover the earth to a depth of 9,000 feet.
- 196×10^6 sq miles of land
- 341×10^6 cu miles of water
- Divide 196 into 341 and get a depth of 1.739 miles
- Multiply by 5,280 to get 9181.92 feet

(ii) Note: Today, the volume of all land <u>above</u> sea level is only one-tenth of the volume of water on earth.

(4) Because the thinner (and higher) portions of the crust were supported entirely by subterranean water, primarily the continents and preflood mountains sank as the supercritical water escaped.
(a) Therefore, *the flooded earth resulted as much from sinking continents as from rising water*.

(i) (For more information on this, see the section on CreationScience.com entitled, *"What Triggered the Flood?"*)

(ii) **Slide Illustration**

(5) As mentioned earlier, the supercritical water in the subterranean chambers dissolved minerals containing large amounts of salt, calcium, carbon and oxygen.

(a) As the SCW cooled, these dissolved substances precipitated out and lined the chamber floor with limestone ($CaCO_3$).

(b) The escaping subterranean waters carried the particles of limestone out of the chamber floor and deposited them on the earth.

(c) The total volume of limestone on the earth is staggering and cannot be explained by currently occurring natural processes. Of course, most of the limestone we see on the earth today did not originate on the earth's surface.

(6) Flooding uprooted most of earth's abundant vegetation and transported it to regions where it accumulated in great masses.

(a) Later, at the end of the continental-drift phase, buried layers of vegetation were rapidly compressed and heated, precisely the conditions that laboratory experiments have shown will form coal and oil.

(7) The flood phase ended with the continents near the positions shown in the slide.

(a) **Slide Illustration**

iii. Phase 3: Continental Drift

(1) Material within the earth is compressed by overlying rock.

(a) Rock's slight elasticity gives it springlike characteristics.

(b) The deeper the rock, the more weight above, so the more tightly compressed the "spring"—all the way down to the center of the earth.

(2) The rupture path continuously widened during the flood phase.

(a) Eventually, the width was so great, and so much of the surface weight had been removed, that the compressed rock beneath the exposed floor of the subterranean chamber sprung upward.

(b) **Slide Illustration -** As the Mid-Atlantic Ridge began to rise, creating slopes on either side, the granite hydroplates started to slide downhill.

(c) This removed even more weight from what was to become the floor of the Atlantic Ocean.

(i) As weight was removed, the floor rose faster and the slopes increased, so the hydroplates accelerated, removing even more weight, etc.

- The entire Atlantic floor rapidly rose almost 10 miles.

(d) **Slide Illustration**

(i) Image 1 - Overlying rocks keep a compressed spring horizontal.

(ii) Image 2 - The spring remains aligned and compressed as the gap between the rocks widens.

(iii) Image 3 - When the gap reaches a certain critical width, the spring suddenly buckles upward.

- Now consider thousands of similar springs lined up behind the first spring—all linked together and repeating in unison steps 1–3. The upward buckling of any coil will cause adjacent springs to become unstable and buckle up themselves. They, in turn, will lift the next spring, and so on, in ripple fashion.

(iv) Image 4 - Rupture completed. Jetting water not shown.

(v) Image 5 - The rupture's path widens by the crushing, erosion, and collapse of the vertical walls, exposing what will become the Mid-Atlantic Ridge. Most of earth's sediments are quickly produced by escaping, high-velocity waters—the "fountains of the great deep."

(vi) Image 6 - Continental-drift phase begins.

- The Mid-Atlantic Ridge "springs" upward, releasing extreme amounts of energy, inherent in compressed rock.
- Fracture zones form perpendicular to the ridge axis and rifts form along the ridge axis.
- The massive hydroplates, lubricated by water, begin to accelerate downhill.
- As more and more weight slides away from the newly formed Ridge, the exposed chamber floor quickly rises several miles (accelerating the hydroplates even more) and becomes the Atlantic floor.

(3) As the first segment of the Mid-Atlantic Ridge began to rise, it helped lift adjacent portions of the chamber floor just enough for them to become unstable and spring upward.

(a) This process continued all along the rupture path, forming the Mid-Oceanic Ridge.

(b) Also formed were fracture zones and the strange offsets the ridge has at fracture zones.

(c) Soon afterward, magnetic anomalies developed.

(4) For a day or so, the sliding hydroplates were almost perfectly lubricated by water still escaping from beneath them.

(a) This process resembled the following: *A long train sits at one end of a very long, level track. If we could somehow just barely lift the end of the track under the train and the wheels were frictionless, the train would start rolling downhill. Then we could lift the track even higher, causing the train to accelerate*

even more. If this continued, the high-speed train would eventually crash into something. The long train of boxcars would suddenly decelerate, compress, crush, and "jackknife."

(5) Continental plates accelerated away from the rising Mid-Atlantic Ridge.
   (a) (Recall that the rupture encircled the earth, and escaping subterranean water widened that rupture an average of about 400 miles on each side of the rupture—on what is now the Pacific side of the earth as well as the Atlantic side. Plates then slid *at least* 400 miles away from the rising Mid-Atlantic Ridge. We will explain dramatic events that occurred simultaneously in the Pacific in the next section.)
   (b) **Slide Illustration**

(6) Eventually, the drifting—actually, accelerating—hydroplates ran into resistances of two types:
   (a) The first happened as the water lubricant beneath each sliding plate was depleted.
   (b) The second occurred when a plate collided with something.
   (c) As each massive hydroplate decelerated, it experienced a gigantic *compression event*—buckling, crushing, and thickening each plate.
      (i) **Slide Illustration – Animation of the Continental Drift Phase**
         - The animation shows one side of the earth at the end of the flood phase. Because the rupture encircled the earth, a similar eroded gap existed between the continental plates on the other side of the globe. The Mid-Oceanic Ridge rose first in the Atlantic, hours or days before the ridge traveled to and rose in what is now the Pacific. This caused the hydroplates to accelerate downhill on a layer of lubricating water, away from the widening Atlantic and into the gap on the opposite side of the earth.
         - The continental-drift phase ended with the dramatic compression event that squeezed up the earth's major mountains. These six frames simply rotate the present continents about today's polar axis. Therefore, greater movement occurs at lower latitudes.
         - Movement begins from where the continents best fit against the base of the Mid-Atlantic Ridge and ends near their present locations. (**Slide)**
         - **(Back to Animation Slide)** Not shown are consequences of the compression event. For example, the compression squeezed and thickened continents, shortening the widths of the major continents and widening the Atlantic. Of course, postflood mountains

thickened the most, but nonmountainous regions thickened as well. Regions that did not thicken are now part of the shallow ocean floor. (**Slide**)

- While it may seem strange to think of squeezing, thickening, and shortening granite, one must understand the gigantic forces required to decelerate sliding continental plates. If compressive forces are great enough, granite deforms (much like putty) on a global scale. (**Slide**)
- On a human scale, however, one would not see smooth, puttylike deformation; instead, one would see and hear blocks of granite fracturing and sliding over each other. Some blocks would be the size of a small state or province, many would be the size of a house, and even more would be the size of a grain of sand.
- Friction at all sliding surfaces would generate heat. At great depths, this would melt rock. Liquid rock (magma) would squirt up and fill spaces between the blocks. This is seen in most places where basement rocks are exposed, as in the Black Canyon of the Gunnison (Image 1) and the inner gorge of the Grand Canyon (Image 2).

(d) To illustrate the compression event, consider the following situation:

(i) Imagine yourself in a car traveling at 45 miles per hour. You gently step on the brake as you approach a stop light and brace yourself by straightening and stiffening your arms against the steering wheel.

- You might feel 15 pounds of compressive force in each arm, about what you would feel lifting 15 pounds above your head with each hand.

(ii) If we repeated your gentle deceleration at the stop light, but each time doubled your weight, the compressive force in your arms would also double each time.

(iii) After about six doublings, especially if you were sitting on a lubricated surface, your arm bones would break.

(iv) If your bones were made of steel, they would break after nine doublings.

(v) If your arm bones were one foot in diameter and made of granite, a much stronger material, 17 doublings would crush them.

(vi) This compression would be comparable to that at the top of each decelerating hydroplate. The compression at the base of the hydroplate exceeded the crushing strength of granite, even before the deceleration, simply due to the weight of overlying rock.

(vii) (**New Slide**) Consequently, crashing hydroplates at the end of the continental-drift phase crushed and thickened each hydroplate for many minutes. Mountains were quickly squeezed up.

(viii) As the mountains and continents rose, the flood waters receded. For each cubic mile that rose, one cubic mile of water was able to drain.

(ix) As explained earlier, the forces acting during this dramatic event were not applied to stationary (static) continents resting on other rocks. The forces were dynamic, produced by rapidly decelerating hydroplates riding on lubricating water that had not yet escaped from beneath them.

(x) Naturally, the long axis of each buckled mountain was generally perpendicular to its hydroplate's motion—that is, parallel to the portion of the Mid-Oceanic Ridge from which it slid. So the Rocky Mountains, Appalachians, and Andes have a north-south orientation.

(e) **Buckling Observed**… The upward buckling of a deep, rock floor has been observed.

(i) A limestone quarry floor buckled upward in Yorkshire, England in 1887. The explanation is quite simple.

(ii) Shale, which lay beneath the floor, consists of platelike particles that can slide over each other like playing cards in a deck.

(iii) The weight of the quarry's walls squeezed shale toward the center of the quarry, increasing the pressure on the quarry floor.

(iv) Once the slightest upward buckling began, the limestone floor weakened, allowing the shale to push up even more.

(f) In the flood cataclysm, the "quarry" was 10 miles deep, hundreds of miles wide, and 46,000 miles long.

(i) The high upward pressure on the "exposed" portion of the subterranean chamber floor was no longer balanced by the weight of the crust pressing down.

(ii) Therefore, that portion of the chamber floor increasingly bulged upward, as happened in the quarry.

(iii) Eventually, the hydroplates, still resting on a layer of water, began to slide downhill, away from the rapidly rising bulge.

(iv) This removed even more weight from the chamber floor, accelerating its upward bulging.

(v) Today, the upbuckled region is the globe-encircling Mid-Oceanic Ridge.

(g) Mechanical and civil engineers call this phenomenon "the buckling of a plate on an elastic foundation."

(i) It can be demonstrated by placing long bricks on top of a foam mattress compressed in a rigid box then slowly

remove the bricks from the foam mattress, beginning at the center and moving outward.

(ii) When enough bricks are removed, the mattress suddenly springs upward, raising the remaining bricks.

(iii) If these bricks were on a frictionless surface, they would slide downhill, just as continents (hydroplates) did during the continental-drift phase.

(iv) Although a void opens up under the upbuckled foam mattress, no void would open up deep inside the earth, because pressures are too great.

(v) Consequently, high pressure rock from below would buckle up to fill the space.

(vi) That would not leave a void farther down, because even deeper rock would buckle into that space.

(vii) Ultimately, mass from the opposite side of the earth must depress to compensate for the rising of the Mid-Atlantic Ridge and the entire Atlantic floor.

(viii) Thus, the Pacific and Indian Oceans rapidly formed.

(h) As mountains buckled up, the remaining water under the plate tended to fill large voids. Some pooled water should still remain in cracked and contorted layers of rock. (**Two Slides**)

(7) PREDICTIONS

(a) Prediction 1

(i) Beneath major mountains are large volumes of pooled salt water. (Recent discoveries support this prediction, first made in 1980. Salt water appears to be about 10 miles below the Tibetan Plateau, which is bounded on the south by the largest mountain range on earth.)

(b) Prediction 2

(i) Salty water will be found within cracks in granite, 5-10 miles below the earth's surface (where surface water should not be able to penetrate).

iv. Phase 4: Recovery

(1) Where did the water go?

(a) When the compression event began on a particular hydroplate, the plate crushed, thickened, buckled, and rose out of the water. As it did, the flood waters receded.

(b) Simultaneously, the upward-surging, subterranean water was "choked off" as the plates settled onto the subterranean chamber floor. With the water source shut off, the deep, newly-opened basins between the continents became reservoirs into which the flood waters returned. **[Slide]**

(c) As you will recall, the floors of these deep reservoirs were initially part of the basalt floor of the subterranean chamber, about 10 miles below the earth's surface. Consequently, sea

level soon after the flood was several miles lower than it is today.
    (i) This provided land bridges between continents, facilitating animal and human migration for perhaps several centuries.
    (ii) [**Slide]** Point out sea floor features of underwater peninsulas for discussion later.

(2) Sediments, mixed with organic matter and its bacteria, were swept with draining flood waters onto the new ocean floors.
  (a) There, the bacteria fed on the organic matter and produced methane.
  (b) Since then, much of this methane combined with cold, deep ocean waters to become vast amounts of methane hydrates along coastlines.
  (c) **[Slide]**

(3) After the flood, hydroplates rested on portions of the former chamber floor, and oceans covered most other portions.
  (a) Because the thickened hydroplates applied greater pressure to the floor than did the water, the hydroplates slowly sank into the chamber floor over the centuries, causing the deep ocean floor to rise.
  (b) As sea level rose in the centuries after the flood, animals were forced to higher ground and were sometimes isolated on islands far from present continental boundaries.
  (c) Classic examples of this are finches and other animals Charles Darwin found on the Galapagos Islands, 650 miles off the coast of Ecuador.
    (i) **[Slide]** Points out the undersea land bridges that surrounded the former South American Peninsula
    (ii) Today, those islands are the only visible remains of a submerged South American peninsula. Darwin believed the finches were blown there during a giant storm. Even if Darwin's unlikely storm happened, both a male and female finch, rugged enough to survive the traumatic trip, must have ended up on each island.

(4) The more sediments continents carried and the thicker continents grew during the compression event, the deeper they sank. This also depressed the Moho.
  (a) Newly formed mountains sank even more, slowly depressing the Moho beneath them to 20–30 miles below the earth's surface.
  (b) The Moho and mantle under the ocean floor rose along with the ocean floor.
    (i) This is why continental material is so different from oceanic material and why the Moho is so deep beneath mountains and yet so shallow beneath the ocean floor.
  (c) **[Slide.]**

(5) Many other things were far from equilibrium after the continental-drift phase.
(a) Over the centuries, the new mountain ranges and thickened continental plates settled slowly toward their equilibrium depth—just as a person's body sinks into a waterbed.
(b) Sinking mountains increased the pressure under the crust on both sides of mountain ranges, so weaker portions of the overlying crust fractured and rose, forming plateaus.
(i) *In other words, as continents and mountains sank, plateaus rose.* This explains the otherwise strange aspects of plateaus such as horizontal strata and thicker Moho layers under them.
(c) It also explains why plateaus are adjacent to major mountain ranges. **[Three Slides]**
(i) For example, the Tibetan Plateau, the largest in the world, is next to the most massive mountain range in the world—the Himalayas.
- The Tibetan Plateau covers 750,000 square miles and rose to an elevation of about 3 miles.
- The Colorado Plateau, next to the Rocky Mountains, and the Columbia Plateau, next to the Cascade Mountains, are other dramatic examples.

v. **Sequence of Events** - [**Slide**]
(1) Although the flood's consequences, displayed above, are correctly sequenced, each phase has a different time scale. Each consequence shown in red is the subject of a subsequent chapter. (Notice that the mammoths were frozen during the rupture phase, but the ice age began during the recovery phase and is diminishing today.)

vi. **Earth Roll.** The sudden formation of major mountains altered the spinning earth's balance,55 causing the earth to slowly roll about 35°–45°.
(1) The preflood North Pole moved to what is now central Asia.56 (The shift produced a 6° precession of the earth's axis that Dodwell discovered from studying almost 100 ancient astronomical measurements made over the last 4,000 years.)
(2) This is why coal, dinosaur fossils, and other temperate fossils58 are found near today's South Pole.
(a) Many researchers have also discovered vast dinosaur and mammoth remains inside the Arctic Circle. All were at temperate latitudes before the flood.
(3) The direction and magnitude of the roll are also shown by animals and plants that today live at specific temperate latitudes but whose fossils are found inside the Arctic Circle.

(a) Remains of a horse, bear, beaver, badger, shrew, wolverine, rabbit, and considerable temperate vegetation are found on Canada's Ellesmere Island, inside the Arctic Circle.
(b) Such animals and plants today require temperatures about 27°F warmer in the winter and 18°F warmer in the summer.
(c) Also found are remains of "large lizards, constrictor snakes, tortoises, alligators, tapirs, and flying lemurs—now found only in Southeast Asia."
(d) Isotopic studies of the cellulose in redwood trees on Axel Heiberg Island, just west of Ellesmere Island, show that they grew in a climate similar to that of today's coastal forests of Oregon (35° farther south in latitude).

(4) Ellesmere Island and Axel Heiberg Island have the largest known contrast between current temperatures and inferred ancient temperatures based on fossils.
(a) Both islands straddle 85°W longitude. Therefore, regions near this longitude experienced large northward shifts following the flood.
(b) The preflood North Pole rolled south near 95°E longitude while the region presently occupied by today's North Pole rolled north near 85°W longitude. Also implied is a roll of at least 35°. Physics and geology give a similar picture.

(5) An ancient historical record tells of a catastrophic flood and an apparent earth roll.
(a) Famous linguist Charles Berlitz reports that early Jesuit missionaries in China located a 4,320-volume work "compiled by Imperial Edict" and containing "all knowledge." It states,
(i) "The Earth was shaken to its foundations. The sky sank lower toward the north. The sun, moon, and stars changed their motions. The Earth fell to pieces and the waters in its bosom rushed upward with violence and overflowed the Earth. Man had rebelled against the high gods and the system of the Universe was in disorder."

vii. **Inland Lakes & Canyons.** Drainage of the waters that covered the earth left every continental basin filled to the brim with water.

(1) Some of these postflood lakes lost more water by evaporation and seepage than they gained by rainfall and drainage from higher elevations. Consequently, they shrank over the centuries.

(2) A well-known example was former Lake Bonneville, part of which is now the Great Salt Lake. [**Slide**]
(a) At its largest extent it covered about 20,000 square miles of western Utah and smaller portions of eastern Nevada and southern Idaho.
(b) was about 325 miles long, 135 miles wide, and had a maximum depth of over 1,000 feet.

(c) Now dried, the ancient shores of Lake Bonneville are easily seen in the geography of Utah
(d) Home to the Bonneville Salt Flats famous for it's extrodinarily flat, level, smooth terrain.

(3) Through rainfall and drainage from higher terrain, other lakes gained more water than they lost.
(a) Eventually, water overflowed each lake's rim at the lowest point on the rim. The resulting erosion at that point on the rim allowed more water to flow over it.
(b) This eroded the cut in the rim even deeper and caused much more water to cut it faster. Therefore, the downcutting accelerated catastrophically. The entire lake quickly dumped through a deep slit which we today call a canyon.
(c) These waters spilled into the next lower basin, causing it to breach its rim and create another canyon. It was like falling dominoes.
(d) The most famous canyon of all, the **Grand Canyon**, formed in this manner - primarily by the dumping of what we will call **Grand Lake**.
(i) More on the Grand Canyon later…

(4) With thousands of large, high lakes after the flood, and a lowered sea level, many other canyons were carved.
(a) Some are now covered by the raised ocean.
(i) It appears that (1) the Mediterranean "Lake" dumped into the lowered Atlantic Ocean and carved a canyon at the Strait of Gibraltar,
(ii) (2) "Lake California" filling the Great Central Valley of California carved a canyon (now largely filled with sediments) under what is now the Golden Gate Bridge in San Francisco, and
(iii) (3) the Mediterranean Sea or the Black Sea carved out the Bosporus and Dardanelles.
(iv)[**Three Slides of the above features**]

viii. The **Origin of the Grand Canyon** - SUMMARY: Geologists admit that they do not know how the Grand Canyon formed, but they insist that the Colorado River somehow carved it and removed the evidence. For 150 years, this insistence has resulted in the canyon's birth being a "hazy mystery, cloaked in intrigue, and filled with enigmatic puzzles."

(1) There are eight main proposals for the Grand Canyon's origin that are rejected by almost all experts. In this class we will not discuss these proposals but each is described in the 8th edition of Dr. Brown's book.
(2) We will consider two ancient, postflood lakes—Grand Lake and Hopi (HO pee) Lake—that successively breached their boundaries

and carved the Grand Canyon in a few weeks. This explanation not only unravels the confusion, but solves other puzzles not previously associated with the Grand Canyon.

(3) Any Satisfactory Explanation for the Origin of the Grand Canyon Should be able to Explain the following Evidence Requiring an Explanation

(a) **Layering.** Probably the most striking sight at the Grand Canyon is the vastness of the sharp, parallel, multicolored layers. (The mineral and chemical content of each layer produces the variety of colors.) Although stratification is common throughout the world's sedimentary rocks, any explanation for the Grand Canyon must account for it.

(b) **Limestone.** The Hualapai Limestone, to the west of the Grand Canyon, was deposited before the Colorado River flowed out the western end of the Grand Canyon. Also, many layers in the canyon consist primarily of limestone hundreds of feet thick.18 What is the source of so much limestone and what concentrated it?

(c) **Marble Canyon.** How does the origin of the nearly straight Marble Canyon and its narrow, vertical walls relate to the origin of the adjoining, but broader, Grand Canyon? What accounts for the strange pattern of tipped layers in the walls of Marble Canyon and Echo and Vermilion Cliffs?

(d) **Side Canyons.** Why do Grand Canyon and Marble Canyon have so many side canyons that were cut as deeply as the main canyons but without a visible source of water?

(e) **Barbed Canyons**. Why does Marble Canyon have large, barbed side canyons?

(f) **Slot Canyons.** How did such narrow side canyons with jagged walls capture enough water to cut deep channels that drain into the Colorado River? Why are most of the world's slot canyons on the Colorado Plateau?

(g) **Perpendicular Faults.** Why are dozens of faults in the Grand Canyon generally perpendicular to the Colorado River, and why does the river hardly ever flow along the "easier" paths provided by these faults?19

(h) **Arching.** Why are Grand and Marble Canyons cut into and along a broad arch that extends, in general, for the 277-mile length of those canyons?

(i) **Inner Gorge.** Why are the walls of the inner gorge so deep, steep, narrow, and rough?

(j) **Nankoweap Canyon.** What provided a violent, multidirectional flow of water able to
(1) carve Nankoweap Canyon and its side canyons,
(2) create a large delta that still remains despite the cross-flowing Colorado River, and

(3) stack boulders 100–200 feet high along Nankoweap Creek? Why would humans choose to live in this desolate canyon?

(k) **Unusual Erosion.** Why are slumps, landslides, and rockfalls on the top of Nankoweap Mesa? Why does the Colorado River sharply delineate this eroded region to the west from the smooth, lower region to the east?

(l) **Forces, Energy, and Mechanisms**. Each explanation for the Grand Canyon requires lifting the Colorado Plateau more than a mile in the air and moving massive amounts of water and rocks. Are the forces, energy, and mechanisms for these movements known—or merely inferred or assumed? Without a knowledge of the underlying physics—which must conform to scientific laws—major errors can creep in. Even if the inferences or assumptions are found to be correct, ignorance of the actual forces, energy, and mechanisms will blind us to root causes, rates, and other consequences. Modeling and testing become limited. Such explanations can only be described as "half baked."20

(m) **Why Here?** Why is the Grand Canyon where it is, and why are there not many equally "grand canyons" worldwide? The canyon receives little rain. If an explanation claims that a set of conditions, such as a fast-flowing river and millions of years, produced the Grand Canyon, then other "Grand Canyons" should be found where those conditions exist elsewhere in the world.

(n) **Why So "Recently"?** If the Grand Canyon was carved during the last one-thousandth of earth's history, why were no other "Grand Canyons" carved earlier?

(o) **Missing River.** The limestone deposits immediately to the west of the Grand Canyon show that the Colorado River did not flow beyond the Grand Canyon before the canyon was excavated. Where was the river? What brought it to its present location? How was the western Grand Canyon carved?

(p) **Missing Talus.** In the canyon region, why do steep cliffs such as Echo Cliffs, Vermilion Cliffs, and others have little talus at their bases?

(q) **Kaibab Plateau.** Why and how did the Colorado River make a right turn and cut through the Kaibab Plateau which rises more than a mile on either side of the river?

(r) **Missing Mesozoic Rock.** What swept off a soft Mesozoic layer, at least 1,000 feet thick, from atop 10,000 square miles of horizontal Kaibab Limestone?

(s) **Missing Dirt.** Where did so much dirt go? About 800 cubic miles of material were removed in carving the Grand Canyon through and below the Kaibab Limestone. The Colorado

River's delta does not contain even 1% of this missing material.

(t) **Fossils.** Why are fossils found only above the Great Unconformity?

(u) **Tipped Layers.** Why are sedimentary layers, hundreds of feet thick, tipped at steep angles below the Great Unconformity, while the layers above (totaling 4,000 feet) are essentially horizontal?

(v) **Time or Intensity?** A satisfactory proposal for carving the Grand Canyon must show, in a self-consistent way, that eons of time transpired, or a brief, intensely violent flow of water occurred.

ix. As mentioned earlier, we will consider two ancient, postflood lakes—Grand Lake and Hopi (HO pee) Lake—that successively breached their boundaries and carved the Marble and Grand Canyons in a few weeks. This explanation not only unravels the confusion, but solves other puzzles not previously associated with the Grand Canyon.

(1) **In summary:** Grand Lake, standing at an elevation of 5,700 feet above today's sea level, quickly eroded its natural dam 22 miles southwest of what is now Page, Arizona. In doing so, the northwestern boundary of former Hopi Lake (elevation 5,950 feet) was eroded, releasing waters that occupied the present valley of the Little Colorado River. It occupied the southeast quarter of Utah, parts of northeastern Arizona, as well as small parts of Colorado and New Mexico. [2 **Slides – one pictoral, the other relief.**]

(2) The Funnel. Imagine Grand Lake, a postflood lake, 5,700 feet above today's sea level, with the area and volume of Lake Michigan, (1,180 cubic miles of water, approximately 22,300 sq miles) high on the Colorado Plateau.

(a) About 15–20 miles beyond the southwest shore of Grand Lake is the top of the long Echo-Vermilion Cliff.

(b) Despite losses from evaporation and drainage, the lake's level is maintained (or exceeded) by rainfall and drainage from higher elevations.

(c) Water drains from under Grand Lake, emerging as springs from the face of this 2,000-foot cliff system.

(d) Increasingly, the ground sinks along a path between the lake and the cliff.

(e) Suddenly, Grand Lake breaches a point on its bank and catastrophically erodes the soft Mesozoic sediments, forming a gigantic spillway—a steep, 18-mile-long channel shaped like a widening funnel.

(f) The escaping water's large volume and high velocity erodes the far end of the funnel within weeks to a width of 12 miles and a depth of 2,000 feet. [**2 slides**]

(3) Marble Canyon. The originally horizontal sedimentary layers below the floor of the funnel steadily arch upward as weight is removed by this downward erosion.

(a) Eventually, the funnel's floor—hard, brittle Kaibab Limestone—cracks in tension, splitting open the entire floor parallel to the funnel's axis, forming *Marble Canyon.*

(b) Aquifers (porous, water-saturated, sedimentary layers) cut by this deep vertical crack begin rapidly spilling their waters, like a large ruptured water main, into the newly formed Marble Canyon. [**Slide**]

(c) Subsurface channels draining into Marble Canyon begin to form.

(i) Directly above these underground drainage channels, the earth sinks, forming north-draining valleys entering Marble Canyon. [**Slide**]

- Instead of "sinkholes," we have hundreds of shallow "sink valleys." [**Slide**]
- The underground channels, in effect, grow in diameter as subsurface water flows through them, so the larger underground "pipes" capture even more water.
- Eventually, only a few very large, subsurface drainage channels are spilling out at fairly even intervals along Marble Canyon. [**Slide**]
- Also, water pouring out of the sides of the funnel spill into some sink valleys more than others, eroding those valleys from the earth's surface down. This allows them to capture more surface water and erode even deeper.

(4) The Grand Canyon. The south-flowing torrent of water spilling from Grand Lake undercuts the northwestern corner of Hopi Lake (elevation 5,950 feet), releasing its waters as well.

(a) Their combined waters, now sweeping westward over northern Arizona, first remove at least 1,000 feet of the soft sediments above the hard Kaibab Limestone.

(b) As this weight is removed from almost 10,000 square miles south and west of the funnel, deeper sedimentary layers arch upward, stretching and in many places cracking open the hard, brittle Kaibab Limestone above.

(c) Near the breach point in Hopi Lake's high shoreline, a waterfall, about thirteen times higher (with possibly a hundred times greater flow rate) than Niagara Falls breaks loose.

(i) "Hopi Falls" removes so much Kaibab Limestone and overlying material that the weaker, compressed layers below begin rising to form the Kaibab Plateau.

(ii) Rushing water from both lakes is channeled through the lowest path, cutting downward at the rate at which the land rises.

(iii) This focuses the westward, erosive flow of these escaping waters. [2 **Slides**]

(d) About 20% of the volume of the rapidly rising Kaibab Plateau is subsurface water.
   (i) The higher the plateau rises, the greater the water's energy and eroding potential.
   (ii) Landslides, slumps, and mudflows spill down the rising slopes of the Kaibab Plateau from multiple directions for weeks.
   (iii) Powerful springs are released around the base and sides of the plateau; many springs will flow without major seasonal variations for centuries, making Nankoweap basin, for a time, an ideal habitat for humans.
      - Some of this water carves deep channels around Nankoweap Mesa topped with the earlier slumps, landslides, and rockfalls.
      - Other powerful springwater carves Nankoweap Canyon, cutting through thick mud and slump deposits, leaving boulders stacked up to 200 feet high along Nankoweap Creek.
      - Rocks, mud, and water spilling eastward off the plateau can go no farther than Marble Canyon, which acts as a gutter, channeling and intensifying the flow southward.
      - Therefore, the land east of Marble Canyon is shielded from spillage off the higher, rising Kaibab Plateau.

(e) Meanwhile, cascading waters from Grand and Hopi Lakes have begun eroding a 216-mile path to—and down through—the edge of the Colorado Plateau.
   (i) The deeper the waters cut below the high postflood water table, the more high-pressure water is released from the flanks of the lengthening channel.
   (ii) Each sedimentary particle becomes a cutting tool carried by the rapidly-flowing (and falling) water.
   (iii) As more sediments are eroded, more "liquid sandpaper" becomes available to erode more sediments.
   (iv) Additional energy is provided by the release of this mile-high, subsurface water.
   (v) In a few weeks, 800 cubic miles of sediments from the Kaibab Limestone and below are removed, forming the Grand Canyon.

(f) Although Marble Canyon adjoins the Grand Canyon, their shapes and widths are so different that the two canyons have different names.
   (i) The differences are explained when one realizes that the change occurs where the northwest corner of the higher Hopi Lake was undercut by the rushing waters from Grand

Lake—where the Little Colorado River now joins the Colorado River.

(ii) In other words, Marble Canyon was formed by the waters of Grand Lake, while the Grand Canyon was formed by the merged waters of both Grand and Hopi Lakes and the water released from aquaducts as the deluge cut deep into the strata.

(iii) Today, the basin that held Grand Lake is drained by the Colorado River and several of its tributaries; the basin that held Hopi Lake is drained by the Little Colorado River.

- Both basins were once filled with silica-rich water that quickly escaped.
- Supporting evidence—mesas, buttes, spires, mounds, petrified forests, extreme meandering rivers, side canyons, and hundreds of huge "pits" excavated by powerful, erupting springs— can now be explained.

(5) This has been a brief examination of the explanation of the origin of the Marble and Grand Canyon as described in relationship to the Hydroplate Theory.

(a) As mentioned many times before, this class has focused on introducing you to the concepts involved in the study of creation science and in this section, I have attempted to provide you an introduction to the origin of the Grand Canyon.

C) Liquefaction: The Origin of Strata and Layered Fossils

- **Introduction**: Thinking back to our discussion of the Fossil Record, one must consider the obvious sorting and layering present in the earth's crust and the effect such layering and sorting would have upon the "school of thought" concerning the origin of the Fossil Record.

- As creationists, we must be able to offer a plausible explanation for the sorting and fossilization of organisms found throughout the Fossil Record since such phenomena might give the mistaken impression that organisms buried in higher layers evolved millions of years after lower organisms.

- Our discussion of the Fossil Record helped to illustrate that the supposedly "overwhelming" evidence in support of evolution found in the Fossil Record was not as "overwhelming" as evolutionists would like you to think. However, one very important thing we did not discuss is the plausible cause of such obvious layering and sorting of organisms on a global scale without the assumed factor of millions of years of slow sedimentation.

- With a thorough understanding of the Hydroplate Theory in our minds, we can now consider a phenomenon that will explain the Origin of Strata and Layered Fossils – Liquefaction.

1) **Liquefaction**

SUMMARY: Liquefaction—associated with quicksand, earthquakes, and wave action—played a major role in rapidly sorting sediments, plants, and animals during the flood. Indeed, the worldwide presence of sorted fossils and

sedimentary layers shows that a gigantic global flood occurred. Massive liquefaction also left other diagnostic features such as cross-bedded sandstone, plumes, and mounds.

2) We will first consider several common situations that cause liquefaction on a small scale. After understanding why liquefaction occurs, we will see that a global flood would produce liquefaction—and these vast, sharply defined layers—worldwide.
3) Before we get into some of the details, let's take a look at some examples of the power of liquefaction…
    a. **Floating Tank**. [**One Slide**] During a 1964 earthquake in Niigata, Japan, the ground turned to a dense liquidlike substance, causing this empty concrete tank to float up from just below ground level. This was the first time geologists identified the phenomenon of liquefaction, which had undoubtedly occurred in other large earthquakes. Liquefaction has even lifted empty tanks up through asphalt pavement and raised pipelines and logs out of the ground. In other words, buried objects that are less dense than surrounding soil rise buoyantly when that soil liquefies. What causes liquefaction? What would happen to buried animals and plants in temporarily liquefied sediments?
    b. **Sinking Buildings**. [**Two Slides**] During the aforementioned earthquake, building number 3 sank in and tipped 22 degrees as the ground partially liquefied. Another building, seen at the red arrow, tipped almost 70 degrees, making its roof nearly vertical. Here is an aerial view of the same buildings.
4) **Examples of Liquefaction**
    a. Quicksand - Quicksand is a simple example of liquefaction.
        i. Spring-fed water flowing up through sand creates quicksand. The upward flowing water lifts the sand grains very slightly, surrounding each grain with a thin film of water. This cushioning gives quicksand, and other liquefied sediments, a spongy, fluidlike texture.
        ii. Contrary to popular belief and Hollywood films, a person or animal stepping into deep quicksand will not sink out of sight forever. They will quickly sink in—but only so far. Then they will be lifted, or buoyed up, by a force equal to the weight of the sand and water displaced. The more they sink in, the greater the lifting force. Buoyancy forces also lift a person floating in a swimming pool.
        iii. However, quicksand's buoyancy is almost twice that of water, because the weight of the displaced sand and water is almost twice that of water alone.
        iv. As we will see, fluid-like sediments produced a buoyancy that largely explains why fossils show a degree of vertical sorting and why sedimentary rocks all over the world are typically so sharply layered.
    b. Earthquakes - Liquefaction is frequently seen during, and even minutes after, earthquakes.
        i. During the Alaskan Good Friday earthquake of 1964, liquefaction caused most of the destruction within Anchorage, Alaska. Much of the

damage during the San Francisco earthquake of 1989 resulted from liquefaction.

ii. Although geologists can describe the consequences of liquefaction, few seem to understand why it happens.

(1) When we understand the mechanics of liquefaction, we will see that liquefaction once occurred continuously and globally for weeks or months during the flood.

iii. Visualize a box filled with small, angular rocks. If the box were so full that you could not quite close its lid, you would shake the box, so the rocks settled into a denser packing arrangement.

(1) Now repeat this thought experiment, only this time all space between the rocks is filled with water.

(a) As you shake the box and the rocks settle into a denser arrangement, water will be forced up to the top by the "falling" rocks. If the box is tall, many rocks will settle, so the force of the rising water will increase.

(b) The taller column of rocks will also provide greater resistance to the upward flow, increasing the water's pressure even more. Water pressure will exert a lifting force on the rocks for as long as the upward flow continues.

(c) This is similar to an earthquake in a region having loose, water-saturated sediments. Once upward-flowing water lifts the topmost sediments, weight is removed from the sediments below. The upward flowing water can then lift the second level of sediments. This, in turn, unburdens the particles beneath them, etc. The particles are no longer in solid-to-solid contact, but are suspended in and lubricated by water, so they can easily slip by each other.

5) Liquefaction Demonstration

a. When the wooden blocks at the top of the horizontal beam are removed, the beam can rock like a teeter-totter. As the far end of the beam is tipped up, water flows from the far tank down through the pipe and up into a container at the left which holds a mixture of sediments. Once liquefaction begins, sedimentary particles fall or rise relative to each other, sorting themselves into layers, each having particles with similar size, shape, and density. Buried bodies with the density of plants and dead animals float up through the sediments—until they reach a liquefaction lens. The same would happen to plants and animals buried during the flood. Their sorting and later fossilization might give the mistaken impression that organisms buried and fossilized in higher layers evolved millions of years after lower organisms.

b. A "school of thought," with appealing philosophical implications for some, would arise that claimed changes in living things were simply a matter of time. With so many complex differences among protons, peanuts, parrots, and people, eons of time must have elapsed. With so

much time available, many other strange observations might be explained. Some ould try to explain even the origin of the universe, including space, time, and matter, using this faulty, unscientific "school of thought." Of course, these ideas could not be demonstrated (as liquefaction can be), because too much time would be needed.

6) Water Lensing

a. An important phenomenon, which will be called *lensing*, was observed in the sediment tank.

i. Some layers were more porous and permeable than others. If water flowed more easily up through one sediment layer than the layer immediately above, a lens of water accumulated between them.

ii. Multiple lenses could form simultaneously, one a short distance above the other. Water in these nearly horizontal lenses always flowed uphill.

iii. Throughout the flood, water lenses formed and collapsed with each wave cycle.

(1) [**Slide – Wave Cycle**]

(a) Liquefaction and Water Lenses. The wave cycle begins at the left with water being forced down into the seafloor. As the wave trough approaches, that compressed water is released. Water then flows up through the seafloor, lifting the sediments, starting at the top of the sedimentary column. During liquefaction, denser particles sink and lighter particles (and dead organisms, soon to become fossils) float up— until a liquefaction lens is encountered. Lenses of water form along nearly horizontal paths if the sediments below those horizontal paths are more permeable than those above, so more water flows up into each lens than out through its roof. Sedimentary particles and dead organisms buried in the sediments were sorted and resorted into vast, thin layers.

(b) In an unpublished experiment at Loma Linda University, a dead bird, mammal, reptile, and amphibian were placed in an open water tank.

(i) Their buoyancy in the days following death depended on their density while living, the build-up and leakage of gases from their decaying bodies, the absorption or loss of water by their bodies, and other factors.

(ii) That experiment showed that the natural order of settling following death was amphibian, reptile, mammal, and finally bird.

(iii) This order of relative buoyancy correlates closely with "the evolutionary order," but, of course, evolution did not cause it. Other factors, also influencing burial order at each geographical location, were: liquefaction lenses, which animals were living in the same region, and each animal's mobility before the flood overtook it

iv. During liquefaction, organisms floated up into the lens immediately above. Water's buoyant force is only about half that of liquefied sediments, so a water lens was less able to lift dead organisms into the denser sedimentary layer immediately above the lens. In each geographical region, organisms with similar size, shape, and density (usually members of the same species) often ended up in the same lens. There they were swept by currents for many miles along those nearly horizontal channels.

b. **Fossils**. When a liquefaction lens slowly collapsed for the last time, plants and small animals were trapped, flattened, and preserved between the lens' roof and floor.
   i. Even footprints, ripple marks, and worm burrows were preserved at the interface, *if no further liquefaction occurred there*.
   ii. A particular lens might stay open through many wave cycles, long after the lens' floor last liquefied. At other places, the last (and most massive) liquefaction event was caused by the powerful compression event.
c. Fossils, sandwiched between thin layers, were often spread over a wide surface which geologists call a horizon.
   i. Thousands of years later, these horizons gave some investigators the false impression those animals and plants died long after layers below were deposited and long before layers above were deposited.
   ii. A layer with many fossils covering a vast area was misinterpreted as an extinction event or a boundary between geologic periods.
d. Early geologists noticed that similar fossils were often in two closely spaced horizons.
   i. It seemed obvious that the subtle differences between each horizon's fossils must have developed during the assumed long time interval between each horizon.
   ii. Different species names were given to these organisms, although nothing was known about their inability to interbreed—the true criterion for identifying species.
   iii. Later, in 1859, Charles Darwin proposed a mechanism, natural selection, which he claimed accounted for the evolution of those subtle differences.
   iv. However, if sorting by liquefaction produced those differences, Darwin's explanation is irrelevant.

VI) Class Review…