

APOLOGETICS – 3 WEEK SERIES FOR JR. HIGH MINISTRY

Week 1:

- Creationism vs. Evolution
- Biblical Insights into Astronomy – The origin of the universe
- Intelligent Design – The complexity of the human cell

Week 2:

- Biblical Insights into Engineering – Noah's Ark design ahead of its time
- Archeological Evidences & Discoveries
- Prophecies Fulfilled

Week 3:

- Paul's Method & Message of Apologetic Evangelism – 8 principles of sharing your faith.
- Techniques for Engaging in Conversations

Week 1:

- Introduction – Evolution defined (Darwinian Theory)
- Biblical Insights into Astronomy – The Origin of the Universe
 - The expanding universe
 - 1st and 2nd Laws of Thermodynamics
 - The universe had a beginning
 - Scriptures confirming the attributes of the universe (stars innumerable, gravity, etc).
 - Earth is finely tuned & balanced
- Intelligent Design – The complexity of the human cell
 - Psalm 139:13-16
 - Explain components of the human cell
 - Cell function demo
 - Complexity of the human eye
- Biblical Insights into Engineering – Noah’s Ark design ahead of its time
 - Read Genesis (Noah’s Ark)
 - Explain the flood, its duration, and conditions
 - Scripps College of Oceanography study/documentary
 - Korean study of the ark
 - Show demonstration (from www.worldwideflood.com)

Introduction

- Atheist – someone who believes God does not exist.
- The Theory of Evolution, popularized in 1859 by Charles Darwin’s book, *Origin of Species*, is one of the pillars upon which the atheistic worldview rests.
 - This belief has been around since the time of the Greek philosopher Anaximander in the 6th century B.C.
 - Darwin’s theory maintains that we are the product of billions of years of random “occurrences” as opposed to intelligent design. Chance chemistry, combined with long time periods, is advanced as the cause for all life on earth.
 - Darwinian theory asserts that all life on earth descended from a common single-celled ancestor which arose in the primordial ooze some 3.5 billion years ago.
 - By the middle of the 20th century (1950’s) Darwinian evolutionary theory had become the accepted worldview among western universities.
 - In the last four decades, evidence has slowly accumulated in the fields of molecular biology and information theory that, according to many devoted evolutionists, has fatally crippled the theory. These discoveries have forced many prominent scientists to admit that without the insertion of information or biochemical know-how onto matter, the origin and evolution of life is impossible.
- Currently, in nearly all of our public universities students are taught that the Bible is a scientifically inaccurate book composed primarily of myths, legends, mingled with a bit of history.
 - What was once the most revered book in the land, the first textbook in the first public school in America, has become an object of ridicule and contempt for the intellectual elite, the mass media, and the “politically correct.”
- Ironically, astonishing evidence has gradually accumulated in the fields of archaeology, astronomy, geology, physics, and biology which confirms the scientific and historical accuracy of the Bible as well as the supernatural origin of its text.

Biblical Insights into Astronomy – The Origin of the Universe

“The heavens declare the glory of God; and the firmament shows His handiwork”

Psalm 19:1

- For thousands of year’s philosophers, theologians and scientists have debated the question of the origin of the universe. From the time of the early Greek philosophers this debate has revolved around two basic questions:
 1. Has the universe always existed or did it have a beginning?
 2. If it did “begin”, was it created by itself or by Someone?

- In the 4th century B.C., Plato & Aristotle popularized the belief that the universe is eternal. The universe was viewed as being infinite in both time & space.
 - For the next 2,300 years, this was the predominating model for the universe among scientists & philosophers.
 - During the same time period, most theologians argued that the universe was caused to exist at a finite point in time.

- In the 20th century (1950’s) staggering scientific discoveries have led astronomers to conclude that the universe began at a finite point in time and space and that it is not eternal!
 - In 1913 astronomer Vesto Slipher published evidence that indicated that about a dozen galaxies in our vicinity were racing away from us at enormous speeds of up to two million miles per hour!
 - This discovery was a surprise to the scientific community since, prior to that time, astronomers believed that galaxies were fixed & rotating in place.
 - He reported his findings at the Proceedings of the American Astronomical Society in 1914.
 - In 1915, Albert Einstein published his second theory called the General Theory of Relativity. This theory predicted that space is expanding and that all matter in the universe is moving away from an apparent point of origin.
 - This mathematical observation explained what Slipher had observed with his telescope in 1914.
 - With this new evidence, the astronomical community concluded that the universe must have begun at a single point in space, at a definite moment in time. This sudden, finite birth of the universe was eventually dubbed the “Big Bang.”
 - One of the most remarkable outcomes of Einstein’s theories was the discovery that time itself is a physical property of the universe. In fact, it turns out that space & time are so tightly coupled to each other that one cannot exist without the other.
 - Nearly 70 years after Einstein published his equations on General Relativity, 3 British astrophysicists, Stephen Hawking, George Ellis,

universe become “wound up” in the first place? When all the theories are broken down, we see that there are only two options:

1. The universe was either “wound up” by God; or
 2. It “wound up” and ordered itself.
- If we propose that the universe ordered and “wound up” itself, are we not proposing that giant clocks can wind their own springs? Therefore, the proposal that the universe wound itself up is an appeal to something outside the bounds of natural law.
 - We believe that an infinitely intelligent, all powerful, Transcendent Creator who used intelligent design, expertise or know-how to create everything from the sub-atomic particles to the universe!
 - The atheist’s model begins with the appearance of all the matter in the universe from nothing, by no one, and for no reason. A supernatural event. However, the atheist does not believe in the outside or transcendent “First Cause” we call God. Therefore the atheist has no “natural explanation” and no “supernatural explanation” for the origin of space-time and matter.
 - Which of these two explanations takes more faith to believe in?
 - Even if you miraculously were able to determine that matter in the universe could arise by itself out of nothing, the next problem is to explain how the universe developed into highly organized, non-random structures like galaxies, solar systems, and living creatures without the introduction of energy, information or know-how from outside the system!

SECTION ON VERSES:

- The Bible has clearly taught these facts in its text for 3,500 years! Written over a period of over 1,500 years, by over 40 authors, the Bible dared to claim that time, space, and matter were created at a finite moment in the history of the universe.
 - In the OT, there are numerous that describe the concept of an expanding universe. In the book of Psalms, written seven to ten centuries BC, it states:

“Bless the Lord, O my soul! O Lord my God, You are very great: You are clothed with honor and majesty, Who cover Yourself with light as with a garment, Who stretch out the heavens like a curtain” Ps 104:1-2
 - In the 8th century BC, the prophet Isaiah also alludes to the stretching forth, or expanding of the universe by God. Written approx 700 - 681 BC.

“Thus says God the Lord, Who created the heavens and stretched them out, Who spread forth the earth and that which comes from it, Who gives breath to the people on it, and spirit to those who walk on it” Isaiah 42:5

“I have made the earth, and created man on it. It was I, My hands that stretched out the heavens, and all their host I have commanded.” Isaiah 45:12
 - “In the beginning God created the heavens and the earth” Gen. 1:1

- The Hebrew word for “create”, *bara*, literally means “*to create matter from nothing.*” The word “beginning” has been understood by the rabbis to mean “*at the beginning of time.*” So a literal rendering of Genesis 1:1 reads, “At the beginning of time, God created from nothing the heavens (space) and the earth (matter).”
- The notion of time having a beginning is also found in the NT. In 2 Timothy 1:9 we read: “*Having saved us and called us with a holy calling, not according to our works, but according to His own purpose and grace which was given to us in Christ Jesus before time began.*”

Ancient beliefs about the universe, world, stars, and Scriptures that clarify these...

The Bible declares that God is omniscient (all-knowing), He possesses a perfect understanding of the physical universe. One of the ways that the Bible authenticates its divine authorship is by revealing an accurate and detailed knowledge of the physical universe. As we will see, throughout the Bible’s text there are highly specific and accurate statements regarding the laws of physics, the nature of our solar system, planet earth, and its life forms. What’s more, these statements were penned centuries before this scientific knowledge was discovered by any human society.

No other “holy” book authenticates its message in these ways. By doing this, the Bible authenticates that it is the very Word of God.

What year were the Proverbs (971-686 BC), Psalms (1410-450 BC), Isaiah (700-681 BC), and Job (possibly before 1445 BC) written?

- The Chinese thought the earth was square. The Egyptians thought it was rectangular. Mesopotamians thought of earth as a floating boat covered by an astrodome-like structure.
 - The Greek mathematician Pythagoras proposed that the earth was a sphere in the 6th century B.C. The Greek philosophers Hipparchus and Aristotle also came to the same conclusion in the 2nd century B.C. Eratosthenes was the first to prove that the earth was a sphere in the 3rd century B.C.
 - However, long before this, the Bible declared that the earth was a circle (sphere):
“It is He who sits above the circle of the earth...” Is. 40:22
- Throughout the centuries, philosophers, theologians, and scientists have speculated about the resting place of planet earth. Upon what or whom the earth is resting became an important part of mythology in many ancient cultures. To the ancient Greeks, the candidates were Atlas or Hercules. The Hindus believed that elephants or turtles were the pillars upon which the earth rested.

The fact of a “free-floating” earth was foreign to most ancient cultures.

- Eventually, Copernicus discovered gravity in 1543.
- However, long before this, the idea of gravity was mentioned in the Bible:

“He stretches out the north over empty space and hangs the earth on nothing” Job 26:7

“On what were its footings set, or who laid its cornerstone”
Job 38:6

- At one time the world thought there were 1100 stars in the universe. In about 100 A.D., Ptolemy was actively cataloging and naming stars. According to Australian astronomers (7/2003), there are over 70,000 million million million stars, and those are only the ones we can actually see. If you were to count the stars at a rate of 10 stars per second, it would take over 100 trillion years to count them all!
 - Yet the prophet Jeremiah described the stars as “uncountable” in about 600 B.C.
“I will make the descendants of David my servant and the Levites who minister before me as countless as the stars of the sky and as measureless as the sand on the seashore” Jer. 33:22
- Popular belief once assumed that all stars are identical. Although one Greek astronomer, Hipparchus, started classifying stars according to brightness in 125 B.C. Herschel realized how “different” stars are from each other in 1780.
 - Paul emphasized the different “splendor” of stars in about 55 A.D.:
“There is one glory of the sun, and another glory of the moon, and another glory of the stars; for star differs from star in glory”
1 Cor. 15:41
- Life could not exist on earth if any one of the following were the case:
 - Faster or slower rotation of the earth
 - The earth 5-10% closer or farther from the sun
 - 1% change in sunlight reaching the earth
 - A larger or smaller earth
 - A larger or smaller moon
 - More than one moon
 - The earth’s crust thinner or thicker
 - Oxygen/Nitrogen ratio less
 - In 1995, NASA astronomer John O’Keefe stated in an interview: “We are, by astronomical standards, a pampered, cosseted, cherished group of creatures...if the universe had

not been made with the most exacting precision we could never have come into existence. It is my view that these circumstances indicate the universe was created for man to live in.”

- British molecular biologist Michael Denton wrote in *Nature's Destiny* (1998): “Whether one accepts or rejects the design hypothesis...there is no avoiding the conclusion that the world looks as if it has been tailored for life; it appears to have been designed. All reality appears to be a vast, coherent, teleological whole with life and mankind as its purpose and goal.”
- The sun produces radiation, which, in certain amounts, can be deadly to living things. The Earth, however, is located at exactly the correct distance from the Sun to receive the proper amount of heat and radiation to permit life as we know it.
- If the earth were much closer to the Sun, human life could not survive because of the horrible heat and pressure. If the Earth were moved just 10% closer to the Sun (about 10 million miles), far too much radiation and heat would be absorbed. If the Earth were moved just 10% farther from the Sun, too little heat would be absorbed. Either scenario would spell doom for life on the Earth.
- Fortunately, creatures living on Earth receive some protection from the Sun's radiation because in one of the layers of the atmosphere (known as the mesosphere, about 12 to 18 miles above the Earth), there is a 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.
- The Earth is rotating on its axis at 1,000 miles per hour at the equator. If the earth rotated much faster, fierce cyclones would stir over the Earth like a kitchen food-mixer. If the Earth turned significantly slower, the seasons would be doubled in their length, which would cause such harsh heat and cold over much of the Earth that it would be difficult, if not impossible, to grow enough food to feed the Earth's population.
- The Earth is about 240,000 miles from the Moon. The Moon helps control the movement of the oceans tides. Tides are an important part of ocean currents. Without these currents, the oceans would stagnate, and the animals and plants living in the oceans and seas soon would perish. If the Moon were moved closer to the Earth by just a fifth, the tides would be so enormous that twice a day they

would reach 35-50 feet high over most of the surface of the Earth.

Intelligent Design – The complexity of the human cell

Cell – the smallest component of life and living organisms. It is less than a thousandth of an inch in diameter! It was not too long ago that the cell was considered to be a “black box” – whose insides are mysterious because you can’t see them or understand them.

EXAMPLE: People play Nintendo Wii, Xbox 360, Playstation 3, computers, etc nowadays, but how do they work?

- In the mid 1800’s, during the time of Charles Darwin, the cell was still a black box to the mind of Darwin and every other scientist.
- Darwin was able to make sense of much of biology above the cell level, but he was not knowledgeable of the inner workings of a living cell.
- Not until after World War 2 (1945), with the help of electron microscopes, that the inner cell structures were discovered.
- Darwin and other scientists knew that the eyes were for seeing, but didn’t know how they see. They could not answer how life works, how life began, and how the first living cell became alive from nonliving matter.

EXPLAIN A CELL: Cells have 2 primary functions – to provide a framework to sustain life and to produce exact copies of themselves so that the organism can continue to live even after those original cells die.

One way to understand the structure and operation of a cell is to think of it as a chemical factory in a large city (organism). This factory operates in such a way that it takes raw materials from the environment, processes them, and yields a product that can be used in its own environment (inside the cell) as well as be sent out to be used somewhere else in that city (the organism). This chemical plant is fully equipped with a biological library located in the computer center (cell nucleus), where the blueprints for the entire city are stored. These blueprints also come with a complete set of instruction manuals that explain the necessary steps for the construction and replication of life. The blueprints and instruction manuals are stored in code form on compact discs (DNA) in the computer center (cell nucleus).

To help us visualize how the various components of a cell work together, imagine that the wall (cell wall) enclosing the chemical factory gets damaged. A messenger (mRNA) is dispatched to the computer center (genetic library), located in the cell nucleus, where it locates the blueprints and the instructions (DNA) needed to repair the injury to the wall. Next, the mRNA makes an exact copy of the information it requires from the computer and stores it on a CD. When the copying process is complete, the mRNA heads off to the site where the damage occurred and begins to manufacture little robots (specific protein molecules), based on the information it copied, in order to accomplish the work of repairing the wall. This explanation is

very basic, but it will help us gain a fundamental understanding of the structure and operation of the cell.

The next step is to probe a bit deeper into the operation of a cell in order to discover more about the information content that is stored in the computer center (located in the cell nucleus). One way to think about the information content inside a cell is to compare it to an instruction manual of the type that comes with the purchase of an item requiring assembly.

Most of us have been frustrated after purchasing some item that required assembly. What would you do if you purchased something as complex as a computer system and then found out that its full assembly was required? Imagine opening the box containing the parts of a computer system and seeing that they all needed to be assembled. Furthermore, think about the headache that would be associated with all of the instruction manuals necessary for the construction of such a technical object. But – what if all the parts arrived without the blueprints or instruction manuals? How would you even begin to assemble it? Without the specific information that communicates the know-how or skills associated with the construction of a computer, the components alone are useless.

This analogy is one very rudimentary way of showing how raw materials alone will not produce a specified and complex system. In a similar manner, all the components for life would be useless without the blueprints and instruction manuals necessary for the assembly and correct operation of a living cell. Energy, matter, and time are not the only ingredients needed to assemble living things; **information must** also be present to get the job done!

PICTURE OF A CELL

- The DNA molecule, combined with protein, is organized into structural units called chromosomes, which usually occur in identical pairs. It is a single, very long, highly coiled molecule subdivided into functional subunits called genes. A gene occupies a certain place on the chromosome and embodies the coded instructions that determine the inheritance of a particular characteristic or group of characteristics that are passed on from one generation to the next.

What caused the 1st single cell, a highly specified and complex entity to exist? Did it take intelligence to produce the first life form? Or did life arise through purely natural forces and processes over a long period of time?

Darwin once said (rephrase): “if it could be shown that any complex organ existed, which could not have been formed by numerous slight modifications, then my theory would absolutely breakdown”

THE EYE

One of the most forceful evidences of design within the human body is the eye. Even Charles Darwin struggled with the problem of an organ so complex as the eye evolving via naturalistic processes. In *The Origin of Species*, he admitted:

To suppose that the eye with all its inimitable contrivances for adjusting the focus to different distances, for admitting different amounts of light, and for the correction of spherical and chromatic aberration, could have been formed by natural selection, seems, I freely confess, absurd in the highest sense (1859, p.170).

- The eye processes approximately 80% of the information received from the outside world.
- The eye can handle 500,000 messages simultaneously
- In an average day, the eye moves about 100,000 times using muscles that, milligram for milligram, are among the body's strongest.
 - The body would have to walk 50 miles to exercise the leg muscles an equal amount.
- The eyes are kept clear by tear ducts that produce exactly the right amount of fluid to cleanse both eyes simultaneously in one five-hundredth of a second.
- The eye can be divided functionally into two distinct parts:
 - The "dioptric" mechanism – handles incoming light
 - The receptor area of the retina where light triggers processes in the nerve cells.
- To form an image, the incoming light rays (arriving at approximately 186,000 miles per second) must be refracted (bent) and focused sharply on the retina.
- The cornea takes care of most of the refraction, and the lens serves to focus items seen at varying distances as it changes its curvature.
- The iris and the pupil work together to let in just the right amount of light.
- There are two opposing sets of muscles that regulate the size of the aperture (the opening, or pupil) according to the brightness or dimness of the incoming light.
- The images move through a lens that focuses the "picture" (in an inverted form) on the retina (which covers less than a square inch) at the rear of the eyeball.
- The image is then picked up by some 137 million light-sensitive receptor cells that convey the message (at over 300 mph) to the brain for processing.
- Those cells [130 million rods (that allow the eye to see in black and white) and 7 million cones (that allow the eye to see in full color)] convert light into chemical signals, which then travel along the optic nerve to the brain.
- It is no wonder that the eye frequently is compared to a camera.

Evolutionists Miller and Goode suggested:

"The living camera of the eye photographs fleeting images by the thousands, between one moment and the next, and it makes its own

adjustments, automatically and precisely, with each change in distance light, and angle"

- The eye does indeed photograph "fleeting images by the thousands."
- It can take and develop approximately half a million pictures a day. The eye is infinitely more complex than any manmade camera. Actually the camera was patterned after the eye, a fact admitted even by evolutionists.
- CHART COMPARING EYE & CAMERA?
- If the function of the camera demands that it was "made," does it not stand to reason that the more complex human camera, the eye, also must have had a Maker? As the ancient proverb says: "There is none so blind as those who will not see."

PSALM 139:13-16

- 13 For you formed my inward parts;
you knitted me together in my mother's womb.
- 14 I praise you, for I am fearfully and wonderfully made. ☑
Wonderful are your works;
my soul knows it very well.
- 15 My frame was not hidden from you,
when I was being made in secret,
intricately woven in the depths of the earth.
- 16 Your eyes saw my unformed substance;
in your book were written, every one of them,
the days that were formed for me,
when as yet there were none of them.

Biblical Insights into Engineering – Noah’s Ark

- The book of Genesis was written approximately 1445 to 1405 B.C.
- Noah’s Ark is the only ship mentioned in the Bible whose dimensions are actually recorded.
- Noah’s Ark was an engineering design ahead of its time! It was designed essentially for stability rather than for movement in the waters.
- Genesis 6:15 says, “*And this is how you shall make it: The length of the ark shall be three hundred cubits [437’], its width fifty cubits [73’], and its height thirty cubits [44’].*” It rained/flooded for 40 days & 40 nights!
- Assuming the “cubit” to be 17.5 inches (minimum suggested value), the ark was taller than a 3-story building and about 1.5 times as long as a football field!
- Its volume capacity was equal to that of 522 standard railroad stock cars!
- A movie/documentary called “In Search of Noah’s Ark” (1976), was done in which they actually created a smaller scale model of the ark. They put it in a large wave tank at Scripps Institute of Oceanography at La Jolla, California. Giant waves were produced in the tank by a mechanical wave generating machine, simulating waves on the scale model larger than any ever experienced on a real ocean. The ark proved to be impossible to sink!
 - In fact, based on mathematical equations of buoyancy, the ark would be able to sustain close to a 90-degree angle and still be able to return to its normal floating position!
- In 1992, a Creationist group in Korea (Korean Association of Creation Research) approached a world-class ship research center (KRISO) to analyze the Biblical Ark.
 - They started with the proportions given in the Bible, and then designed 12 other ships with the same volume. Here are the results of the study:
 - Show Table of different ships on Keynote...
 - By combining the requirements for stability (capsize resistance), comfort (sea kindness), and strength (hull stress), they found that it was not possible to make much improvement on Noah’s Ark.
 - The proportions and size of the ark are extremely seaworthy.
 - The ark could handle 47.5m (155 foot) waves before roll becomes critical.
 - The ark is 13 times as stable as the American Bureau of Shipping (ABS) rules require for a passenger vessel. The ABS develops and verifies conformance with standards for design, construction, and operational maintenance of marine-related facilities.
 - Had the ark been taller it could become unstable; longer and it could break; either wider or shorter and it could become dangerously uncomfortable.
 - Go to interactive Flash graphic on www.worldwideflood.com?

- Naval engineers now know that the length-to-width ratio specified in the Bible is ideal for the stability of a barge-type craft (non-propelled ship) designed for rough seas. It was not until the 1900's that comparably sized ships were constructed! Genesis recorded these dimensions approximately 3,300 years earlier!
- Study results can be found on www.worldwideflood.com