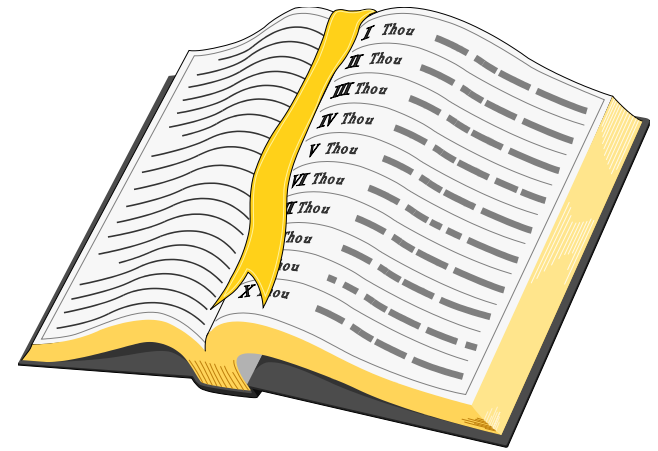


The Bible, Creation and Science



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The Bible, Creation & Science

- Scientific Statements in the Bible Accurate?
- Laws of Science Consistent With the Bible?
- Reliability of the Bible Confirmed by:
 - Prophecy, history, geography, archaeology
- Scientific Statements/Anticipation in the Bible
 - Astronomy, geophysics, geology, hydrology
 - Meteorology, oceanography, physics, biology
- Alleged Scientific Errors in the Bible
- Which Origins Model Best Fits the Facts?
 - Creation or Evolution
- Conclusions



To Begin the Discussion ...

- In 1903, a British philosopher, Herbert Spencer, made a profound scientific statement:
“Everything in the universe can be explained by five basic things - space, matter, time, force, and action.”
- Spencer, an evolutionist, was a contemporary of Charles Darwin, the British scientist credited with popularizing the concept of evolution. He (Spencer) was given a prestigious award by the British Science Society at the time. This was considered to be a major contribution to science. And it is, until you realize that ...



What Does The 1st Bible Verse Say?

- Moses, under the inspiration of the Holy Spirit, wrote in **Gen. 1:1**, “**In the beginning (time) God (force) created (action) the heavens (space) and the earth (matter).**”
- What makes this even more remarkable is the fact that Moses was educated in the tradition of the Egyptians. They believed that only the ocean existed at first. An egg/flower appeared and the sun god was born. The sun god had four children, of whom one was Geb (the earth). They believed that the earth was a flat disk afloat on the river of the ocean. None of this mythology of the time was included in the book of Genesis.

Some Common Misconceptions

- Skeptics and unbelievers think:

“The Bible is an antiquated religious book, filled with scientific fallacies and mistakes reflecting the naïve cosmology of the primitive tribes of the Near East.”

- Even some professing Christians think:

“The Bible is a book of true religion dealing solely with spiritual subjects and that, where it seems to touch on matters of science and history, it must be interpreted spiritually or allegorically, rather than literally.

Evolution is Science

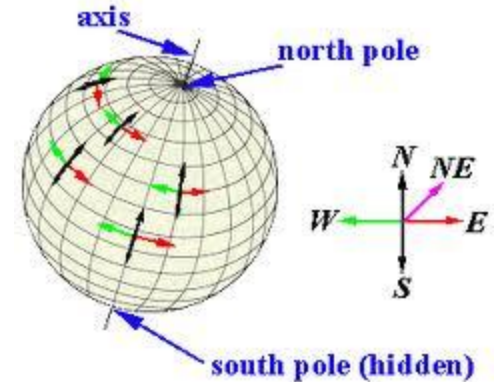


Creation is Religion



Can I Believe The Bible?

- **Ps. 103:12**, as far as the east is from the west, so far does he remove our transgressions from us.
- The psalmist used the words “East/West” not “North/South”
- When one travels west, one always goes west and never gets to the east
- When one travels south, eventually one reaches the South Pole and goes north
- These concepts are only true if the earth is round!
- How could the author have known this?



Believing The Bible

- There are many evidences for the existence of God and the truth of the Bible
- However, for someone committed to naturalism, no amount of evidence will do
- “Apologetics is not for proving the Word of God but simply for providing a basis for faith” (Josh McDowell)
 - **1 Peter 3:15**, “ ... and always *be* ready to *give* a defense to everyone who asks you a reason for the hope that is in you, with meekness and fear.”
- True faith satisfies both the heart *and* the intellect (mind)





Laws of Science & The Bible

- Law of biogenesis – life comes only from life **Gen. 1**
- 1st Law of Thermodynamics – the law of conservation of mass / energy ($E = mc^2$) **Gen. 2:1-3**
- 2nd Law of Thermodynamics – the law of entropy, (in a *closed or open* system):
 - Spontaneous processes lead to a decrease in order
 - Energy moves to a lower potential, becoming less available to do work
 - Things move in a direction from order to chaos
- Law of Cause and Effect – every effect must have a cause. The effect cannot be greater, in size or in kind, than the cause **Gen. 1:1**

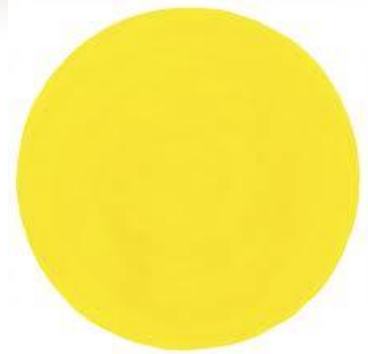
Biblical Reliability on Science

- We trust the Bible for spiritual truth
- Prophecy, history, geography, and archaeology confirm the truth of the Bible
- Do we trust the Bible for truth in science?
 - Astronomy, geophysics, geology, hydrology, meteorology, oceanography, physics, biology
- There are many biblical references to nature and natural processes
 - Authors use everyday language
 - Amazingly accurate statements
 - Anticipatory scientific insights in the Bible



Astronomy – The Sun

- **Ps. 136:7-9** “To Him who made great lights, ...the sun to rule by day, ... the moon and stars to rule by night ...”



- Scientifically accurate
- **Gen. 1:16**, “Then God made two great lights: the greater light to rule the day, and the lesser light to rule the night. *He made the stars also.*”



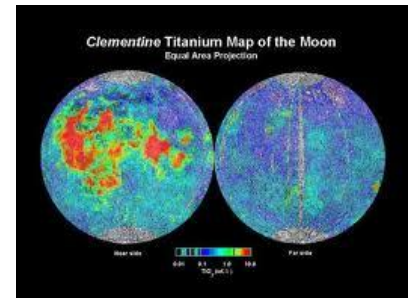
- **Ps. 74:16** “... You have prepared the light and the sun.”



- Did God create the light separate from the sun in the beginning?
- **Gen. 1:3**, “Let there be light’; and there was light.”

Astronomy – The Moon

- **Job 25:5**, “If even the moon does not shine ...”
 - The moon itself is not a source of light
 - Moon rocks filled with titanium, a better reflector than diamonds
- **Ps. 89:37**, “It shall be established forever like the moon, even like the faithful witness in the sky.”
 - The moon itself is not a source of light, but a reflector of light from the sun
- The moon is not a source of light



Astronomy – Size of Universe

- **Is. 55:9** “For as the heavens are higher than the earth, so are My ways higher than your ways, ...”
- **Job 22:12** “Is not God in the height of heaven? And see the highest stars, how lofty they are!”
- **Jer. 31:37** “... If heaven above can be measured, and the foundations of the earth searched out beneath, ...”
 - These three verses indicate the size of the universe
 - Written around 700 BC



Astronomy – Diverse Stars

- **Jer. 31:35-36**, “...Who gives the sun for a light by day, the ordinances of the moon and the stars for a light by night ...”
 - Defines the precision of orbits
 - Praise to the Creator, contains no scientific error
- **1 Cor. 15:41**, “ ... for one star differs from another star in glory.”
 - Variety of stars, no two stars alike
 - God calls them by name (**Ps. 147:4**)



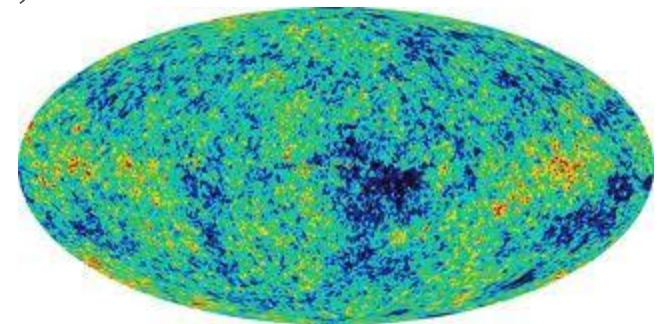
Astronomy – The Number of Stars

- **Gen. 15:5** “... count the stars, if you are able to number them. ... so shall your descendants be.”
- **Gen. 22:17** “... and multiplying I will multiply your descendants as the stars of the heaven, and as the sand which is upon the sea shore...”
- **Jer. 33:22** “ ... as the host of heaven cannot be numbered, nor the sand of the sea measured ...”
 - Ptolemy counted 1056 stars; Johannes Kepler counted 1005
 - Total number of stars visible to the naked eye is about 4000
 - These three verses seemed to be in scientific error until ... the telescope
 - Today scientists estimate there are more than 10^{22} stars (about the same order of magnitude as the number of grains of sand on the earth)



Stretched Out The Heavens

- **Job 9:8**, “He alone spreads out the heavens”
- **Ps. 104:2**, “... Who stretch out the heavens like a curtain. ...”
- **Is. 40:22**, “ ... Who stretches out the heavens like a curtain, ...”
- **Is 51:13**, “ ... Who stretched out the heavens and laid the foundations of the earth; ...”
- God stretched the heavens out in the past, and still stretches the universe out today



Constellations

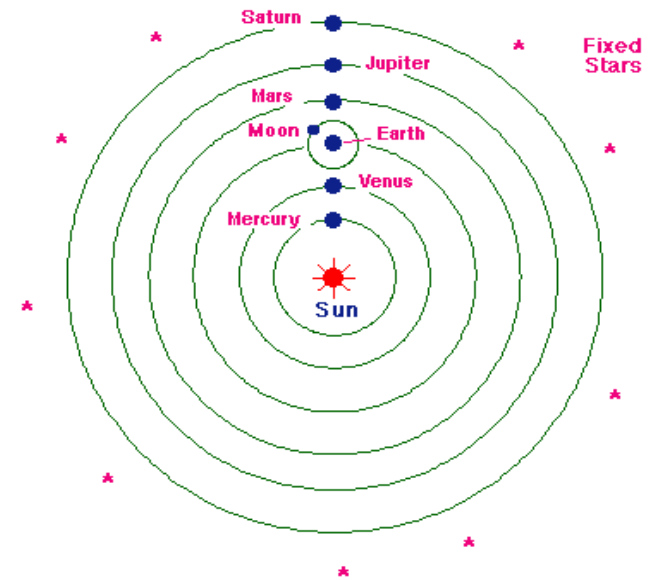
- **Job 38:31** “Can you bind the cluster of Pleiades, or loose the belt of Orion?”
 - God told Job in ~ 2000 BC that the seven stars of Pleiades were bound together and the stars of Orion are not
 - Pleiades used to be called the “seven sisters”
 - We learned [20th century] that the stars of Pleiades are gravitationally bound and the stars of Orion are not



Geophysics – Floating Spherical Earth

- **Job 26:7,10**, He stretches out the north over empty space; He hangs the earth on nothing. ... He drew a circular horizon on the face of the waters, at the boundary of light and darkness.

- Written about 2000 BC
- Indicates a round earth, consistent with observation
- Geocentric model ruled for 1500+ years
- Galileo (1564-1642) proposed heliocentric model



Ancient Myths About Earth

- Hindus – earth carried by elephant standing on back of giant turtle
- Greeks – Atlas carried world on shoulders
- Some scholars thought earth was flat and rested on pillars
- Earth myths not in the Bible



Spherical Earth

- **Prov. 8:27**, “... When He drew a circle on the face of the deep.”
 - Indicates that the earth is a globe
- **Is. 40:22**, “It is He who sits above the circle of the earth ...”
 - “chuwg”, Hebrew word for arc, sphere
 - 8 inch (20 cm.) per mile curvature on ocean surface
- **Ps. 103:12**, “As far as the east is from the west ...”
 - Consistent with the shape of the earth



Floating Rotating Earth

- **Job 38:12,14**, “Have you commanded the morning since your days began, and caused the dawn to know its place, ... It takes on form like clay under a seal, and stands out like a garment.”
 - The dawn rolls across the earth as it rotates
 - A cylindrical seal rolled over soft clay
-> conveys the rotation of the earth on its axis
- **Job 26:7; 38:6**, “He stretches out the north over empty space; He hangs the earth on nothing.”; “To what were its foundations fastened? Or who laid its cornerstone?”
 - Earth out in space, gravitation among the planets



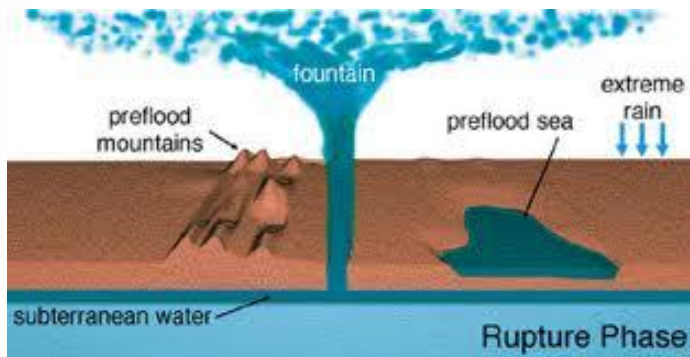
Geology

- **Job 14:18-19**, “But as a mountain falls and crumbles away, and as a rock is moved from its place; as water wears away stones, and as torrents wash away the soil of the earth; ... “
 - Rock erosion
- **Job 28:9-10**, “He puts his hand on the flint; He overturns the mountains at the roots. He cuts out channels in the rocks ... “
 - Man’s efforts in mining
 - Runoff explained



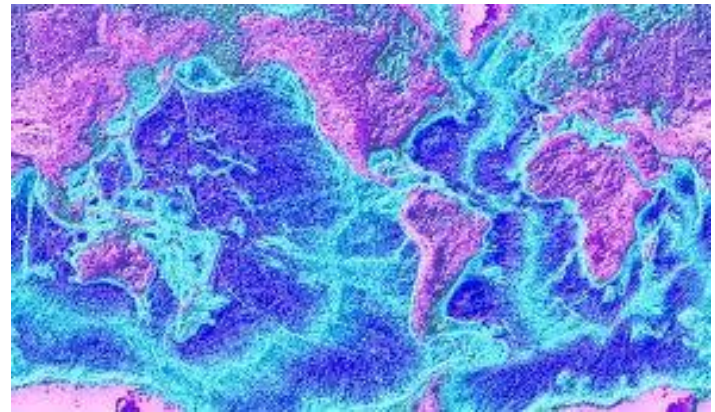
Springs, Fountains of the Deep

- **Gen. 7:11**, “ ... on that day all the fountains of the great deep were broken up, and the windows of heaven were opened.”
 - Source of flood waters started
- **Gen. 8:2**, “The fountains of the deep and the windows of heaven were also stopped, ... “
 - Source of flood waters stopped



Water Reservoirs of the Deep

- **Ps. 33:7**, “He gathers the waters of the sea together as a heap; He lays up the deep in storehouses.”
 - Oceanic reservoir
- **2 Sam. 22:16**, “Then the channels of the sea were seen, the foundations of the world were uncovered, ... “
 - Valleys in the seas



Glaciers, Uniformitarianism

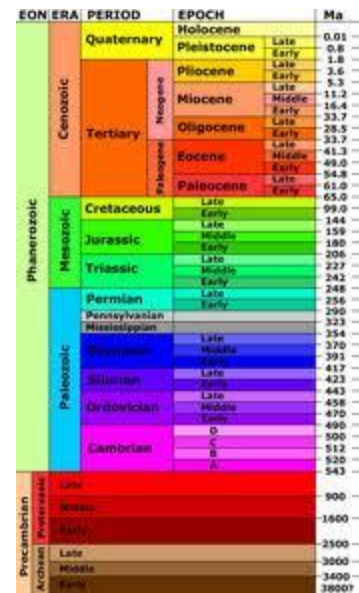
- **Job 38:29-30**, “From whose womb comes the ice? And the frost of heaven, who gives it birth? The waters harden like stone, And the surface of the deep is frozen.”



- Glacial period

- **2 Pet. 3:4**, “And saying, Where is the promise of His coming? For since the fathers fell asleep, all things continue as they were from the beginning of creation.”

- Warning of Uniformitarianism?



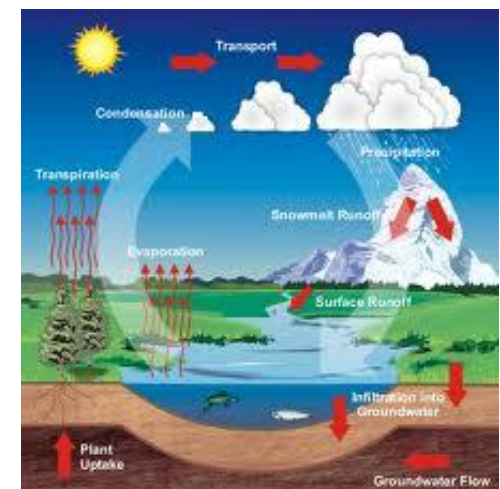
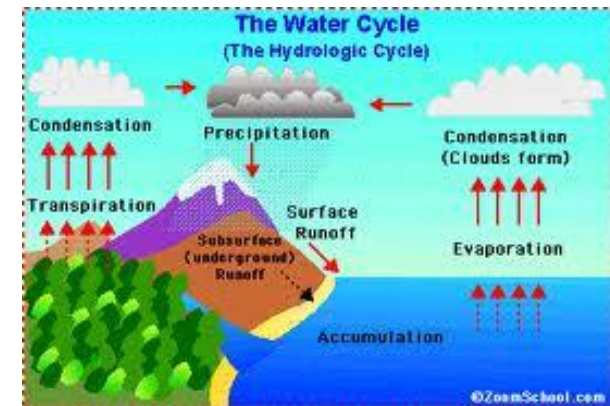


Principle of Isostasy

- **Is. 40:12**, “Who has measured the waters in the hollow of His hand, measured heaven with a span and calculated the dust of the earth in a measure? Weighed the mountains in scales and the hills in a balance?”
- **Ps. 104:5-9**, “Who laid the foundations of the earth ...”
 - Principle of Isostasy – level of the Earth's crust is determined by its density; lighter material rises, forming continents, mountains, and plateaus; heavier material sinks, forming basins and ocean floors
 - The Earth is balanced

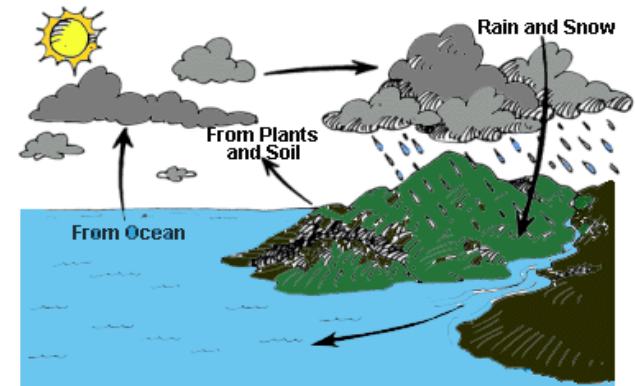
Hydrology

- **Eccl. 1:7**, All streams run to the sea, but the sea is not full; to the place where the streams flow, there they flow again. [*Solomon in 935 B.C.*]
 - The hydrologic cycle was understood by man only in the 17th century
 - 1100 billion gallons of water per hour flow into the sea – sea does not fill up
- **Is. 55:10**, For as the rain and the snow come down from heaven and do not return there but water the earth, making it bring forth and sprout, giving seed to the sower and bread to the eater,
 - World's food supply is made possible by the distribution of water



Electricity and Rain

- **Ps. 135:7; Jer. 10:13**, “... He causes the vapors to ascend from the ends of the earth, He makes lightning for the rain ... ”
 - Evaporation occurs after “a multitude of waters in the heavens” descends
 - Relation of electricity to rain
- **Jer. 10:13**, “... He makes lightning for the rain, He brings the wind out of His treasuries.”
 - Relation of electricity to rain



Clouds, Vapor, Rain

- **Job 26:8; 37:11,16**, “He binds up the water in His thick clouds, yet the clouds are not broken under it. ... Also with moisture He saturates the thick clouds. ... Do you know how the clouds are balanced ... “
 - Condensation from the clouds, which hold water mysteriously
 - Clouds can weigh billions of tons each
- **Job 36:27-28**, For he draws up the drops of water; they distill his mist in rain, which the skies pour down and drop on mankind abundantly.
 - Evaporation
 - Precipitation



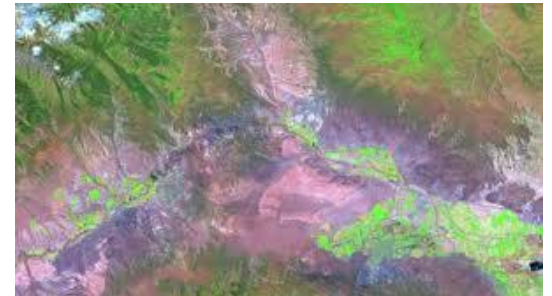
Hydrologic Balance

- **Job 28:25**, When he gave to the wind its weight and apportioned the waters by measure,
 - Wind has weight
 - Air has weight and exerts pressure
 - Only known since 1643 with invention of the barometer
 - Average storm cloud weighs 10B tons
 - At 45 Mph equal to 40 atomic bombs
 - Relative weights of air and water needed for hydrologic cycle



Meteorology

- **Eccl. 1:6**, “The wind goes toward the south and turns around to the north; the wind whirls about continually, and comes again on its circuit.”
 - Circulation of the atmosphere, not discovered until much later
 - Wind circuits impact airplane flight times
- **Is. 40:22**, “It is He who sits above the circle of the earth, and its inhabitants are like grasshoppers; who stretches out the heavens like a curtain and spreads them out like a tent to dwell in.”
 - Protective effect of atmosphere



Snow, Hail, Frost

- **Job 38:22**, “Have you entered the treasury of snow or have you seen the treasury of hail ...”
 - Snow and hail
- **Ps. 147:16**, “He gives snow like wool; He scatters the frost like ashes.”
 - Snow and frost



Oceanography

- Ps. 8:8, “The birds of the air, and the fish of the sea that pass through the paths of the seas.”
- Matthew Maury undertook research project based on this Scripture verse (1841-1861)
 - There are paths in the sea
 - Also aware of “wind circuits” in **Eccl. 1:6-7**
 - Concluded that there must be “currents in the ocean”
 - Plotted wind circuits and ocean currents as an aid to navigation of the seas



Maury and Oceanography

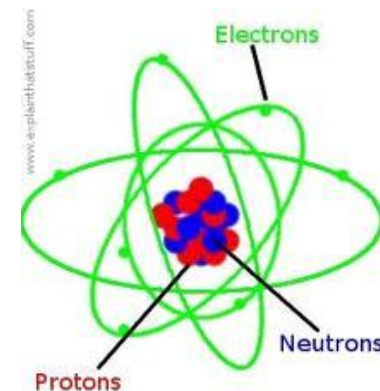
- Gulf stream is a “path in the sea”
 - 40 miles wide, 2000 feet deep
 - Flows from Gulf of Mexico up through the Atlantic
 - More paths in the sea discovered since
- Monument erected in Maury’s home state of VA

“Matthew Fontaine Maury, Pathfinder of the Seas, the Genius Who First Snatched from the Ocean and Atmosphere the Secret of Their Laws. His Inspiration, Holy Writ, Psalm 8:8, Psalm 107:23-24, and Ecclesiastes 1:6.”



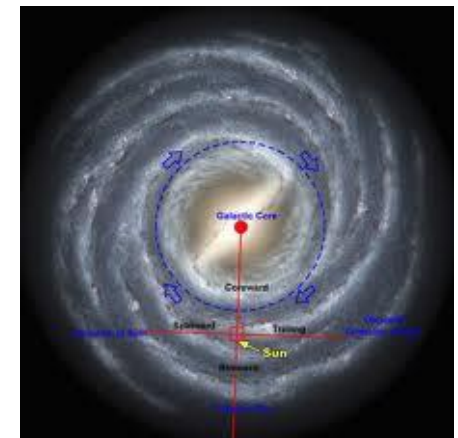
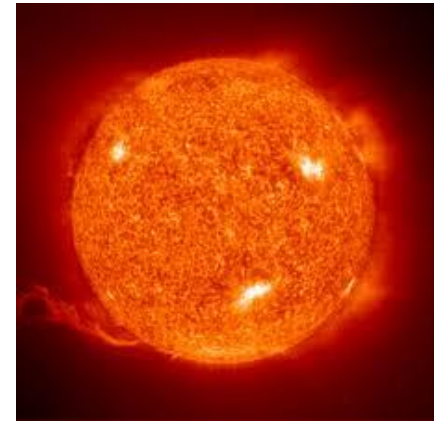
Physics

- **Heb. 1:3**, “... upholding all things by the word of His power ...”;
- **Col. 1:17**, “He is before all things, and in Him all things consist.”
 - Mass-energy equivalence (First Law of Thermodynamics)
- **Heb. 11:3**, “By faith we understand that the worlds were prepared by the word of God, so that what is seen was not made out of things which are visible.”
 - Mass is manifestation of energy
 - World’s basic elements are the electron, proton, neutron, neutrino (not earth, air, water, fire - as thought by the early Greeks)



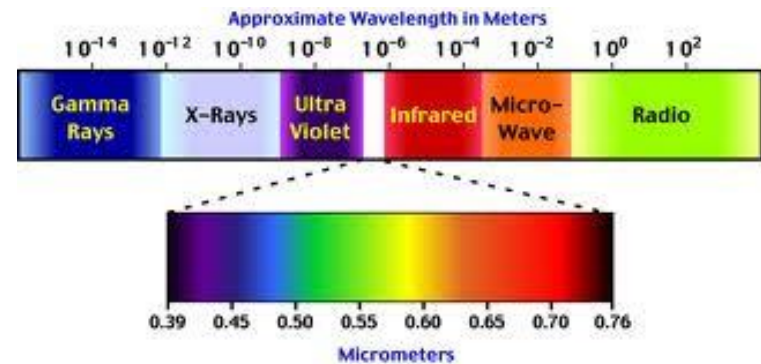
Sources of Light and Energy

- **Gen. 1:14,17**, “... let there be lights in the firmament of the heavens to divide the day from the night; and let them be for signs and seasons, and for days and years. ... God set them in the firmament of the heavens to give light on the earth.”
 - Source of energy for the earth
- **Ps. 19:6**, “Its rising is from one end of heaven, and its circuit to the other end; and there is nothing hidden from its heat.”
 - Sun is source of energy for the earth
 - Sun moving at 600K mph around center of Milky Way galaxy



Radio Waves, Radiation

- **2 Pet. 3:10** “But the day of the Lord will come as a thief in the night, in which the heavens will pass away with a great noise, and the elements will melt with fervent heat; both the earth and the works that are in it will be burned up.”
 - Atomic disintegration
- **Job 38:35** “Can you send out lightnings, that they may go, and say to you, ‘Here we are!’?”
 - Radio waves, electromagnetic radiation



Biology

- **Gen. 1:26**, “... let us make man in Our image, according to Our likeness; ...”
 - The uniqueness of man
- **Gen 3:15**, And I will put enmity between you and the woman, and between your seed and her Seed;
 - A female possesses the “seed of life”
 - Not common knowledge until a few centuries ago
- **Prov. 16:24**, “Pleasant words are like a honeycomb, sweetness to the soul and health to the bones.”
 - Psychotherapy





Biology – Nature of Flesh

- **Gen. 1:11,24-27; 3:19**, “In the sweat of your face you shall eat bread till you return to the ground; for out of it you were taken, for dust you are, and to dust you shall return.”
 - The chemical nature of flesh is evident from this
- **1 Pet. 1:24-25**, “... all flesh is as grass, and all the glory of man as the flower of the grass. The grass withers, and its flower falls away. But the word of the Lord endures forever.”
 - Man returns to dust and his body is gone

Biblical Kinds

- **Gen. 1:11-12, 21, 24-25**, “...herb that yields seed according to its kind, ..., beast of the earth according to its kind.”
 - Indicates stability of different kinds
 - Biogenesis, each producing after its own kind [used 10 times]
- What does the fossil record suggest?
 - Stasis – most species show no directional change; morphological change is limited and directionless
 - Sudden appearance – species do not appear gradually by steady change of its ancestors; they appear all at once and “fully formed”, e.g. “Cambrian Explosion”



Circulatory System

- **Gen. 9:4** “Only you shall not eat flesh with its life, that is, its blood.”
 - Life is in the blood, a medical statement
 - Blood circulatory system, and importance of blood to life, were scientifically discovered by William Harvey in 1616 AD
- **Lev. 17:11,14** “For the life of the flesh is in the blood ...”, “For as for the life of all flesh, its blood is identified with its life.”
 - Written by Moses ~ 1400 BC.
 - Blood circulation, life in the blood
 - Used to “bleed” a patient to remove a disease



Painless Surgery

- **Gen. 2:21**, “And the Lord God caused a deep sleep to fall upon Adam, and he slept; and He took one of his ribs, and closed up the flesh in its place.”
 - God knew that the key to painless surgery was to put the patient to sleep.
 - Until the 1800’s surgery was performed without anesthesia – perfected by William Morton ~ 1846, inspired by **Gen. 2:21**.
 - Anesthetic gases were discovered in early 1800’s.



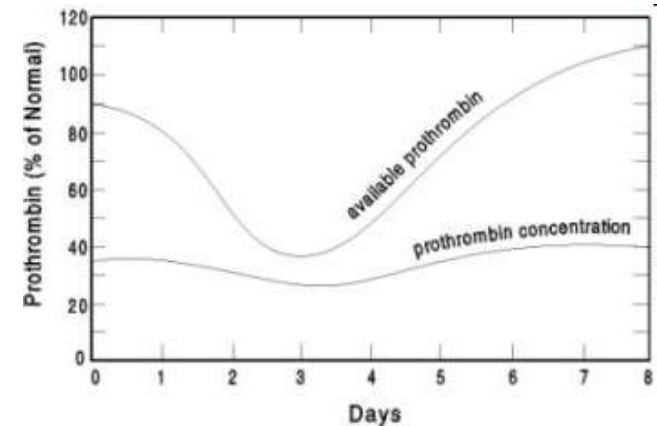
Germs Cause Infection

- **Lev. 11:40** “He also who carries its carcass shall wash his clothes and be unclean until evening.”
 - God told Moses to wash after handling dead things (~ 1400 BC.)
 - Until the 1800’s doctors handled the dead and then treated patients without washing.
 - Phillip Semmelweiss proved that disease can be transferred by not washing after handling dead things (~ 1846 AD.)



The Immune System

- **Gen. 17:12**, “He who is eight days old among you shall be circumcised, every male child in your generations, he who is born in your house or bought with money from any foreigner who is not your descendant.”
 - Eighth day is the only day in the entire life of the newborn that the blood clotting element prothrombin is above 100%
 - Medical science has discovered that this is when the immune system is at its peak



Proper Nutrition

- **Gen. 2:9**, And out of the ground the Lord God made every tree grow that is pleasant to the sight and good for food.
- **Gen. 9:3**, Every moving thing that lives shall be food for you. And as I gave you the green plants, I give you everything.
- **Ps. 104:14**, He causes the grass to grow for the cattle, and vegetation for the service of man, that He may bring forth food from the earth.
- Superiority of vegetables over meat, **Dan. 1:12-15**



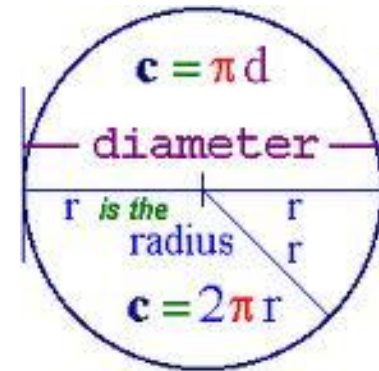


Value of Proper Nutrition

- God designed plant life to be nutritional
- The Psalmist recognized the benefits of the grass and herbs
- In the mid 1700's James Lind discovered the benefits of vitamin C, e.g. cures scurvy
- In the late 1800's Christian Eijkman discovered the benefits of thiamine, e.g. cures beriberi
- Good nutrition can cure and prevent diseases, e.g. heart, cancer
- Modern guidelines: vegetables, fruit, grains, nuts

Alleged Scientific Errors in Bible

- **1 Kings 7:23**, Then he made the sea of cast metal. It was round, ten cubits (1 cubit = 18”) from brim to brim, and five cubits high, and a line of thirty cubits measured its circumference.
 - A measurement in Solomon’s Temple
 - All engineers know that the ratio of the circumference of a circle to its diameter is *pi*, i.e. 3.14159
 - **1 Kings 7:26**, thickness was a handbreadth,
 - By including brim thickness (4 inches) in calculation of circumference, value of *pi* is correct, i.e. $30 * 18 / (10 * 18 - 4 - 4) = 540/172 = 3.14$





“Four Corners of the Earth”

- **Rev. 7:1** “four corners of the earth ...”
 - The phrase “four corners” in the Greek means “four quarters”
 - Translated this way in **Rev. 20:8** and other Scriptures
 - Four quadrants, or four cardinal directions: north, south, east, west
 - Common language used in surveying and mapping today
- Does not imply a flat earth!

The Circuit of the Sun

- **Ps. 19:6** “[The sun’s] rising is from one end of the heaven, and its circuit to the other end, ...”
 - Convention used by astronomers and cartographers even today
 - We measure the motion of the sun, moon and stars relative to the earth
 - All heavenly bodies are in motion relative to each other
 - Sun moves around center of Milky Way galaxy at 600,000 mph
- Sun does move within the universe





The Bible Is Unique

- The Bible is unique among religious books of antiquity in scientific accuracy
- The Bible contains some scientific statements that anticipate modern science
- The Bible contains no myths from the Egyptian, Greek, Roman cultures of the day
- There is no “modern science” in the Babylonian, Hindu, Islamic or Greek sacred books



Which Origins Model Best Fits The Facts?

- **Creation** and **Evolution** are the only two models of origins
- Both models should be considered as equal alternatives and evaluated objectively in terms of their relative abilities to correlate and explain scientific data
- **The model that incorporates the most data and has the smallest number of unresolved issues is the most likely to be true**

The Meaning of Evolution

1. Artificial Selection ←

- Plant and animal breeding

2. Change ←

- Evolution of a coastline (random)
- Evolution of a car (designed)

3. Micro-Evolution ←

- Small variation within prescribed limits of complexity
- e.g., finch beaks by mutation and natural selection

4. Macro-Evolution ←

- Particles -> people

5. Molecular Evolution ←

- Origin of life – assumes a mutating replicator

Only 1, 2 and 3
have been observed

4 never observed!

5 is impossible!

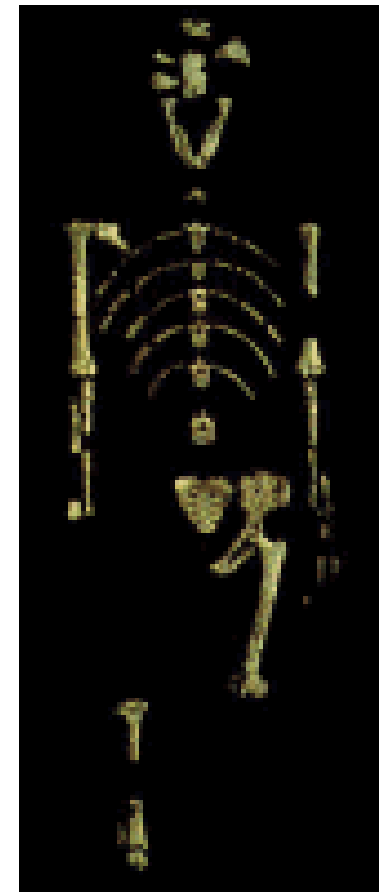


Looking at the Scientific Evidence

1. Origin of matter, energy and natural law
2. Classification of biological organisms
3. Mutations and natural selection
4. Origin of man
5. Origin of life (probability)
6. The fossil record
7. Origin of the solar system and planets
8. Teleology – evidence for design

Lucy – Missing Link to Man?

- Discovered in 1974 by Donald Johanson
 - 40% complete skeleton
 - Dated at 3.5 million years old
- Evidence:
 - Arm/leg ratio of 83.9 %
 - Hip/pelvis – walked upright
 - Knee joint – walked upright
- Observations:
 - Fingers long and curved (for climbing)
 - Shoulder blade like gorilla
 - Brain size of chimpanzee



Lucy - Reconstructed

Chicago
Museum

- Looking more closely, we find:

- Leg bone broken in two places and one end was crushed -> this invalidates the ratio
- Hip/pelvis was incomplete, and thus reshaped to make it look as if it walked upright
- Knee joint was found over one mile away and 200 feet deeper in strata from rest of bones



This is a reconstruction of the famous fossil hominid "Lucy". One of our oldest known ancestors, it is found in a fossilized and almost complete skeleton found in the Tertiary region of Ethiopia by Dr. Donald Johanson. The fossil dated to c. 3.24 million years ago and is classified as *Australopithecus afarensis*. Lucy and other fossil and living primates and hominids will be the focus of an upcoming MLCU Museum exhibition on Primate Evolution.



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- Fossil remains of two different creatures fitted to form a make-believe creature

Behind The Scenes



40%
Skeleton

From the PBS Nova Series “In Search of Human Origins”, Episode One 1994 (Dr. Owen Lovejoy)

- Lucy’s pelvis is very wrong – looks very ape-like
- “Fixing” Lucy with a power saw!



St. Louis
Museum



Biblical Worldview Presuppositions

- Nature is real, not imaginary
- Nature is a “thing,” not a god
- Nature is worth studying
- Nature is unified and orderly
- The natural order is mathematically precise
- Human minds can discover and understand the natural order

The Soul of Science, Nancy Pearcey and Charles Thaxton



Conclusions

- The Bible is accurate when it speaks on science
- The Bible uses the language of the day
- The Bible anticipates future scientific truths
- Scientists have used the Bible to discover scientific truths
- Biblical worldview presuppositions are rational
- Modern science is founded on the biblical worldview

“The grass withers, the flower fades, but the word of our God stands forever.” Is. 40:8