

Intelligent Design vs. Evolution

Defending God's Creation

Hebrews 1: 10-12

Psalm 102: 25-27

10 And:

"You, LORD, in the beginning laid the
foundation of the earth,

And the heavens are the work of Your hands.

11 They will perish, but You remain;

And they will all grow old like a garment;

12 Like a cloak You will fold them up,

And they will be changed.

But You are the same,

And Your years will not fail."

KU mythology class

- “The fundies want it all taught in a science class, but this will be a nice slap in their big fat face by teaching it as a religious studies class under the category mythology.”
- Paul Mirecki, chairman of KU’s Religious Studies Department
- Email sent to Society of Open-Minded Atheists and Agnostics

Bigger Battles Coming

- “While Joel Cracraft, past president of the American Institute of Biological Sciences, says that the scientific foundations for evolution are as solid as “the Earth revolving around the sun,” its status in the classroom seems hardly assured”
- from the Eagle, 12/2/05

Bigger Battles Coming

- University of Minnesota biologist P.Z. Myers argues that Darwinists should take an even harder line against their opponents: "Our only problem is that we aren't martial enough, or vigorous enough, or loud enough, or angry enough," he wrote. "The only appropriate responses should involve some form of righteous fury, much butt-kicking, and the public firing and humiliation of some teachers, many school board members, and vast numbers of sleazy far-right politicians."
- from editorial in Seattle Times, 11/21/05

Ben Stein on *EXPELLED*



“I think we will be mocked and belittled for this production.”

– Interview in *WORLD* magazine

TIME review of *EXPELLED*

“He [Stein] makes all the usual mistakes nonscientists make whenever they try to take down evolution, asking, for example, how something as complex as a living cell could have possibly arisen whole from the earth’s primordial soup. The answer is it couldn’t—and it didn’t. Organic chemicals needed eons of stirring and slow cooking before they could produce compounds that could begin to lead to a living thing.”

- Jeffrey Kluger

Creation

- Genesis 1:1 - 2:3
- Day in vs. 5,8,13,16,18,19,23,31,2:2&3
- From Hebrew word *yowm*
- Exodus 20:10 & 11

Hebrew *yowm*

- "Probably, so far as I know, there is no professor of Hebrew or Old Testament at any world-class university who does not believe that the writer(s) of Gen. 1-11 intended to convey to their readers the ideas that (a) creation took place in a series of six days which were the same as the days of 24 hours we now experience (b) the figures contained in the Genesis genealogies provided by simple addition a chronology from the beginning of the world up to later stages in the biblical story (c) Noah's flood was understood to be world-wide and extinguish all human and animal life except for those in the ark. Or, to put it negatively, the apologetic arguments which suppose the 'days' of creation to be long eras of time, the figures of years not to be chronological, and the flood to be a merely local Mesopotamian flood, are not taken seriously by any such professors, as far as I know."
- Professor James Barr, University of Oxford

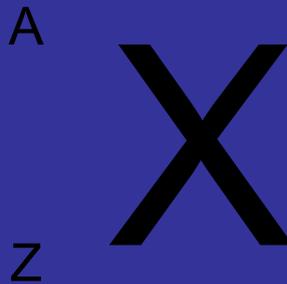
Radiometric Dating

- Matter and Radioactive Decay
- Radiometric Carbon (^{14}C)
- Other Radiometric dating methods

Atom

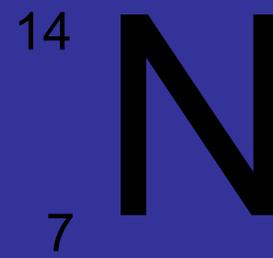
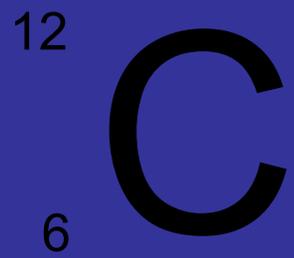
- Composed of protons, neutrons, and electrons
- Central core is nucleus (contains protons and neutrons)
- Orbited by electron “cloud”
- Protons – positive charge
- Neutrons – no charge
- Electrons – negative charge

Atom



A = mass number (# of protons + neutrons)
Z = atomic number (# of protons)

Atom



Atom

- Isotopes – atoms having nuclei with the same number of protons but different numbers of neutrons
- ${}^9\text{C}$ ---- ${}^{12}\text{C}$ ---- ${}^{14}\text{C}$

Atom

- The most stable elements are in low atomic number range (≤ 20) and have neutrons=protons (n/p ratio =1)
- As atomic number > 20 then n/p ratio > 1
- All elements with atomic number > 82 are radioactive

Radioactivity

- Phenomenon in which radiation is given off by the nuclei of the element and thus changes it to a different element
- Occurs by alpha particles, beta particles, and gamma rays
- Goal: nuclear stability
- *Parent* – Original element
- *Daughter* – Product of radioactive decay
- *Equilibrium* – ratio of daughter activity to parent activity is constant

Radioactivity

- *Half-Life* – the time it takes for activity to decay to half the original value

$$A = A_0 e^{-\lambda t}$$

$$T_{1/2} = \frac{0.693}{\lambda}$$

Radiometric Carbon (^{14}C)



Half-life $^{14}\text{C} = 5730$ years

Radiometric Carbon (^{14}C)

Cosmic
Rays



^{14}N



^{14}C



$^{14}\text{CO}_2$



Taken In
Organic
(Living)

Radiocarbon Clock

- Starts when animal/human/tree dies
- 3 scenarios
 - Lot of ^{14}C in fossil = recent death
 - Little ^{14}C in fossil = death long time ago
 - No ^{14}C in fossil = death $> 60,000$ years ago
- To date must know:
 - Rate of decay (^{14}C $T_{1/2}=5730$ years)
 - How much ^{14}C started with

Radiocarbon Clock

- To know the amount of starting material we measure the ratio of C12 to C14
- 1 trillion C12 atoms to 1 C14 atom
- Dependent upon equilibrium
- Scientists have determined that takes 30,000 years to reach equilibrium

Radiocarbon Clock

<u>C12</u>	<u>C14</u>	<u>ratio</u>	<u>#1/2</u>	<u>age</u>
100 t	100	1 t/1	0	0
100 t	50	2 t/1	1	5730
100 t	25	4 t/1	2	11460
100 t	12	8 t/1	3	17190
100 t	6	16 t/1	4	22920
100 t	3	32 t/1	5	28650

Radiocarbon Clock

- Are we in equilibrium?
- Has the ratio of C12 to C14 always been 1 trillion to 1?

Radiocarbon Clock

- Dr. Willard Libby (founder of C14 dating) measurements that C14 formed 25% faster than being removed
 - Attributed it to experimental error
- However experiments in the 1960's confirmed that we were at least 25% out of equilibrium
- The assumption of equilibrium is FALSE
- If ratio is $>$ than 1 trillion to 1 then things date by this method older than are

Radiocarbon Clock

- Factors that affect amount of carbon in atmosphere
 - Cosmic ray penetration of atmosphere
 - Genesis flood
 - Earth's magnetic field
 - Amount of carbon dioxide in atmosphere

Radiocarbon Clock

- If we are not in equilibrium, then is Earth less than 30,000 years old?
- Why does coal have detectable C14?
- Why does fossilized wood supposedly 200 million years old have detectable C14?

Radioisotope Dating

- Potassium 40 – Argon 40
- Uranium 238 – Lead 206
- Uranium 235 – Lead 207
- Rubidium 87 – Strontium 87

Radioisotope Dating

- Used only on igneous and metamorphic rocks (basalt)
- Cannot be used on sedimentary rock (limestone, sandstone, and shale)
- Assumption that no daughter element present in rock after it cooled
- Radioactive decay then dates rock

Radioisotope Dating

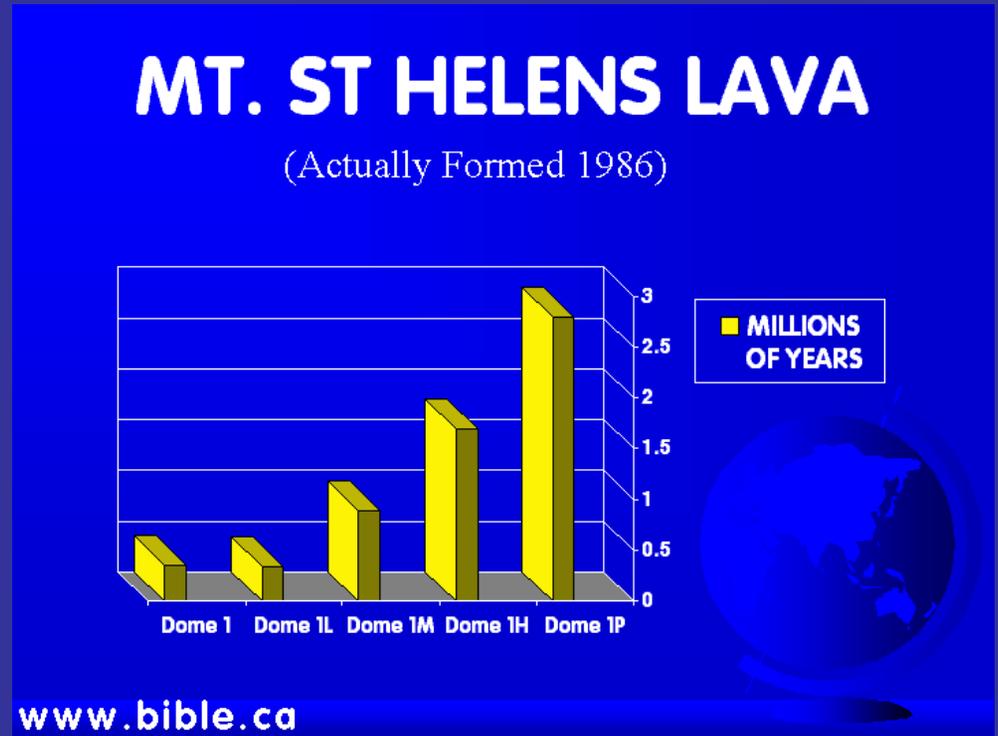
- Assumptions
 - Amount of daughter element at beginning is known (zero)
 - All the daughter element is due to radioactive decay
 - Closed system (no parent or daughter element added or removed from system)
 - Radioactive decay rates are constant

Radioisotope Dating

- Sunset Crater in Arizona
 - K-Ar dating 200,000+
 - Formed 1065 AD
- Mt. Ngaurhoe, New Zealand
 - K-Ar dating 275,000+
 - Erupted 1949, 1954, 1975
- Hualalai basalt, Hawaii
 - K-Ar dating 1.4-22 million
 - Formed 1801

Radioisotope Dating

- Mount St. Helens
 - K-Ar dating up to 2.8 million
 - Erupted 1980



- Grand Canyon
 - Rocks from upper strata have been dated older than rocks of lower strata

Radioisotope Dating

“When the same rock is dated by more than one method, it will often yield different ‘ages’. And when the rock is dated more than one time by the same method, it will often give different results.”

John Morris, Ph.D. in Geology

The Geology Book, 2000, pg. 52

Radioisotope Dating

- Skull 1470
- Human characteristics but found in old rocks
- Argued dates for many years in literature with wide range from different methods
 - From 0.5 million years to 2.6 million years
- Nearby pig fossils eventually won out with date settled around 1.9 million years

Young Earth

- Scriptures teach young earth
 - Concept of Apparent Age!
- Red blood cells/ unfossilized dinosaur bones discovered!
- Amount of salt/sediment in ocean
- Moon receding from Earth

For More on Radiometric Dating

<http://www.bible.ca/tracks/dating-radiometric.htm>

2 Peter 3:3-6

- 3 knowing this first of all, that scoffers will come in the last days with scoffing, following their own sinful desires.
- 4 They will say, "Where is the promise of his coming? For ever since the fathers fell asleep, all things are continuing as they were from the beginning of creation."
- 5 For they deliberately overlook this fact, that the heavens existed long ago, and the earth was formed out of water and through water by the word of God,
- 6 and that by means of these the world that then existed was deluged with water and perished.