CSE 102 - Class 10

Appendix vestigial vestigial - don't need it anymore ours is smaller than a horses so it is a sign that we are loosing it or we just eat less roughage than a horse so don't need it as much you can live without both your arms and legs, that doesn't mean you don't need them

Whale Pelvis "Just imagine whales walking around, its true" whale pelvis holds its reproductive organs Human tail bone has no apparent use holds 9 muscles that are important for body functions

They used to think there were 180 vestigial organs when they started Now we know there are none Even if there were that would be the opposite of evolution. Do we keep loosing organs until we have everything we need?

How long would it have taken for Mt. Rushmore to happen on its own wind, water, ex-foliation, erosion

Things have adapted to their environment "picture plant adapted to take in nitrogen" "fish adapted gills to live in water" how did they live before they adapted gills? - they all died for millions of years

Evolutionists argue against design using arguments they designed.

"Darwin's black box" - hair on bacteria

minimum number of parts for an internal combustion engine to work 100?

Bacteria motor has 40

Irreducible complexity - can not remove one more part without making the machine stop working How many parts in a car ?

how many do you need to remove to get the car to not work - any one of thousands (key) bacteria motor take away any one and it will not work

when it was evolving how did it know that when it had 35 parts it only needed 5 more? 8 million of these motors would fit in the cross section of a hair spins at 100.000 RPM

motor moves through liquid the equivalent of a human swimming 60mph through peanut butter viscosity problem - the smaller you are the thicker the liquid feels

Eye Evolution

They arrange a bunch of eyes in order from simple to complex and guess that this is how it happened.

Psalm 94:9 - God formed the eye

back of the retina there are 137,000,000 light sensitive cells in 1 square inch - each one wired directly to the brain

eye sees more color and can focus faster than any camera Poor eve design - blood vessels in front of retina block light - octopus has better eve its blood vessels are behind the retina Octopus lives in water - water insulates UV light Humans live in air - air poor insulator for UV light swap eyes with octopus and you would be blind in a few days Origins of life 1950 Stanley L. Miller and Harold C. Urey "Earth's former atmosphere" They assume there was no oxygen because if there was than the new life would oxidize and break apart We live in an oxidizing atmosphere (cut fruit, metal) all layers of rock have oxidation so the Earth always had oxygen - the older the layer the more oxygen it has Textbook "life only produces life" couple pages later "here is how life formed from non living matter" Took gases and fed them through the tubes and used spark to simulate lightning had a methane ammonia water vapor hydrogen atmosphere - no oxygen they produced a "mixture rich in amino acids"

Letters in the alphabet are the building block for making words dump block letters on the floor probability of making a word - low probability of making a sentence - impossible

It requires a bunch of amino acids in the correct order to make a protein it takes millions of proteins to make a cell they excluded oxygen because they knew the amino acids would oxidize and bread apart

Earth has always had Oxygen need oxygen to create ozone ozone stops UV light UV light destroys ammonia ammonia one of the building blocks of his atmosphere no oxygen no ammonia

the contraption had a trap door to filter out the product because if it was let go through again because if it did the lightning would have destroyed it they created 85% tar 13% carboxylic acid toxic to life 2% amino acids Did not create life - proved that it could not happen

26 letters can be arranged to make hundreds of thousands of words words can be arranged to produce an unlimited number of books

there are only 20 amino acids combine to make proteins smallest protein contains 70 amino acids sentence that has 70 letters The quick brown fox jumps over the lazy dog. Has every letter in the alphabet (35 total letters) put letters in a box and dump them out to make that sentence no chance all the letters have to be facing the right way letters can be to the left, right, upside down, reversed, reversed to the right, reversed to the left, reversed, upside down, or right way up (if their 2D - 3D have more combinations) amino acids have to be facing the right way to form a chain There are right handed and left handed amino acids fitting right handed nut on left handed bolt Chirality - spin / twist of a molecule to fit all have to be the same hand to make a chain dump the letters on the floor and half will be upside down R in Russia can be used backwards T can be used if its reversed Experiment produced right and left handed amino acids are left handed DNA/RNA are right handed

1 cell has more complexity than the city of New York

problems with the experiment

- 1. Excluded oxygen
- 2. Trapped out product
- 3. Half were right half were left

proteins in water are more likely to devolve before they come together most scientists agree the oceans are full of water This was supposed to take place in the water once 4 or 5 get together they will fall apart Brownian motion put one drop of red food coloring in glass of water it will spread through the entire glass molecules of water bumping together will spread other molecules apart

They are under the impression that if you get all of the molecules together in the right order they will miraculously come to life Take a frog - put it in a blender all of the molecules are in one place how long before another frog (or any type of other animal) comes back to life even if you manually reassemble the frog its still dead none of the parts in an airplane fly its the intelligent design that causes all of the parts together to fly nothing in aluminum causes it to fly nothing in a frog that causes it to be alive

there is no chance of it becoming alive on its own there is the breath of life thing that no one understands

There are no 2 or 3 celled organisms billions of 1 celled smallest grouping is 20 and they don't even make up a tissue tissue takes hundreds of thousands of cells "2 celled creatures must have existed but there are not any left" there is no such thing as a simple life form Trees of life in text books are nonsense they arrange them in what ever order looks best and only the tips of the branches contain any data because no one knows anything that was before them.

Textbooks teach smaller is simpler

in the 1850's when they started looking at cells they could only see what appeared to be a bag of jelly

a cell is incredibly complex

the parts of a cell are also incredibly complex thousands of paramecium can fit in a single drop of water there more complicated than the space shuttle

Smaller is not simpler

Cray computer	Honeybee
6 Billion calc/sec	1000 Billion calc/sec
lots of energy (kW)	10 mW
	100,000 mi/gal of honey
	compare size of bee with wing size it cant fly
	(Don't tell the bee)
\$48 million	free
lots of people to maintain	self contained - self reproducing
2300 lbs	less than 1 oz
human brain millions of times more complex than a bee's brain	
3 lb brain	-
more electric connections in brain than in entire world	

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stores more information than a library

computers rated by how much information they can process and retrieve human - elephant - whale - all beat a cray computer