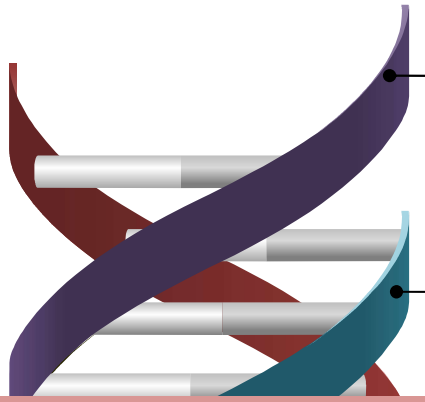
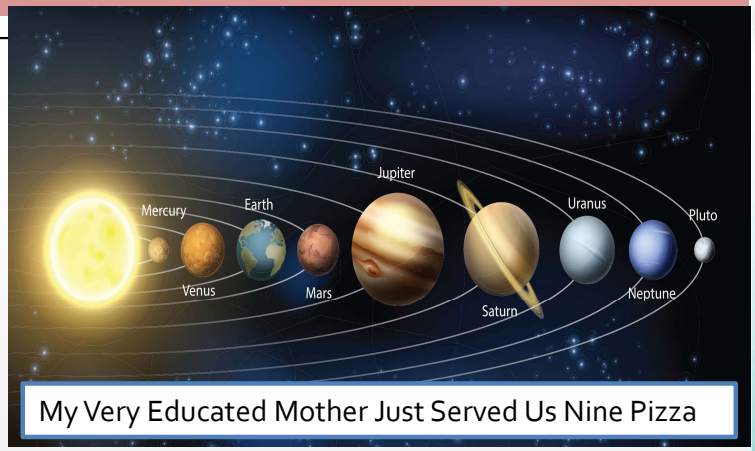


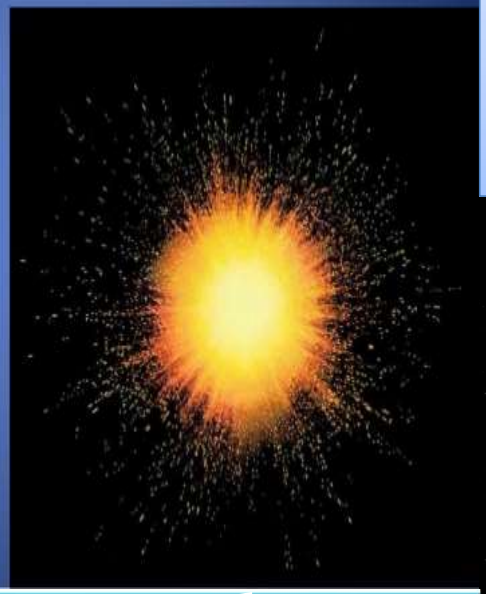
Origin of Universe & Life



When scaling, group all elements to be scaled. Scale as needed. Use the "Increase Font Size," "Decrease Font Size" buttons or manually change the font size for the editable text.

Time begins

- The universe begins ~13.7 Billion years ago
- The universe begins as the size of a single atom
- The universe began as a violent expansion
  - All matter and space were created from a single point of pure energy in an instant

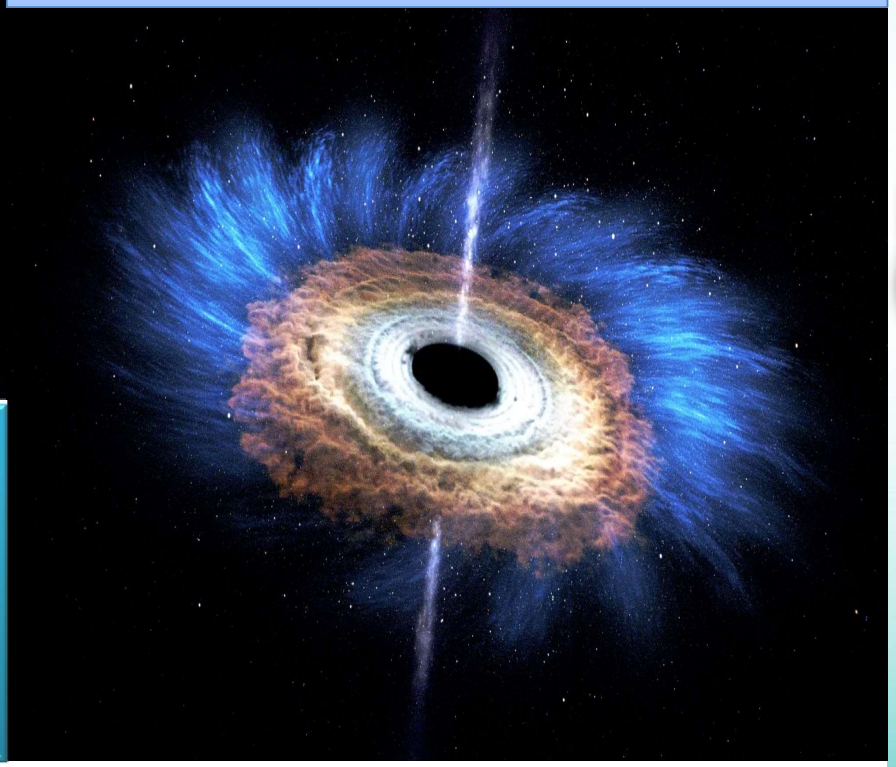


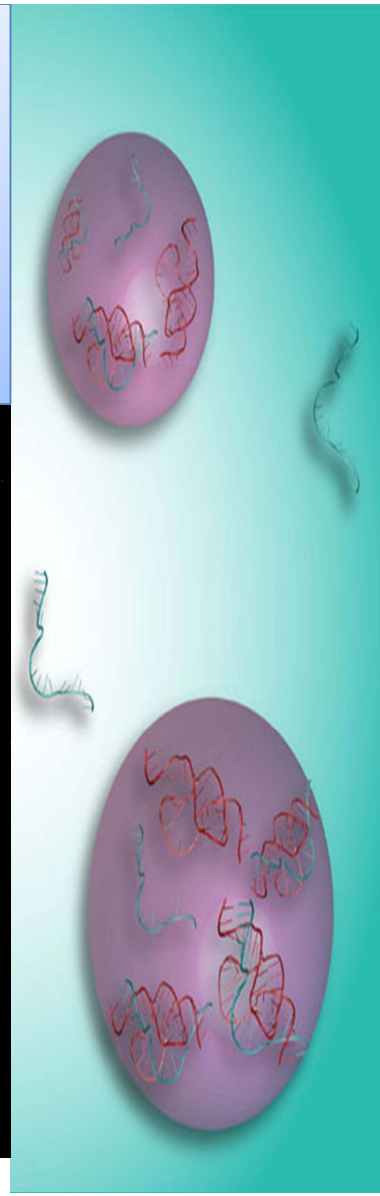
وأَوَلَمْ يَرَ الَّذِينَ كَفَرُوا أَنَّ السَّمَاوَاتِ الْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا

AlAnbeaa 30

QURAN SURAH AZ ZARIYAT 47 IN

وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ

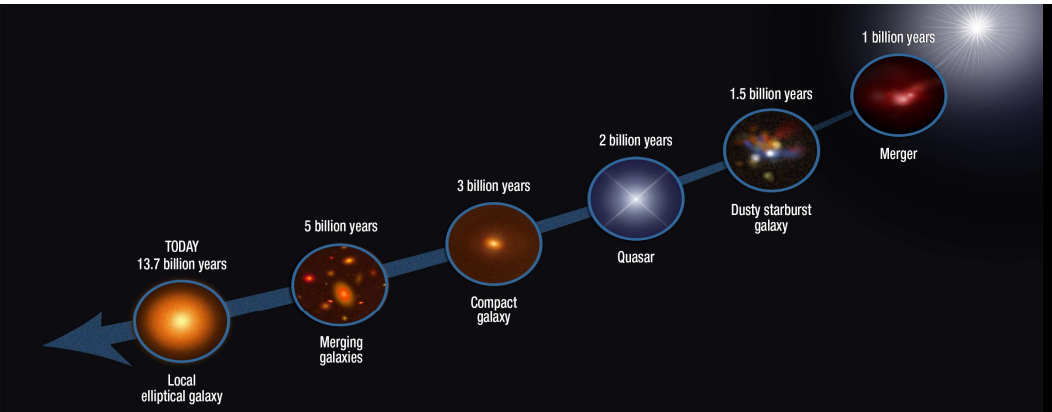


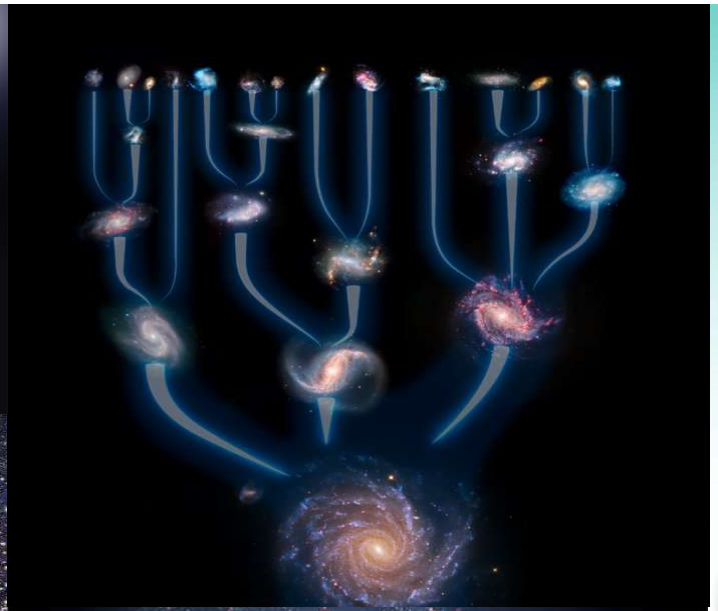


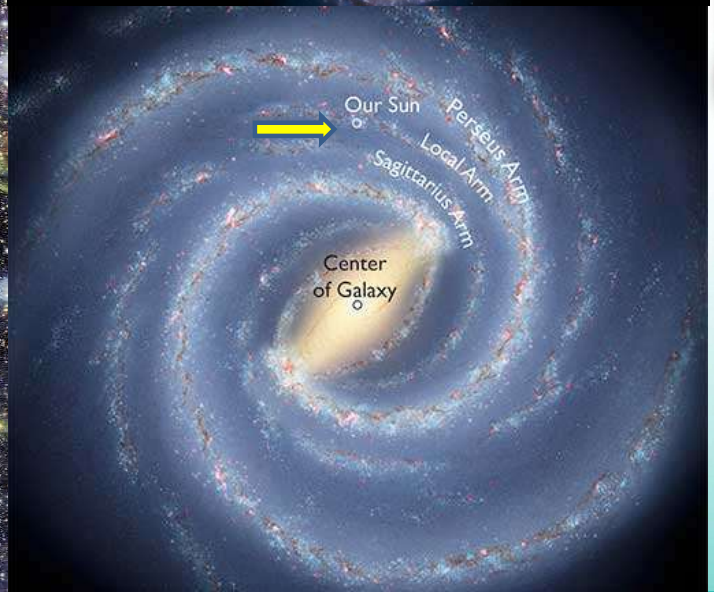
Big Bang Timeline

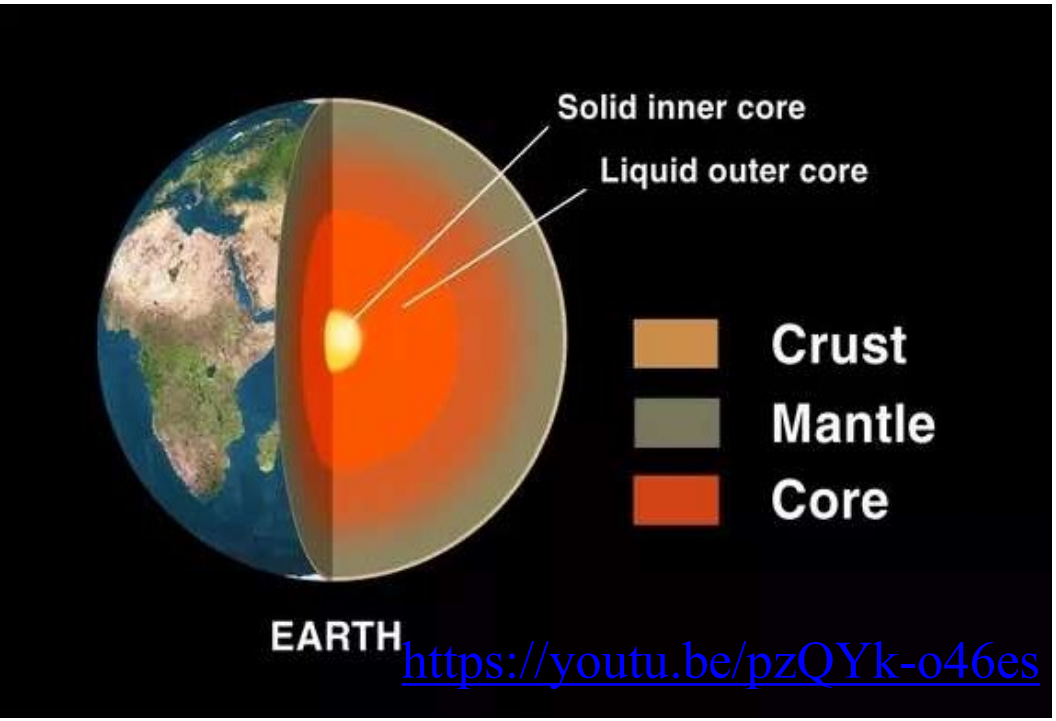
D + T > He +E

Hydrogen Isotopes


1 billion years
Merger
1.5 billion years
Dusty starburst galaxy
2 billion years
Quasar
3 billion years
Compact galaxy
5 billion years
Merging galaxies
TODAY
13.7 billion years
Local elliptical galaxy



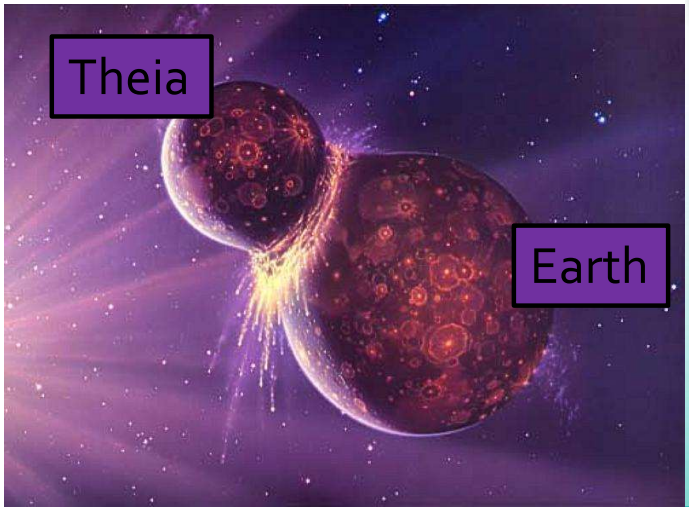

Our Sun
Perseus Arm
Local Arm
Sagittarius Arm
Center of Galaxy

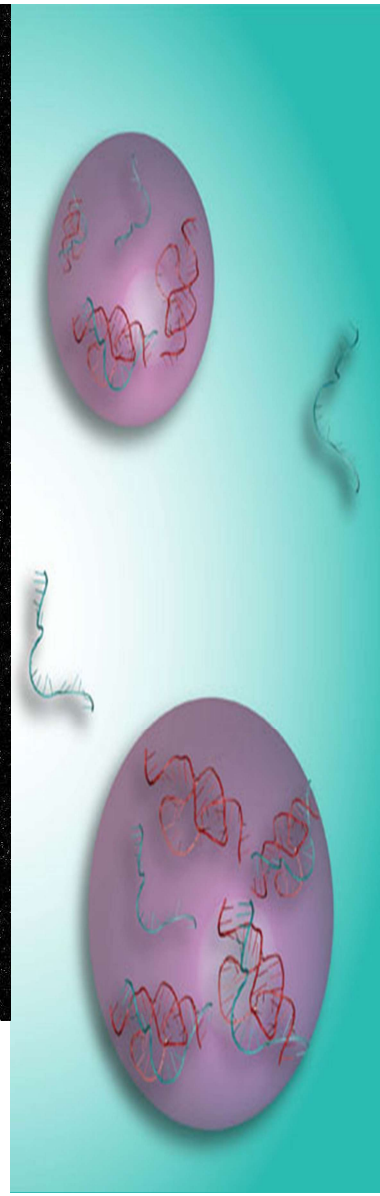


https://youtu.be/pzQYk-o46es

استنبط العلماء من قوله تعالى:{وَأَنزَلْنَا الْحَدِيدَ}،[٢] أنّ معدن الحديد لم يخرج من الأرض إنّما نزل من السّماء لأنّ الله تعالى قال أنزلنا ولم يقل خلقنا

Massive chunks of rock known as asteroids have broken apart throughout the history of our solar system, sometimes through collisions with other asteroids, showering down smaller chunks of rock. The meteorite fragments that came into Earth's atmosphere, and did not burn up in the intense heat, brought more iron to the planet's surface.





https://youtu.be/Jvw1n4VdZCo?t=44

https://youtu.be/Jvw1n4VdZCo?t=52

Where does life come from? Life must come from life

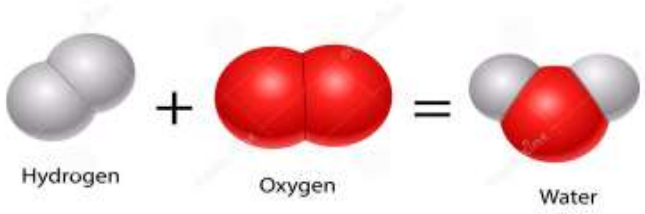
But what about the beginning?

Could Life have developed on Earth under abiotic conditions?

- Earth is approximately 4.5 billion yrs old
- Hot, barren, rocky, and bombarded with meteorites
- Atmosphere composed of nitrogen, carbon monoxide, hydrogen, and water vapor but NO OXYGEN
- Hot lava, ultraviolet light, poisonous gases, lightning

Most abundant element in the universe was Hydrogen then Oxygen.

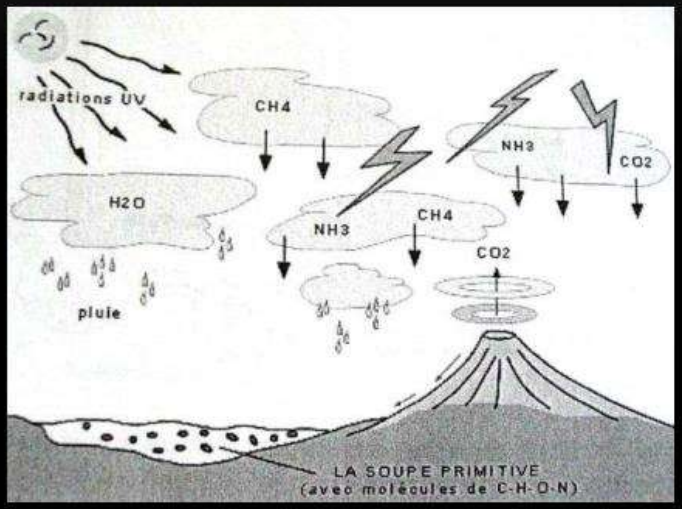
Reaction of Hydrogen and Oxygen to Water



$$2H_2 + O_2 = 2H_2O$$

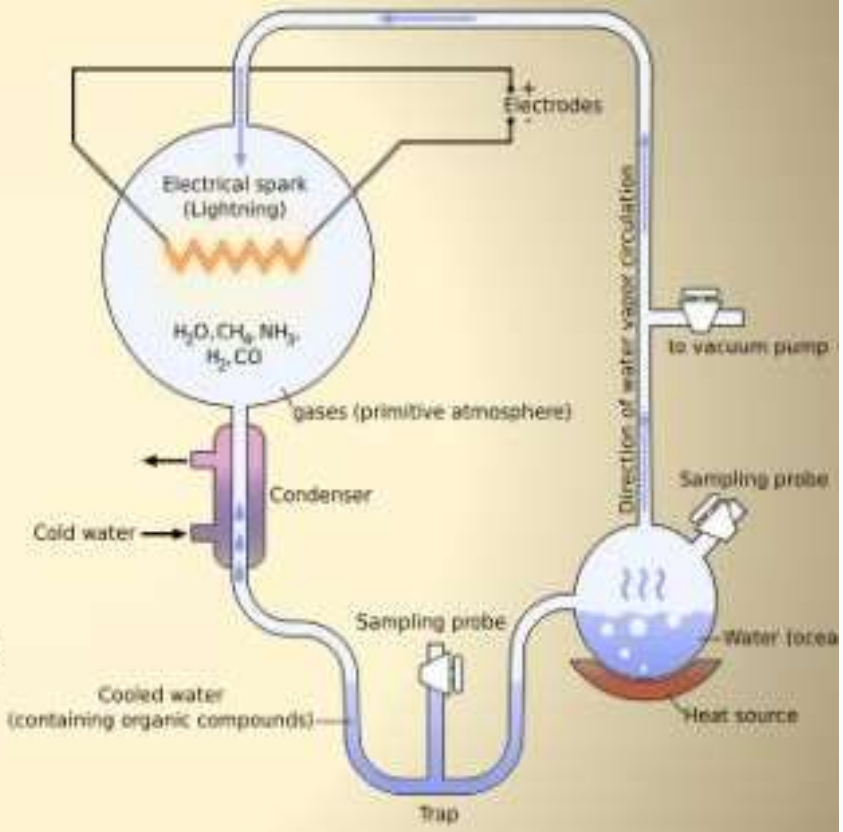
A. I. OPARIN AND J.B.S. HALDANE'S HYPOTHESIS

- In the 1920s, Russian chemist A.I. Oparin and British scientist J.B.S. Haldane hypothesized that Earth's early atmosphere was a reducing (electron-adding) environment, in which organic compounds could have formed from simple molecules.
- The energy for this synthesis came from lightning and intense UV radiation.
- Haldane suggested that the early oceans were a solution of organic molecules, a "primitive soup" from which life arose.

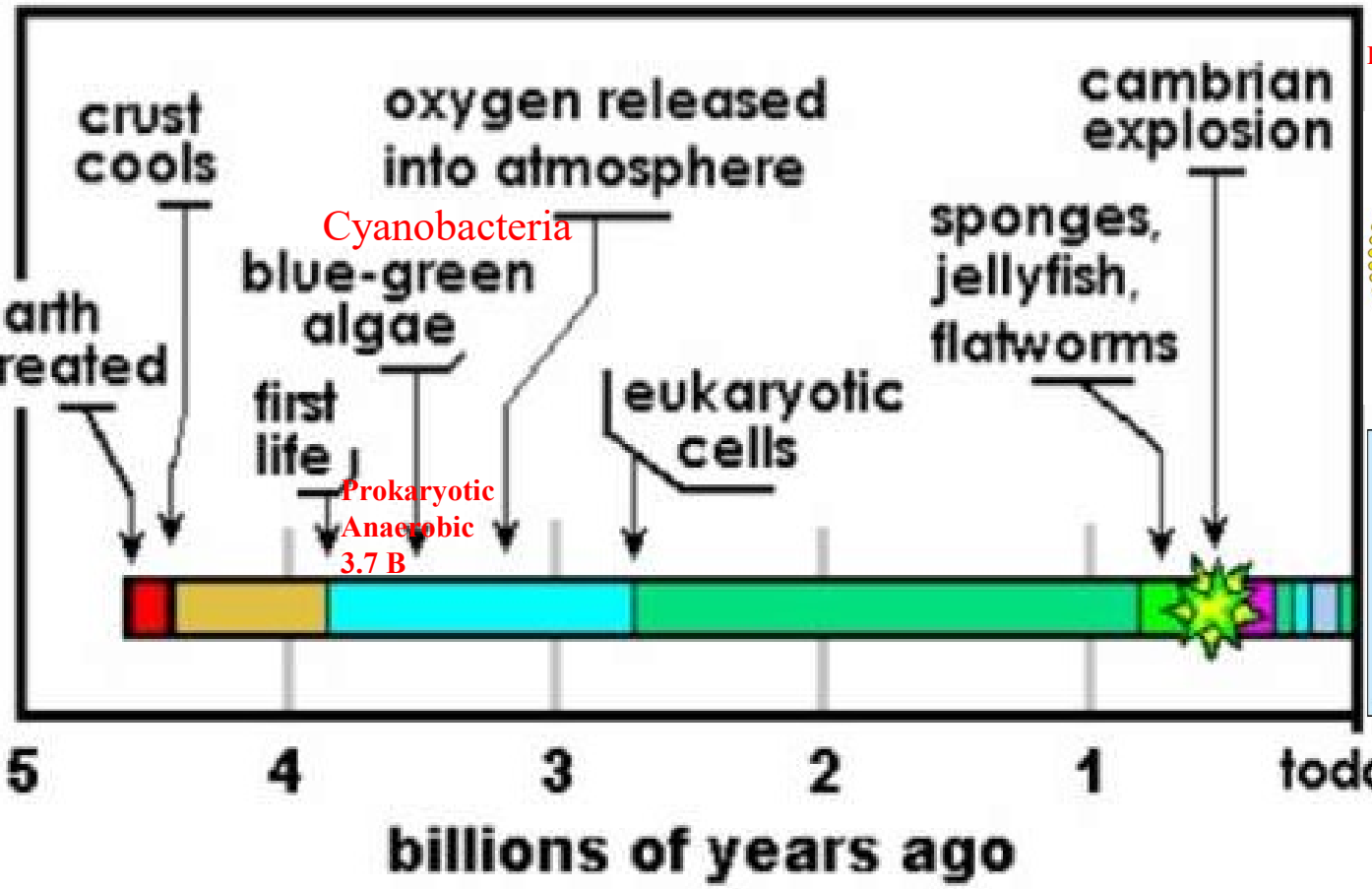


Origin of Life - Abiogenesis

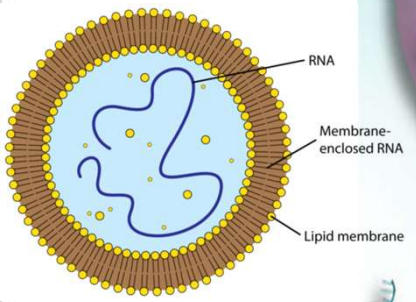
- The early atmosphere was likely reducing (gaining electrons)
- The Miller-Urey experiments showed that amino acids can be catalyzed by electrical activity (lightning) in this environment.
- Other theories have been proposed

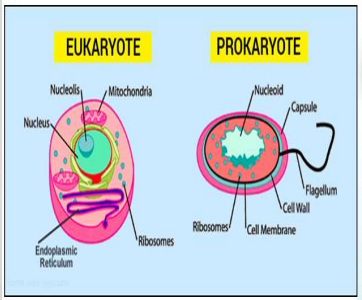


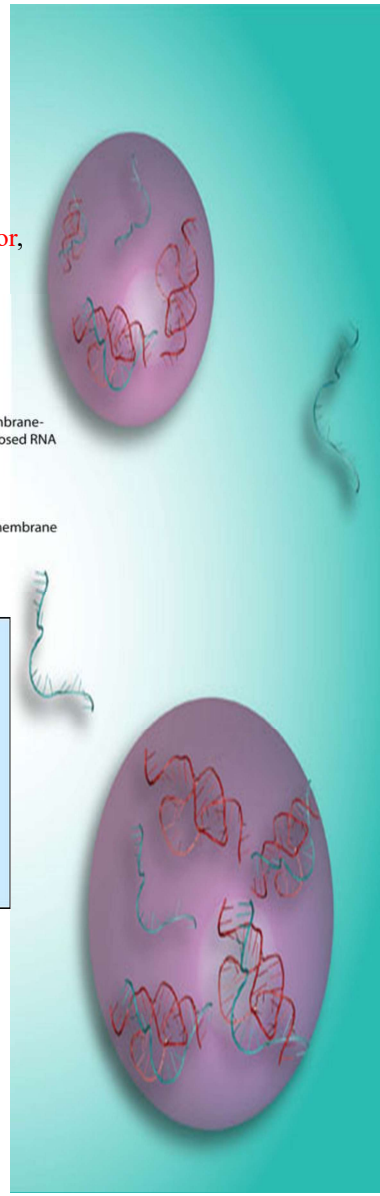
A history of life on earth

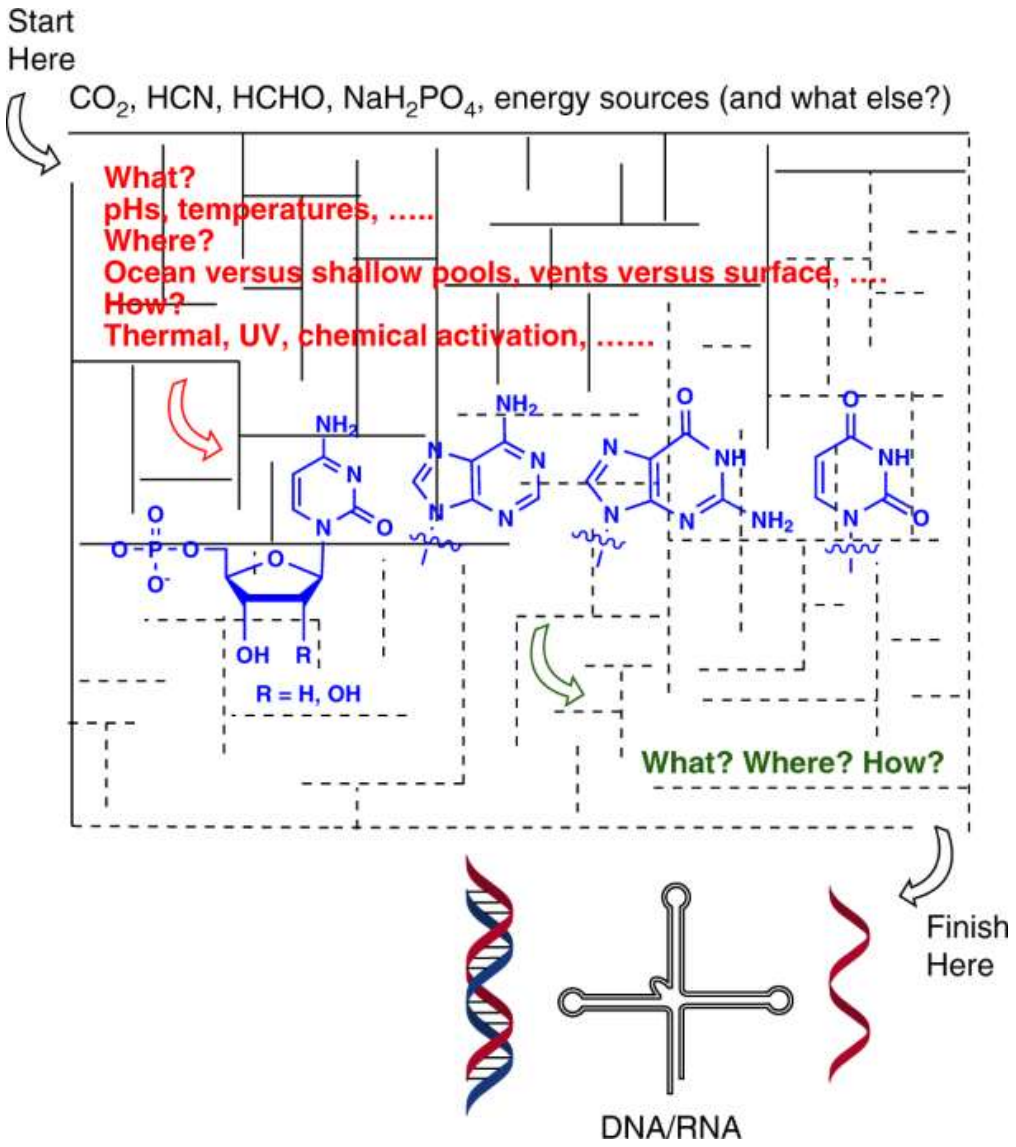


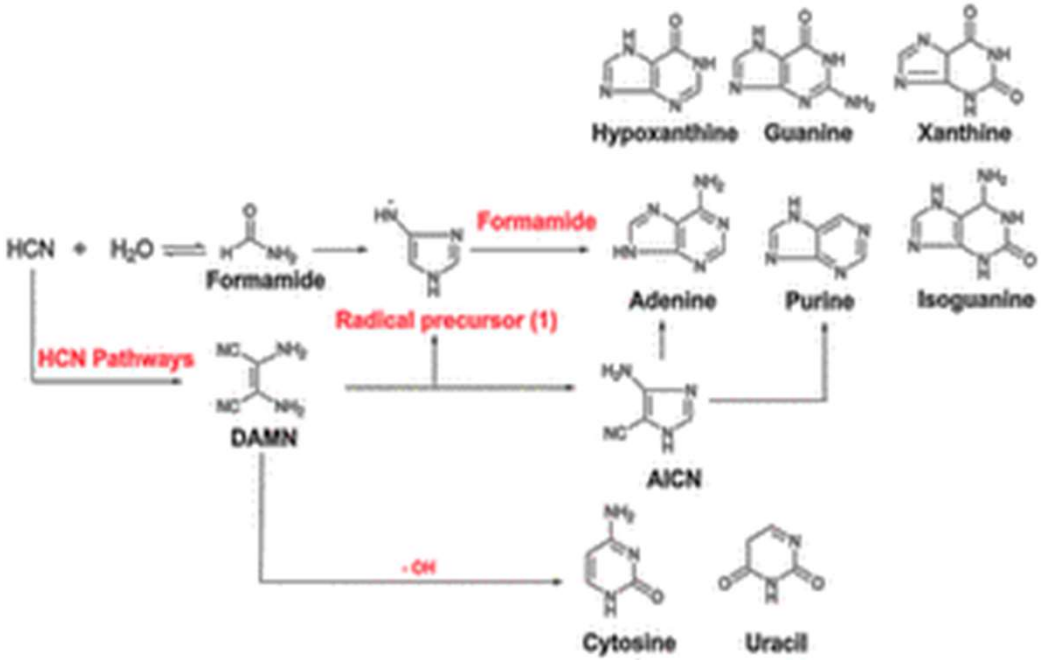
LUCA
Last Universal Common Ancestor,

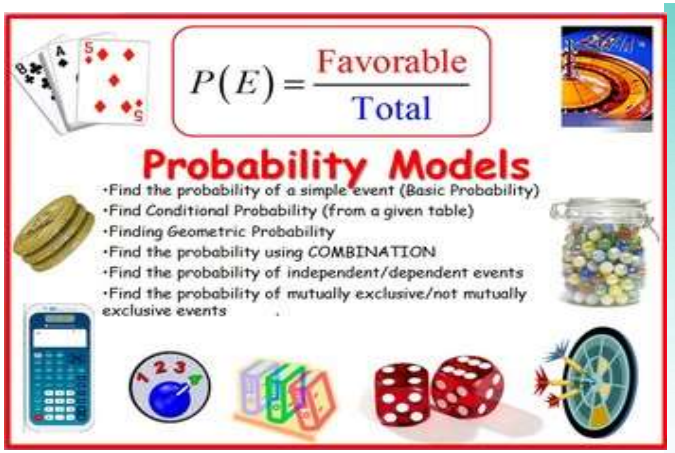







Start
Here
CO_2, HCN, HCHO, NaH_2PO_4, energy sources (and what else?)
What?
pHs, temperatures, ...
Where?
Ocean versus shallow pools, vents versus surface, ...
How?
Thermal, UV, chemical activation, ...
R = H, OH
What? Where? How?
Finish
Here
DNA/RNA

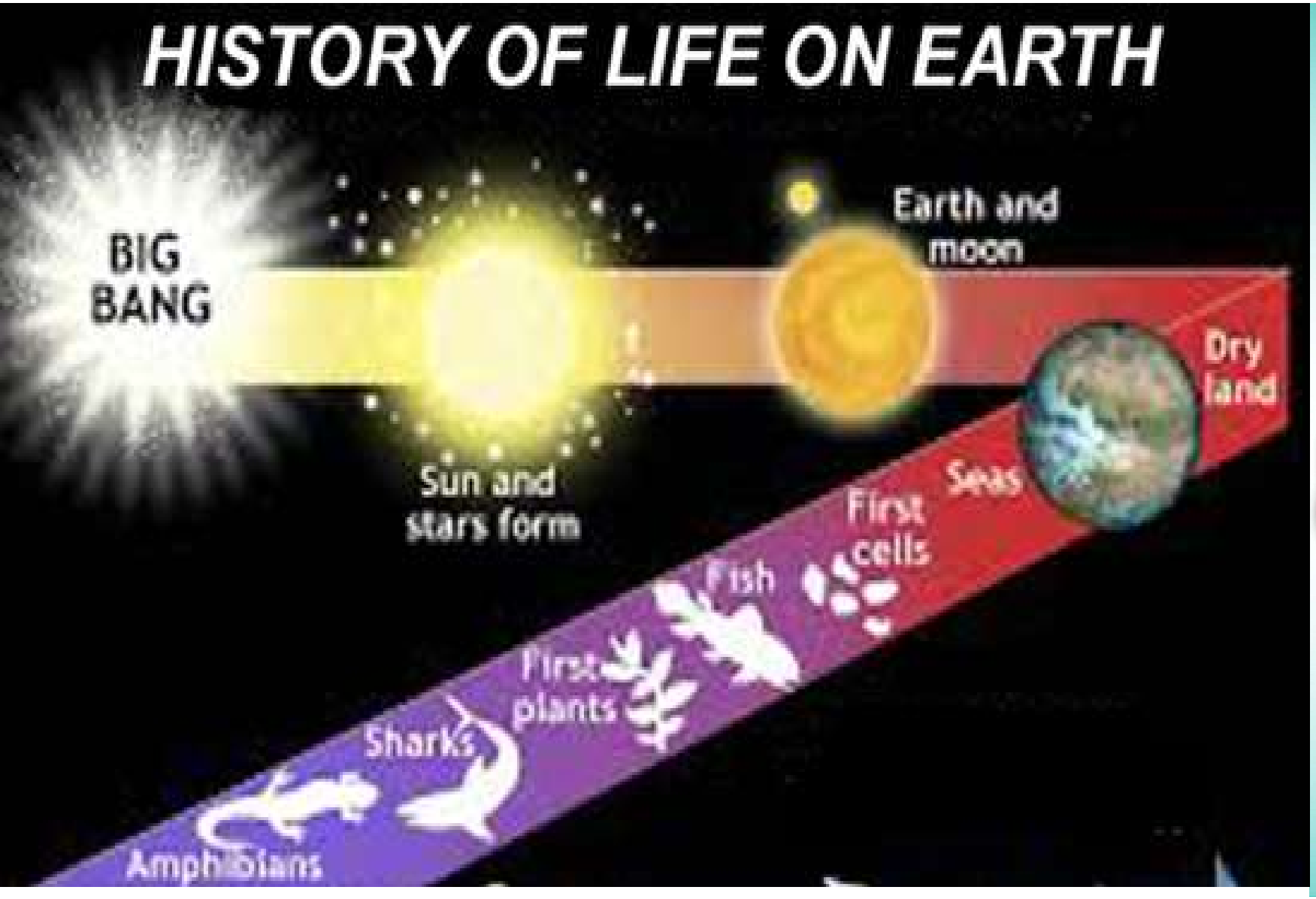


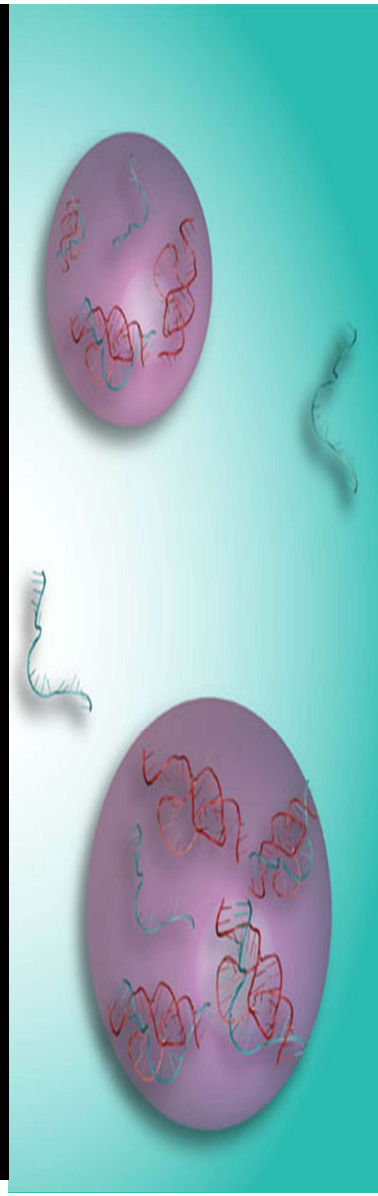


Your chances of winning the Powerball – if you were to play only one set of numbers, would be 1 in 292,201,338. You can of course improve your odds of winning by purchasing more tickets and playing more combinations, but realistically speaking, it won't make much of a difference. Numbers are from 1-69.

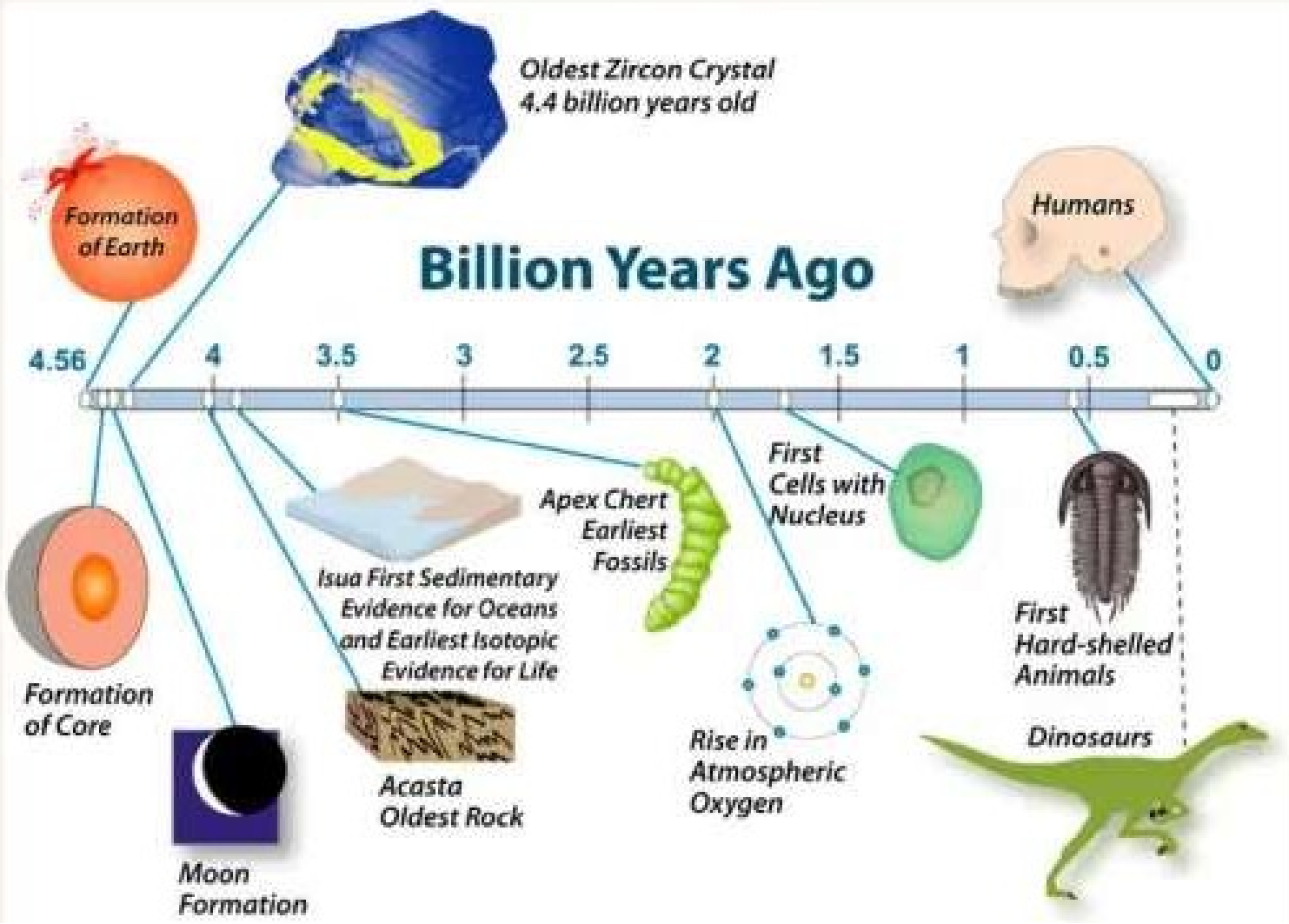
3,700,000,000
Billion Years
Few molecules and
Good probability
Heat,
Water,
Catalysts

https://youtu.be/cJWe2jv1kR4?t=122


HISTORY OF LIFE ON EARTH
BIG BANG
Sun and stars form
Earth and moon
Dry land
Seas
First cells
Fish
First plants
Sharks
Amphibians

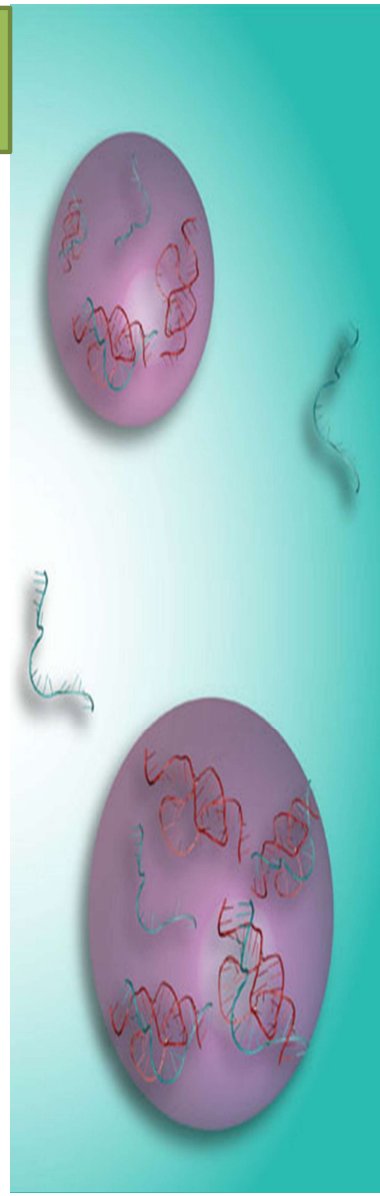


his timeline shows the history of life on arth.



(فَلَا أُقْسِمُ بِالْخُنَّسِ . الْجَوَارِ الْكُنَّسِ)

التكوير/15-16



أما **الكنس:** تكنس ما

حولها، كَنَسَ الموضع يَكْنُسُه، بالضم، كَنْساً: كَسَح القُمامَة عنه. **أي أن الله تعالى وصف الكواكب بأنها تنقبض على نفسها وتجري في السماء وتكنس ما حولها من انقاض أو قمامة، قسم قد يبدو في الوهلة الأولى غريب وعجيب! وهذا ما سنوضحه.**

Black Holes

الْخُنَّسِ : You can’t see

الْكُنَّسِ : Attracts, Absorbs like vacuum

الطارق والنجم الثاقب نجم نيتروني :

في عام (1967م) رصد العلماء موجات راديوية كهرومغناطيسية من خلال بعض التلسكوبات الراديوية، لقد التقطت إشعاعات لنجوم مجهولة، وبعدما قام العلماء بدراسة هذه النجوم دراسة دقيقة على مدى أكثر من ثلاثين عاماً وجدوا بأن هذه النجوم أكبر من الشمس بعدة أضعاف. وتتشكل نتيجة انفجار النجوم، فعندما ينفجر هذا النجم ويتهاوى على نفسه فإن مادته تتحول وقد قدر عدد النجوم النيوترونية في مجرتنا بمائة ألف نجم ومن الطبيعي أن إلى نيوترونات. تحتوي مليارات المجرات الأخرى على مئات الآلاف من النجوم النيوترونية الطارقة الثاقبة فالسماء إذن تمتلئ بها.

وَالسَّمَاءِ وَالطَّارِقِ (1) وَمَا أَدْرَاكَ مَا الطَّارِقُ (2) النَّجْمُ الثَّاقِبُ

الَّذِي أَحْسَنَ كُلَّ شَيْءٍ خَلَقَهُ وَبَدَأَ **خَلْقَ الإنسان مِنْ طِينٍ** * ثُمَّ جَعَلَ نَسْلَهُ مِنْ سُلَالَةٍ مِنْ مَاءٍ مَهِينٍ ﴾ [السجدة

﴿ فَاسْتَفْتِهِمْ أَهُمْ أَشَدُّ خَلْقًا أَمْ مَنْ خَلَقْنَا إِنَّا **خَلَقْنَاهُمْ مِنْ طِينٍ لَازِبٍ** ﴾ [الصافات: 11].

﴿ وَلَقَدْ خَلَقْنَا الإنسان مِنْ **صَلْصَالٍ مِنْ حَمَأٍ مَسْنُونٍ** ﴾ [الحجر: 26].

﴿ خَلَقَ الإنسان **مِنْ صَلْصَالٍ كَالْفَخَّارِ** ﴾ [الرحمن: 14]

﴿ هُوَ الَّذِي خَلَقَكُمْ **مِنْ تُرَابٍ** ثُمَّ مِنْ نُطْفَةٍ ثُمَّ مِنْ عَلَقَةٍ ﴾ [غافر: 67]

"وَجَعَلْنَا **مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ** أَفَلَا يُؤْمِنُونَ" (الأنبياء 30)

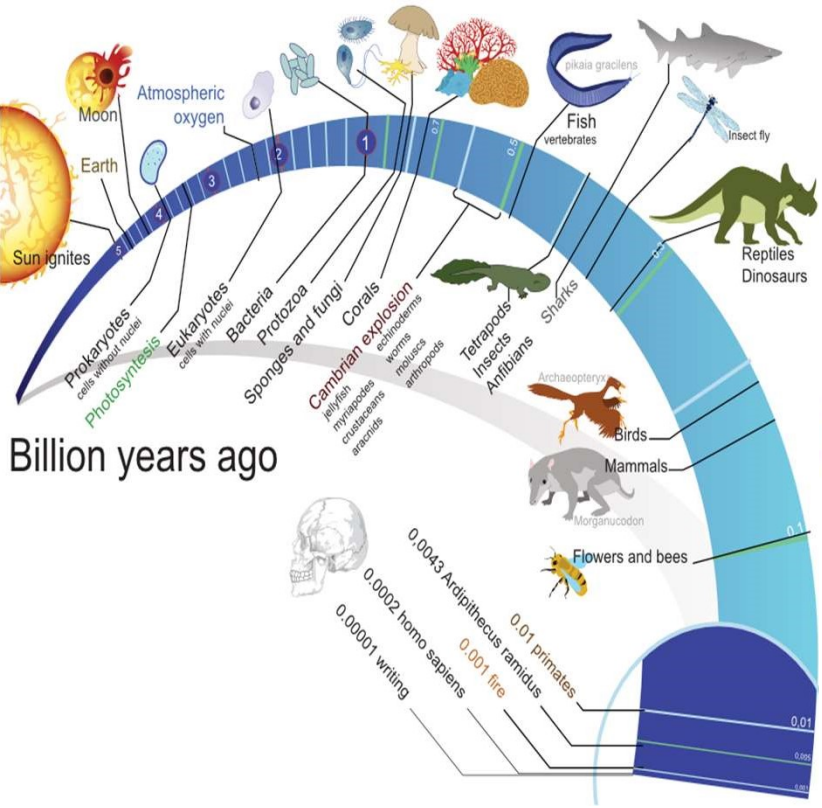
وَهُوَ ٱلَّذِى **خَلَقَ مِنَ ٱلْمَآءِ بَشَرًا**(الفرقان - 54)

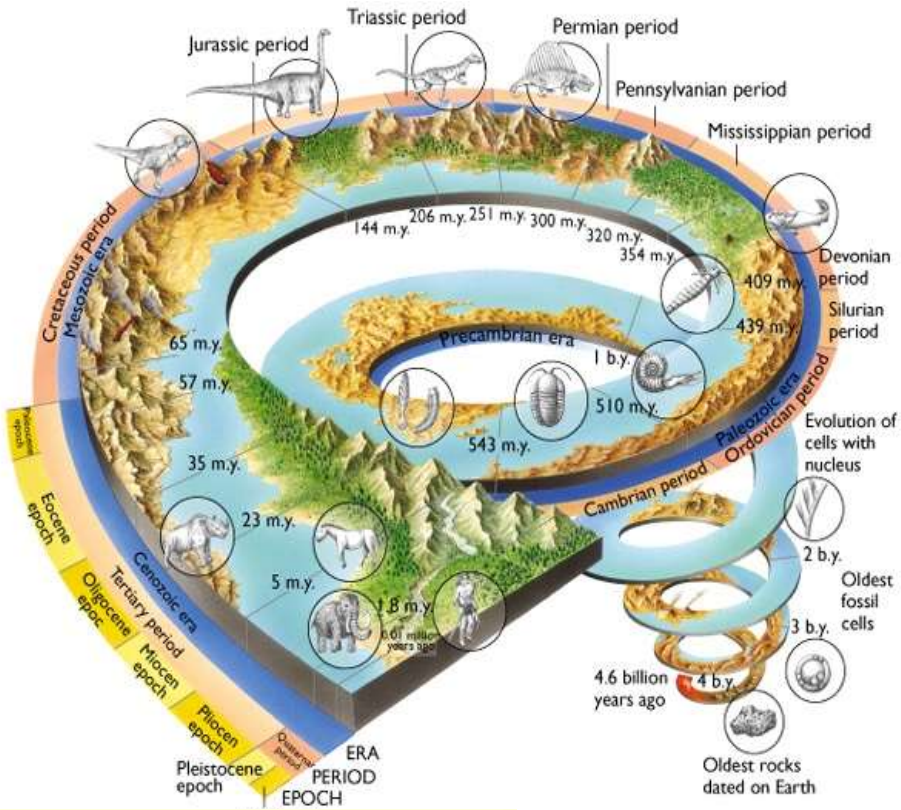
خَلْقَ الإنسان مِنْ طِينٍ

مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ

مِنْ تُرَابٍ

خَلَقْنَاهُمْ مِنْ طِينٍ لَازِبٍ





شكراً

Thank you