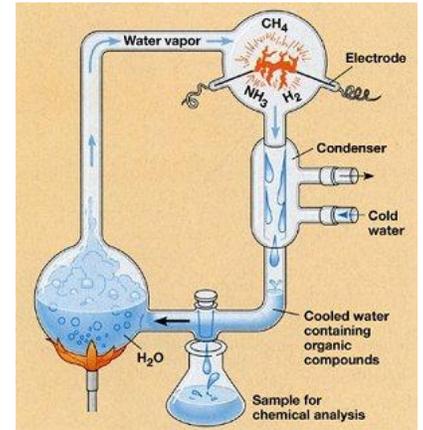


Origin of Life Notes

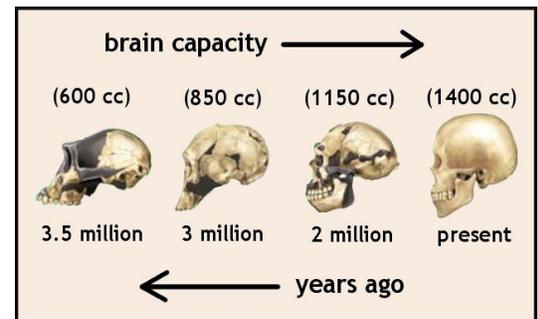
Primordial Soup or Chemical Evolution

- The theory that life came from the mixture of a chemicals and energy.
- The early atmosphere was made up of nitrogen, methane, hydrogen, and ammonia (not oxygen!).
- **Stanley Miller and Harold Urey** put the chemicals found on early earth into a vessel and added a spark.
 - Spark= Lightning (helped to combine organic molecules)
- Their experiment produced amino acids – the building blocks of life. They inferred that simple carbon compounds can form complex carbon (organic) compounds.



Hominid Evolution

- **Hominid**= Primate that walks upright on two feet (bipedal), has opposable thumbs, long lower limbs, and a large brain.
- Humans (*Homo sapiens*) are the only living hominids on Earth today.
- Humans' closet living relative is the chimpanzee. This does not mean we evolved from chimpanzees
- As hominids evolved their jaw size reduced from ape like jaws to human like jaws.
- Their brain size slowly increased.
- Following the increase in brain size, hominids obtained the ability to problem solve (think abstractly).
- They began to use tools, form societies, and a complex language was developed.
- Hominids were very successful at using and making tools because they have opposable thumbs.



Becoming Human Documentary

Prologue

1. Our story begins in _____ where our ancestors first stood up.
2. Today only a single species of human survives, that species flourished because they developed a _____.

Evidence

3. _____ was the first complete hominid skeleton ever found. She was named after a Beatles song.
4. This skeleton was _____ million years old.
5. Lucy did not have big canines, stone tools, or fire for protection. Lucy stood less than four feet tall and was a _____ so she probably did not have much defense against these predators.

Anatomy

6. Charles _____ proposed that humans and African apes must have shared a common ancestor.
7. Today, we know that our closet living ancestor is the African _____.
8. Humans close relationship with Chimpanzees doesn't mean that we evolved from them, nor does it mean they will evolve into _____.
9. One of the defining characteristics of being a hominid is bipedalism or _____.
10. Once an organism becomes bipedal there are so many other things that they can do with their four limbs and _____.
11. _____ was the initial feature that set us apart from the apes.
12. Big Body = Big _____

Lineages

13. It is possible that there was direct conflict between Neanderthals and early humans.
14. DNA evidence shows the Neanderthal DNA is distinct from modern humans. Leading us to believe they are _____ from modern humans.

Culture

15. The engravings in the caves in Australia marked the beginning of early human's ability to understand _____ concepts.