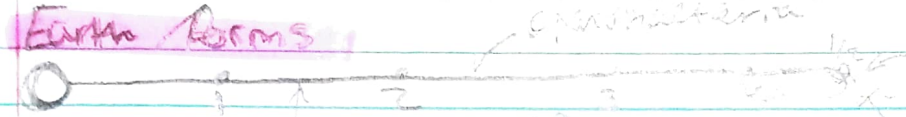
• How cells operate to how we operate.

(Ancient → modern cells)

Earth forms



first single cells (Archea, Bacteria, Extremophile)

← cell membrane, made of lipids - porous

• Protein: (chains of amino acids) • lipids: (oils, fats) • porous allows nutrients in and out

- Waste/HSS: hydrogen sulfide, methan=CHy Alcohol us=Co_2

Bacteria organelles ← Ribosome ← make the stuff (reads instructions)

← DNA plasmids

(Genes: instructions on how to make it.)

Cytoplasm

nucleus is a place where all the DNA is so cells don't freak

DNA

↳ Beginning of Eukaryotes (advanced cells) which is all multicellular life ↑ this all happened in the last half billion years

chloroplast takes Co_2 and H_2O and makes O_2 sugars

the floating vers. is cyanobacteria → changed the entire planet making O_2.

- Ameoba (single celled Eukaryotes)
- Euglena (single celled)
- Diatoms (single celled)

→ where? they are all over the place!

• Brain eating. (Pseudopodia) (have false foots) testates (build shells) heliozoan - have spikes, Pelomyxa a giant ameoba has just one cells, some have thousands of nuclei; endosymbiotic bacteria something is living inside of it → inside of ameoba are different bacterias.

White blood cells are ameoba. Euglena is not a plant or animal

• Diatoms - Deemed plant like, photosythac single cellular, visible from space, Frustulia has sheks, Diatoms grow shells out of glass halves, ~~sides of ameoba~~. They don't divide but break in half.