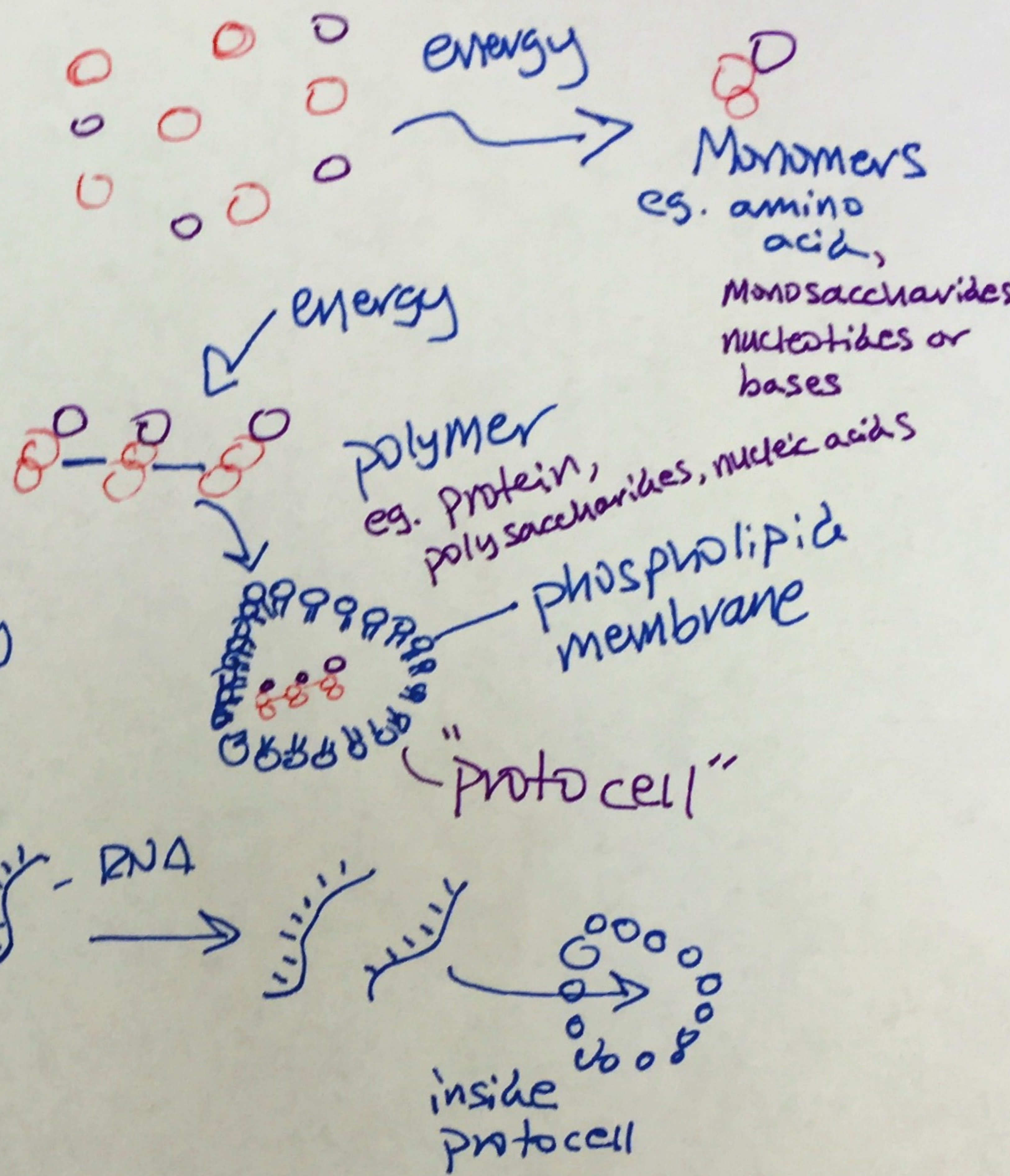
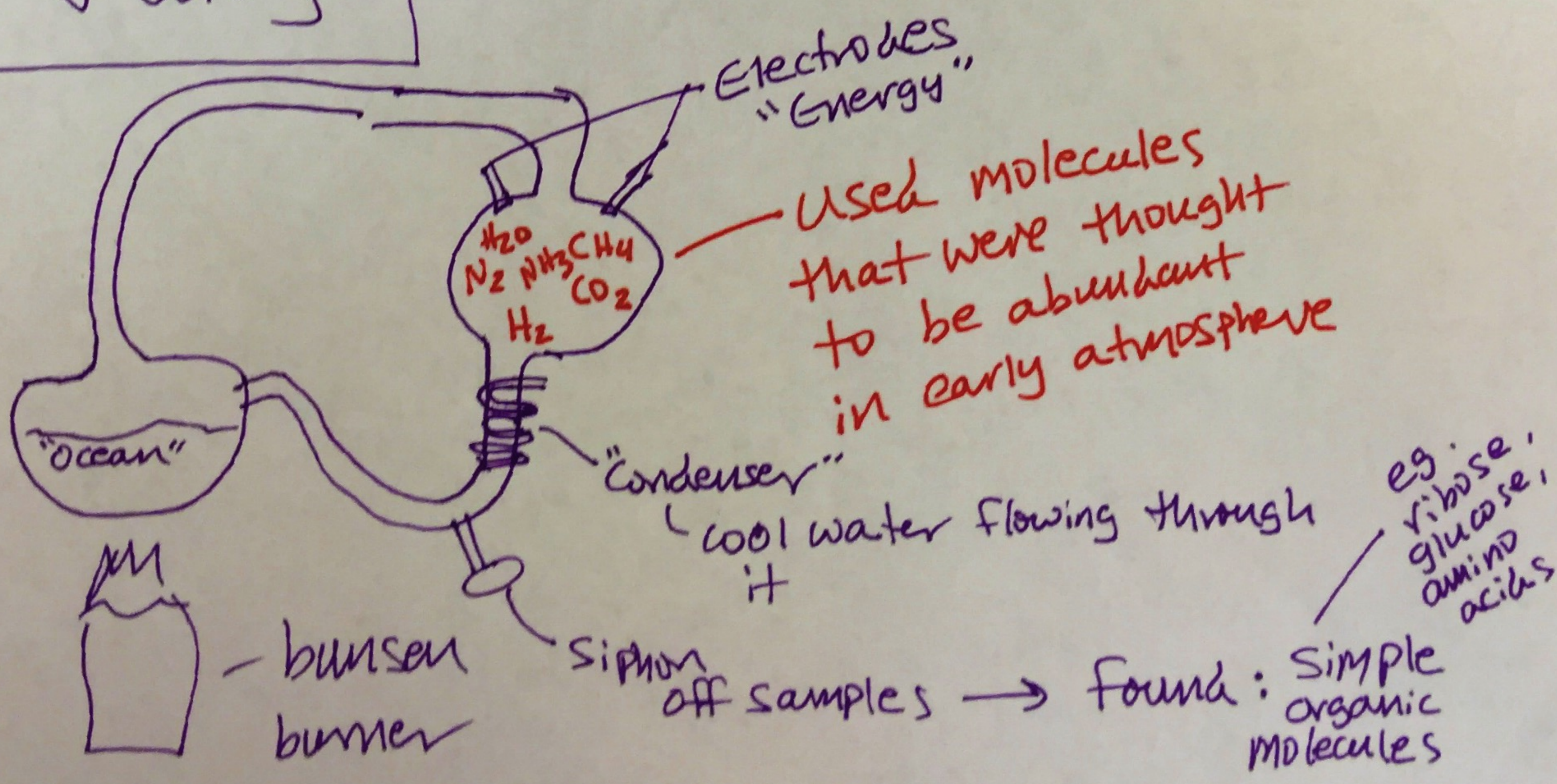


Biochemical Origins of Life

- 1) Synthesis of simple organic compounds
- 2) Polymerization
- 3) Enveloping/Packaging
- 4) Self-replicating molecule



Miller + Urey



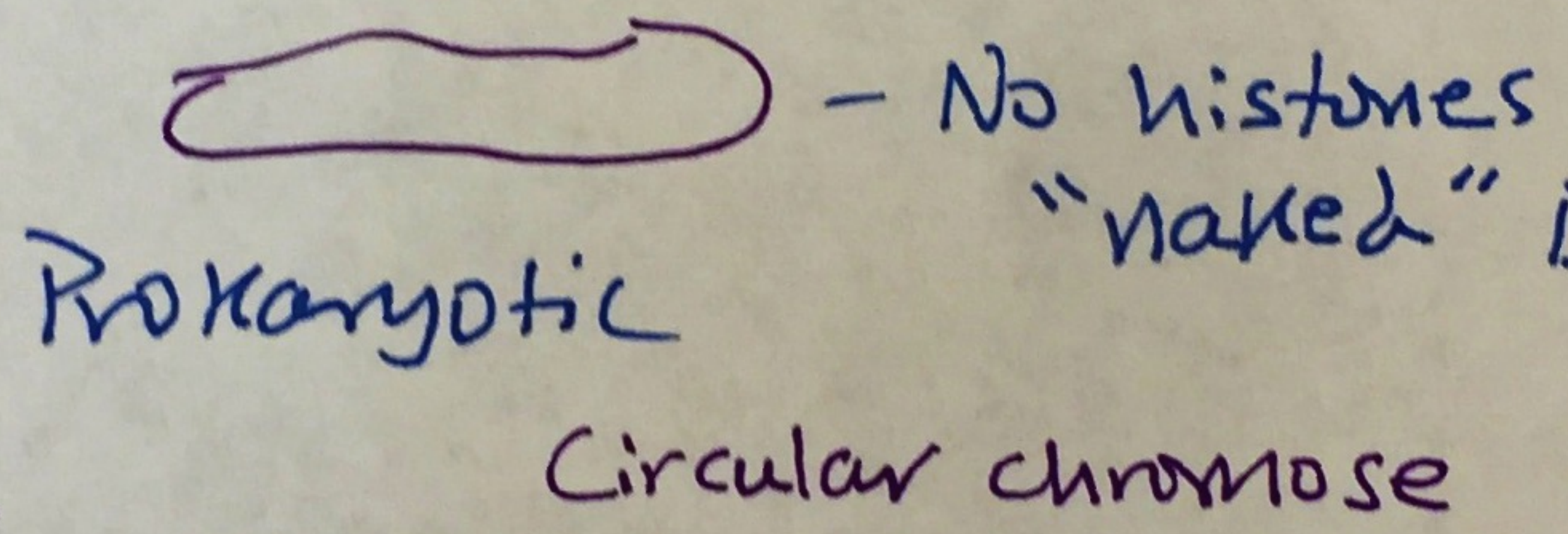
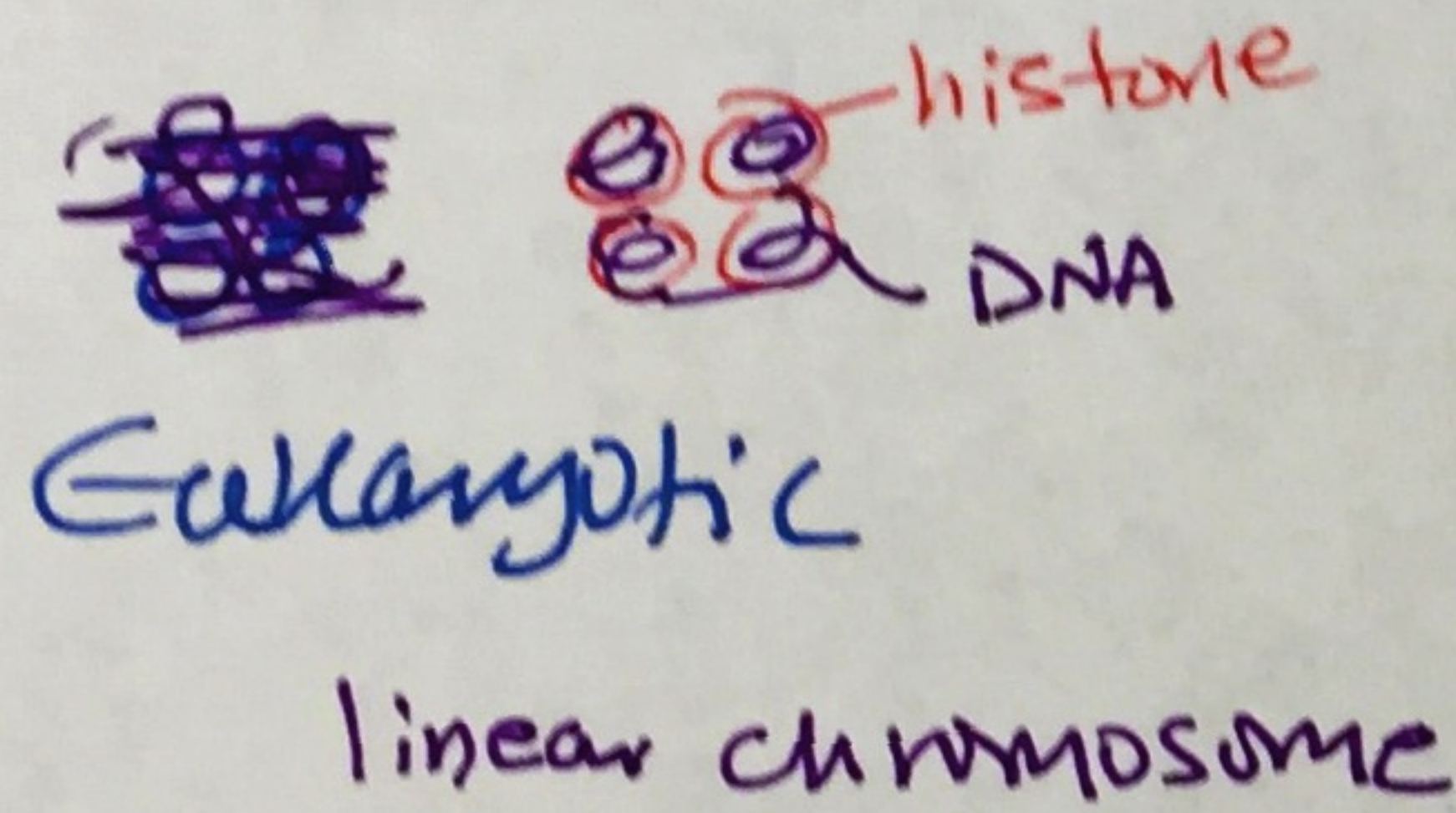
Pro vs. Eu. ribosomes

Prokaryotic ribosomes: 70S

Eukaryotic ribosomes: 80S

Histones

↳ Proteins associated w/ eukaryotic DNA



- No histones
"naked" DNA

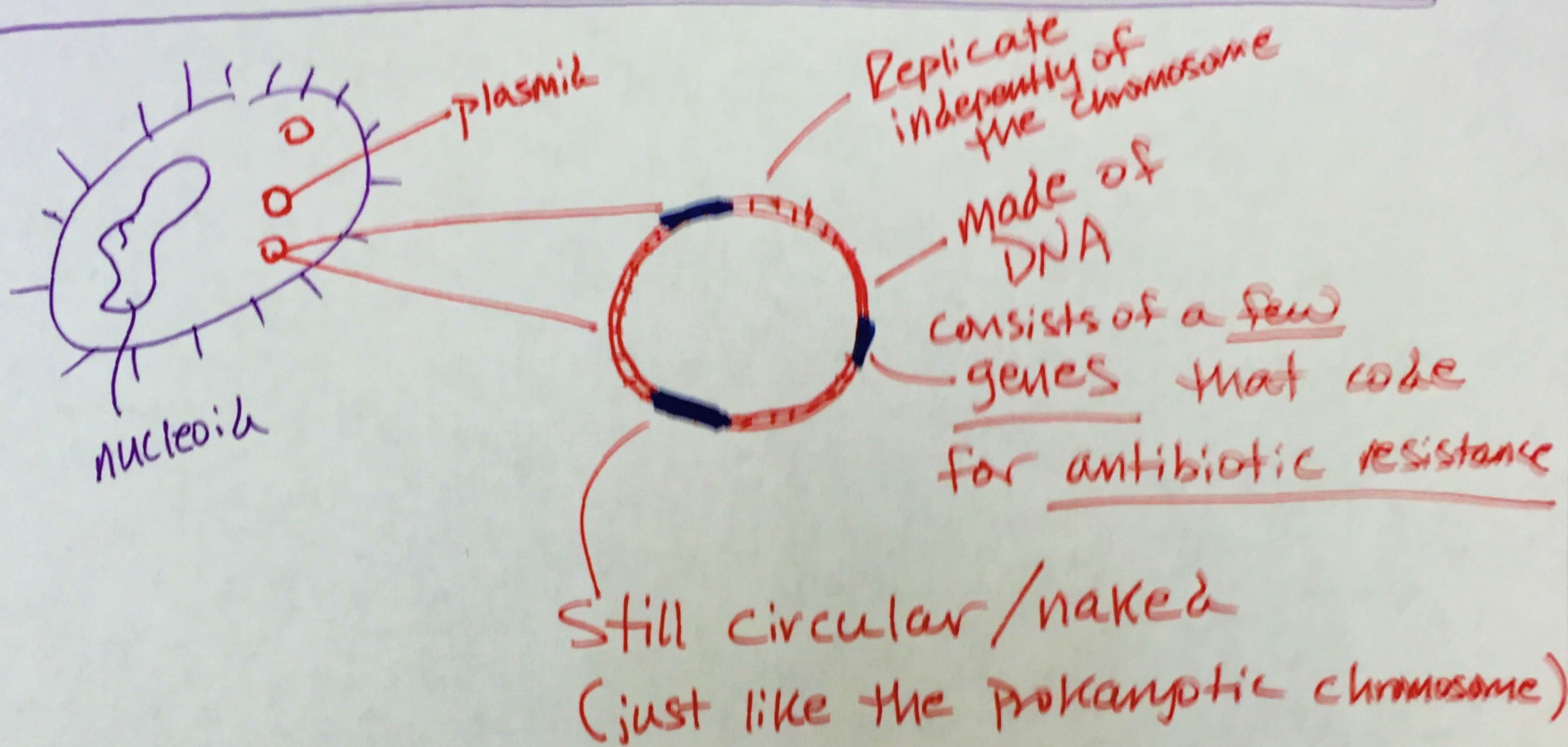
plasmid
○
Tiny circular piece of DNA w/ just a few genes that code for antibiotic resistance

Antibiotics

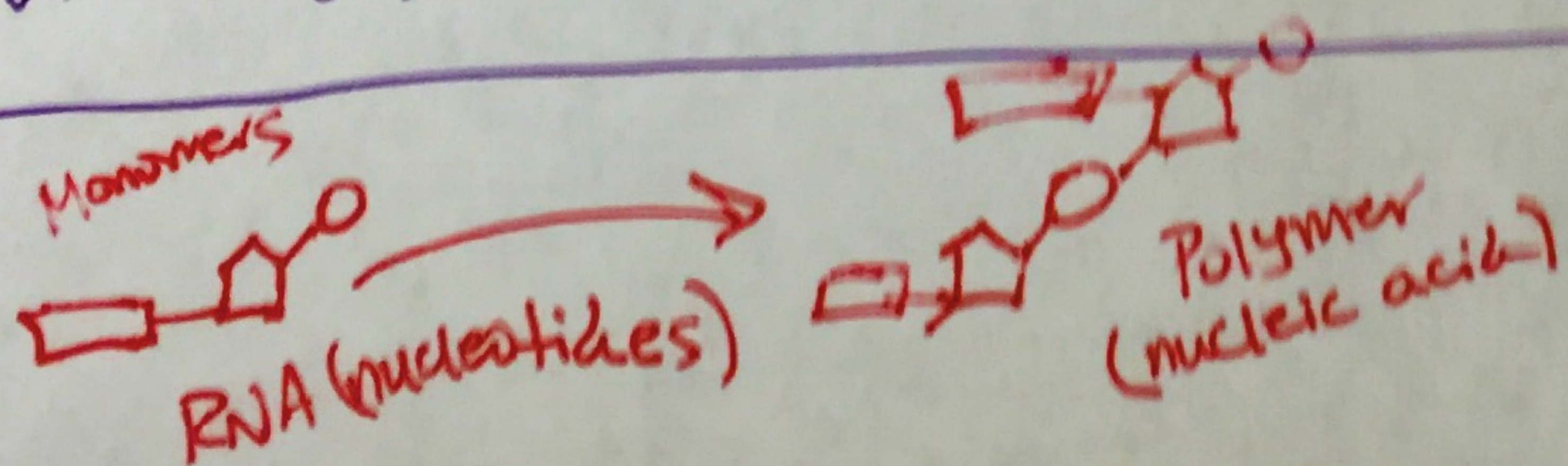
-
- 1) Breakdown cell wall
 - 2) Punch holes in cell membrane
 - 3) Interfere w/ protein synthesis by altering ribosome
 - 4) Block/destroy critical bacterial enzymes

- VIRUSES don't have
- Cell walls
 - Cell membranes
 - Ribosomes
 - Enzymes

Can you cover structure/function of plasmid DNA?



What about the RNA 1st Hypothesis?



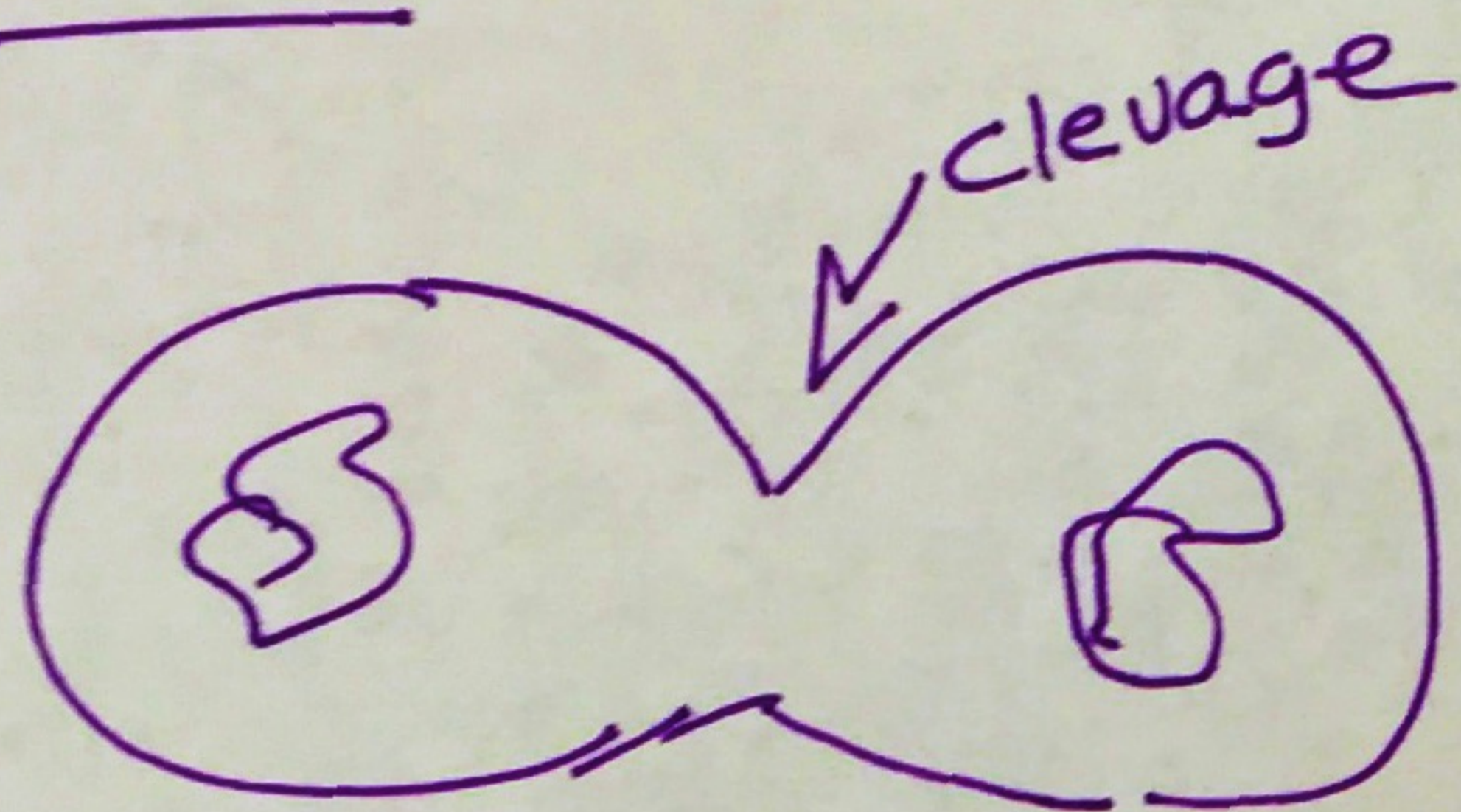
could SELF-replicate
+
link ~~protein~~ amino-acids together

Evidence • RNA can be transcribed into DNA (reverse transcriptase)

- Miller/Urey produced ribose but not deoxyribose
- RNA is single stranded / DNA double stranded
- RNA can replicate w/o enzymes = DNA needs enzymes
- RNA can link amino-acids together = DNA needs RNA to make proteins (acting like an enzyme) to do this

What do I need to state for
4th step of Binary fission?

Pinching in / Cleaving of cell membrane +
cell wall to produce 2 daughter cells.



10/05 IB Bio Review

Name	Period
Cooper Hawes	1
Brandon Kay (Gillespie)	6
Ben Mix	6
John Leitch	4 (VB)
Alex Taylor	2
Alysse Legault	2
Melody Kazemini	2
Dana McClaw	3
Cory Anderson	5 (VB)
Mack Williams	4 (VB)
Trevor West	5 (VB)
Maddie McCombs	6
Nanditha Shiva Kumar	6
Tyler Montgomery	6
Emily Koya	6
Bradley Kim	1
Derin Kang	5 (VB)
Tanner Stawn	2
IVAN Esmeral	6 th
Paul Abboud	6 th