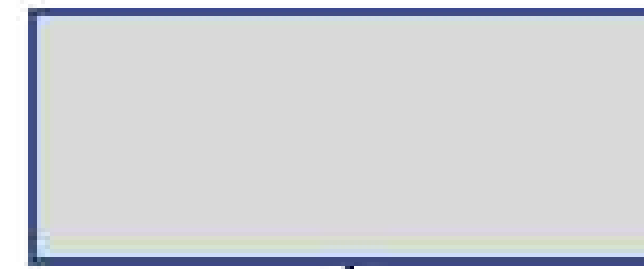


## Characteristics of Life

1. Made of Cells
2. Homeostasis
3. Obtain Energy
4. Reproduction
5. Growth
6. Response to Environment
7. Pass Traits to Offspring
8. Evolve



### Cell Theory

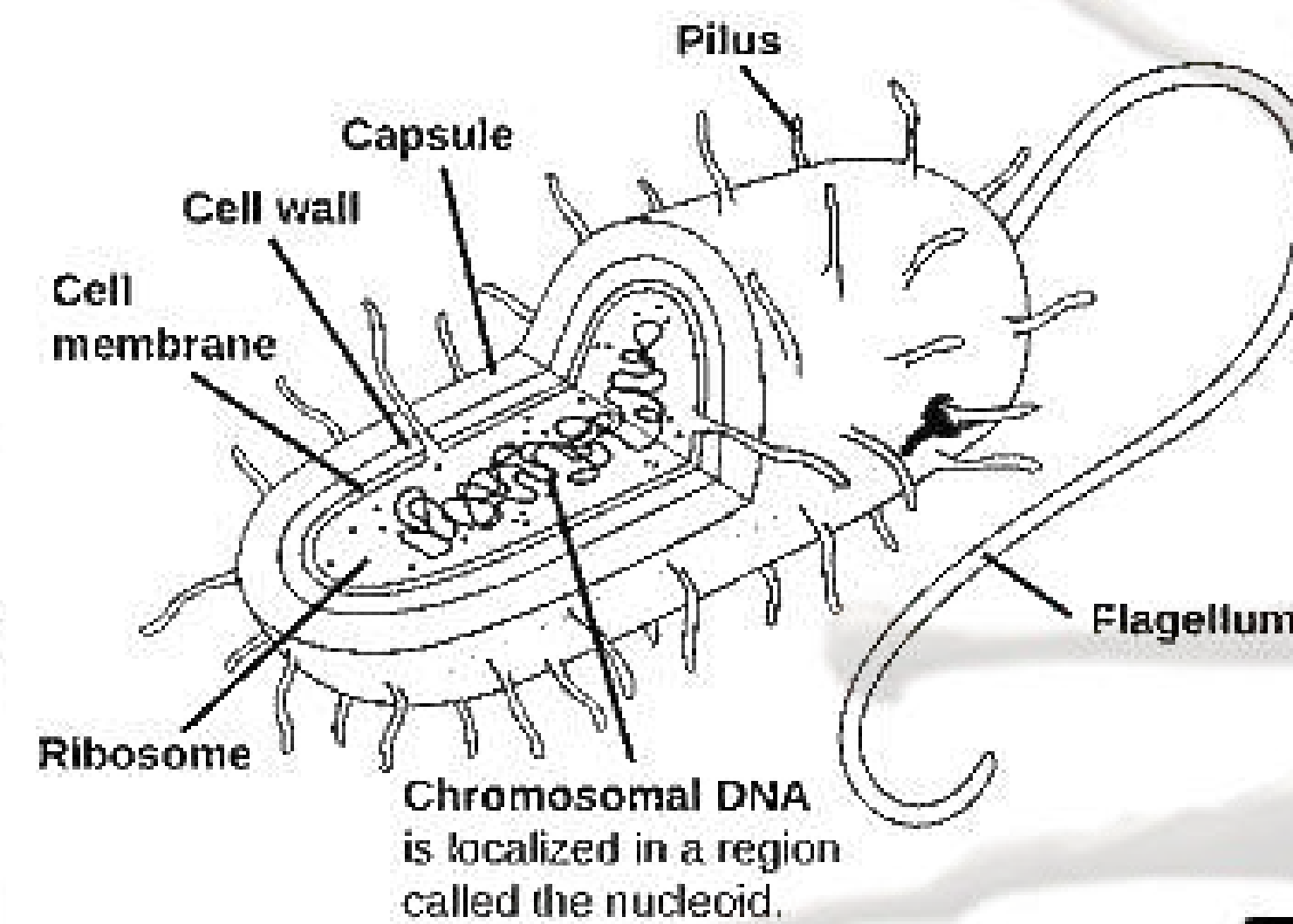
1. All Living Things are made of Cells
2. Cells are the Basic Unit of Life
3. Cells come from other Cells

Pro - Before  
Kary - Nucleus

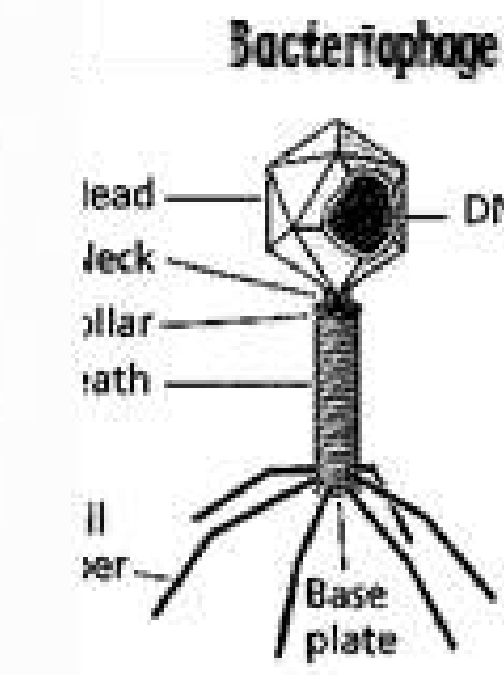
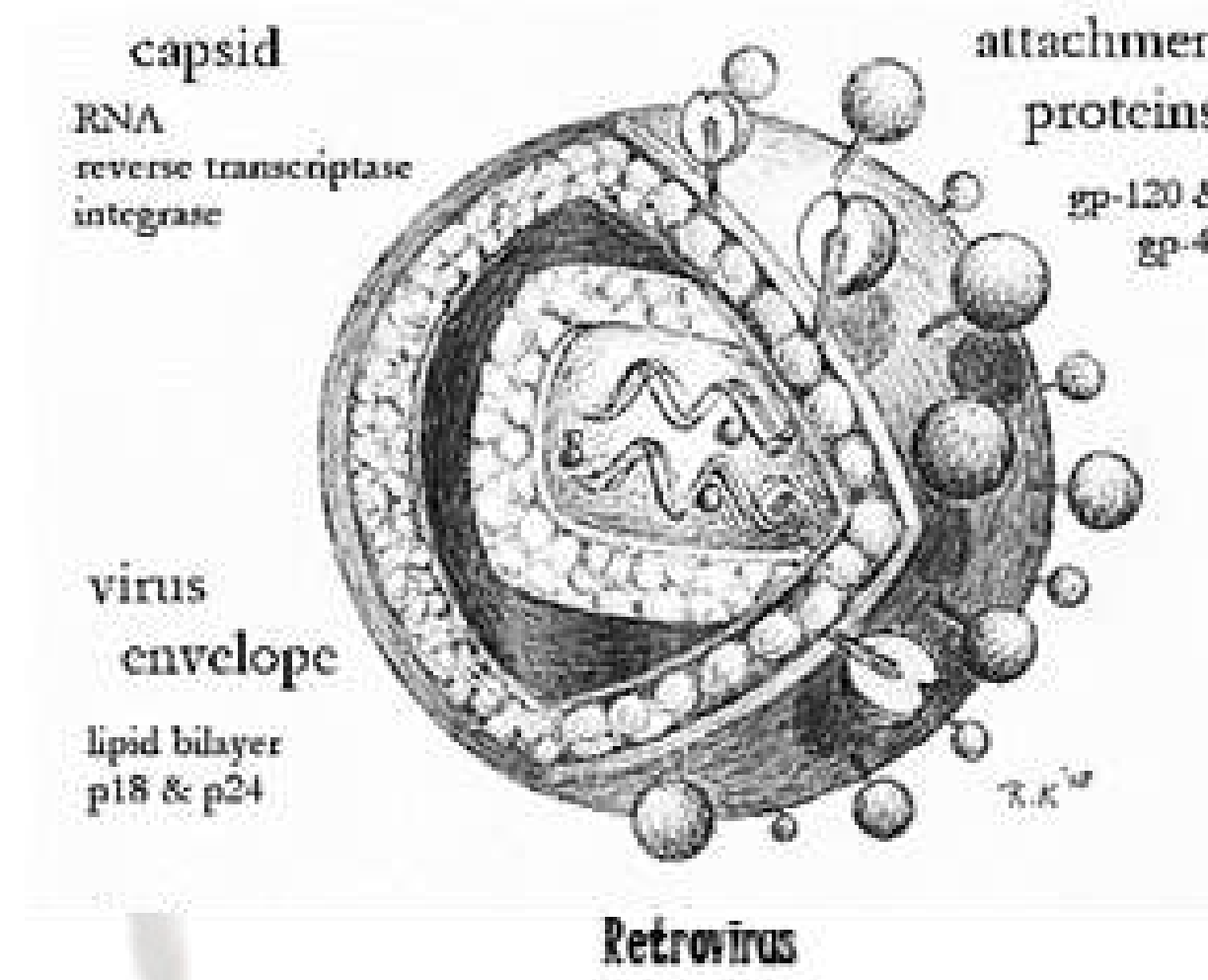
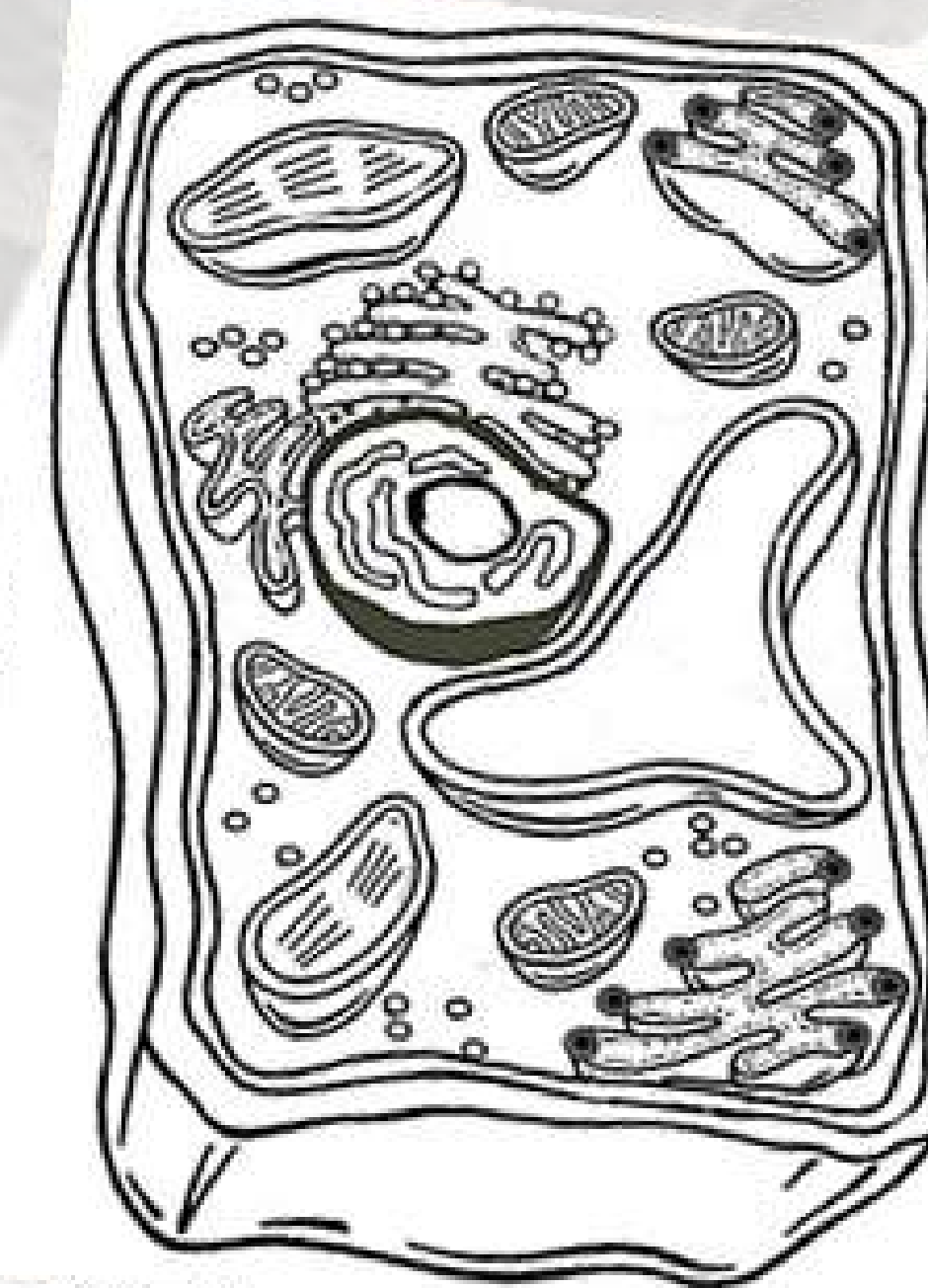
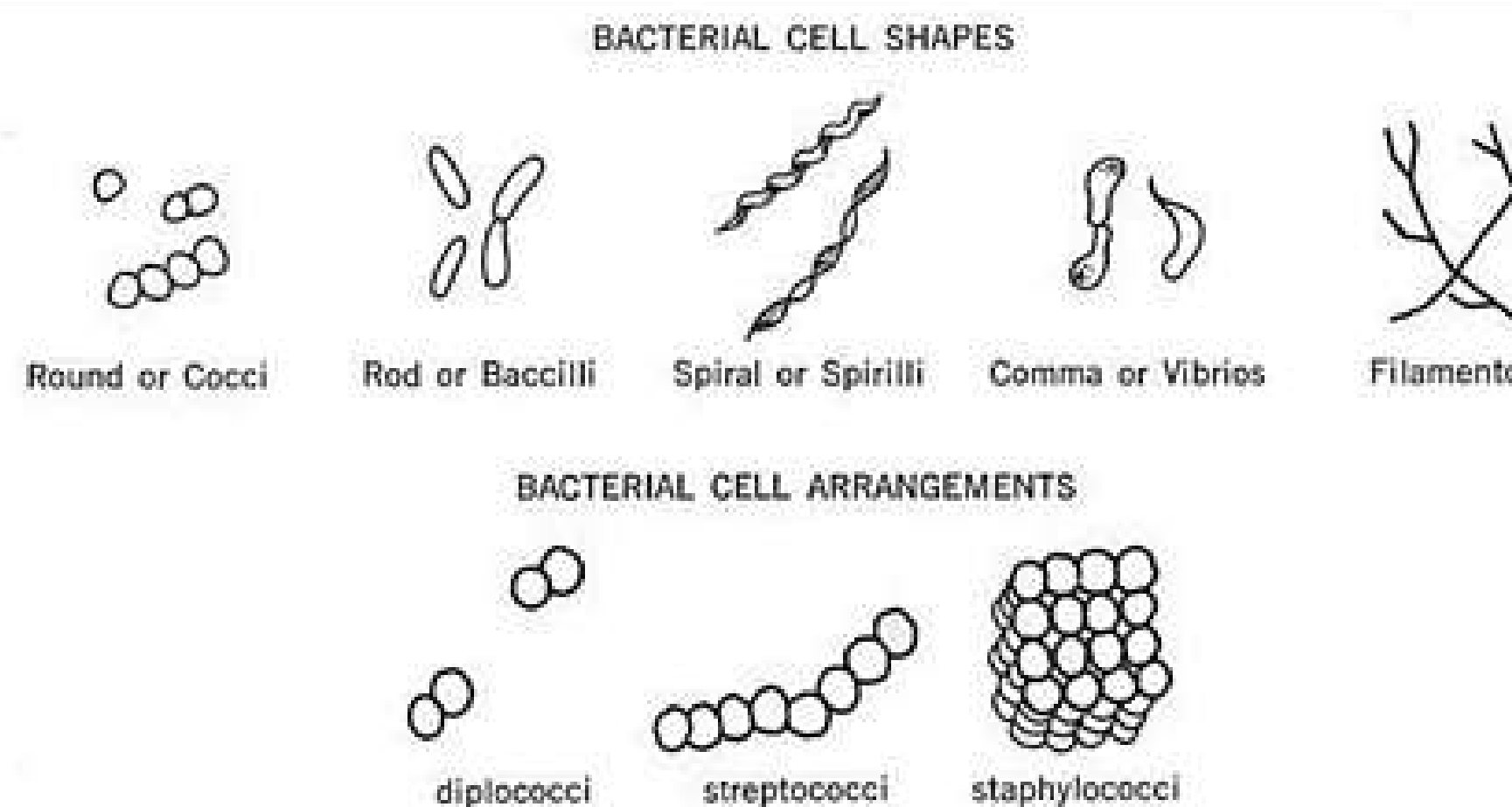
Ea - True  
Kary - Nucleus

## Ex: BACTERIA

1. NO Membrane Bound Organelles
2. NO Nucleus!
3. HAS: Cell Wall / Cell Membrane / Ribosomes / Circular Chromosome / Genetic Material - DNA
4. Shapes:

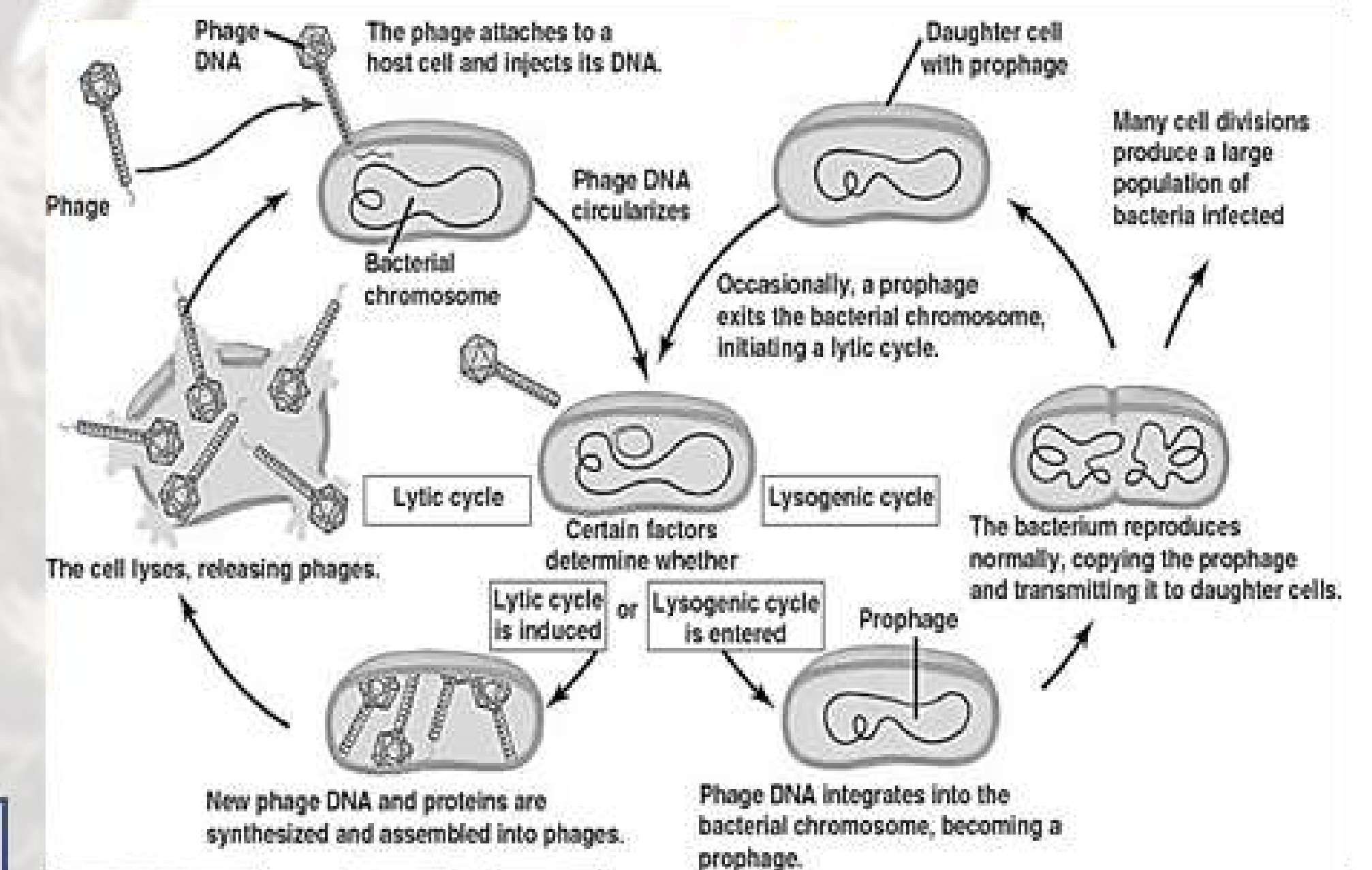


1. HAS Membrane Bound Organelles
2. HAS Nucleus!
3. HAS: Cell Membrane / Ribosomes / Genetic Material - DNA
4. MAY HAVE: Cell Wall, Chloroplast, H2O Vacuole, Lysosomes, Centrioles...



Non-Living - cannot maintain homeostasis

2. Cannot reproduce without a host
3. HAS: Protein Coat/ Genetic Material - DNA/RNA
4. Not a CELL
5. **Lytic:** Short Duration, hijack Host, replicate virus, break open cell...EX: Cold, Flu, Ebola....
6. **Lysogenic:** Long duration, incorporation of viral RNA into host DNA. EX: HIV, Herpes



| Organelle    | Function                                   |
|--------------|--------------------------------------------|
| Nucleus      | Controls the cell                          |
| Rough ER     | Packages and Transports proteins           |
| Golgi        | Repackages and transports Proteins         |
| Ribosomes    | Protein Synthesis                          |
| Mitochondria | ATP Synthesis                              |
| Chloroplast  | Photosynthesis                             |
| Cytoplasm    | Jelly-like substance, holds all organelles |



