

- Ribosomal proteins in archaea are similar to those in eukaryotes cells

- Obligate aerobes: use oxygen in metabolic processes to create energy.
- Obligate anaerobes :use the process of fermentation in the absence of oxygen to create energy.
- Facultative anaerobes: use either oxygen-based metabolism or fermentation for energy production.

Structure of prokaryotes

Macroscopic, unicellular. Lack a nuclear membrane and other membrane bound organelles (mitochondria/ chloroplast)

1. Chromosomes

- arranged differently from how they are in eukaryotic cells.
- Genes found on a large chromosome (in nucleoid)
- Many prokaryotes have at least one small piece of DNA called a *plasmid*

2. Capsule

- Formed by a layer of polysaccharides around the cell wall
- It prevents the cell from drying out
- Helping the cell attach to surfaces
- Protects cell from effects of antibiotics
- Helps prevent bacteria from being eaten by white blood cells

1. Pili

- Submicroscopic
- Hair like structure made of protein
- Help bacterial cells attach to surfaces
- Can also serve as a bridge between cells, where copies of plasmid can be sent across. Providing the prokaryotes with new genetic material, thus transferring the resistance of antibiotics

