



Common Features of Prokaryotic Organisms (Bacteria)

- **Microscopic, single-celled** organisms.
- Have a **cell wall**, **cell membrane**, **cytoplasm**, and often **plasmids** (small DNA loops).
- **No nucleus** → instead, DNA is in the form of a **circular chromosome** in the cytoplasm.
- Some can **carry out photosynthesis**, but most are **heterotrophic** (feed on other living or dead organisms).
- Shape can vary (e.g. rods, spheres, spirals).



Examples

- **Lactobacillus bulgaricus** – rod-shaped bacterium, used in yoghurt production.
- **Pneumococcus** – spherical bacterium, pathogenic (causes pneumonia).



Exam Tip:

- Always mention “**no nucleus, circular DNA**” – this is a key difference from eukaryotes.
- Be able to name **one useful bacterium (Lactobacillus)** and **one harmful/pathogenic bacterium (Pneumococcus)**