

Unit 4 – The Natural Environment and Species Survival

BACTERIA CELLS

What is a bacterium?

- It is a prokaryotic cell

What components are present in bacteria?

- Capsule
- Cell wall
- Cell surface membrane
- Ribosomes
- Mesosome
- Pilus
- Plasmids
- Main circular DNA
- Flagellum

What are the functions of each of these components?

- Capsule – the mucus layer for protection and prevent dehydration.
- Cell wall – made of peptidoglycan.
- Ribosomes – site of protein synthesis, occurring freely in cytoplasm.
- Mesosome – infolding of the cell surface membrane and the site of cell respiration.
- Pilus – Protein tubes that allow bacteria to attach to surfaces
- Plasmids – Small circles of DNA
- Flagellum – Used for cell movement

VIRUS CELL

What is the basic structure of the virus cell?

- Protein coat
- Nucleic acid (DNA or RNA)

Why do some viruses have an outer envelope and what do they contain?

- The envelope may be taken from the host cell's surface membrane.
- The envelope will therefore contain lipids and proteins.
- They also have glycoproteins from the virus itself known as antigens.

What are examples of diseases caused by bacteria?

- Salmonella, gonorrhoea and cholera.

What are examples of disease caused by viruses?

- Flu, measles, chicken pox, cold sores.