Bacterial Cell Worksheet

Name: _____ Date: _____

Part A — Match each part to its description

Word bank: Capsule • Cell membrane • Cell wall • Cytoplasm • Flagellum • Nucleoid (DNA) • Pili • Plasmid • Ribosomes

Write the correct part from the word bank on each line.

1. A sticky, slimy layer on the outside of some bacteria.

   _____

2. A tough layer that gives the cell its shape and keeps it from bursting.

   _____

3. A thin layer inside the cell wall that controls what goes in and out.

   _____

4. The jelly-like fluid that fills the cell.

   _____

5. Tiny parts that build proteins.

   _____

6. The area where the cell's main DNA is found. It is not inside a nucleus.

   _____

7. A small, extra ring of DNA, separate from the main DNA.

   _____

8. A long, whip-like tail that spins to move the cell.

   _____

9. Short, hair-like threads on the outside of the cell.

   _____

Part B — Answer the questions

1. What are the parts of a bacterial cell?

_____

_____

2. What is the difference between a bacterial cell and an animal or plant cell?

3. Do all bacteria look like this?

Answer Key

Bacterial Cell Worksheet

Part A

1. **Capsule** — A sticky, slimy layer on the outside of some bacteria.
2. **Cell wall** — A tough layer that gives the cell its shape and keeps it from bursting.
3. **Cell membrane** — A thin layer inside the cell wall that controls what goes in and out.
4. **Cytoplasm** — The jelly-like fluid that fills the cell.
5. **Ribosomes** — Tiny parts that build proteins.
6. **Nucleoid (DNA)** — The area where the cell's main DNA is found. It is not inside a nucleus.
7. **Plasmid** — A small, extra ring of DNA, separate from the main DNA.
8. **Flagellum** — A long, whip-like tail that spins to move the cell.
9. **Pili** — Short, hair-like threads on the outside of the cell.

Part B

1. What are the parts of a bacterial cell?

A bacterial cell has a cell wall, a cell membrane, cytoplasm, ribosomes and a nucleoid where its DNA is found. Many bacteria also have plasmids, a flagellum, pili and a capsule.

2. What is the difference between a bacterial cell and an animal or plant cell?

A bacterial cell is a prokaryotic cell: it has no nucleus, and its DNA sits in the cytoplasm. It also has no mitochondria, chloroplasts, endoplasmic reticulum or Golgi apparatus. Animal and plant cells are eukaryotic cells: their DNA is inside a nucleus, and they are usually much bigger.

3. Do all bacteria look like this?

No. This diagram shows a rod-shaped bacterium with every common part. Bacteria can also be round or spiral, and many have no flagellum, pili or capsule. Every bacterium has a cell membrane, cytoplasm, ribosomes and DNA, and almost all have a cell wall.