Name _____

Size and Forms Answer Key

1. Bacteria are generally measured in micrometers (µm), with sizes ranging from about 0.2 µm to 10 µm.

2. Yes, bacteria can undergo genetic recombination, exchanging genetic material through processes such as conjugation, transformation, and transduction.

3. Yes, bacteria have a cell membrane that encloses their cytoplasm and controls the movement of substances in and out of the cell.

4. Viruses cause diseases by infecting host cells and disrupting their normal functions, leading to symptoms and illness.

5. Yes, bacteria can form biofilms, which are complex communities of bacteria attached to surfaces and encased in a protective matrix.

6. No, viruses lack metabolic machinery and cannot carry out metabolic processes on their own.

7. Bacteria are classified as prokaryotes because they lack a true nucleus and other membrane-bound organelles.

8. Some bacteria can carry out anaerobic respiration, obtaining energy by using alternative electron acceptors in the absence of oxygen.

9. Yes, viruses can mutate rapidly due to their high replication rate and genetic variability, leading to the emergence of new viral strains.

10. Yes, certain bacteria can produce spores as a survival mechanism to withstand harsh environmental conditions, such as heat or desiccation.