

Name \_\_\_\_\_

## Classifying Bacteria and Viruses Answer Key

1. The two main domains of classification are Bacteria and Archaea.
2. Bacteria can be classified into three main shapes: cocci (spherical), bacilli (rod-shaped), and spirilla (spiral-shaped).
3. Bacteria can obtain energy through various methods, including photosynthesis, chemosynthesis, and heterotrophy.
4. Viruses are classified based on their genetic material, which can be DNA or RNA, and whether it is single-stranded or double-stranded.
5. Viruses can also be classified based on factors such as their shape, size, mode of transmission, and the type of host they infect.
6. Bacteria are unicellular organisms with a distinct cellular structure, including a cell wall and internal organelles, while viruses are acellular and lack cellular structure.
7. Bacteria reproduce asexually through a process called binary fission, where a single cell divides into two identical daughter cells.
8. Yes, bacteria can be beneficial. For example, certain bacteria in our gut help with digestion and the synthesis of vitamins.
9. No, not all viruses are harmful. Some viruses, such as bacteriophages, can infect and kill bacteria, which can have beneficial effects in controlling bacterial populations.
10. Bacterial infections can often be treated with antibiotics, while antiviral medications are used to manage viral infections. However, not all viral infections have specific treatments, and supportive care is often provided to manage symptoms.