

Name _____

The Antibiotic Arsenal: How Antibiotics Battle Bacterial Invaders

Open-Ended Response Answer Key

1. One mechanism by which antibiotics can disrupt bacterial DNA replication is by binding to the DNA and preventing enzymes from accurately copying the genetic material.
2. Overuse or misuse of antibiotics can contribute to the development of antibiotic resistance by providing selective pressure for resistant bacteria to survive and multiply.
3. Scientists can stay ahead of bacteria in the ongoing battle against antibiotic resistance by researching new antibiotics, developing diagnostic tools to identify resistant bacteria, and promoting antimicrobial stewardship programs to ensure responsible antibiotic use.
4. Patient education is crucial in promoting responsible antibiotic use by raising awareness about the importance of completing antibiotic courses as prescribed, avoiding unnecessary antibiotic use for viral infections, and understanding the risks of antibiotic resistance.

