

Name \_\_\_\_\_

## Healing Equations: How Differential Equations Shape Biology and Medicine

### Open-Ended Response Questions

1. Can you explain how the logistic growth equation is used to model population dynamics in ecology?
2. How might neuroscientists use the Hodgkin-Huxley model to study the electrical activity of neurons?
3. Why is it important for epidemiologists to model the spread of infectious diseases using differential equations?
4. How do pharmacologists use pharmacokinetic models to optimize drug therapies?

