

Lesson 2 – Animal Research and Vaccines

Vaccine Research Assignment

Group Names

Which vaccine did your group select?

Describe who developed this vaccine and how animals played a role in the research.

Explain why it was necessary for the scientist(s) to use animals to develop this vaccine.

Create a graphic organizer that explains what you discovered in your research. Include a description of the disease and its history as well as the methods the scientist(s) used during vaccine development. Ensure that your graphic organizer shows how animals were involved in the origin, development and/or testing of the vaccine, and describe the justification for why researchers worked with animals during the process. Use materials as needed to create your graphic organizer.

Summative Assessment Quiz

1. What are two advantages of using smaller animals for vaccine development?
 - A. Shorter life spans, cheaper to care for
 - B. Genetic differences, smaller sample sizes
 - C. Easier histological analyses, easier than using computers
 - D. Better than fruit flies, faster scientific progress
2. Number the steps in the correct order for creating a vaccine.
 - _____ A. Determine how to test hypothesis
 - _____ B. Generate hypothesis
 - _____ C. Test vaccine on animals
 - _____ D. Determine need for vaccine
 - _____ E. Conduct clinical trials on people
3. Organize the groups tested in clinical trials of the rotavirus vaccine in the correct order by number, starting with initial trials.
 - _____ A. Babies
 - _____ B. Adolescents
 - _____ C. Grade school children
 - _____ D. Laboratory mice
 - _____ E. Adult humans
4. What was the role of cows in the development of the smallpox vaccine invented by Edward Jenner?
 - A. He used cows to test his smallpox vaccine.
 - B. He obtained cowpox virus from them to test on humans.
 - C. He used cows for clinical trials of a cowpox vaccine.
 - D. He wanted to publish a scientific paper about cows.
5. Why did Louis Pasteur use dogs to test the rabies vaccine?
 - A. Only dogs get rabies.
 - B. Untreated rabies is almost always fatal in humans.
 - C. Rabbits were unsuitable for testing the vaccine.
 - D. As a cat lover, he preferred to use dogs.
6. Write a short passage with a balanced analysis on the ethics of using animal research to develop vaccines.