

Scientific Method

Directions: Please read the following paragraph carefully. Answer the questions below on a separate piece of paper. Remember to use full sentences when constructing your responses.

When the Salk vaccine, developed for the prevention of polio was tested, two nearly identical groups of children were tested. These children were of the same age, sex, in the same classes in school, lived in the same area, had similar diets, and so on. One group of children received the Salk vaccine and the second group of children was "vaccinated" with injections of saltwater instead of the Salk vaccine. The two groups were compared one year later. Among the thousands of children who received the Salk vaccine, only a few children contracted polio. Among the thousands of children who received the saltwater "vaccine", hundreds of children contracted polio.

Questions:

1. State a possible hypothesis for this experiment.
2. Identify the experimental factor and the control for this experiment.
3. Why is it necessary to have a control in this experiment?
4. Why was it necessary to test the Salk vaccine on children instead of research animals?
5. Identify the independent and dependent variables.
6. Why did the doctors use saltwater injections for the control group?
7. What could the doctors conclude from the results of this experiment?