Controlled Experiment Practice

Read the paragraph below, and then use your notes to answer the questions.

Scientists observed that white mice that were fed seeds appeared to grow more than mice given leafy green and yellow vegetables. The scientists hypothesized that the protein in the seeds was responsible for the growth. They designed an experiment to test their hypothesis. They divided 300 mice of the same size, age, and sex into three groups of 100 mice each. The mice were kept under identical conditions for 14 days. One group was given a diet low in protein. One group was given a normal protein diet of vegetables. One group was given a high protein diet of seeds. The mass of each mouse was recorded daily for 14 days.

1. Write a hypothesis using an if/then statement.

2. Did the scientists in the paragraph design a controlled experiment? Explain your answer.

3. What were the constants in the experiment? List as many as you can.

4. Identify the experimental groups in the experiment.

5. Which group of mice was the control group?

6. What is the independent variable in this experiment? Explain.

7. What is the dependent variable in this experiment? Explain.