

Scientists have some special characteristics. They are curious people. This curiosity leads to them to investigate things and events. Scientists use their senses to observe as they investigate. They think logically and open-minded. In seeking knowledge, the organized approach used by scientists is called the scientific method. List the 6 steps of the scientific method below.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

**VOCABULARY:**

- a) Control (of an experiment): \_\_\_\_\_
- b) Factor: \_\_\_\_\_
- c) Hypothesis: \_\_\_\_\_
- d) Theory: \_\_\_\_\_
- e) Scientific Method: \_\_\_\_\_
- f) Variable: \_\_\_\_\_

**USING THE SCIENTIFIC METHOD:**

A scientist observed that white mice that were fed seeds appeared to grow more than mice given leafy green and yellow vegetables. The scientist hypothesized that the protein in the seed was responsible for the growth. He designed an experiment to test this hypothesis. He divided 200 mice of the same age, size, health, and sex into two groups of 100 mice each. The mice were kept under identical conditions for 14 days. One group was given a diet low in protein. The other group was given a normal protein diet. The weight of each mouse was recorded daily for 14 days.

7. Which group of mice served as a control? \_\_\_\_\_
8. Which variables had to remain constant? \_\_\_\_\_
9. What effect of this protein diet was measured (tested)? \_\_\_\_\_
10. Why were large numbers of mice used in this experiment? \_\_\_\_\_  
\_\_\_\_\_
11. If the results of the experiment did not show a marked change between the two groups, what should the scientist do next? \_\_\_\_\_  
\_\_\_\_\_
12. What was the scientific problem that was being studied in this experiment? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

On this side of the page, create your own scientific experiment. Explain the six steps that you would take to create an experiment.

YOUR NAME \_\_\_\_\_

YOUR PARTNERS NAME: \_\_\_\_\_

YOUR PARTNERS NAME: \_\_\_\_\_

YOUR EXPERIMENTS NAME: \_\_\_\_\_