

## Experimental Design

A. Scientific methods— ways, or steps to follow, to \_\_\_\_\_.

1. Steps to the scientific method:

- a. Recognize the \_\_\_\_\_.
- b. Do research and form a \_\_\_\_\_.
- c. Design an \_\_\_\_\_ and test your hypothesis.
- d. \_\_\_\_\_ your data.
- e. Draw \_\_\_\_\_ and \_\_\_\_\_ your results.

B. Experimental research design—

1. Form a **hypothesis**, which is a \_\_\_\_\_ that can be tested.

2. Plan the \_\_\_\_\_.

- a. **Independent variable**—the factor in the experiment that is \_\_\_\_\_.
- b. **Dependent variable**—the factor in the experiment that is being \_\_\_\_\_.
- c. **Constants**—variables that stay the \_\_\_\_\_.

3. Use a **control**—a sample that is treated like the other experimental groups except that the \_\_\_\_\_ variable is not applied to it.

4. Conduct several \_\_\_\_\_ of the experiment.

5. \_\_\_\_\_ your results and draw conclusions.