

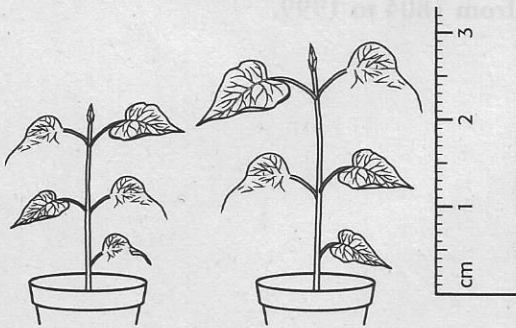
Unit 1 *continued*

Nature of Science

4. A sample of digestive juice was removed from the stomach of a pig. The juice was placed in a test tube, along with some grains of wheat. A second, identical test tube that contained an equal number of wheat grains was set up. However, pure water was used rather than digestive juice. The test tubes were kept at 40°C, which is about the temperature inside a pig's stomach. After eight hours, the grains of wheat in the digestive juice had broken apart into tiny particles. The grains of wheat in the water were wet but were otherwise unchanged. What was the dependent variable in this experiment?
- A temperature
 - B wheat grains
 - C the liquid in the test tube
 - D pig physiology

5. A scientist wants to determine how water temperature affects the development of fish eggs. Which of the following would be an appropriate control group for such an experiment?
- A Ice is added to the water of one group of fish eggs and the tank is covered.
 - B One group of fish eggs and water is placed in a sunny window.
 - C The water of one group of fish eggs is kept at the same temperature as would be found in nature.
 - D The water of one group of fish eggs is kept at the same temperature as would be found in nature and the tank is covered.

6. A student conducted an experiment that investigated how light affects the growth rates of plants.



In the illustration above, how many centimeters (to the closest 0.1 cm) taller is the plant on the right than the plant on the left?

- A 0.3 cm
- B 0.5 cm
- C 1 cm
- D 5 cm