

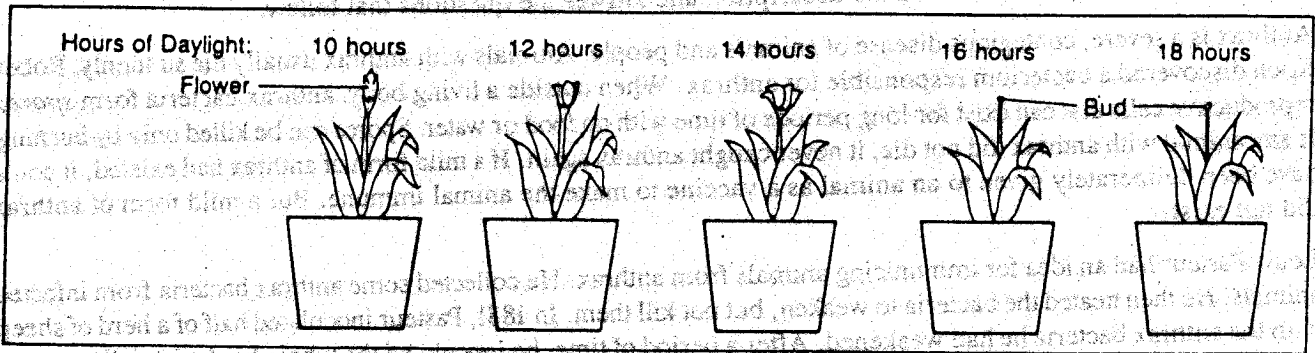
Activities of Science

NAME _____
 CLASS _____ DATE _____

A. APPLICATION OF THE RESEARCH METHOD

Textbook reference: Sections 1-2, 1-4

Science is based on the objective, careful observation of nature. People who work in science follow the research method, which is a logical process that involves observation, formation of hypotheses, and experimentation. Consider how the research method was carried out in the following example. A scientist observed that tobacco plants flower only at certain times of the year. After careful consideration of this phenomenon, the scientist conducted an experiment. She grew five tobacco plants and exposed each to a specific amount of daily light. Study the diagrams below, which show the result of this experiment. Then complete the sentences that follow and fill in the chart, explaining how a scientist would apply the research method to this problem.



1. Since only one factor changed in this experiment, it is called a _____ experiment.
2. The variable in this experiment is _____.
3. List some conditions of the experiment that were probably held constant. _____

Research Method Step	Application to this Problem
Observation	
Defining the problem	
Forming a hypothesis	
Testing the hypothesis	

Research Method Step**Application to this Problem**

Observing and recording results	
Drawing conclusions	
Reporting the results	