

Scientific Method Practice

You want to determine the effects of a certain fertilizer on the growth of sunflowers grown in a greenhouse. Materials that are available to you include: greenhouse, 100 sunflower plants, water, fertilizer, and soil. You want to know if the sunflowers will grow best with a weak concentration of fertilizer, a medium concentration of fertilizer, or a high concentration of fertilizer. How will you design an experiment to test different concentrations of this fertilizer?

A. State your hypothesis: Has to be TESTABLE.

Uses correct lay out and terminology for example:

"If _____ (I do this) _____, then _____ (this) _____ will happen because _____."

B. How will you set up a controlled experiment?

C. What is the control group in this experiment?

D. What is the experimental group in this experiment?

E. What variables must be kept constant in this experiment?

F. What variable is being changed in this experiment?

G. After one month of measuring the sunflowers, the following data is obtained.

Is your hypothesis supported or disproved by these results?

What is your conclusion based on these results?