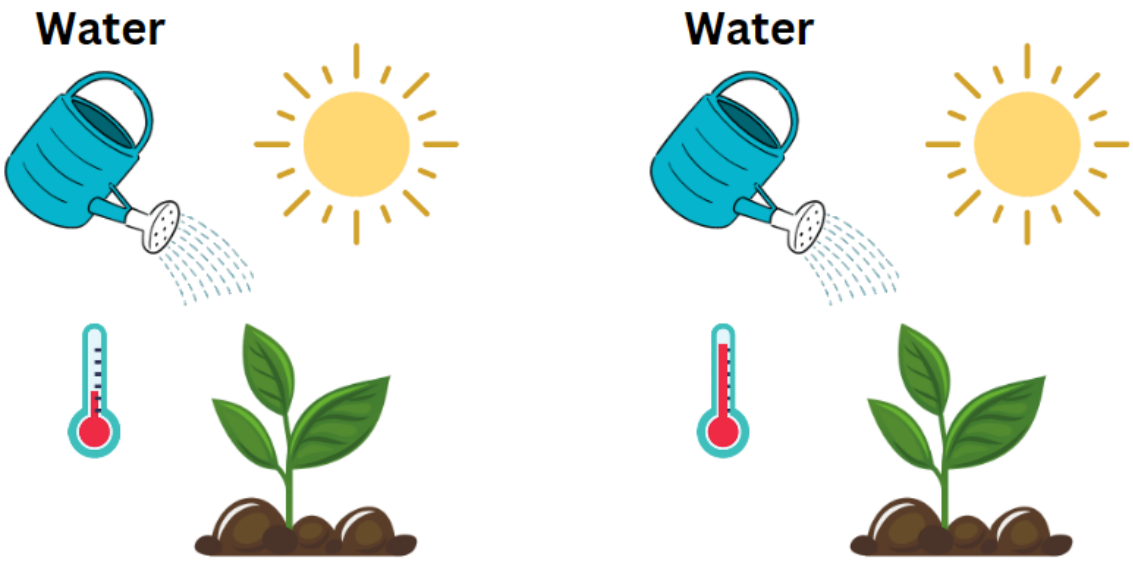
Scientific Method

Using the image below, answer the following questions about the experiment.



Based on the image, what do you think the researcher's independent variable is?

Using the experiment provided, write a hypothesis. Remember, a hypothesis should be a statement about what you think the outcome of the experiment would be.

Which variables are not changing or are "controlled variables" in the experiment shown?

Scientific Method Steps

Match the description with the step of the Scientific Method.

___ State the problem.

___ Predict an outcome to the problem.

___ Compare the hypothesis to the experiment.

___ Develop a procedure to test the hypothesis.

___ Record the results of the experiment.

___ Learn about the topic.

A. Purpose

B. Research

C. Hypothesis

D. Experiment

E. Analysis

F. Conclusion

Independent vs. Dependent Variables

For each example hypothesis, identify the independent and dependent variables.

1. If leaf size is related to sun exposure, then exposing plants to more sun will result in larger leaves.

Independent variable:

Dependent variable:

2. If caffeine helps students study better for tests, then students who drink caffeine while studying will do better on tests.

Independent variable:

Dependent variable:

3. If carrots help improve eyesight, then people who eat carrots will be able to see better.

Independent variable:

Dependent variable: