

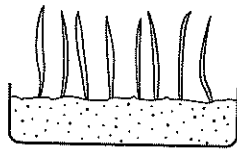
## Examining an Experiment

Have you ever noticed how a plant bends toward the light? Plants twist and bend in order to get toward the light. The attraction of plants toward light is referred to as phototropism.

In this example, Lee and Jill conducted experiments to learn more about the way corn plants grow. You will observe their experiments and interpret the data they collected.

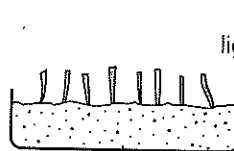
### Experiment #1

Group A

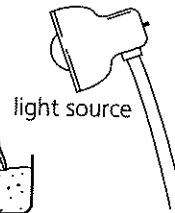


Normal plants with tips on the shoots.

Group B



Plants with tips cut from the shoots.



- (a) Identify the control and the experimental groups.

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- (b) What are the independent and dependent variables?

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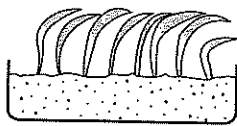


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After a period of time, Lee and Jill observed the following.

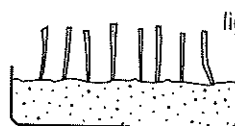
### Experiment #1

Group A

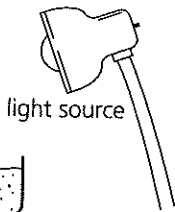


Normal plants with tips on the shoots.

Group B



Plants with tips cut from the shoots.



- (c) Record your observations.

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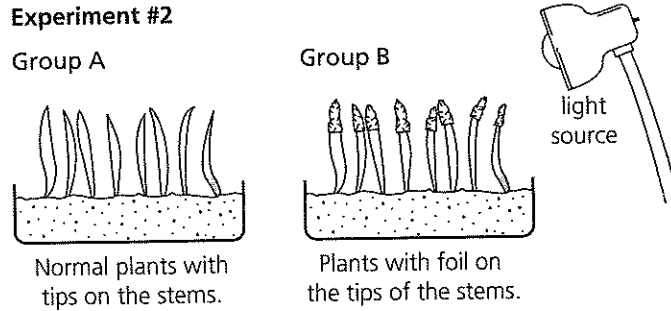


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Lee and Jill examined the results. Lee concluded that the cutting of a plant prevented it from responding to the light. He suggested that the injured plant must be using all of its energy to repair itself. Lee explained, "That is why the plants in group B failed to grow and to bend toward the light."

### Examining an Experiment (continued)

Jill suggested that they do another experiment to test Lee's hypothesis. In the second experiment, Jill and Lee decided to cover the tips of the shoots with aluminum foil.



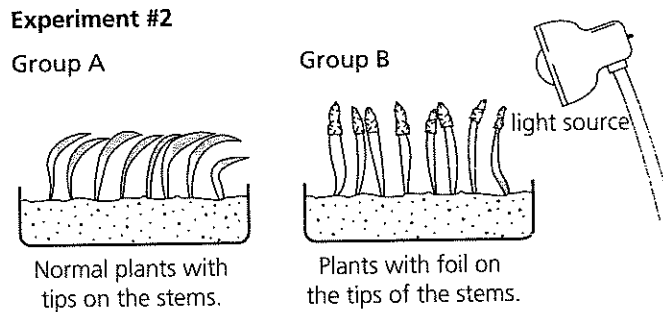
(d) What were Lee and Jill testing in the second experiment?

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The following observations were made a few days later.



(e) Record your observations.

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(f) On the basis of the second experiment, Lee decided to change his first hypothesis. Why did he believe that his first hypothesis was no longer correct?

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(g) What conclusion would you make, based on the results of the second experiment?

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