

# Light and Stem Growth in Pea Plants

You have already examined the effect of gibberellic acid and B-9 (an inhibitor of GA synthesis) in tall and dwarf phenotypes of pea. Now you will investigate the role of light in the growth of the pea stem.

## I. The Effect of Light on Stem Growth

About three weeks ago pea seeds were planted in two pots of soil. One pot was placed in the light in the greenhouse. The other was placed under an inverted black plastic container in the greenhouse (i. e. the plants were grown in the dark). Today you will document the growth responses. You will want to measure shoot height, count the number of leaves, measure the \_\_\_\_ th leaf length, measure fresh and dry weight of shoots and cotyledons.

### Plants Grown in the Light

Parameter											Average
Shoot Height											
Number of Leaves											
Leaf Length											
Fresh Weight (shoot)											
Dry Weight (shoot)											
Fresh Weight (cots)											
Dry Weight (cots)											

### Plants Grown in the Dark

Parameter											Average
Shoot Height											
Number of Leaves											
Leaf Length											
Fresh Weight (shoot)											
Dry Weight (shoot)											
Fresh Weight (cots)											
Dry Weight (cots)											

Before writing your amplified abstract, think of questions you can answer with these data about the effect of light on growth. How is growth in light different from that in darkness? Think of meaningful ways of comparing the results of the two conditions. Think about how “reserves” fit into this project; how photosynthesis fits into the project. How does the word “growth” fit into what you have observed?