

CHAPTER 3	Investigation 3.A: Observing Leaves	BLM 3.1.3
HANDOUT		

Purpose: Measure the leaves of a plant in two locations with different abiotic conditions to see how the different conditions affect a plant's morphology.

Materials

- ruler
- materials for recording data

Procedure

1. With your teacher, determine an area to study. You will be measuring the leaves of a plant species in two locations that have different abiotic conditions. For example, you could measure the leaves of a tree near a stream and a tree of the same species some distance away from the stream, dandelions in a field that is regularly mowed and dandelions in a field that is “wild,” or a plant near a roadway and a plant of the same species in a nearby forested area.
2. Predict if there will be any differences in measurements for the plants in the two locations.
3. Working in pairs, measure the length at least 25 leaves on plants in each location and record the data. (If you are measuring leaves on a tree or shrub, use a larger sample size, such as 100 leaves. Take care not to endanger yourself or the plant during this activity.) Determine the average leaf length in each study area.

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Analysis

1. Describe how the abiotic conditions in the two locations differ.
2. Was there a difference in average leaf size in the two locations?
3. If there was a difference, hypothesize why, making reference to abiotic conditions.