

Investigation – Part 1**Activity A***Observing & Describing a Park's Environment***Period 1**

When a scientist studies in the outdoors or in the “field” they must be prepared to work in all kinds of weather conditions. Not all conditions are easy to work in. At times it is a struggle for even the most seasoned scientist to collect the data they seek in a particular environment.

Before we experience the outdoor environment firsthand, there are many skills that we can learn within the comforts of our indoor environment. These skills include making appropriate observations, writing down data in an organized fashion, classifying data into different groups to better understand the data, presenting the data, and critiquing our own work and the work of others. These are some of the skills we will practice in this first activity.

Materials

See the following Reference materials on the web page for this module under Data and Tools or they will be provided by your teacher in a packet:

- 🗺️ Map of the Park

Preliminary Activity

1. Classify the following as either Biotic or Abiotic. Justify your decision.
 - a) Water
 - b) Air
 - c) Grass
 - d) Oak tree
 - e) Soil
 - f) Earthworm
 - g) Fire
 - h) Air
 - i) Heat

Name: _____ Section: _____ Lab# _____

Methods

Divide into 3 stations. Each group is assigned or elects to study one of three areas in the Park, listed below.

Station 1: _____

Station 2: _____

Station 3: _____

Observations

1. Look through the station carefully.
2. Discuss the objects found at your site and how they may influence the environmental conditions of the site.
3. Include in the objects found at your site things that you can infer from the photographs but may not actually be able to see (be sure to note them as inferred rather than observed in your list).
4. Decide whether the objects on your list are living or non-living and label them as **biotic** for the living objects and **abiotic** for the non-living objects.
5. Discuss other conditions (not objects) that may also influence the environment at the site. For example, the site is flat which may make the ground wetter after a heavy rainfall or the site is shaded from the sun by trees.
6. Record your observations on **Data Sheet 1: Observing and Describing Central Park's Environment**. Answer the Investigation Questions.

Data Sheet 1

Activity A

Observing & Describing Central Park's Environment

Tasks for Observing the Park Site

What makes up an environment? Discuss the objects found at your site (by listing objects you see in the pictures) and how they may influence the environmental conditions of the site. Then, decide whether these objects are living or non-living and label them as biotic for the living objects and abiotic for the non-living objects. Discuss other conditions (not objects) that would also influence the environmental conditions at the site. Record your observations in the table below.

Place of Study in the Park: _____

OBJECT OR CONDITION	INFLUENCE ON ENVIRONMENT	BIOTIC OR ABIOTIC

Individual Assessment Questions

Activity A

Searching for Clues: What Factors Help Create Our Environment?

Use your understanding of biotic and abiotic environmental conditions and the environmental knowledge gained from this activity to answer the following questions.

1. If you were planning a field study in the Park site you investigated to understand the conditions that help create this environment, describe:
 - a) The types of data you would collect (List FIVE conditions that you would measure?)
 - b) Describe how you would measure these FIVE conditions.
 - c) What instruments you would need for your data collection.

2. In looking over the data from the different sites, think about the conditions common to all the groups.
 - a) Identify THREE abiotic conditions described as important to all sites.
 - b) Identify THREE biotic conditions described as important to all sites.

3. Describe ONE condition that is abiotic, yet is due to a biotic influence.

