Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_ PD \_\_\_\_\_\_

***Biological Communities Lab***

**Objectives**:  
1. List familiar organisms found in several different communities.  
2. Distinguish between producer and consumer organisms in your list.  
3. Examine and identify as many organisms as possible from a soil community.  
  
**Materials Needed**:  
l. soil sample  
2. newspaper  
3. vials  
4. hand lens  
5. four small jars with cover  
6. isopropyl alcohol   
  
**Procedure**:  
You are probably used to thinking of your city, town or neighborhood as a community. But did you know that all animals and plants live in communities too?   
  
**Part A**. Producers and Consumers  
Based on your knowledge and previous observations, list in the table, at least four organisms found in these communities: Home, Farm, Forest, Ocean and Pond. Identify the organisms as producers or consumers. Circle the organisms that you consider to be consumers (Hint: Producers are usually green in color and are capable of producing their own food. Consumers are usually brown or other color and cannot manufacture their own food. They obtain food by eating or consuming).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Organism #1** | **Organism #2** | **Organism #3** | **Organism #4** |
| **Home** |  |  |  |  |
| **Farm** |  |  |  |  |
| **Forest** |  |  |  |  |
| **Ocean** |  |  |  |  |
| **Pond** |  |  |  |  |

**Part B**. Soil Community  
1. Collect a variety of soil samples. Place each sample in a plastic bag to prevent drying and then label the bag. Vegetation found on the soil must be included with the sample.

2. Empty the bag of soil on the sheet of newspaper. Probe through the soil and look for hidden organisms.

3. Record in the table, the common names of all observed consumer and producer organisms.   
4. For each organism record quantitative and qualitative observations. Also, describe the organism’s habitat and niche..

5. Place small consumer organisms into containers (jars) of isopropyl alcohol for future microscopic study.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Organism #1** | **Organism #2** | **Organism #3** | **Organism #4** |
| **Quantitative Observation** |  |  |  |  |
| **Qualitative Observation** |  |  |  |  |
| **Niche** |  |  |  |  |
| **Habitat** |  |  |  |  |

**Part C**. Field Observations  
1. While in the field, find as many of the items we discussed in class.

2. Take a picture of each item with a distinguishing object to confirm its authenticity.

Items to Find

* Abiotic Factor
* Biotic Factor
* Organism
* Habitat
* Population
* Community
* Producer
* Consumer