

# AP Environmental Science

## Lab 1-2

### *Shannon Wiener Invertebrate Field Study*

#### **Objective**

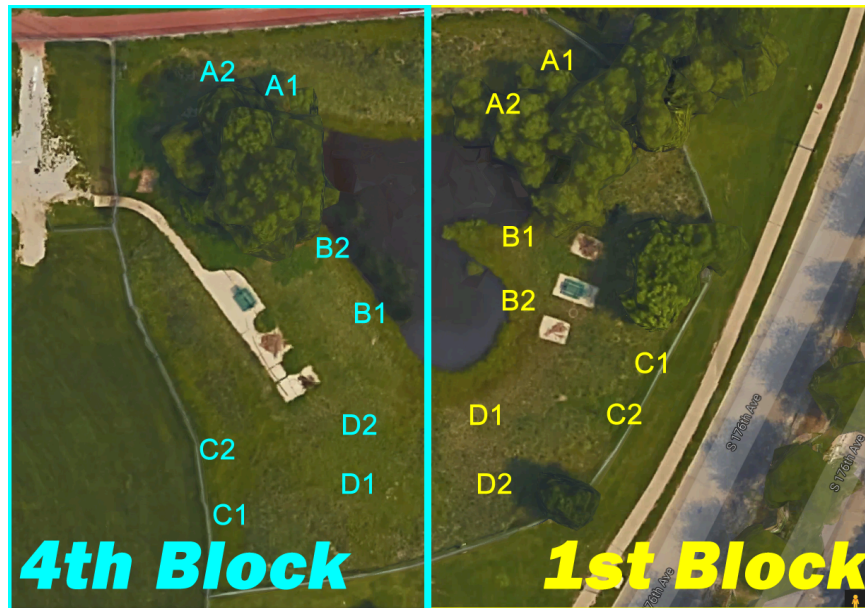
Analyze the species diversity of invertebrates at the 'Pond' using the Shannon-Wiener index.

#### **Overview**

Using ethanol, traps will be set for invertebrates at the Pond at the Northeast corner of the property.

Trap Locations 2016/2017:

Each location is 5 Meters apart, in the same ecological 'area'



## Lab Equipment

Equipment from Left to Right

- Garden Spade
- Landscape Pins (4x)
- Plastic Container
- 70% Ethanol
- Foam Plates
- Plastic Cups

## Procedures

Procedures on this document are an 'overview', students will need to design their own step-by-step procedures outlining *specifically* what steps were taken to measure the fruits.

- Table groups will be assigned the same type of fruit
- Each student will receive *one* of that fruit type
- Students may discuss with their table groups the procedures or 'norms' that they will use while dissecting their fruits

## Data Collection / Graphing

Data-collection must contain a data-table. The instructions on this document overview some common expectations or 'norms' that should be seen in the student's submission.

1. Data should be taken for each fruit
2. An average for each fruit type must be on the data-table
3. Data from other groups must be shared
4. The graph must compare the Biotic Potential for each fruit type that is available for the *entire class*

## Discussion Questions

Discussion questions should always be answered in a 'full-sentence' format. Students should focus on *answering* the question and not on filling up space with 'flowery' or unnecessary language.

1. What is an advantage of producing many seeds?
2. What possible disadvantages exist to producing many seeds?
3. To estimate the total number of seeds produced by a watermelon plant, what you need to know?

## Conclusion

Conclusion statements for this lab should contain language that shows the student understands the meaning of Bioltic Potential, as well as a reflection on the outcomes of the lab.