Group Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Assigned Pond: \_\_\_\_\_\_\_\_\_\_

The ponds we are studying:

List the abiotic ways in which these ponds differ (for example, shaded in the woods versus open to direct sunlight to a field).

Our species of interest is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Question 1: Which one of these ponds will have the highest and lowest biodiversity?

Question 2: Which of these ponds do you expect to contain the most of your species of interest?

**Write a hypothesis and describe the mechanism behind it:**

**Sampling Procedure:**

1) Each team will be assigned one pond (or area within a pond) to sample

2) Sample macroinvertebrates – identify and count all of the macroinvertebrates that you see in your tank using the accompanying ID guide and data sheet. Use sweep nets to remove invertebrates if you need to look at them with a magnifying glass or under a microscope.

3) Sample zooplankton – Use a 1 liter container to take 5 vertical water samples from 5 points in the pond. Pour this water into a plankton net. Count all of the plankton you see in 25% of the water sample under a microscope and record them on the accompanying data sheet.

4) Take water chemistry measurements – Use water chemistry meters to measure chlorophyll *a*, dissolved oxygen, nitrate, and temperature. Chlorophyll *a* will be used as our algae abundance for this exercise.

5) Create your food web – Use the poster paper to display your food web in the manner of your choosing. Add tick marks next to each labeled species to indicate the abundance of that species you found. Draw arrows to indicate feeding relationships among species.

6) Share data with other groups and make conclusions about the validity of your hypothesis where you justify your claims with evidence

**Conclusions:**