Student Name: _____ Date: _____ Period: _____

Bird Behavior

Question: What behaviors do birds exhibit while they are feeding?

Materials:

- Stopwatch
- Binoculars
- Bird identification books
- Meter tape
- Bird seed

My Hypothesis: _____

Procedures:

Creating an Ethogram of Birds Feeding

1. You will now develop an ethogram for birds visiting a feeding area.

2. Choose one bird species to watch carefully for 5 minutes. Record the species of the bird on the Bird Ethogram.

3. In the schoolyard, select an area that birds frequent and mark out a three-meter circle as the feeding area. Set up as many feeding areas as needed to accommodate your class size. Three days before the study, bait each feeding area with bird seed (approximately 3 cups of seeds). This will acclimate the birds to a new food source.

4. During the 5-minute observation, name and describe all of the behaviors of your bird on the Bird Ethogram.

5. Work with your classmates to list all the behaviors that were observed and recorded. After the class ethogram is complete, identify which behaviors were states (s) and which were events (e).

Conducting the Bird Behavior Study

6. Now you will use your ethogram to conduct a real behavior study of birds. Choose one behavior that was observed during the 5 minutes. This behavior and "feeding" will now be studied more closely.

7. As a class, choose one bird species to study. Be sure to choose a species that is common in your schoolyard.

8. Work in groups of 5 to do the behavioral observations with the following tasks:
    a. Timer: watches the stopwatch and says "now" every 20 seconds.
    b. Recorder: records data from each observer on the Bird Behavior Data Sheet.
    c. Total Birds Present Observer: makes an instantaneous count of the number of birds of the chosen species at the moment the timer says "now".
    d. Feeding Behavior Observer: makes an instantaneous count of the number of birds of the chosen species at the moment the timer says "now".
    e. Class-chosen Behavior Observer: makes an instantaneous count of the number of birds of the chosen species doing the class-chosen behavior at the moment the timer says "now".

9. Use the same feeding set-up as preciously described.

10. Observations of feeding and the class-chosen behavior will be done for 5 minutes every month, at the same time each day.

11. After the observations, calculate the total number of birds present, the total number of birds performing the feeding behavior, and the total number of birds performing the class-chosen behavior of the Bird Behavior Data Sheet.

12. Calculate the percentage of birds feeding and the percentage performing the class-chosen behavior on the Bird Behavior Data Sheet.

13. Use data from each month to fill out the Monthly Behavior Data Sheet.

14. Graph the monthly percentages.

Results:
See your graph.

Conclusion Questions:

- Does the percentage of birds feeding vary during the school year?
- Does the percentage performing the class-chosen behavior vary during the school year?
- What other factors may influence bird behavior at a feeder?
- Think about the sample size of this investigation. Was 3 minutes of observation long enough to make generalizations about the population? Was the three-meter circle large enough?

Bird Ethogram

Species: _____ Date: _____

Remember: It is important to not move or talk above a whisper!

The BEHAVIOR name will only take one line, but the DESCRIPTION may take more than one line

Behavior	Description of Behavior	State (s) or Event (e)

Bird Behavior Data Sheet

Species: _____ Date: _____

Class-chosen Behavior: _____

Time	Number of Birds Feeding	Number of Birds Performing Class-chosen Behavior	Total Number of Birds
20 sec			
40 sec			
1 minute			
1 minute 20 sec			
1 minute 40 sec			
2 minutes			
2 minutes 20 sec			
2 minutes 40 sec			
3 minutes			
3 minutes 20 sec			
3 minutes 40 sec			
4 minutes			
4 minutes 20 sec			
4 minutes 40 sec			
5 minutes			
Total			
Average			
Average Percentage			

Average % of Birds Feeding = (Average Number Feeding / Average Total Number of Birds) x 100

Average % of Birds Performing Class-Chosen Behavior = (Average Number Performing Class-Chosen Behavior / Average Total Number of Birds) x 100

Monthly Behavior Data Sheet		
Species:		
Month	Average Percent of Birds Feeding	Average Percent of Birds Performing Class-Chosen Behavior

