Student Name: _____ Date: _____ Period: _____

Egg Predation

Question: Does the location of a bird's nest affect the rate or type of predation?

Materials:

- Non-toxic oil-based modeling clay of various colors
- Plastic gloves
- Bird nests
- Wire

My Hypothesis: _____

Procedures:

1. Hypothesize about locations of bird nests that might have different risks of predation (e.g., high in a tree versus low in a shrub, on a bare branch versus on a heavily vegetated branch).

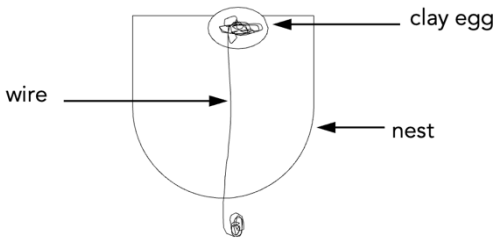
2. Walk around the schoolyard and try to locate nests. Study the shape of the nests and what they are made from.

3. Choose two different types of locations to test. Place only one nest per site and two to five nests in each type of location. For example, if your class decides to test nests in pine trees versus nests in shrubs, place two to five nests in pine trees (no more than one nest per tree) and two to five nests in shrubs (no more than one nest per shrub). If the sites require a ladder, ask a school maintenance worker for assistance.

Make the Clay Eggs and Nest (See Diagram Below)

4. Ball up a piece of wire to form the center of the clay egg. Leave a "tail" on the wire approximately 3 inches long to secure the clay egg into the basket.

5. Firmly layer clay over the wire into an egg shape. The egg should be left with asmooth surface, just like a real egg. Be careful not to make the egg too large. A good size is about 1/2 to 3/4 inches long.



6. Poke the wire "tail" attached to the egg through the bottom of the nest and make a knot in the wire, securing the egg into the nest. Do not pull on the wiretoo hard, as it will pull through the bottom of the nest.

Collecting the Data

7. Place the nest outside, in the site you chose. Record the location of the nest on the Egg Predation Data Sheet.

8. Every school day, check your nest, without excessive handling of the nest, and record your findings on the Egg Predation Data Sheet.
    a. If the clay egg looks like it has been pecked at, or has a beak-shaped indentation, write "bird predation."
    b. If the egg has teeth marks, write "mammal predation."
    c. If the egg appears untouched, record "no predation."

9. Remove nests that have had predation, but leave the nests with no predation in place.

10. At the end of two weeks, remove all remaining nests.

11. Record the number of days it took for each nest to have predation on the Class Egg Predation Rate Chart. Use these values to calculate an average number of days to predation in the two different location types.

12. Work with your classmates to fill in the Class Egg Predation Type Chart. Graph the percentages of eggs with no predation or predation by mammals or birds on the Egg Predation Graph.

<u>Results:</u>

See your graph.

<u>Conclusion Questions:</u>

- How long did it take for predators to find the nests in each location?
- How does the nest location affect the type of predation at the nest?
- What other factors could affect nest predation?

Egg Predation Data Sheet

Location of nest: _____

Date nest was placed: _____

Nest number: _____

Date	Days Since Nests Were Placed	Type of Predation

Class Egg Predation Rate Chart		
Nest Number	Day of Predation	
	Location: _____	Location: _____
1		
2		
3		
4		
5		
Average		

Class Egg Predation Type Chart							
Nest Location	Number of Eggs	Amount of Predation			Percentage of Predation		
		Bird	Mammal	No Predation	Bird	Mammal	No Predation
Total Number of Eggs: _____							

Egg Predation Graph