Name_____ Period _____

Introduction:
All living things have certain needs for survival. Food, water and shelter are minimum needs for every organism. In this activity you will model how these needs are met, what happens when they are not, and see how populations fluctuate based on their availability.

Data: (you will write this down from the numbers provided by the data recorder. Write all answers IN YOUR NOTEBOOK)

Years	Number of Deer (Round 1)	Number of Deer / with Predators (Round 2)
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Fill in your Chart Before Answering the Analysis Questions.

Analysis:

1. What pattern did you see in the deer population from year to year?
2. Why do you think the pattern formed?
3. How did the deer act when their habitat requirements became limited?
4. Carrying capacity refers to the ability of an environment to support living things. How is carrying capacity related to deer population size?
5. What are the limiting factors in this particular deer population?
6. Mountain lions hunt deer and rely on them for a food source. If mountain lion populations had been modeled in this activity, what would you expect to see happen?

GRAPHS – You have had several graphing assignments up to this point. If you do not understand how to completely construct one of these graphs without help, PLEASE let me know!!! You need to know how to graph and understand graphs for the test, end of year test and the ACT.

GRAPH #1 – DEER POPULATION WITHOUT PREDATORS
You will use two different lines for this graph.
Line 1: Round 1 – Deer Population Without Predators
Line 2: Draw a line to show the carrying capacity for this population

GRAPH #2 – DEEP POPULATION WITH PREDATORS
You will use two different lines for this graph.
Line 1: Round 2 – Deer Population With Predators
Line 2: Draw a line to show the carrying capacity for this population

GRAPH #2 – EXPONENTIAL GROWTH
We do NOT have real data for this graph. If the deer had unlimited food, water and shelter and NO predators, show what the population would look like after 20 seasons.