

Predator-Prey Simulation



Name: _____

Class: _____

Date: _____

1. Create your predator and prey cards:

If your teacher has not already done so, cut 100 one-inch-square pieces of paper. These will represent prey. Then, cut 25 index cards in half (the short way) so you have 50 predator cards.

2. To begin, place 3 prey cards on the table, in a random pattern. Then, toss a predator card onto the table. The predator must be touching at least 3 prey to survive, and all prey that are touched are removed.

3. At the end of each round, double the numbers of predators and prey, throwing the cards randomly on the table. If there are no predators, one will be "introduced" to the system. It may be quite a while before the prey population can sustain a predator.

4. Record the number of predators and prey that start each round and end each round on the table below

5. Repeat the process for 20 generations.

Generation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
# of initial prey	3																			
# of final prey																				
# of initial predators	1																			
# of final predators																				

6. How large did the prey population have to be to sustain a predator? What happened to the prey population as the number of predators increased? How long were the predators able to maintain their population?

7. How does this simulation model a real ecosystem? Are there other, unaccounted-for factors that can influence population dynamics?

Name: _____

8. Graph the populations of predators and prey on the same graph. What relationships do you notice between the two lines?

Title: _____

