

Name: _____ Hour: _____

On the Savannah

We have examined the relationship between predator and prey, now let's look at what happens to the ecosystem around those predators and their prey. There are three roles that you will play, lion, giraffe, or shrub.

Lion: Lions must eat at least three giraffes to survive (take one brown card from each). Lions are only able to walk to approach their prey (remember you don't want them to hear you!)

Giraffe: Giraffes must eat at least 2 different shrubs to survive (take one green card from each). Giraffes can power-walk away from the predators, but they cannot run because that would attract more predators. Once a predator attacks a giraffe, they die.

Shrubs: Giraffes eat Shrubs, and if 4 giraffes eat the shrub, it will die (when you lose all your green cards).

Some reminders: There is a hunter in our midst! If you make too much noise the hunter will be able to find you and take you out of the game.

Each round will last 2 minutes. At the end of each round we will determine how many survivors remain. We will then reset the game and change the number of each species.

Data:

Round	Initial Lions	Final Lions	Initial Giraffes	Final Giraffes	Initial Shrubs	Final Shrubs
1	5		10		5	
2	6		10		4	
3	7		10		3	
4	5		9		6	
5	5		8		7	
6	5		7		8	
7	4		11		5	
8	3		12		5	
9	2		13		5	

Questions

1. What happens to the giraffe population when the lion population is high?
2. What happens to the shrub population when the lion population is high?
3. What happens to the lion population if the giraffe population is low?
4. What happens to the shrub population if the giraffe population is low?
5. What happens to the lion and giraffe populations when the shrub population is low?
6. During which trial did the most individuals from each species survive? Why do you think this is?
7. Describe a pattern you see in this data and explain your answer.