

Group Members: _____

_____ Period: _____

Breeding Bunnies: Gene Frequency Data

How does natural selection affect gene frequency over several generations? In other words, how the amount of dominant and recessive alleles change in the population over time. Clearly state your hypothesis (a tentative explanation or solution to the problem).

State what you would predict (if your hypothesis is true) about the frequency of F and f alleles in the population of rabbits after 10 generations, where ff bunnies are selected against (do not survive). In other words, which allele do you think would become more common? Less common?

Generation	Number of FF Individuals	Number of Ff Individuals	Number of ff Individuals	Number of F Alleles	Number of f Alleles	Total Number of Alleles	Gene Frequency of F	Gene Frequency of f
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Discussion Questions (answer on back or separate sheet of paper; do not recopy questions)

1. Based on your lab data, do you need to change your hypothesis? **Explain.**
2. Compare the number of alleles for the dominant characteristic with the number f alleles for the recessive characteristic
3. Compare the frequencies of the dominant allele to the frequencies of the recessive allele
4. In a real rabbit habitat new animals often come into the habitat (immigrate), and others leave the area (emigrate). How might emigration and immigration affect the gen frequency of F and f in this population of rabbits? How might you simulate the effect if you were to repeat this activity?
5. How do your results compare with another group's data? If significantly different, why do you think they are different
6. How are the results of this simulation an example of evolution?