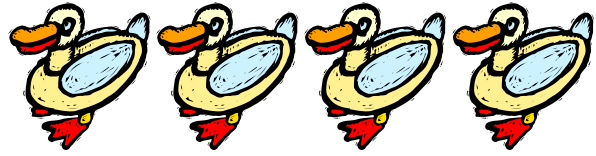


Name _____

Quackers Lab



Natural selection is often referred to as “survival of the fittest.” The organisms that are best adapted will survive and be the parents of the next generation.

Purpose: In this activity, you will simulate the events of natural selection in a population of paper ducks. Some ducks in the population have dark feathers, and some have light feathers. The light feathered ducks are more easily spotted by predators than the dark feathered ducks.

Procedure:

1. Randomly select 10 paper quackers from the bag and place them on your desk.
2. Count how many light feathered quackers and how many dark feathered quackers you have and record as generation 1 in data table 1.
3. Choose one partner to be the predator. The predator will choose 3 light feathered quackers from the 10 on your desk. If there are less than 3 light feathered quackers, you will need to eat enough dark feathered quackers to make a total of 3. (Ex. If there are only 2 light quackers, eat the 2 light quackers and 1 dark quacker.)
4. Place the 3 “eaten” quackers aside in a separate pile.
5. Randomly select 3 quackers from the bag and place them on your desk with the 7 that were not eaten. You should have 10 quackers on your desk again.
6. Count how many light and dark quackers are in your group of 10 and record as generation 2 in table 1.
7. Now the other partner will act as predator. Again, choose 3 light feathered quackers, and if there are not enough light feathered quackers, substitute dark feathered quackers as needed.
8. Repeat steps 4 through 6 until you have recorded data for all 5 generations.
9. Place your data on the board to be averaged with the rest of the class.
10. Record the class average data in table 2.
11. Using the class average data, create a line graph for graph 1. There will be two lines: one for dark feathered quackers, and one for light feathered quackers. Be sure to title your graph, label the axes and provide a color key for the lines.
12. Answer the conclusion questions and turn in your lab.

Name _____

Quackers Lab

Data and Observations

Table 1: Light and Dark Quackers Each Generation

Generation	Light Quackers	Dark Quackers
1		
2		
3		
4		
5		

Table 2: Class Averages

Generation	Average Light Quackers	Average Dark Quackers
1		
2		
3		
4		
5		

Create your graph here:

Conclusion Questions:

1. Write a statement describing how the number of light and dark quackers changed over the period of 5 generations.
2. What do you predict would happen to the number of light quackers if you had continued predation for a total of 10 generations? Explain your prediction.
3. Which type of quacker would Darwin consider “most fit” in this predation situation, the light quacker or the dark quacker? Why?
4. What adaptation do these quackers possess that allows them to survive?
5. Explain why it is incorrect to say that an organism adapts to its environment.
6. What changes in the population would occur if the predation changed and began to prefer the dark quackers? Explain why these changes would occur.