Survival of the Fittest:

Evolution Bean Lab

Objective: To simulate the process of natural selection using various backgrounds and different colored beans.

Materials:

25 black beans

25 lima beans

25 kidney beans

black construction paper

green construction paper

Procedure:

1. Place all of the beans onto the green construction paper.

2. Both students in the group will close their eyes for 30 seconds. After 30 seconds, open your eyes and pick up the first bean that you see and place it aside and close you eyes. Close your eyes and count to ten then open them and again grab the first bean that you see. Do this 10 times.

3. When you are done, count the beans remaining on the construction paper and those beans that you picked off of the construction paper. Fill in the numbers in the data chart.

4. Now place the beans onto the black construction paper. Repeat steps 2 and 3.

5. Put all of the materials away and answer the analysis questions.

Data:

Beans	Number of Lima Beans Initial	Number of Lima Beans Removed	Number of Lima Beans Remaining	Number of Kidney Beans Initial	Number of Kidney Beans Removed	Number of Kidney Beans Remaining	Number of Black Beans Initial	Number of Black Beans Removed	Number of Black Beans Remaining
Green Paper									
Black Paper									

Analysis

1. On the green background, which bean "survived" best? Why do you think this is so?

2. On the green background, which bean "survived" the worst? Why do you think this happened?

3. What would eventually happen to the population of the beans that "survived" the worst? Why?

4. Which bean "survived" the best on the black background? Was it the same or different than the bean that "survived" the best on the green background? Why do you think this is so? Explain.

5. Why did different beans survive better on the different colored backgrounds?

6. How does this lab simulate the process of natural selection?