Natural Selection Lab Activity

By Dan Mazol and Dawn Boyer

Name_____

Purpose: The purpose of this lab is to examine the role the environment plays in natural selection.

Material: 10 squares of each color paper (black, red, white and newspaper), 2 sheets of red paper, 2 sheets of black paper, 2 sheets of white paper and a large piece of newspaper.

Procedure:

1. Collect all the materials that you need for the lab.
2. Decide who will be the "predator" and who will be the "prey" first.
3. The predator will close their eyes (no peeking) while the prey randomly arranges all of the squares on the sheet of black paper. *Do not overlap or conceal any of the squares.*
4. When the partner or teacher says "go", the predator opens their eyes and picks up as many squares as they can using only their *thumb and forefinger*. After **ten** seconds, the predator stops and counts the squares they collected.
5. Enter the data in to table below.
6. Repeat the experiment for each sheet of paper (red, white and newspaper).
7. Switch roles so both partners act as predator for each color of paper.

Data Table

Color of Prey	**Black Environment**	**Red Environment**	**White Environment**	**Newspaper Environment**
Black				
Red				
White				
newspaper				

Analysis Questions

Answer on separate sheet of paper that will be collected.

1. What is the relationship between the surviving members of the population and the environment?

2. What role do genetics play in the change of a population?

3. Create a graph illustrating the data you have collected.

4. Choose one color environment (sheet of paper). Create a graph for what the data may look like in 10 years, 100 years and 1000 years. (You need to make a total of three graphs for this question).

5. Looking at your graphs from #4, explain how these graphs illustrate the process of evolution by means of natural selection.