**Natural Selection Simulation**

In this simulation, you will be seeing natural selection at work in a very simplified scenario. Although stripped down to just two species, this simulation has a lot of important information in which we can observe how organisms survive in an ecosystem with respect to inherited traits. Set the simulation with the following variables:

Setting:

Location: Equator

Selection Factor (Limiting Factor): Wolves

Chart: Population

Rabbit Color: White (this should be t he default color as you are starting the experiments). Make sure white is the dominant gene and brown is the recessive gene.

Now try the following experiments:

Experiment A: Add one “ friend” to the ecosystem and record results

Experiment B: Restart Game. Add one “friend” to the ecosystem and let run through a few generations. Now add wolves to the ecosystem and record the results

Experiment C: Restart Game. Add one “friend” to the ecosystem and let run through a few generations. Now add a mutation for a brown rabbit. Let this run for a few generations. Now add wolves to the ecosystem , observe and record results. Experiment D: Restart Game: Add one “friend” to the ecosystem and let run through a few generations. Now add a mutation for a brown rabbit. Let this run for a few generations. Now add food as a selection factor. Now add wolves to the ecosystem, observe and record results.

Experiment E: Design your own experiment with a genetic mutation, and selection/

limiting factors. Write down all the variables you have chosen and record results. Questions:

After you have completed experiments A-E, answer the following questions. Report the answers to these questions in the discussion board entitled “Natural Selection”.

1. What can be controlled in this experiment on natural selection?

Click here to enter text.

2. What color adaptation is advantageous for rabbits at the equator? Why do you think this is so?

Click here to enter text.

3. What color do you hypothesize to be advantageous for rabbits in the arctic? Why do you think may be the case?

Click here to enter text.

4. What impact does “food” as a selection factor have on the population of rabbits?

Click here to enter text.

5. Explain in detail the experiment you chose to do and what your results are? What selection factors did you choose to use and what impacts did they have on the natural selection of rabbits?

Click here to enter text.