Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_Period \_\_\_\_\_

Peppered Moth Simulation and Natural/Artificial Selection Simulation

Open the simulation at: <http://www.biologycorner.com/worksheets/pepperedmoth.html>

Read the Introduction of the peppered moth and the Instructions below it. Click on [peppermoths.weebly.com](http://peppermoths.weebly.com/)

1. Explain why the environment of the peppered moth changed.

**This will provide more information and the instructions for the simulation. Click on each yellow circle and read the text. Click the yellow triangle to advance the info. When you are ready for the simulation, click on the circle with the birds and click the yellow triangle to start the simulation. Run the simulation in each type of forest.**

1. Describe the life cycle of a peppered moth.
2. Make the sketches for each environment below. Include both variations of moths in each.

 **Light Forest Dark Forest**

1. Record the percentages for the types of moths remaining after 60 seconds of feeding.

|  |  |  |
| --- | --- | --- |
| Type of Moth | Light Forest | Dark Forest |
| Light Colored |  |  |
| Dark Colored |  |  |

1. Explain how natural selection has impacted the peppered moth population.
2. What would happen if there were no predators in the forest? Do you think the percentages of light and dark moths would change over time? Explain your answer.
3. Propose a design for another experiment that investigates moth phenotypes (characteristics) in a forest where there are no predators. The limiting factor is food availability for caterpillars (baby moths) and caterpillars with larger mouthparts are able to obtain food faster. What data would researchers record in this experiment to show how natural selection affects the moth population in the forest over time?