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# Peppered Moths: Natural Selection in Black & White

Objective: Simulate changes in moth population due to pollution and predation, and observe how species can change over time.

Introduction: Charles Darwin accumulated a tremendous collection of facts to support the theory of evolution by natural selection. One of his difficulties in demonstrating the theory, however, was the lack of an example of evolution over a short period of time, which could be observed as it was taking place in nature. Although Darwin was unaware of it, remarkable examples of evolution, which might have helped to persuade people of his theory, were in the countryside of his native England. One such example is the evolution of the peoplered moth Biston betularia.

The economic changes known as the industrial revolution began in the middle of the eighteenth century. Since then, tons of soot have been deposited on the country side around industrial areas. The soot discoloured and generally darkened the surfaces of trees and rocks. In 1848, a darkcoloured moth was first recorded. Today, in some areas, 90% or more of the peppered moths are dark in colour. More than 70 species of moth in England have undergone a change from light to dark. Similar observations have been made in other industrial nations, including the United States.

#### Instructions:

Go to the link below to read more information on Kettlewell's study of moths. At the end, you will run two simulations for 5 minutes each, during this time you will play the part of a bluejay that eats moths.

After 5 minutes record the % of dark moths and light moths, you will need this information later.

#### Link: Peppered Moth Simulation at peppermoths.weebly.com

#### Data and Analysis

Read the background information and answer the questions as you go. Life Cycle of the Peppered Moth

- Why are these moths called "peppered moths?"
- 2. What animals eat the peppered moth?
- 3. What is a lichen?.
- 4. What do the larvae of the moth eat?
- 5. How do peppered moths spend the winter?
- 6. Moths that have more dark spots than the average moth are called what?

# **Peppered Moth Activity Answers**

**K Morrison** 

**Peppered Moth Activity Answers:** 

### Peppered Moth Activity Answers Book Review: Unveiling the Magic of Language

In an electronic digital era where connections and knowledge reign supreme, the enchanting power of language has are more apparent than ever. Its power to stir emotions, provoke thought, and instigate transformation is actually remarkable. This extraordinary book, aptly titled "**Peppered Moth Activity Answers**," published by a highly acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound effect on our existence. Throughout this critique, we shall delve to the book is central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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