

## UbD Template 2.0 for Peppered Moth Analysis- Evidence of Natural Selection

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OTLD 502

### Stage 1 Desired Results

<b>ESTABLISHED GOALS</b> <ul style="list-style-type: none"> <li>• To explain the events that lead to the industrial melanism of this insect</li> <li>• To collect, analyze and interpret data collect from the peppered moth simulation</li> <li>• To discuss how the peppered moth reinforces Darwin's Theory of Natural Selection</li> </ul>	<b>Transfer</b>	
	<i>Students will be able to independently use their learning to...</i> argue that the industrial melanism of the peppered moth is evidence of Darwin's Theory of Natural Selection	
	<b>Meaning</b>	
	<b>UNDERSTANDINGS</b> <i>Students will understand that...</i> changes in the environment can lead to changes/ evolution in the peppered moth	<b>ESSENTIAL QUESTIONS</b> Can we see organisms evolve and change within our life time?
	<b>Acquisition</b>	
<i>Students will know...</i> that the change in color of the peppered moth occurred due to changes in the environment and predation	<i>Students will be skilled at...</i> collecting, analyzing, interpreting and applying their knowledge of the data collected from the peppered moth simulation	

### Stage 2 - Evidence

<b>Evaluative Criteria</b>	<b>Assessment Evidence</b>
Completion of handout	<b>PERFORMANCE TASK(S):</b> Data from simulation and written response questions on the handout
Discussion questions on formative ass	<b>OTHER EVIDENCE:</b> Long answer/essay questions on formative assessment of the Evolution Unit

### Stage 3 – Learning Plan

#### *Summary of Key Learning Events and Instruction*

- Students will be given the handout: [Biology 11: Peppered Moth Analysis](http://www.techapps.net/interactives/pepperMoths.swf) and instructed to go to the following webpage, : <http://www.techapps.net/interactives/pepperMoths.swf>
- Students will then follow the instructions on the handout which asks them to visit each of the different areas of the webpage
- As the students proceed through the site, they are asked to fill in guiding questions to provide background information on the peppered moth, environmental factors and the basis of Kettlewell's experiment
- The students will then proceed to perform the simulations for the light and the sooty forest
- At the end of each time trial for both forest types, students will enter data into the data table on the handout
- Students will then reflect on the information that they have collect and the data from the simulation, to answer the analyze questions (formative assessment)