

***NatureMapping Program***  
***1<sup>st</sup> Grade Butterfly Project***

Modules	Life Sciences	Math	Technology
<b>1. Scientific question</b> What are the native butterflies and moths in Waterville and farm fields? (descriptive study)	Hypothesis/Prediction: There are native butterflies and moths in Waterville		
<b>2. Project Design (Identify a Setting within a System and Identify variables of Interest)</b> What you are going to do?	Systems: Learn what a butterfly looks like and the different stages of its life Learn how to identify different butterflies Learn where to find butterflies and caterpillars (Karen) in Waterville What plants do butterflies use (Karen)	Measure the length of time it takes for a chrysalis (butterfly) cocoon (moth) to grow before it becomes a butterfly (Painted lady). Monitor what the most common species is observed.	Use Internet to find butterflies  Publish results on the website and submit data to the <i>NatureMapping</i> Program
<b>3. Methods (Collect Data)</b> How you are going to do it?	1. Obtain a list of species that would be expected to live in Waterville, along with their pictures and life history information. 2. Students will collect data from home and around the school yard 3. Capture butterflies and learn about at least 4 species	Develop a poster where students can add their sightings. Make columns of different plants (tree, bush, flower, puddle/water) where students can put stickies under the appropriate column.  Collect data weekly	Digital pictures of butterflies will be taken.  Digital pictures of the plants – 5 <sup>th</sup> grade
<b>4. Data Analysis - Results</b> What did the data tell you?	We know the different between a butterfly and other insects because _____  We find butterflies most of the time (where?) Most are found when temp is 70 degrees or higher	Record temperature of day when butterflies are seen and not seen.  Time of day and temperature is important. We see more _____ than any other butterfly	
<b>5. Discussion (Use Evidence to Support an Explanation)</b> Why do you think you got the results that you did?	Why might this occur?	Why do they think butterflies are found when it is sunny and warm	

**NatureMapping Program**  
**1<sup>st</sup> Grade Butterfly Project**

Modules	Reading/Writing	Art	Social Studies
<p><b>1. Scientific question</b> What are the native butterflies and moths in Waterville and farm fields (descriptive study)</p>	<p>Hypothesis/Prediction: There are native butterflies and moths in Waterville</p>		
<p><b>2 Project Design (Identify Setting within a System and Identify variables of Interest)</b> What you are going to do?</p>	<p>Students will learn new science related vocabulary</p>	<p>Learn about the symmetry of the body colors</p>	<p>Culture - Caterpillars eat plants that we like in our gardens. We have to share our gardens if we want to see butterflies.</p>
<p><b>3. Methods (Collect Data)</b> How you are going to do it?</p>	<p>Learn how to read diagrams – body parts</p> <p>Learn to gather information and write what they learn</p>	<p>Students draw their butterflies and label the parts. Use the butterflies that die in the classroom or are found dead around homes, etc. to learn about parts – identify the differences – size, color, shape, patterns</p>	
<p><b>4. Data Analysis - Results</b> What did the data tell you?</p>		<p>Based on the different coloration and parts, there are ____ different butterflies in Waterville.</p>	
<p><b>5. Discussion (Use Evidence to Support an Explanation)</b> Why do you think you got the results that you did?</p>		<p>Future. More drawings for the mural</p>	<p>Introduced species</p>