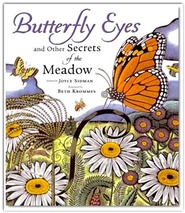
**Butterfly Eyes in the Meadow**

*A collaboratively created lesson that integrates, science, visual art, language*

*arts, and theatre arts. It is based on Powell GT Magnet Elementary School’s*

*One Book, One School project. Created by A+ Fellows, Lori Cozzi and Marta King*



Lesson based on:

**“An Apology to My Prey”** from

**Butterfly Eyes and Other Secrets of the Meadow**

By Joyce Sidman

Illustrated by Beth Krommes

**Theatre Essential Standards**

4.C.1 Use movement, voice, and writing to communicate ideas and feelings.

4.A.1 Analyze literacy texts and performances.

**Science Essential Standards**

4.L.1 Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.

4.L.1.1 Give examples of changes in an organism’s environment that are beneficial to it and some that are harmful.

4.L.1.2 Explain how animals meet their needs by using behaviors in response to information received from the environment.

4.L.1.4 Explain how differences among animals of the same population sometimes give individuals an advantage in surviving and reproducing in changing habitats.

**Unpacking**

**What does this standard mean a child will know, understand and be able to do?**

**4.L.1.1**

Students know that for any particular environment, some kinds of plants and animals survive well, some survive less well and some do not survive at all. When the insect population grows in an area that is frequented by insect eating birds, this is advantageous for the birds. Conversely, if the insect populations are decreased by disease in a similar scenario, the population of birds would be stressed and likely, reduced.

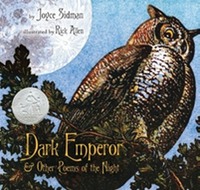
**4.L.1.2**

Students know that animals collect information about the environment using their senses. Animals also exhibit instinctive (inborn) behaviors that help them to survive. Students know that in animals, the brain processes information, and signals the performance of behaviors that help the organism survive.

**4.L.1.4**

Students know that there is variation among individuals of one kind within a population. Students know that sometimes this variation results in individuals having an advantage in surviving and reproducing. Survival advantage is not something that is acquired by an organism through choice; rather it is the result of characteristics that the organism already possesses.

**The Illustrations of Beth Krommes**



From her web-site: <http://www.bethkrommes.com>

**What is scratchboard?**

Scratchboard, also known as scraperboard, is a black-and-white drawing medium. The board itself is a cardboard or panel with a thin veneer of fine, white clay covered by a layer of india ink. The drawing surface starts completely black. The drawing is made by scratching white lines through the ink with a sharp tool, such as an etching needle or a scratchboard nib held in a pen holder. The more lines that are drawn, the brighter the picture becomes. The clay coating under the ink allows the sharp point to remove the ink easily without tearing the board support. A scratchboard drawing is often very highly detailed and can resemble a wood engraving.

I love working in black-and-white but it is not always appropriate for every assignment. In order to add color to my scratchboard illustrations, I developed a technique of photocopying the scratchboard onto acid-free paper, mounting the paper onto a more stable board, and adding color with watercolor. This painting is the original art I deliver to a publisher.

Contact her at: [beth@bethkrommes.com](mailto:beth@bethkrommes.com)

**More resources:**

joycesidman.com

**Working with Scratchboard in Your Classroom**

Beth Krommes used a technique called “scratchboard” to create the art for this book. Her technique is complicated and painstaking, but here is a simplified version that is easy to do in the classroom.

You will need:

• white paper

• colored crayons

• black tempera paint & paintbrushes

• liquid dish soap

• paperclips

1. Have students completely color their paper in a thick layer of crayon, using any pattern they like—stripes, blotches, etc.

2. Add a drop of liquid soap to the black tempera paint (so it will stick to the crayon layer), and have your students paint a coat of black all over the top of the colorful crayon layer.

3. After the paint is dry, your students can lightly scratch an animal design into the black surface with a bent paperclip. The bright crayon colors will show beautifully through the black, and the effect will be that of scratchboard art.