



Column: Elementary Explorations

Creating Citizen Scientists in Kindergarten

Kristen Poindexter

This is the first installation in a column Kristen will write for THST about teaching science in the elementary classroom.

Kristen Poindexter is a veteran Kindergarten teacher in Indianapolis, Indiana. She holds a B.S. and an M.Ed. from Ball State University, and is currently an Ed.D. student in Curriculum and Instruction with a focus on Science Education at Indiana University. Kristen is the recipient of the 2014 National Shell Science Teaching Award and the recipient of the Presidential Award for Excellence in Math and Science Teaching, and has served as HASTI's President, VP, Elementary Director, Director at Large and the 2022 Conference Chair. In 2014, she received the Presidential Award for Excellence in Math and Science Teaching. She is a frequent presenter at district, state, and national conferences and she serves as a science coach for her school district where she mentors other teachers. Look for her regular contributions to THST!



We learn lots of different things each year in my Kindergarten classroom, but our September Monarch Butterfly study is always a class favorite!

We begin our study by finding out as much as we can about Monarch Butterflies. I created a simple collection of books using my Epic! books account to allow my students to gather information on their own about Monarch Butterflies. Our favorite titles include "Monarch Butterfly" (2012) by Gail Gibbons, "Monarch Butterfly Migration" (Hirsch, 2022), and "The Incredible Migration of the Monarch Butterflies" (Furstinger, 2022). Each of these books provide enough information in just the photographs that my students can learn about Monarchs even if they cannot yet read the text.

As a class, we create a KWL chart and enter in all of our information that we learned about Monarchs while reading. We also make sure to write down everything

the children are wondering about Monarchs, so that I can make sure to address those wonderings!

To help my students have some hands-on experience with migration, we use the website www.journeynorth.org to guide our understanding of the Monarch migration. They have a program each year where children can color and cut out their own life sized Monarch butterfly and then as a class you send all of them, plus a class picture, a letter, and a return envelope to the amazing folks at Journey North. They take all those paper Monarch butterflies and send them to schools in Mexico, close to where the actual Monarchs overwinter in the pine tree forests. In the spring, just as the real Monarchs are migrating back to the US, the paper Monarchs make their way back to our classroom, with the exception that we get paper Monarchs from all over the country to replicate the many paths that a Monarch may take.

Full listing of authors and contacts can be found at the end of this article.



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Figure 1: Life Cycle Bracelet

We create lots of items to put in our science notebooks that show the life cycle of the Monarch, but our favorite is the life cycle bracelet (Figure 1) and life cycle squishy bag (Figure 2). The bracelet is created using one clear bead (egg), one black bead with three yellow beads (head and body of the caterpillar), three green beads (chrysalis), and either one orange bead or a butterfly shaped bead (butterfly). We then sing the following song and move the beads on our bracelet to show the life cycle.

Monarch Butterfly Song

(to the tune of "Up on the Housetop")

First comes a butterfly and lays an egg,
 Out comes a caterpillar with many legs,
 Oh, see the caterpillar spin and spin,
 A little chrysalis to sleep in,
 Oh, Oh, Oh, wait and see...
 Oh, Oh, Oh, wait and see,
 Out of the chrysalis
 My oh my!
 Out comes a Monarch Butterfly!

We also create squishy bags (Figure 2) for another tactile experience. Using a sandwich sized baggie, fill it with a few squirts of clear hair gel. Add in a small bead (egg), a 1 inch length of pipe cleaner (caterpillar) a leaf shaped bead (chrysalis), and a butterfly shaped bead (butterfly). Students can squish the parts of the life cycle around and then work to put it back in order!

We study the Monarchs in September because in Indiana that is when many of them begin their long migration south to overwinter in Mexico. Most of the Monarchs arrive in Mexico just in time for the celebration of Dia de los Muertos, or the Day of the Dead. It is believed that the arrival of the Monarch butterflies represents the souls of those who have passed on coming to visit their loved ones during the Day of the Dead. We read the book "Day of the Dead" by Julie Murray (2022) using our Epic! books app to learn more about the custom of "Day of the Dead" and how cool it is that our Monarch butterflies are there being a part of the celebration!

It brings me so much joy as an educator to know that I am creating young citizen scientists in my classroom! I have students email and call years after they leave my classroom and tell me how they incorporated Monarch butterflies into a project they are working on because they learned about them in my classroom!

References

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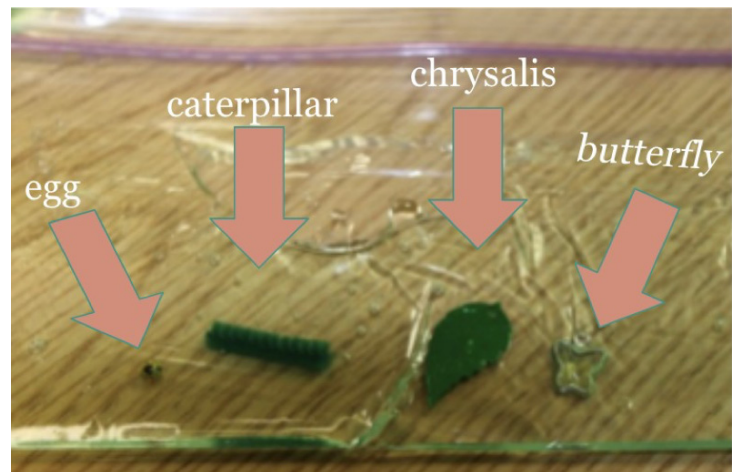


Figure 2: Life Cycle Squishy Bag

Author

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