

# METAMORPHOSIS



*Nancy in the first grade.*

**M**etamorphosis has been on my mind lately, both as a specific scientific idea and a broader concept. One of our second grade teachers recently asked me if I could help her teach metamorphosis to her students and one thing led to another. My first thought was to research the work of Maria Sibylla Merian, an artist/naturalist whose work I became aware of years ago on a visit to the National Museum of Women in the Arts in Washington, DC (NMWA).

Maria Sibylla Merian (1647–1717) was one of the great female artists of the seventeenth century. Her work depicts a particular sensitivity toward the natural world and its inhabitants. She was the first person to record and illustrate the biological process of metamorphosis—the life cycle of a dramatically different egg, larva, pupa, and adult found in many insects.

In 1699, at age fifty-two, she traveled with her daughter from Amsterdam to the rainforests of the Dutch colony of Surinam in South America, more than a century before Charles Darwin's expeditions. Here she spent two years studying and recording metamorphosis in her insect subjects' natural habitats. She returned to



*Nancy in the adult stage.*


Amsterdam to write and illustrate a book about what she had observed. Though her book inspired many subsequent scientists, her work was mostly forgotten during the nineteenth century until its reemergence in contemporary times. In 1997, the U.S. Postal Service issued two botanical print stamps featuring two illustrations by Merian selected from more than seventy of her engravings in the collection of the NMWA.

My students share in Merian's wonder at the transformations of nature every time they observe a butterfly emerging from a chrysalis in their classroom. In turn, I get to see their own transformations. One of the benefits of teaching art in an elementary school for a number of years is the opportunity to see my students change before my eyes as they grow up. I have taught many of my current fifth graders since they were in kindergarten and have been fortunate to witness their physical, mental, and creative transformations—rapid changes most pro-

## Metamorphosis Activities

- Research Merian at [www.nmwa.org](http://www.nmwa.org)
- Look for contemporary naturalists/artists online and compare their work to Merian's.
- Research species of butterflies native to your region and depict their stages of metamorphosis in a flip book.

nounced in elementary students. I am privileged to be such a witness.

In *Chrysalis: Maria Sibylla Merian and the Secrets of Metamorphosis*, author Kim Todd says that metamorphosis "is a process integral to the way we perceive ourselves and our ability to change our lives." The articles this month detail thoughtful transformations big and small for you and your students. 

## Resources

- Todd, Kim. *Chrysalis: Maria Sibylla Merian and the Secrets of Metamorphosis*. Harcourt, Inc., 2007.
- Burris, Judy and Wayne Richards, *The Life Cycles of Butterflies*. Storey Publishing, 2006.

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