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In the Field and in the Literacy Lab: Science Poetry!

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When I visit schools I often share the first poem I ever wrote in Mrs. Brownworth's fourth-grade class:

The grass is green,
The grass is brown,
The grass is waving up and down.

The grass is brown,
The grass is green,
Under the grass are many things
you've never even seen!

I fell under poetry's spell in fourth grade, but I'd been *this* kid since the age of three: the one looking under logs, peering into pond water, and sifting through salty tidal sands. I'm still that eager, hands-on learner, as well as the (not quite so young) writer who loves the language, ideas, music, and moment of a poem.

Each science poetry collection I envision begins with an immersive field experience *and* a wide, general-interest dive into the library. For my upcoming collection *Superlative Birds* (Peachtree, March 1, 2019) I visited the Cornell Lab of Ornithology in Ithaca, New York, where I met ornithologists and amazing birders, and experienced birding using all of my senses. When I meet field scientists, their excitement always enriches my connection to their subject. Fun tip: Many field scientists are happy to share their work with students of all ages! During my experiential adventures I create a field journal to record my scientific and sensory observations, sketches, and informational notes.

I began my *Superlative Birds* library research reading general-interest books about birds, bird behavior, and avian ecology. I read both

narrative and expository nonfiction. I also read bird-centered fiction and memoir. Reading widely gives me an overview and a lexicon of rich and inspiring content language. Fiction and memoir add to my emotional connection, and I never know which book or article will spark an idea or new direction. That's the fun of research! And that's also why I so appreciate access to library collections with a wide variety of approaches to a particular topic.

As I zeroed in on my approach to *Superlative Birds* (avian world record-holders such as the tiniest, the loudest, and the *smelliest* birds) my library research became more focused. I studied specific attributes such as eggs, beaks, and nests, each selected to tell a piece of the story of "bird-ness." I also read books and articles highlighting animal "record-holders." I continued to

hone my hands-on birding skills as I wrote my poems and science notes—have binoculars, will spy! This hands-on exploration has also helped deepen my understanding of bird behavior and ecology. Interested in birds since the ninth grade (an anecdote I share in the book's back matter), this book has made me into an avid, citizen-scientist birder who now participates in Audubon bird counts and sends observations to Cornell's eBird database.

Last spring, I was fortunate to collaborate with school librarian Jenny Lussier and elementary educator Amy Sorensen at John Lyman Elementary School in Connecticut to introduce Amy's grade 3/4 class to the process of using field experience and science journaling to create science poetry. Full-circling back to my fourth-grade poem about critters under the grass, we based our two-day program on the "Investigations" section of *Leaf Litter Critters* (Peachtree 2018). Before the program Jenny and I gathered equipment with the help of the district's elementary science specialist, Susan Michael.

We began day 1 in the school library, where we discussed safe field sampling, science journaling (writing and sketching), and informational and sensory observations. Having read *Leaf Litter Critters*, Amy's students predicted what we might find in our duff samples. Outside, working in twos and threes, students chose sites and collected samples in recycled plastic containers. Then we sat at picnic tables to sketch, listen, look, and make observations in our simple journals (see figure 1 for an example from one of my own science journals). I so enjoyed seeing students engrossed in multisensory observation—each connecting with something different in the environment around them. Back in our



collaborative "lab" in the school library, students took a closer look at their samples with magnifiers and continued their journal observations.

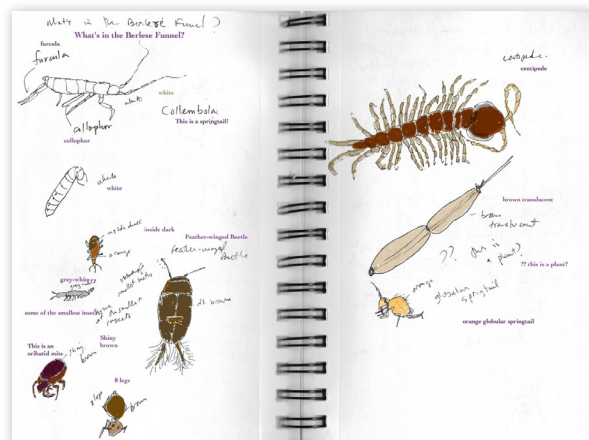
During our day 2 meeting on the rug in Amy's classroom, I shared some examples of nature poetry, encouraging student observations of different aspects of poetry, including rich use of language, rhyme, emotion, and fun and powerful words. Then students shared their observational writing from their journals, brainstorming how they might build on their own language and observations in a poem. We moved to tables for independent writing.

In feedback to me, Amy wrote, "I think the fact that [the students] were able to get out into the field and collect their own samples was key to hooking them in. Many kids were amazed at the discoveries made in just a scoop or two of the earth! Even my most reluctant writers

were inspired to take notes and create poetry in their 'field journals.'" Amy also suggested a simple and terrific gross-motor improvement to use during the day 2 classroom brainstorming session: "stand up and tell a friend what you noticed..." Jenny wrote, "I would have loved to add a research part to follow your workshop." That would be an enriching extension, mirroring my own poetry process.

Jenny observed that our collaborative, cross-curricular programming correlated with several of the Key Commitments for Shared Foundations in the AASL *Standards Framework for Learners*, including:

Figure 1. Science journaling example.



Science Poetry Programming:

"Supporting teachers and students in content areas"

—Jenny Lussier, school librarian

Inquire: Build new knowledge by inquiring, thinking critically, identifying problems, and developing strategies for solving problems.

Include: Demonstrate an Understanding of and commitment to inclusiveness and respect for diversity in the learning community.

Collaborate: Work effectively with others to broaden perspectives and work toward common goals.

Curate: Make meaning for oneself and others by collecting, organizing, and sharing resources of personal relevance.

Explore: Discover and innovate in a growth mindset developed through experience and reflection. (AASL 2018, 34, 35, 36, 37, 38)

I was thrilled to collaborate with these two exemplary educators to develop a program that can introduce students at any grade level to (in the words of teacher, Amy Sorensen) "...a wonderful balance of down and dirty science exploration and solid literacy work" that for me is the joy of creating science poetry!

Leslie Bulion has been writing poetry since the fourth grade and has been an observer of the natural world from the moment she could peer under a rock. Her award-winning science poetry includes *Leaf Litter Critters*, *At the Sea Floor Café: Odd Ocean Critter Poems*, *Random Body Parts: Gross Anatomy Riddles in Verse* (all published by Peachtree), and *Hey There, Stink Bug* (published by Charlesbridge), with more collections on the way! Leslie's graduate background in oceanography and work as a school social worker informs her science poetry as well as her science-infused middle-grade novels *Uncharted Waters*, *The Trouble with Rules*, and *The Universe of Fair* (all published by Peachtree). Her books have been honored by Bank Street College, National Council of Teachers of English, National Science Teachers Association, American Association for the Advancement of Science, Parents' Choice Foundation, and selected for state reading lists. Her first book, *Fatuma's New Cloth* (published by Moon Mountain), was awarded the 2003 Children's Africana Book Award by the African Studies Association. When Leslie isn't traveling for research, scuba diving, visiting schools, or speaking at conferences, she works, explores, and lives in Connecticut with her husband, Rubin Hirsch.

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