

Poetry

Across the Sciences

By Davi Walders

Poetry and science? Does this equation compute? Poets, many of whose works have been inspired by science, would certainly answer in the affirmative, including William Carlos Williams, a doctor who continued to make house calls while becoming one of America's major poets.

On a smaller scale, I am a poet and former teacher who encourages the weaving of poetry into all areas of the curriculum, particularly into the sciences. As a collector of poems for many years, I have seen the power that the right poem read at the right moment can have. Paradox, creative thinking, attention to detail, discovery, humor—a good poem carries many of these elements so critical to scientific inquiry.

For instance, one of Emily Dickinson's numerous poems on scientific subjects might provide a good beginning to a study unit on the human body. Here is one of her brilliant and playful openings:

*The Brain — is wider than the Sky —
For — put them side by side —
The one the other will contain
With ease — and You — beside...*

Or Adrienne Rich's "Planetarium," a contemplation about astronomer Caroline Herschel standing alone in 1848, offers students a clear image of a real person doing real science.

*...a woman 'in the snow
among the Clocks and instruments
or measuring the ground with poles'*

*in her 98 years to discover
8 comets...levitating into the night sky riding the
polished lenses...*

I believe poems have a role to play in all classrooms and disciplines. Even if only used occasionally to change pace or try something new, a good poem has the power to awaken students (literally and figuratively), to stir the imagination with metaphor and surprise, to open a window, and let the light of learning in.

How could I not feel this way? I am a poet who has had the pleasure of looking out at audiences during readings, watching words form a

A NARROW FELLOW IN THE GRASS

*A narrow fellow in the grass
Occasionally rides;
You may have met him,—
did you not,
His notice sudden is.*

*The grass divides as with a comb,
A spotted shaft is seen;
And then it closes at your feet
And opens further on.*

*He likes a boggy acre,
A floor too cool for corn.
Yet when a child, and barefoot,
I more than once, at morn,*

*Have passed, I thought,
a whip-lash
Unbraiding in the sun,—
When, stooping to secure it,
It wrinkled, and was gone.*

*Several of nature's people
I know, and they know me;
I feel for them a transport
Of cordiality;*

*But never met this fellow,
Attended or alone,
Without a tighter breathing,
And zero at the bone.*

Emily Dickinson

NATIONAL POETRY MONTH

Established in April 1996, National Poetry Month is an annual celebration of poetry and its vital place in American culture. Each year, thousands of libraries, schools, booksellers, and cultural institutions participate through readings, festivals, book displays, workshops, and other activities. The Academy of American Poets works with partner institutions, including American Booksellers Association, American Library Association, the National Council of Teachers of English, the office of the U. S. Poet Laureate, and the Urban Libraries Council, to provide materials and assistance to participants across the country. Contact the Academy of American Poets, 584 Broadway, Suite 1208, New York, New York 10012-3250; (212) 274-0343; poets@artswire.org or visit their website at www.poets.org.

YOUNG PEOPLE'S POETRY WEEK

The second annual Young People's Poetry Week (April 10–16), established in 1999 as a part of National Poetry Month and sponsored by The Children's Book Council (CBC), will highlight the value of poetry for children and young adults by encouraging everyone to celebrate poetry in their homes, classrooms, libraries, childcare centers, and bookstores and to read it, enjoy it, and write it.

The CBC has new poetry materials available through its online catalog. They include a poetry activity set; bookmarks; a full-color poster; and Book Poems: Poems for National Children's Book Week, a collection of poems celebrating books and reading written by major U.S. poets for National Children's Book Week over the last four decades. Book Poems includes works by poets as diverse as Gwendolyn Brooks, Ogden Nash, and Shel Silverstein. Visit the CBC website (<http://www.cbcbooks.org>) or email joanncbc@aol.com..

magical bridge that connects in nods, smiles, and tears. I have watched new awareness and space in a listener's mind and heart being created through the power of a poem. After a reading, people have lined up to share their own memories evoked by something I have read. Sometimes I have been thanked for writing what listeners say they have long known or felt, but could not express. A poem has helped them know more about their own experience. And I, myself, have often felt that same shock of recognition and insight when reading a good poem.

*Poetry can turn on the light
and deepen meaning as
nothing else can.*

But even more importantly, long before I wrote my own poems, I used others' poetry in my classes, whatever the subject I was teaching. I still run into students who say they remember nothing else but a poem we read and the boy (or girl) in the next row. I kept a file of poems and a few anthologies next to the dictionary on my desk. And I used them.

Maybe you're thinking about how much you disliked poetry, how intimidated you felt, how you never "got it." I didn't much like poetry in school either. Because of the way it had been taught, I rarely had been allowed to experience the power of the poem, taste its richness, let its texture really touch me before I had to begin analyzing, dissecting, pulling apart. Keep the dissecting in the lab. Use poems to increase understanding and deepen enjoyment.

Poems may be written in vernacular or rap, all caps or lower case, but a good poem is always substantial, teaching us about ourselves and the world. A poem's imagery and metaphors can intensify and clarify meaning. Poetry can turn on the light and deepen meaning as nothing else can. Which carries more meaning? "That's a difficult class," or "I feel like shattered glass after that class."

Two or three minutes may be enough. A poem that catches a classes' interest may come up over and over in discussion, be referred to again and again throughout the year as a shared experience by which other moments may be measured. What can't be seen or understood by more didactic methods of teaching may suddenly be clarified by a poem. Poems touch us at deep levels, levels we don't or can't always articulate. Meaning carried by metaphor and the condensed, tight language of a poem may penetrate faster for learning disabled students as well as having great appeal to gifted students because of a poem's many layers and the worlds contained, but not necessarily voiced. In their richness, poems can often be the source of "aha," or "Now I get it."

Poems braid curricular areas, breaking through boundaries, weaving things together: formulae to feelings, a long-ago lab experiment to today's, frustration to sudden laughter. Poems contain values and voice, time and place, past and present. They carry within their spareness the currents of rivers, the horizon, and the scent of loamy soil.

Here's an excerpt that bridges biology with truth about the human condition from Margaret Atwood's "The Woman Who Could Not Live with Her Faulty Heart":

*I do not mean the symbol of love
a candy shape to decorate cakes with,
the heart that is supposed
to belong or break;
I mean this lump of muscle
that contracts like a flayed biceps,
purple-blue, with its skin of suet,
its skin of gristle, this isolate,
this caved hermit, unshelled
turtle, this one lungful of blood,
no happy plateful.*

*All hearts float in their own
deep oceans of no light,
wetblack and glimmering,
their four mouths gulping like fish...*

For this poet, the heart of this poem is more complicated, as the last line conveys:

*One night I will say to it:
Heart, be still,
and it will.*

Perhaps e e cummings was only teasing us when he wrote in 95 Poems “now air is air and thing is thing...,” for surely he would have agreed that poems are both “air and thing.” A poem at the right moment can let in a breeze, warm and balmy, evoking memory and sensations, or chilly, cold and invigorating, leading to spirited discussions. Poems mesh subject matter to the human condition, to society’s values and problems. Poets raise the important human questions and undertake the struggle to answer them. There are poems that can add spice and depth to classes across the entire span of the curriculum.

Nothing else but “some forms of advanced science — particle physics, for example,” says poet, educator, and 1996 Pulitzer Prize winner Jorie Graham, “allows a young mind to experience the paradox, ambiguity, irrational thought, associative ‘leaping’ any good poem teaches us to think and feel in.”

Davi Walders is a poet and education consultant whose poetry and prose have appeared in The American Scholar, Ms, Cross Currents, Seneca Review, and many other literary journals and publications. Her poems are included in numerous anthologies, including Worlds in Their Words: Contemporary American Women Writers (Prentice Hall); Grow Old Along with Me—The Best Is Yet to Be, There’s No Place Like Home for the Holidays, and Generation to Generation (Papier Mache Press); and Beyond Lament: Poets of the World Bearing Witness to the Holocaust (Northwestern University Press).

In addition to being a poet, Ms. Walders is also an education consultant and lives in Chevy Chase, Maryland. She is compiling an anthology, Poetry Across the Curriculum, and some of the ideas in this article first appeared in the Virginia Journal of Education.

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ZINC

I am zinc, the taste of a metal sink.
Cool on the brink of a bluff, I blink
at the sun,
an ore one
dredges for
while dreaming
of silver at
earth’s core.
I am class,
mix with
brass and
bronze,
shine on
copper and
nickel I click
in clocks, glitter
on steel, galvanize
gutters. But as zinc I’m more for I
link with oxide on noses at the shore.

Davi Walders

STARS

*How countlessly they congregate
O’er our tumultuous snow,
Which flows in shapes as tall as
trees
When wintry winds do blow!—*

*As if with keenness for our fate,
Our faltering few steps on
To white rest, and a place of rest
Invisible at dawn,—*

*And yet with neither love nor hate,
Those starts like some snow-white
Minerva’s snow-white marble eyes
Without the gift of sight.*

FIREFLIES IN THE GARDEN

*Here come real stars to fill the
upper skies,
And here on earth come emulating
flies,
That though they never equal stars
in size,
(And they were never really stars
at heart)
Achieve at times a very star-like
start.
Only, of course, they can’t sustain
the part.*

Robert Frost

Poets and Poems on Science

Science is often the subject of poetry because the small and large questions of life with which science deals also intrigue poets. Even the tiniest details and anomalies found in nature, things, and relationships offer themselves as gifts to inspire poetry. Poems on science are filled with the sense of wonder that opens and delights young minds.

Poets whose work on scientific themes has touched me and given me much to think about over the years include:

Margaret Atwood, *Selected Poems 1965-1976*, Houghton Mifflin, 1987. Includes such wonderful poems as "The Woman Who Could Not Live With Her Faulty Heart."

e e cummings, *The Complete Poems, 1913-1962*, Harcourt Brace Jovanovitch, 1972. Includes such poems as "now air is air and thing is thing: no bliss" and "[space being (don't forget to remember) Curved]."

Emily Dickinson, *Collected Poems of Emily Dickinson*. Doubleday, 1997. Also a website where more than 1000 of her poems can be downloaded. Any collection will include such surprising and thought-provoking gems as "The Brain—is wider than the Sky."

Robert Frost, *Collected Poems, Prose, & Plays by Robert Frost*, R. Poirier and M. Richardson, eds. The Library of America, 1995. Includes poems such as "Our Hold on the Planet," and "Why Wait for Science?"

Robinson Jeffers, *Collected Poetry of Robinson Jeffers Vol II 1928-38*, Tim Hunt, Ed. Contains beautiful pieces about the natural world, Big Sur, and the California coast such as "Evening Ebb."

Mary Oliver, *New And Selected Poems* and her other collections contain quiet celebrations of animals, the moon, trees, the seasons. A sampling of titles includes "Alligator Poem," "Poppies," "Water Snake," and "Black Snake."

Marge Piercy' *Mars and Her Children* and many of her other collections have poems about the gifts of the world including whales that visit the coast of Cape Cod, her cats, and her garden.

Muriel Rukeyser, *A Muriel Rukeyser Reader*, Jan Levi, Ed. WW Norton, 1994. Contains amusing and true poems of praise for small things such as "The Conjugation of the Paramecium" and "St. Roach."

William Carlos Williams, *Selected Poems*, New Directions Publishing Corp., 1985. Williams was a doctor who practiced full-time while writing some of America's finest poetry. Many of his poems such as "Iris" are famous for their beauty and power.

Davi Walders

SB&F Reviewed or Recommended Resources

The following titles are recommended by *SB&F* staff, colleagues, or reviewers.

Books

Alderson, Sue Ann. *Pond Seasons*. (Illus. by Ann Blades.) Buffalo, NY: Groundwood Books, 1998. 32 pp. \$15.95. ISBN 0888992831; C.I.P. [EP, EI]

A selection of poems about animals, nature, and the seasons.

Allman, John. *Curve Away from Stillness: Science Poems*. NY: New Directions, 1989. 83 pp. \$7.95. ISBN 0-8112-108-12. [GA, C]

Asch, Frank. *Sawgrass Poems: A View of the Everglades*. (Illus. by Ted Levin.) San Diego: Harcourt Brace, 1996. 48 pp. \$18.00. ISBN 0-15-200180-8. C.I.P.

Levin and Asch have a love affair with the Everglades. Whether the subject is a manatee or mosquito, they treat each one's living and surviving seriously, but not without amusement. The book should appeal to young and old. (See *SB&F*, Vol. 33, No. 1, pg. 20 [EP-EA, GA] ★★)

Asch, Frank. *Song of the North*. (Illus. by Ted Levin.) NY: Harcourt, 1998. 48 pp. \$16.00. ISBN 0-15-201258-3. C.I.P. See *SB&F*, Vol. 35, No. 3, pg. 57)

Brown, Kurt (Ed.). *Verse and Universe: Poems About Science and Technology*. Minneapolis: Milkweed, 1998. xiv+345pp. \$15.95 (paper). 98-19340. ISBN 1-57131-407-5. Index. C.I.P.

The beauty of poetry is appropriate in any venue of the human mind, heart, and spirit; in this book lies the proof thereof. You need not be a scientist or a sophisticated lover of poetry to appreciate this work, simply indulge, and be the better for it. (See *SB&F*, Vol. 35, No. 4, pg. 163. [YA, GA, C, T] ★★)

Elder, John. *Imagining the Earth: Poetry and the Vision of Nature*. Champaign, IL: University of Illinois, 1985. 248 pp. \$24.95. ISBN 025-201-1775. C.I.P.

Fleischman, Paul. *Joyful Noise: Poems for Two Voices*. (Illus. by Eric Beddows.) NY: Harper Collins, 1990. 44 pp. \$15.95. ISBN 0-0602-18533. C.I.P.]

Paul Fleischman verbally re-creates the "Booming/boisterous/joyful noise" of insects. The poems resound with the pulse of the cicada and the drone of the honeybee. A clear and fascinating guide to the insect world—from chrysalid butterflies to whirligig beetles. *Newbery Medal Award 1990*. [EI-JH, GA]

Fletcher, Ralph. *Ordinary Things: Poems from a Walk in Early Spring*. (Illus. By Walther Lyon Krudop.) NY: Atheneum, 1997. \$16.00. ISBN 0-6898-1035-0. C.I.P.

Thirty-three poems capture the wonder of ordinary objects that are found on a spring walk to and through the

woods, from stone walls and streams, to leaves and a Beetle. [EA, JH, GA]

Florian, Douglas. *On the Wing: Bird Poems and Paintings.* NY: Harcourt Brace, 1996. 48 pp. \$16.00. ISBN 01-5200-4917. C.I.P.

Twenty-one poems about birds, from familiar ones to exotic, are included. *1995 Lee Bennett Hopkins Poetry Award.* [EP-JH, GA]

Florian, Douglas. *Insectlopedia: Poems and Paintings.* NY: Harcourt Brace, 1998. \$16.00. ISBN 01-5201-3067. C.I.P.

Poems about 21 insects and spiders. [EP-JH, GA]

Frucht, William, (Ed.). *Imaginary Numbers: An Anthology of Marvelous Mathematical Stories, Diversions, Poems, and Musings.* NY: Wiley, 1999. 335 pp. \$27.95. ISBN 0-471-33244-5. C.I.P.

George, Kristine O'Connell. *Old Elm Speaks: Tree Poems.* (Illus. by Kate Kiesler.) NY: Clarion Books, 1998. \$15.00. 48 pp. ISBN 0-3958-761-17. C.I.P.

In a variety of poem forms, from free verse, rhyme, and haiku, willows, pine, elm, and other types of trees describe themselves and their environment. (See *SB&F*, Vol. 35, No. 3, pg. 57) [EI-JH]

Goldish, Meish. *101 Science Poems & Songs for Young Learners: with Hands-On Activities.* (Illus.; An *Instructor Book*) NY: Scholastic, 1977. \$12.95. ISBN 05990-96369-4. [EP-EI]

Kennedy, Dorothy M., *Make Things Fly: Poems About the Wind.* (Illus. by Sasha Meret.) NY: Margaret McElderry, 1998. 32 pp. \$16.00. ISBN 0-689-81544-1. C.I.P. (See *SB&F*, Vol. 35, No. 3, pg. 57) [EP-EI]

Levy, Constance. *I'm Going to Get a Pet Worm Today and Other Poems.* (Illus. By Ronald Himler.) NY: Margaret McElderry, 1991. \$14.00. 38 pp., ISBN 0-6895-05-353.

Everyday things, mostly from nature and described in thirty-nine poems for young readers. [EP, EI]

Lyon, George Ell. *Counting on the Woods.* (Illus. by Ann W. Olson). NY: DK Publishing, 1998. \$15.95. 32 pp. ISBN 0-789-42480-0. C.I.P.

"A delightful book to share with young readers. The book features a walk in the woods and what was found there." (See *SB&F* review, Vol. 34, No. 8, pg. 243; [K, EP, T]★★

Prelutsky, Jack. *Tyarnnosaurus Was a Beast.* (Illus. by Arnold Lobel.) NY: Greenwillow, 1988. 31 pp., ISBN 0-688-06443-4. C.I.P.

"A light-hearted looks at dinosaurs...factual information is cleverly incorporated into each poem." (see *SB&F* review, Vol. 24, No. 4, pg. 244; [EP-EA]★

Sierra, Judy. *Antarctic Antics: A Book of Penguin Poems.* (Illus. by Jose Aruego and Ariane Dewey.) NY: Harcourt, 1998. \$16.00. 32 pp. ISBN 0-15-201006-8. C.I.P.

"In hilarious verse and illustration, children really learn about the habitat, birthing, feeding, parenting, and more." (See *SB&F*, Vol. 35, No. 3, pg. 57.)

Steinman, Lisa M. *Made in America: Science, Technology, and American Modernist Poets.* New Haven, CT: Yale University Press, 1987. \$18.95. 219pp. ISBN 03-0003-810-0. [GA, C]

Worth, Valerie. *All the Small Poems and Fourteen More.* (Illus. by Natalie Babbitt.) NY: Sunburst, 1996. \$6.95 (paper). ISBN 03-744-03457. C.I.P.

Contains all four *Small Poems* books in one volume, plus fourteen new poems. Worth writes about ordinary things from an extraordinary perspective.

Yolen, Jane, Ed. *Mother Earth Father Sky.* (Illus. by Jennifer Hewitson.) Honesdale, PA: Boyds Mill, 1996. \$15.95. 64 pp. ISBN 1563974142.

An anthology of 40 nature poems by C.S. Lewis, Christina Rossetti, Joseph Langland, and other notable authors that focus on earth and conservation. [EI, EA]

Yolen, Jane. *Sea Watch, A Book of Poetry.* (Illus. by Ted Lewin.) NY: Philomel Books, 1996. \$15.95. 30 pp. ISBN 0399227342. [EI, EA]

Websites

<http://www.poets.org/npm/npmfrmst.htm>
National Poetry Month's website.

Includes practical suggestions for teachers, librarians, and others on how to set up programs, events, classes, and displays, along with selected success stories of National Poetry Month programs and events from around the country.

<http://www.bartelby.com>

Named after the humble character of its namesake scrivener, or copyist, Bartleby publishes the classics of literature, nonfiction, and reference free of charge for the home, classroom, and Internet users. An ever-expanding list of great books—currently thousands of works by hundreds of authors—meets the needs of students, researchers, and pleasure readers alike. Poetry classics are included.

<http://www.Poetry.com>

This site encourages writing poetry and reading others poems. Contests, such as the Haiku of the Day, prizes, and links to other sources are featured.

<http://www.magicdragon.com/UltimateSF/sfpo.html>

The Ultimate Science Fiction Poetry Guide is a detailed list of links to science fiction poetry resources.

<http://www.g-search.or.jp/kenji/english/works/science.html>

Poetry Encounters Science, a web page devoted to Japanese poet Miyazawa Kenji includes three essays discussing the convergence of poetry and science in Kenji's work.