LitLinks: Writing Equation Poems in Science Class

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TODAY'S GUEST BLOGGER: LAURA PURDIE SALAS

I love science, math, and words, and in *Snowman-Cold=Puddle: Spring Equations* (Charlesbridge, 2019), I play with all three.

Snowman is about the transformations of spring. But instead of using numbers or symbols in these equations, I used words and metaphors.

So, when a woodpecker reminded me of a drumbeat, I wrote:

bark + beak = drum

I expanded on the equations with science sidebars.

> *Tap. Tap. Tap. A downy woodpecker digs for bugs in a tree. Tap-tap-tap-tap-tap-tap-tap! It drums faster in spring to claim its territory or attract a mate.*

And Micha Archer's gorgeous illustrations fill in much of the meaning and magic!

Creating Science/Poetry Equation Spinners

Step One: Just the facts

Brainstorm a list of facts related to your science unit. For example, if you're studying the life cycle of a monarch butterfly, a few facts might be:

- butterflies mate and lay eggs on milkweed
- larvae eat the milkweed to grow
- over 10 days' time, a larva breaks down and rearranges into a butterfly
- monarchs fly and float on the wind

Step Two: Where is this relationship going?

Read ***Snowman-Cold=Puddle*** with your students. You could also read some student and grown-up equation poems in my Padlet. By the time you finish reading the book and a few Padlet poems, your students will probably already be coming up with their own!

The key to this activity is thinking about *change*. Equations are about relationships. How two things together become a different thing. How taking away one element totally changes the first thing. Or how multiplying one thing leads to something else.

Take the facts you brainstormed above and turn them into equations, like:

- butterfly + butterfly = eggs
- butterflies – milkweed = no eggs
- larva + milkweed = butterfly
- larva – milkweed = hunger
- chrysalis x 10 days = butterfly
- monarch + wind = float

Step Three: Add some dazzle!

I also think about metaphor. Without metaphor, these equations can be very literal and nothing more than a recitation of facts. So ask yourself, which part of the equation could you compare to something else? You will often think of more than one possibility!

- monarch + wind = kite
- monarch + wind = ballerina
- chrysalis x 10 days = magic!
- butterfly + butterfly = family
- butterflies – milkweed = empty skies

- milkweed + eggs = daycare
- larva + milkweed = stained-glass wings
  You could play with alliteration—have fun with these equations!

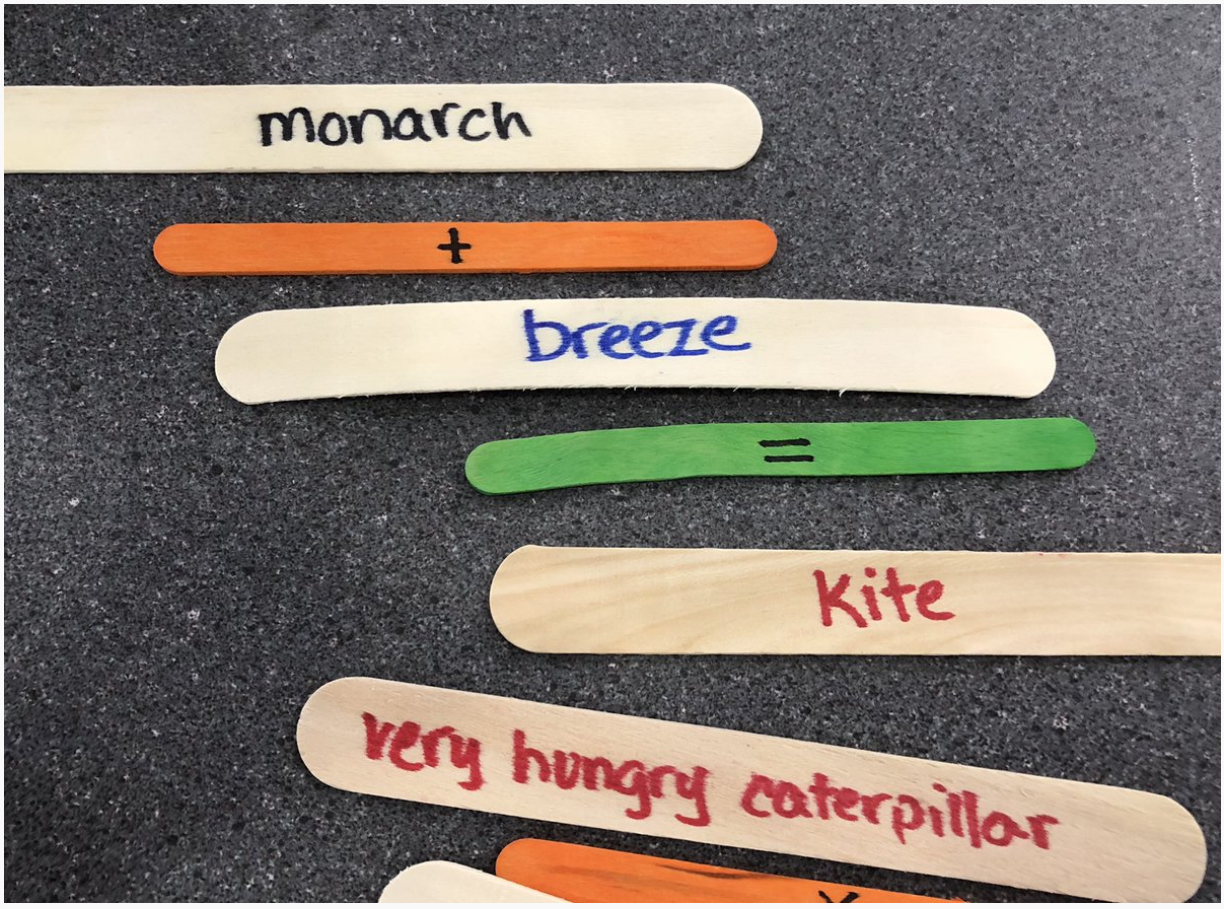
- butterfly + breeze = ballerina

Step Four: Get physical

Turning the equations into physical objects kids can manipulate brings the activity to life for me. It lets students explore and think about options and relationships as they try to solve the equations.

Two fun options are popsicle sticks and Styrofoam cups.

Here's what the popsicle sticks look like:



And here's an example of the Styrofoam cup spinner:

You give this to students all mixed up and ask them to find the equations.

Editor's Note: Extra kudos if you can find a substitute for these single-use plastic cups!

How you use this activity depends on the ages and skills of your students and on what you're working on. You could write them in groups, individually, or as an entire class. It could be a review activity for a test, a science center activity, or a language arts activity tied to a science

unit. Students could write them and exchange them and try to solve them. The possibilities are endless!

I hope you have fun trying this out, and I would LOVE for you to share some of your equation poems on the Padlet on my website: www.laurasalas.com/snowman

You'll also find a teaching guide and a downloadable equation poem activity sheet there. Remember…

science + poetry = surprise!

Laura makes an equation poem in Minnesota!

Former teacher **Laura Purdie Salas** *has written more than 130 books for kids, including* **Meet My Family!**, *the* **Can Be…** *series (Bank Street Best Books, IRA Teachers' Choice),* **BookSpeak!** *(Minnesota Book Award, NCTE Notable), and* **If You Were the Moon** *(finalist for the 2018 AAAS/Subaru SB&F Prize in Science Children's Books) Laura loves to share inspiration and practical tips with educators about poetry, nonfiction, and more. Visit Laura at laurasalas.com or connect with her on Twitter @LauraPSalas.*