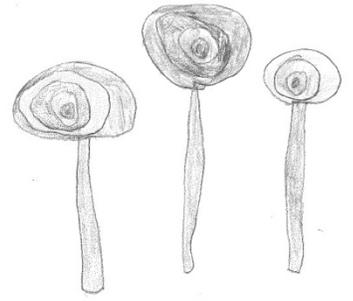


Storytelling and Math

Janice Novakowski



Storytelling creates an opportunity for students to make meaning of mathematics through making connections.

“connect mathematical concepts to each other and to other areas and personal interests”

~BC K-9 Mathematics curricular competency

Making Connections

- math to self
- math to world
- math to math

What openings are you creating in your classroom for students to make connections?

“Learning is embedded in memory, history, and story.”

~First Peoples Principles of Learning, FNEESC

“engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures”

~BC K-9 Mathematics curricular competency

In their book, *Teaching Mathematics as Storytelling* (2009) SFU Mathematics Education professors Zazkis and Liljedahl examine the role of storytelling in the mathematics classroom, with the teacher in the role of storyteller. They define a story as having conflict and a structure and examine specific elements of a story:

- plot
- conflict
- images
- human meaning
- the sense of wonder
- humor
- patterns

“stories make us feel”

~Zazkis & Liljedahl, 2009, p. 3

*How does a personal or emotional connection to story shift our engagement or meaning-making?
How might a more personal and open approach to “story or word problems” support students’ learning of mathematics?*

Zazkis and Liljedahl (2009) also consider story types, as pertaining to the kind of engagement with mathematics that the story brings:

- stories that set a frame or background
- stories that accompany or intertwine
- stories that introduce
- stories that explain
- stories that ask a question
- stories that tell a joke

“We tell stories in the mathematics classroom to achieve an environment of imagination, emotion, and thinking. We tell stories in the mathematics classroom to make mathematics more enjoyable and more memorable. We tell stories in the mathematics classroom to engage students in a mathematical activity, to make them think and explore, and to help them understand concepts and ideas.” (page ix)

What might it mean for students if they told their own stories?

Picture books to inspire problems and stories involving change in quantities:

Splash! by Ann Jonas

One Duck Stuck by Phyllis Root

Quack and Count by Keith Baker

Counting on Fall by Lizann Flatt

Picture books to inspire sharing problems and stories:

The Cookie Fiasco by Dan Santat

The Doorbell Rang by Pat Hutchins

Bean Thirteen by Matthew McElligott



Picture books to inspire problems and stories involving decomposing and composing quantities:

Ten Black Dots by Donald Crews

12 Ways to Get to 11 by Eve Merriam

Picture books to connect to counting collections:

Hannah’s Collections by Marthe Jocelyn

Two Ways to Count to Ten by Ruby Dee

What in the World? Numbers in Nature by Nancy Raines Day

Great Estimation by Bruce Goldstone

Amanda Bean’s Amazing Dream by Cindy Neuschwander

Provocations to inspire mathematical storytelling:

What math stories can you tell?

What stories live in these materials?

What stories live in numbers?

What stories live in these equations?

How can you use shapes to tell a story? How do the shapes give you ideas for your story? How can you compose and decompose shapes to give you new ideas?

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janice/April2019