

THROUGH THE LOOKING GLASS:

*Using literature as windows into equity
in early mathematics*

Cynthia E. Taylor, Cynthia.taylor@Millersville.edu

Kelley Buchheister, kbuchheister2@unl.edu

Christa Jackson, jacksonc@iastate.edu



“Difference does not diminish; it enlarges the sphere of human possibilities.”

(Sacks, 2002, p. 201)

Diversity in Children's Books 2015

Percentages of books depicting characters from diverse backgrounds.
Based on the 2015 publishing statistics compiled by the Cooperative Children's Book Center, School of Education, University of Wisconsin-Madison:
ccbc.education.wisc.edu/books/pcstats.asp



0.9%
American
Indians/
First Nations

2.4%
Latinx

3.3%
Asian Pacifics/
Asian Pacific
Americans

7.6%
African/
African
Americans

12.5%*
Animals, Trucks, etc.

73.3%**
White

Illustration by David Huyck, in consultation with Sarah Park Dahlen & Molly Beth Griffin
Released under a Creative Commons BY-NC-SA license: <https://creativecommons.org/licenses/by-nc-sa/4.0/>

* About a quarter of the total children's books published in 2015 were picture books, and about half of those depict non-human characters, like animals & trucks.

** The remainder depict white characters.

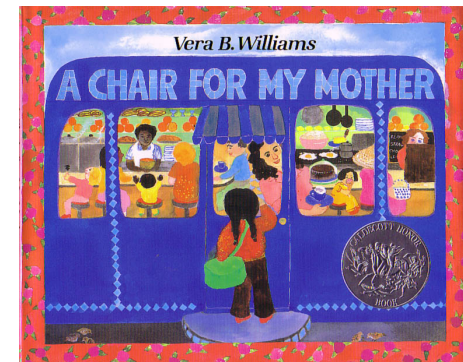
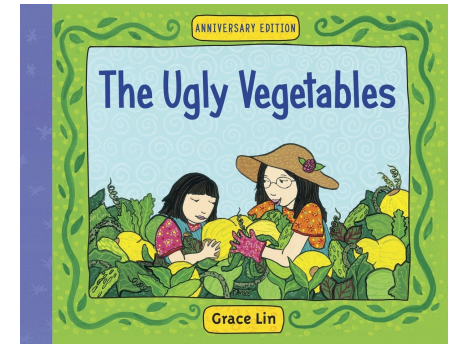
EMPOWERING STUDENTS— CULTURALLY RICH STORIES

- **Color-aware approach**

- Intentional teaching—purposeful value discussions
- Address race in direct and positive ways

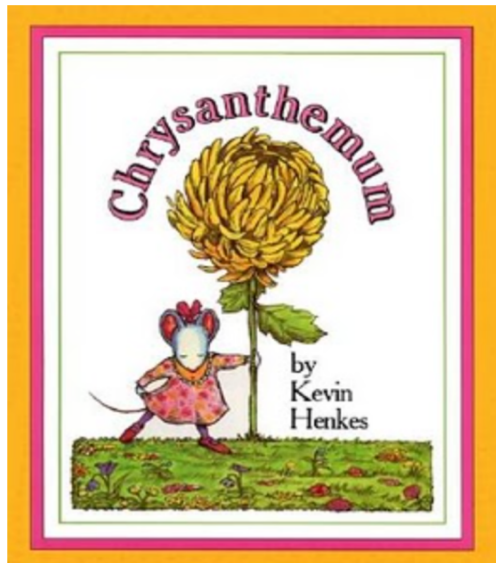
- **Social justice approach**

- Empower children to advocate for equity
- Recognize and act upon race-related injustices
 - *Unfairness and discrimination*

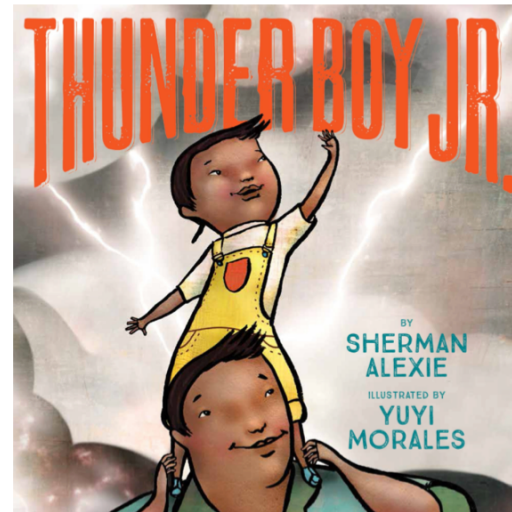
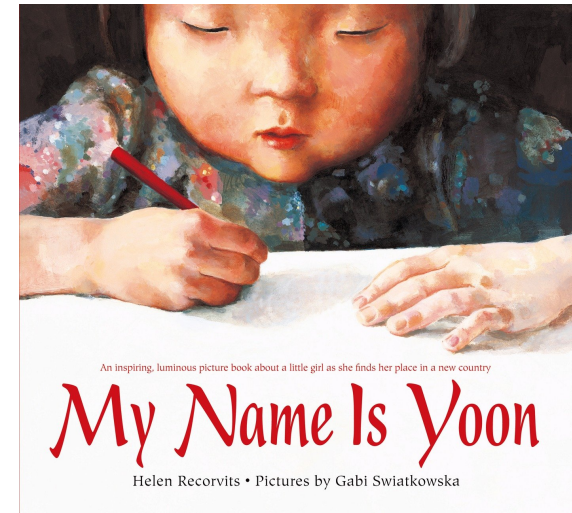


MAKING CONSCIOUS SHIFTS

FOR EXAMPLE, SHIFTING FROM...



to include...



Continuing the connections:

1. Have you ever had an experience like in this story?
2. Are the characters in this story like you or anyone in your family?
3. What was your favorite part about this story? Why?



STRATEGIES FOR IDENTIFYING CULTURALLY, AND MATHEMATICALLY, RICH LITERATURE

- **Select books that provide opportunities for self-reflection**
 - Tools that affirm sense of racial identity (Bishop, 1990; Wanless & Crawford, 2016)
 - Does the book allow children to imagine themselves in the story?
 - *Mirror elements of identity (e.g., race, community, values)*
 - Does the book encourage children to expand their understanding or empathy for others?
 - *Introductions to unfamiliar people, places, or contexts*
- **Thought-provoking tasks**—grounded in math content and processes
 - **Color-aware:** *Mathematical explorations contextualized in related literature*
 - **Social justice:** *Math as tools to investigate or document inequities*
- **REMEMBER:** No single book fully represents a group or issue
 - Seek “text sets”
 - Collections on a topic to emphasize different perceptions



“Starter” Children’s Book List

- **Counting on Frank** By: Rod Clement
 - Possible concept: Measurement
- **Dreaming Up** By Christy Hale
 - Possible concepts: Building, Shape & Space
- **Feast for 10** By: Cathryn Falwell
 - Possible concepts: Counting, Numeral to Quantity
- **Google-eyed Goats** By: Stephen Davis & Christopher Corr
 - Possible concepts: Addition & Counting
- **Handa’s Surprise** By: Eileen Browne
 - Possible concept: Subtraction
- **“More, More, More” said the Baby** By Vera B. Williams
 - Possible concepts: more/less, comparing concepts
- **Mr. George Baker** By: Amy Hess
 - Possible concepts: Counting, Addition/Subtraction, Sorting
- **My Rows and Piles of Coins** By: Tololwa Mollel
 - Possible concepts: Sorting & Money
- **Please, Baby, Please** By Spike Lee and Tonya Lewis Lee
 - Possible concept: time
- **Subway** By: Anastasia Suen
 - Possible concepts: Spatial orientation
- **Two of Everything** By: Lily Toy Hong
 - Possible concept: Doubling
- **The Ugly Vegetables** By: Grace Lin
 - Possible concepts: Sets, Measurement/cooking

Professional References

- Bishop, R.S. 1990. “Multicultural Literacy: Mirrors, Windows, and Sliding Glass Doors.” *Perspectives: Choosing and Using Books for the Classroom* 6 (3). www.psdschools.org/webfm/8559.
- Botelho, M.J., & M.K. Rudman. 2009. *Critical Multicultural Analysis of Children’s Literature: Mirrors, Windows, and Doors*. Language, Culture, and Teaching series. New York: Routledge.
- Boyd, F.B., L.L. Causey, & L. Galda. 2015. “Culturally Diverse Literature: Enriching Variety in an Era of Common Core State Standards.” *The Reading Teacher* 68 (5): 378–87.
- Derman-Sparks, L., & J.O. Edwards. 2010. *Anti-Bias Education for Young Children and Ourselves*. Washington, DC: NAEYC.
- Durden, R., E. Escalante, & K. Blitch. 2015. “Start With Us! Culturally Relevant Pedagogy in the Preschool Classroom.” *Early Childhood Education Journal* 43 (3): 223–32.
- Husband Jr., T. 2012. “‘I Don’t See Color’: Challenging Assumptions About Discussing Race With Young Children.” *Early Childhood Education Journal* 39 (6): 365–71.
- Myers, W.D. 2014. “Where Are the People of Color in Children’s Books?” *New York Times*. www.nytimes.com/2014/03/16/opinion/sunday/where-are-the-people-of-color-in-childrens-books.html?_r=0.
- Paley, V.G. 1998. *The Girl With the Brown Crayon: How Children Use Stories to Shape Their Lives*. Cambridge, MA: Harvard University Press.
- Wanless, S. B. & Crawford, P. A. (2016). Reading your way to a culturally responsive classroom. *Young Children*, 71,(2): 8 – 15. <https://www.naeyc.org/resources/pubs/yc/may2016/culturally-responsive-classroom>

