Colorado State Library
GRT Quick Bites
20 Minute Topics in Early Learning

A-B-Cs & 1-2-3s! Numeracy and Early Literacy
Kate Brunner
Your Colorado Early Learning Support Team

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Photo by N. Romano (2019)
Growing Readers Together & Early Childhood in Colorado

- Up to **57% of children under 6** are cared for informally by family members, friends, & neighbors (FFN caregivers)
- GRT prioritizes & supports library service to FFN caregivers
- **GOAL:** To increase FFN’s awareness of library resources and services through outreach, community partnerships, and relationship building.
Today, let’s explore...

Whole child early learning

The numeracy-literacy connection

Early numeracy in libraries
Whole Child Early Learning & Development

- Physical development & health
- Language & literacy
- Cognitive development (STEM, logic & reasoning, arts & humanities)
- Social-emotional development
- Approaches to learning

https://earlylearningco.org/guidelines/introduction/
Reimagining School Readiness

Center for Childhood Creativity at the Bay Area Discovery Museum
Early Numeracy

**Numbers Sense & Operations** - (ex. 1-to-1 correspondence, ordinality, subitizing, operational problem solving)

**Geometry & Spatial Sense** - (ex. shapes, directions, & relationships)

**Measurement** - (ex. quantity, frequency, & comparison)

**Patterns & Algebraic Thinking** - (ex. dynamic/static patterning, prediction)

**Data Analysis & Classification** - (ex. sorting and using information)

**Creativity & Reasoning** - (ex. problem solving, communicating ideas)
“...there is growing evidence that both early literacy and early numeracy skills are strong predictors of children’s long-term achievement (e.g., Duncan et al., 2007; Watts, Duncan, Siegler, & Davis-Kean, 2014), with early numeracy emerging as the strongest predictor of later success.”

https://www.renaissance.com/2019/08/01/blog-connections-early-literacy-numeracy-preschool/
“An engaging and encouraging climate for children's early encounters with mathematics develops their confidence in their ability to understand and use mathematics. These positive experiences help children to develop dispositions such as curiosity, imagination, flexibility, inventiveness, and persistence, which contribute to their future success in and out of school (Clements & Conference Working Group, 2004).”

“Mathematics in Early Childhood” - National Council of Teachers of Mathematics (NCTM)
Use, share, and model mathematical and spatial language.

Engage inquiry-based problem solving mathematical and spatial activities.

Provide opportunities for children to explore and explain.

Model praising process and effort.
Additional Resources

★ CA Early Math Symposium -
https://www.earlymathca.org/2021-early-math-symposium

★ BADM Reimagining School Readiness Activity Database -
https://bayareadiscoverymuseum.org/school-community-programs/educator-resources/activities

★ Dr. Jo Boaler’s work - *What’s Math Got to Do With It?*, 
*Mathematical Mindset*, and *Limitless Mind*, as well as her website, https://www.youcubed.org/
Upcoming Learning Opportunities

★ August 18 at 11am MT
Reimagining School Readiness Training with Beth Crist & Melody Garcia - free registration required by Aug 4th

Register here: https://docs.google.com/forms/d/e/1FAIpQLScFd1J7iJZZmaAzCsBISeEfqNNRAzuk1gHIjmpFS3vXYl8Wiw/viewform?usp=sf_link

★ October 6th-8th
Colorado Libraries for Early Literacy Online Conference (Reimagining School Readiness preconference training Oct 6th at 12:30 MT open to all conference participants.)

For more information: https://www.clel.org/conference
Fall 2021 GRT Opportunities

★ Bring GRT’s Play, Learn, & Grow programming to your Colorado library - in-person or online.

★ Reach out to Kate or Melody to chat about continued development of early learning spaces, programs, services, & outreach at your library.

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We Welcome Your Input!

Please complete this short feedback survey:

https://www.surveygizmo.com/s3/4404594/GRT-Team