

Models and Manipulatives with A Long Shelf Life

Facilitated by: Sandi Stanhope and Ashley Marlow, All Learners Network

Date: October 21, 2024 8:30 AM-3:30 PM

Location: NIU - Naperville Campus
1120 E. Diehl Road, Naperville

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DESCRIPTION

All students need tools to think with—they first need concrete materials they can manipulate as they think about concepts, especially when they are introduced to new concepts. These tools help students build understanding and strategies for solving problems. Models are tools you think with. They stand in for complex ideas. We encourage all students to explore critical mathematical concepts through three types of models: concrete, representational, and abstract. We also recognize that some models have a longer shelf life than others and will have a bigger impact on mathematical progress. Although we know that students' progress through these multiple models is not linear, in our instruction, we believe that students deserve more time with concrete models while they build understanding of big mathematical ideas. They can work with representations and symbols alongside the concrete models. We can make intentional connections between each type to help students along the way.

OUTCOMES

During this workshop, teachers will

1. Investigate the benefits of embedding the use of models with learners in grades K-8 to support access, equity, and sense making
2. Explore ways to use models within the context of high leverage concepts
3. Engage with instructional strategies for connecting multiple models
4. Share/Brainstorm ideas for model management
5. Understand the long term impact of mathematical models on conceptual understanding

ABOUT THE PRESENTERS

Sandi Stanhope, Chief Learning Officer at ALN

Sandi Stanhope worked in Franklin County for over 25 years as a primary classroom teacher, teacher leader, math interventionist and math coach. She has spent more than 20 years digging into the research around the ways in which young children develop early numeracy, additive reasoning, and their overall developing understanding of mathematics. She was a lead facilitator in the development and implementation of and training for the Primary Number and Operations Assessment (PNOA), a tool used throughout VT and elsewhere to identify what young students know and can apply around concepts in early numeracy. In addition, in the role of a primary mathematics consultant, she is a frequent course instructor and workshop presenter supporting teaching and learning of essential content, knowledge, and pedagogy for teachers and students in the area of mathematics. Sandi is a graduate of Vermont Mathematics Initiative (VMI) and a national trainer for OGAP Additive Reasoning.

When she is not immersed in researching the mathematics of young children, Sandi enjoys time off with her family and traveling.

Financial Disclosure: Sandi is **employed with All Learners Network.**

Non-Financial Disclosure: Sandi has **no relevant non-financial disclosures.**



Ashley Marlow, Director of Operations at ALN

Ashley Marlow, MS. Ed., is an elementary math coach and consultant, and the director of All Learners Network. She is a former third-grade classroom teacher with a passion for supporting teachers in creating equitable learning opportunities in math. Ashley plans professional learning opportunities focusing on instructional routines in mathematics that support belonging, engagement, and access to rigorous grade-level content for all.

Financial Disclosure: Ashley is **employed with All Learners Network.**

Non-Financial Disclosure: Ashley has **no relevant non-financial disclosures.**



This program qualifies for ISBE PD clock hours and CE for SLPs, OTs, PTs, SWs, Nurses through IDFPR.

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Questions? Email Samantha Conklin at sconklin@ucpnet.org

Registration fee: No cost as the training is sponsored through All Learners Network, and venue is sponsored through a grant from the Illinois State Board of Education.



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