STEM Initiatives in REL Midwest

Presentation to the PreK-12 STEM Education Innovations Committee

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Meet the Presenter

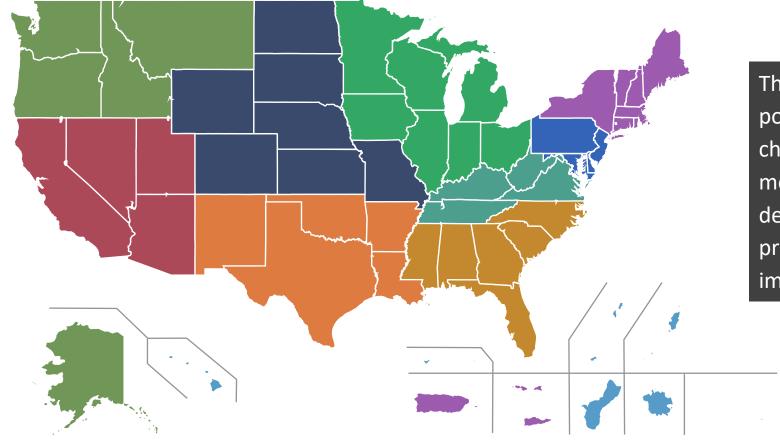


Katie Rich

REL Midwest



The Regional Educational Laboratory (REL) Program

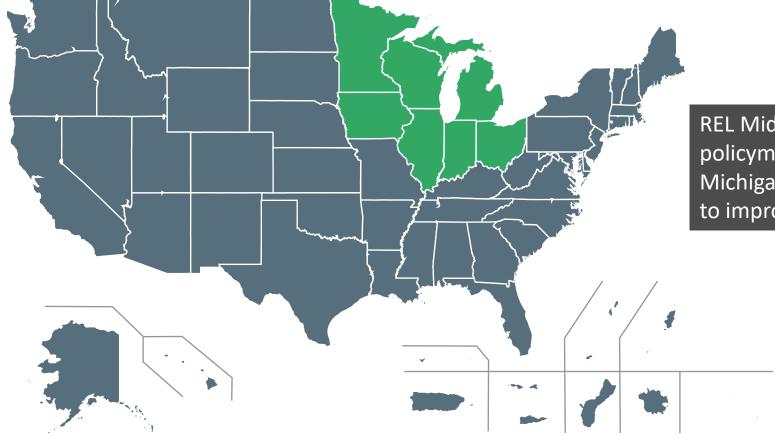


The 10 RELs partner with educators and policymakers nationwide. REL work is change oriented, supporting meaningful local, regional, or state decisions about education policies, programs, and practices designed to improve learner outcomes.

The RELs are funded by the U.S. Department of Education's Institute of Education Sciences (IES).



REL Midwest



REL Midwest partners with educators and policymakers in Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin to improve learner outcomes.

https://ies.ed.gov/ncee/rel/region/midwest

The RELs are funded by the U.S. Department of Education's Institute of Education Sciences (IES).



REL Midwest Partnerships



Teaching Fractions Toolkit Partnership







Supporting Inclusive and Diverse Educator Environments Partnership



Employability Skills Partnership





Making Equitable Schools Audit Partnership





Data-Informed Leadership for Equity Partnership





ENgagement and Achievement through Computational Thinking Partnership





Strategies to Improve Reading Partnership



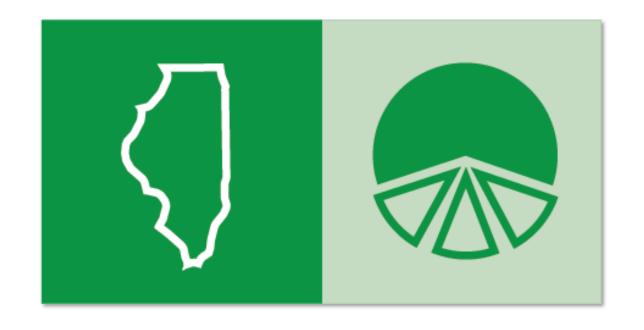
Teaching Fractions Toolkit Partnership (Illinois)



Teaching Fractions Toolkit Partnership (Illinois)

REL Midwest is partnering with the Illinois State Board of Education and school districts in Illinois to strengthen grade 6 students' conceptual understanding of fractions.

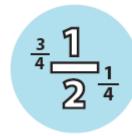
The **Teaching Fractions Toolkit Partnership** aims to narrow gaps in math achievement among Illinois student groups farthest from opportunity.



Teaching Fractions Toolkit Partnership (Illinois)



The components of the **Teaching Fractions Toolkit** include:



Professional development and supports for grade 6 math teachers on evidence-based practices for teaching fractions, rational number computation, and related concepts.





Supports for math leaders and school/district administrators to reinforce the broader developmental trajectory of fraction understanding across grades PreK–8.



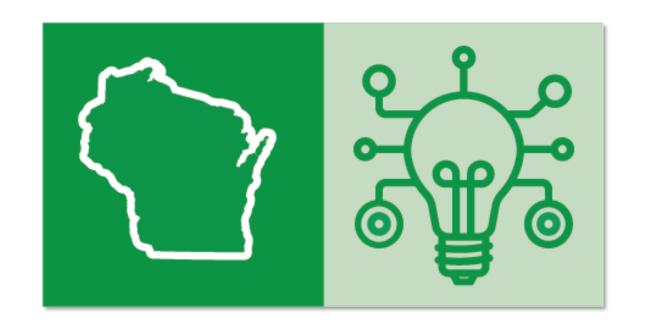
ENgagement and Achievement through Computational Thinking (ENACT) Partnership (Wisconsin)



ENgagement and Achievement through Computational Thinking (ENACT) Partnership (Wisconsin)

REL Midwest is partnering with school districts in Wisconsin to increase grade 6 students' confidence, engagement, and achievement in mathematics.

The focus of the **ENACT Partnership** is to develop, test, and refine an intervention to support Wisconsin grade 6 teachers in integrating **computational thinking** and **student-focused practices**.





ENACT Partnership (Wisconsin)—Impact

Partnership activities

Coordinate partnership activities with participating districts and schools.

Co-develop ENACT. Implement ENACT. Refine ENACT.

Assess usability/feasibility of ENACT across multiple cohorts.

Study long-term outcomes.

ENACT

- Conduct a three-day Summer Institute to train teachers on how to integrate computational thinking (CT) and studentfocused practices into their mathematics lessons.
- Support teachers through seven coaching sessions to reflect on and continuously improve their instruction using a rubric, student exit tickets and surveys, and teachers' written reflections.
- Meet with school leadership teams to reflect on teachers' experiences and student data.
- Develop dissemination resources (blog posts, videos, infographics) to share information about the partnership, intervention, and relevant research.

Short-term outcomes

Teachers

- Increase knowledge of CT and student-focused practices.
- Understand how to integrate CT and student-focused practices into their mathematics lessons.

Medium-term outcomes

Teachers

• Integrate CT and studentfocused practices into their mathematics lessons.

Long-term outcomes

Grade 6 students

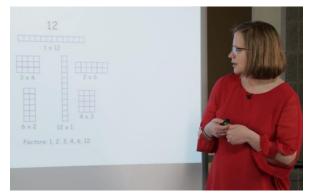
- Increase mathematics selfefficacy.
- Increase mathematics engagement.
- Increase mathematics achievement on year-end mathematics grades.
- Increase mathematics achievement on end-of-year tests.



ENACT Partnership (Wisconsin)—Scaling

To support scaling, the **ENACT Partnership** is committed to developing a robust set of resources that will support flexible implementation of the intervention in diverse contexts.

Teacher-facing



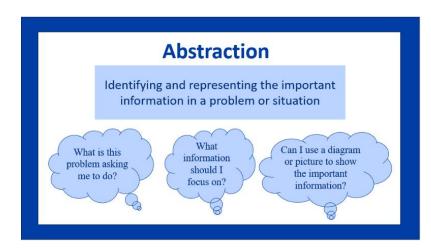








Student-facing



Coach-facing

Date ✓	Coaching Procedure	Notes
1. One week before visit		
	a. Support conceptual lesson planning: Contact the classroom teacher prior to the in-person coaching visit to clarify any questions teachers have about the upcoming lesson.	
	b. Facilitate logistical lesson planning: Decide who will lead which parts of the lesson and coordinate material development. Remind teachers to complete their reflection forms and update their lesson logs before the visit, if they have not done so already.	
	c. Facilitate planning of coaching day schedule: Coordinate with teachers to create an agenda that includes location and time of coaching components (co- teaching, debrief) and how to gain access to the school building.	
	d. Review and summarize teacher's student self-efficacy data. Review the data from the teacher's first	



Thank you!

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