



University of Idaho
Coeur d'Alene



IDAHO
REGIONAL MATHEMATICS CENTERS

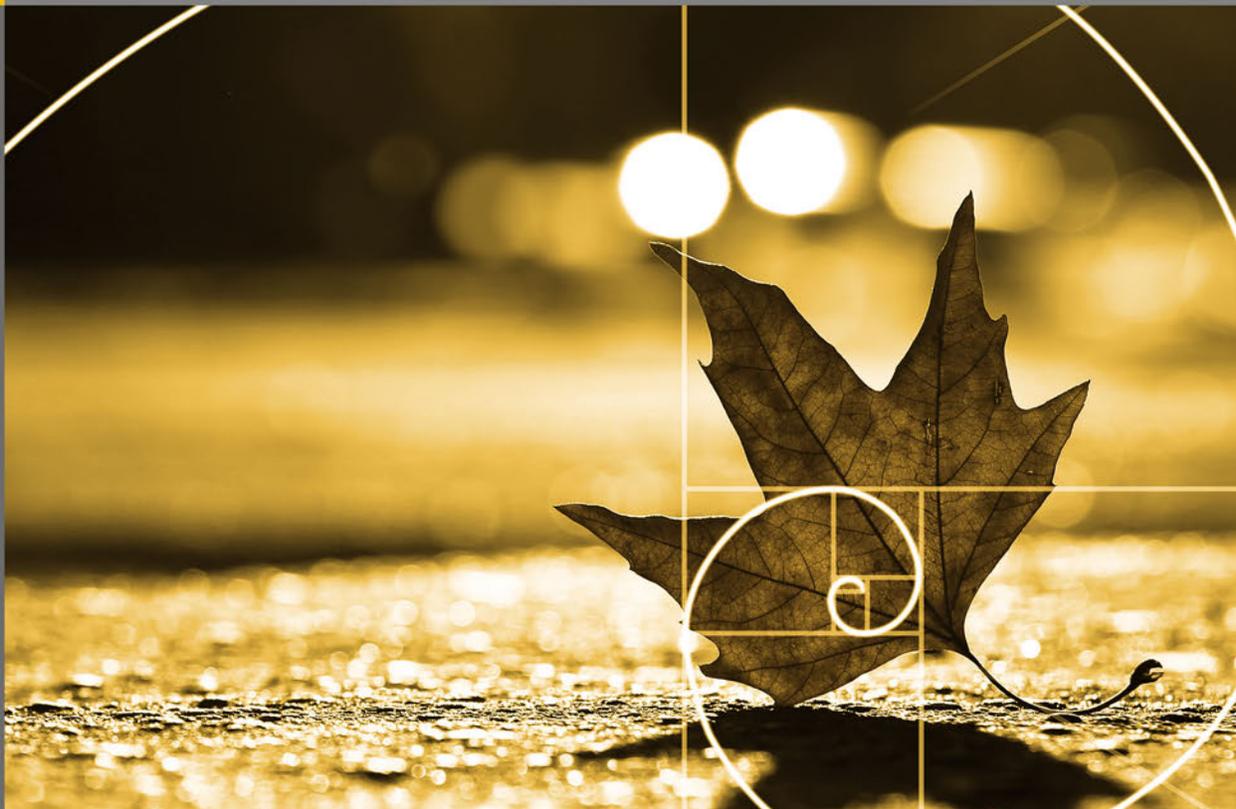
2018

Region

I

CENTER NEWS

Fall





IDAHO

REGIONAL MATHEMATICS CENTERS

REGION I FALL 2018 NEWSLETTER

CONTENTS

Center Staff 2

News 3

A Principal’s Role:
Shared Leadership for
Mathematical Instruction 4

Resources 9

Upcoming Events 10

QUESTIONS?

Contact us: irmc@uidaho.edu
(208) 292-2514

WANT TO MAKE SURE YOU'RE ON OUR MAILING LIST?

E-mail us with the subject line: Add Me!
irmc@uidaho.edu

FIND US ONLINE:

uidaho.edu/irmc | idahomath.com

Follow [#idahomath](https://twitter.com/idahomath)

Twitter: [@idmathed](https://twitter.com/idmathed)

Facebook: [irmccda](https://www.facebook.com/irmccda)

Center Staff



Dr. Julie Amador, Regional Director Associate Professor of Mathematics Education
Julie teaches elementary/middle school mathematics and technology education at the University of Idaho, in the College of Education, Health and Human Science's department of Curriculum and Instruction. She researches lesson study and how teachers design and enact lessons, with a strong emphasis on what teachers notice about student thinking.



Dr. Abe Wallin
Regional Math Specialist
Abe teaches courses on mathematical thinking and provides curriculum and teaching support to area school districts. He has been working on designing a K-5 curriculum, assessment writing, and development of mathematical tasks with local teachers. In addition, Abe continues to conduct research on the use of video clubs with mathematics teachers.



Jode Keehr
Program Coordinator
Jode's background is in design, advertising, and public relations. She is currently a graduate student in the human factors/experimental psychology doctoral program at the University of Idaho. Her current research looks at the effect of video speed and interruptions on learning performance.



Chris Chilton
Administrative Specialist
With years of experience in video, design, and audio, Chris supports local teachers with multimedia data collection and works on various projects for the center. He holds a bachelor's degree in electronic media and film from Eastern Washington University in Cheney, Washington.

Center News

ACTION-RESEARCH: REGION ONE ROUTINES FOR REASONING

More than 70 teachers from Region One participated in our Summer and Fall Academies based on *Routines for Reasoning* (Kelemanik, Lucenta, Creighton, 2016). Building on this work, the Idaho Regional Mathematics Center will continue exploring the routines with local students in the 2018-2019 school year.

In addition to an initial two-day training, the teachers are participating in a year-long action-research project between August 2018 and March 2019. Teachers are developing classroom materials and lessons based on research questions related to the routines.

During our project, teachers will meet face-to-face several times. These meetings will provide

opportunities for reflection on the implementation of the routines, discussion of modifications made, and to analyze data that teachers have collected.

At the culmination of this project, teachers will create presentations of their results, which then can be shared with others who may be considering using the routines for reasoning in their classrooms. The Idaho Regional Mathematics Center will also be collecting data on the overall experience of teachers as they implement the materials.



Academy resources are available on idahomath.com, which will be updated with new materials as projects progress.

A PRINCIPAL'S ROLE:

SHARED LEADERSHIP FOR MATHEMATICAL INSTRUCTION



By Jennifer Reyes

A principal's role in building instructional capacity around mathematics can be pivotal, especially when it is a part of a shared leadership model.

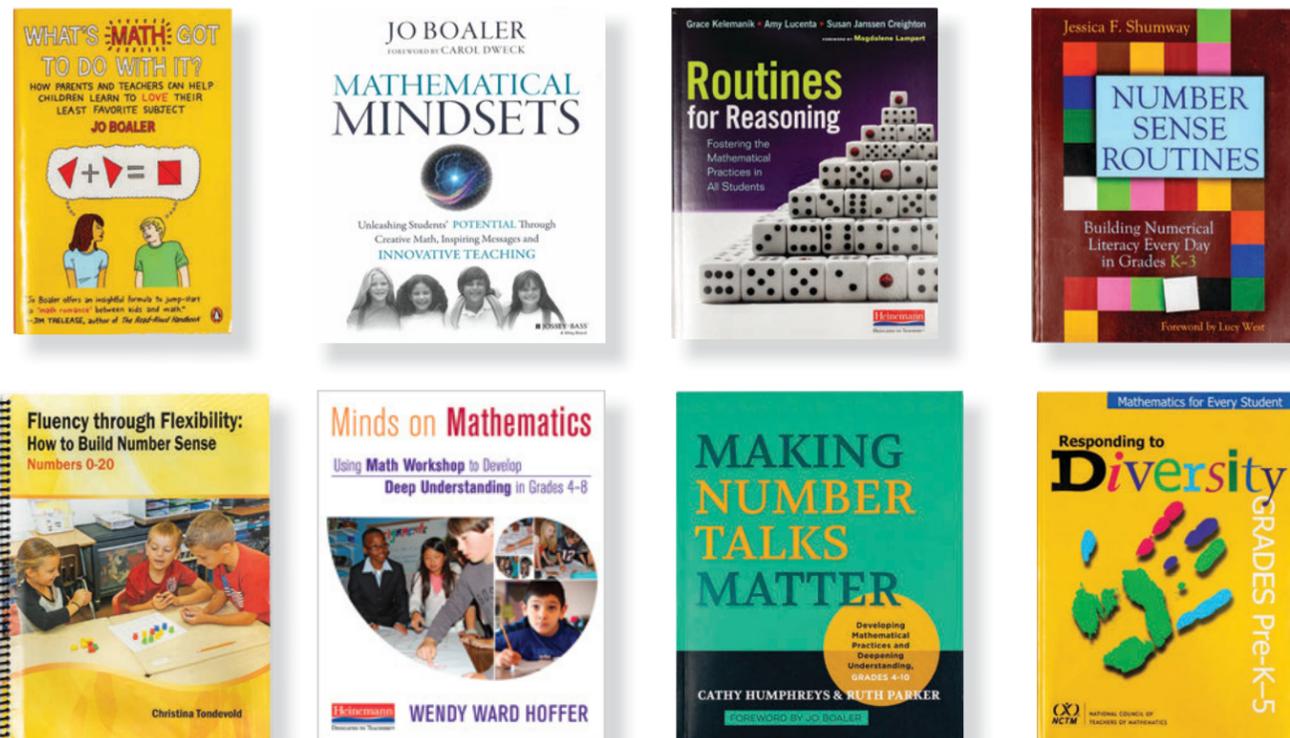
Marks and Printy (2003) found teachers have the desire and expertise to lead, which emphasizes the importance of cultivating teacher leadership,

which, in turn, will improve and enhance school performance. It is important for a principal to embrace what can seem a "messy" process in terms of teachers and administrators taking instructional risks when implementing rigorous, rich mathematics instruction. Listening to teachers and planning professional learning to transform math instruction, ensuring students are doing the heavy lifting, has been a key focus at Fernan STEM Academy.

At the end of the 2017-2018 school year, the Fernan STEM Academy staff felt the need to focus on mathematics instruction building-wide. As a result, Principal Kathy Livingston and I, the principal assistant, began developing a professional learning plan to address mathematics instruction. Additionally, the leadership team, which is composed of teachers from various grade-levels in our building, created their own plans for math-

focused professional development. Kathy and I, together with the leadership team, collectively decided our plan would begin with a "Mathematics Book Tasting" and then introduce mathematics-focused Teaching Labs throughout the year.

A "Book Tasting," is an opportunity for participants to preview a number of texts, jot down any thoughts they may have about each, and select a title that would be most appropriate



Books offered at the Fernan Stem Academy’s Book Tasting: *What’s Math Got to do With It*, (Boaler, 2009), *Mathematical Mindset*, (Boaler, 2016), *Routines For Reasoning*, (Kelemanik, Lucenta, & Creighton, 2016), *Number Sense Routines*, (Shumway, 2011), *Fluency Through Flexibility* (Tondevold, 2014), *Minds on Mathematics: Using Math Workshop* (Ward-Hoffer, 2012), *Making Number Talks Matter*, (Humphreys & Parker, 2015), *Mathematics for Every Student: Responding to Diversity Grades Pre-K-5*, (NCTM, 2009).

for their own professional growth in mathematics instruction. As part of our building-wide plan, each teacher at Fernan STEM Academy developed a problem of practice related to mathematical instruction and student thinking which she wanted to work on for the year. With this problem of practice in mind, teachers attended our book tasting and selected a book they felt would help them grow professionally; then teachers who selected the same book formed groups. Follow-up sessions will take place throughout the year so teachers can discuss their selected books and how the content addresses their individual needs. We are hoping this collaboration will push teacher thinking, learning, and instructional practice. Because of the book tasting structure, groups can include teachers from different grade-levels, which

may lead to mathematical discussions that would not naturally occur without this process. We see the book tasting as a means for pushing collegial boundaries in a positive way, possibly leading to richer conversations in the future.

In the initial planning stage, our staff also voiced interest in pursuing a series of mathematically-focused Teaching Labs. The premise of a Teaching Lab is to look at student thinking through the lens of each teacher’s problem of practice. In this way, each teacher grows professionally through the examination of real students’ mathematical thinking. Prior to instruction, the focus teachers (those teaching the lab lesson) and the observing teachers meet to discuss each teacher’s problem of practice and connect it to the lesson. During the observation, teachers who are watching

focus on their individual problems of practice and use what they are experiencing to build situational awareness for their own practice, to better understand how they can meet their own goals during classroom instruction. After the lesson, all of the teachers come together to debrief the lesson and to share personal insights from the Teaching Lab process.

To prepare for the labs, Kathy and I met to discuss what our roles would be in assisting teachers during each of these instructional cycles. Kathy and I were both instructional coaches before moving into administration, which influenced how we decided to proceed. In the past, some labs had been taught or co-taught with a district coach, but for this round two teachers volunteered to teach the lab with support from others from our own building. We believe

that having the building staff and administrators co-teach the Lab Lesson emphasizes our overall investment in building-wide mathematical

OUR TEACHERS ARE TAKING THE LEAD AND DRIVING THEIR OWN PROFESSIONAL GROWTH.

instruction. In addition, it shows that shared leadership works best if all are willing to be vulnerable. Prior to the Lab day, the focus teacher had a planning session with a district coach and a building administrator to refine the task before teaching. Currently we have completed one lab with teachers at both the primary and upper-elementary levels and we have two more scheduled to occur later in the school year.

Although it is still early, a preliminary result of this work has been that teachers are becoming far more reflective and intentional in their mathematics instruction, which is affecting other content areas as well. When we look at



the Danielson model in terms of evaluation, our teachers are taking the lead and driving their own professional growth. We are finding that if individuals get "stuck," their colleagues are picking them up. Teachers are now coaching each other.

Taking the approach of shared leadership with the staff allows teachers the freedom to come to Kathy and me to have instructional conversations regularly. As a result, we have shifted the focus of our traditional pre-observation meetings to include goal setting in the areas of both mathematics and literacy. Our administrative team has met with and recorded each teacher's goals in these two content areas. Knowing individual teacher's goals empowered us as instructional leaders; we are able to follow-up by asking how we can support them and what evidence will show progress towards those goals. This process has helped us, as administrators, provide feedback on walkthroughs as well as giving us specific "look-fors" in relation to their goals. We are hoping to continue this process into the future.

At Fernan STEM Academy we started our school year focusing on an area of need recognized by both the administrative team and the teachers. As administrators, we have created a structure to help teachers collaborate and learn from each other. We hope to see specific outcomes: students doing the heavy lifting during mathematics time, students who persevere when facing new challenges, who are able to offer adequate critique of models and strategies with precise language, who use quantitative reasoning and mathematical structure in the analysis of their own work and that of others; but will this happen? We realize that teachers have a difficult role in ensuring all the holes in previous content are filled while preparing students to move forward, but we believe that through meaningful goal setting, reviewing pertinent literature, observing peers, and having an overall mindset toward growth, we can be successful. We are currently seeing positive results, and are hopeful that these will continue.



Kathy Livingston is a Principal at Fernan STEM Academy in the Coeur d'Alene School District.

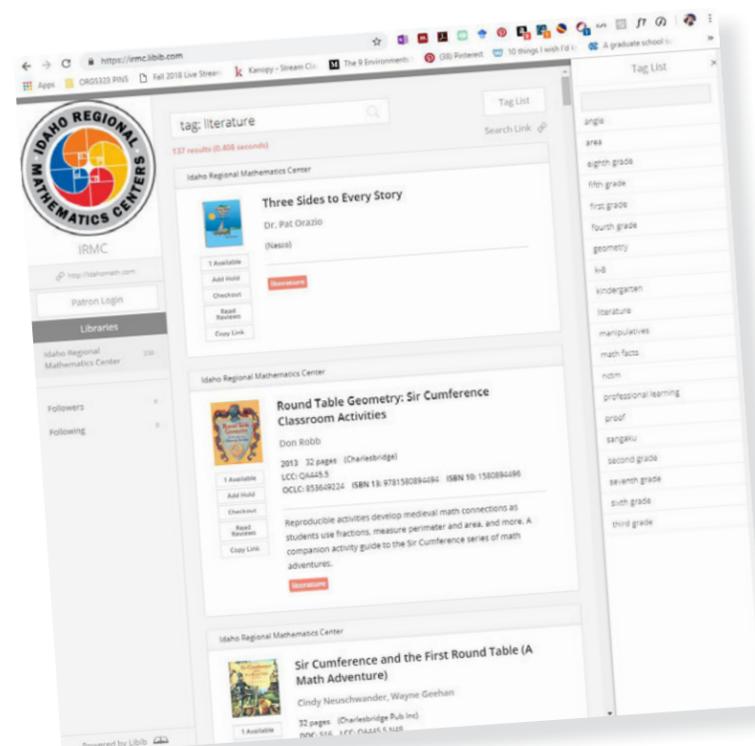


Jennifer Reyes is a Principal Assistant at Fernan STEM Academy in the Coeur d'Alene School District.

References:

Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational administration quarterly*, 39(3), 370-397.

IRMC Library Resources



SNEAK PEEK: IDAHOMATH

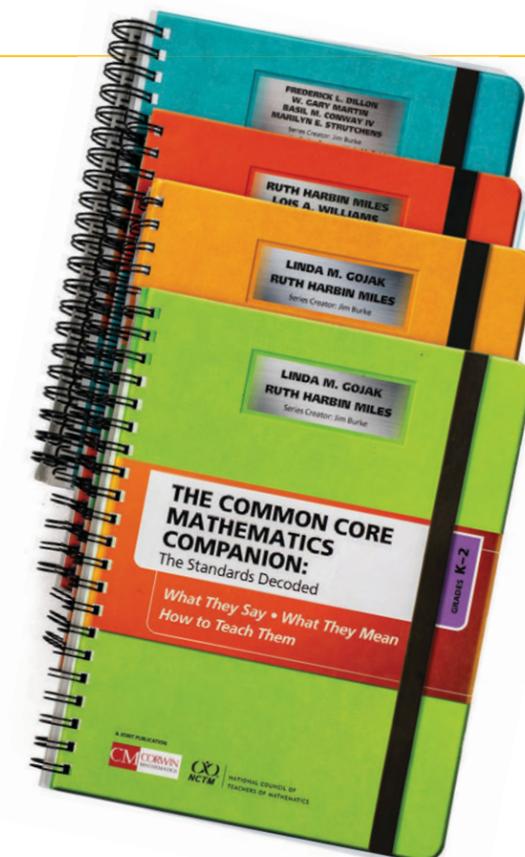
We are making the materials from our Summer and Fall Academies and ongoing action-research projects available at www.idahomath.com. Lesson plans, posters, sample assessments, and more can be downloaded.

New materials will be added to the site as they are developed. In the works are Desmos activities, and lists of open-source resources for teaching mathematics.

Our lending library is getting an online makeover as well, and will be available on liblib at irmc.liblib.org, or through the link on idahomath.com. We've already uploaded literature and professional learning books, with manipulatives soon to come. Items will be searchable by author, title, publish date, and tags. Stay tuned!

THE COMMON CORE MATHEMATICS COMPANION SERIES: K-12 GRADE

It can be difficult at times to interpret the Idaho Content Standards for Mathematics, or at least imagine meaningful ways to enact the intent of individual standards. *The Common Core Mathematics Companion: The Standards Decoded* series is an important resource for your building. There are four different books, each covering a grade-band of standards. The content includes specific descriptions of each standard in teacher-friendly language, suggestions for how to address the standard with students, connections to other standards at the grade level, and common student misconceptions. In addition, there are lists of critical vocabulary for each grade-band, course planning guides, descriptions of models, and a variety of other resources. If your team is planning on doing some curriculum work, or if you just want to develop a deeper understanding of your standards, we suggest you take a look at *The Common Core Mathematics Companion: The Standards Decoded* series. The IRMC has three copies of each grade-band that we can lend to interested teachers.



Idaho Regional Mathematics Center UPCOMING EVENTS

Teaching Mathematical Thinking (TMT) Courses

TMT fulfills the 3-credit MTI course requirement for Idaho teachers. This course provides an opportunity to study fundamental mathematical theory underlying the content area of numbers and operations and student reasoning of numbers and operations topics within a framework of a student-centered, problem-based classroom.

There will be TMT courses held the following dates in June.

- Grades K-2: June 10-14, 2019
- Grades 3-5: TBD Summer 2019
- Grades 6-9: June 17-21, 2019

Registration will open Friday, March 1, 2019. For course and registration information, please visit our events page: www.uidaho.edu/irmc-events.



IDAHO

REGIONAL MATHEMATICS CENTERS

4 th - 16	16 - 4
5 th - 25	25 - 5
6 th - 36	36 - 6
7 th - 49	49 - 7
8 th - 64	64 - 8
9 th - 81	81 - 9
10 th - 100	100 - 10
11 th - 121	121 - 11
12 th - 144	144 - 12
13 th - 169	169 - 13
14 th - 196	196 - 14
15 th - 225	225 - 15
16 th - 256	256 - 16
17 th - 289	289 - 17
18 th - 324	324 - 18
19 th - 361	361 - 19
20 th - 400	400 - 20
21 st - 441	441 - 21
22 nd - 484	484 - 22
23 rd - 529	529 - 23
24 th - 576	576 - 24
25 th - 625	625 - 25



SAVE THE DATE!

ICTM/ISTA/IRMC
CONFERENCE

August 13-14, 2019
Coeur d'Alene, Idaho



We gratefully acknowledge contributions and support from Idaho's State Legislature and the Idaho State Department of Education, making these programs possible.

We Are Here To Support You

The Regional Mathematics Center is open year round. We are able to meet with teams of teachers during the summer months as well as during the school year. If your district is in need of mathematical support, please contact us. We are happy to work with teachers and administrators in developing instructional plans, conducting assessment reviews, or addressing other concerns at no cost.