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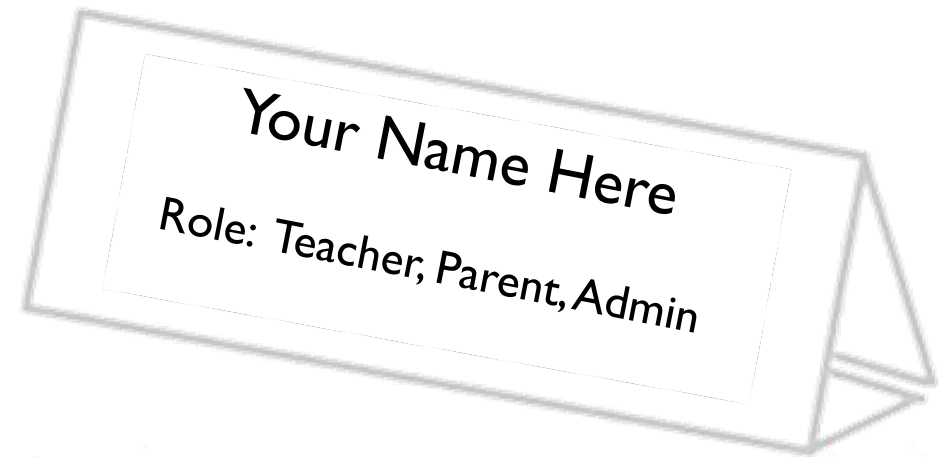
# K-5 MATH TEXTBOOK COMMITTEE

KIMBERLY SCHOOL DISTRICT

MEETING I: FEBRUARY 1, 2023

# WELCOME!

- Please sign in
- Make a name tent



# INTRODUCTIONS



# MEETING SCHEDULE

<b>Date / Time</b>	<b>Location</b>	<b>Agenda</b>
Wednesday, February 1st 4:00 – 6:00	KSD District Office	Overview of Priorities, Vision, and Scoring Rubric
Wednesday, February 8th 4:00 – 6:00	KSD District Office	i-Ready Classroom Mathematics and Reveal Math
Wednesday, February 15th 4:00 – 6:00	KSD District Office	Into Math, enVision, and Everyday Math
<del>Tuesday, February 21st 4:00 – 6:00</del>	KSD District Office	Select top 2 resources for Final Presentation
Tuesday, February 21st 4:00 – 6:00	KSD District Office	Finalist #1 Presentation
Wednesday, February 22nd 4:00 – 6:00	KSD District Office	Finalist #2 Presentation
Wednesday, March 1st 4:00 – 6:00	KSD District Office	Final Decision

# NORMS / EXPECTATIONS

We will protect our time (begin and end on time)

We will actively participate through listening and speaking

We will assume good intentions and consider others' perspectives

Be willing to come to a consensus decision

## COMMITTEE'S PURPOSE



Determine priorities in elementary math instruction



Evaluate potential elementary math resources to select one to recommend to the school board for adoption in April/May and implementation FY 23-24

## 5 – TEXTBOOK TO CONSIDER



**i-Ready Mathematics** by *Curriculum Associates*



**Into Math** by *Houghton Mifflin Harcourt*



**Reveal Math** by *McGraw Hill*



**enVision Mathematics** by *Savvas*



**Everyday Mathematics** *McGraw Hill*



# WHY THESE 5 OPTIONS?

- K-12 State Adoption Guide - The Curricular Materials adoption process provides review and evaluation of new curricular materials, according to the states six-year adoption cycle. Materials are screened for content, organization, presentation, and quality. The choice of instructional materials is a local district decision according to local district policies and procedures.
  - Mathematics K-12 materials review was June 2022
  - Classifications
    - **Comprehensive** - a program which consistently meets the focus, coherence, depth, and rigor of the Idaho Content Standards with minimal or no need for instructional adaptations and/or supplemental materials. A comprehensive program provides effective content progressions within and between grade levels.
    - **Basic** - A program which meets the focus, coherence, depth, and rigor of the Idaho Content Standards at a substantial level with some need for supplemental material. A basic program provides content progressions within and between grade levels, though they may be uneven.
    - **Component** - A program designed and intended to be used to supplement a comprehensive or basic program. A Component Program will support and/or enhance the focus, coherence, depth, and rigor of a comprehensive or basic program.
    - **Intervention** - A program designed and intended to target and support students' specific needs.
  - All options fall under Comprehensive Program
- State Standards – The standards define what all students are expected to know and be able to do, not how teachers should teach.

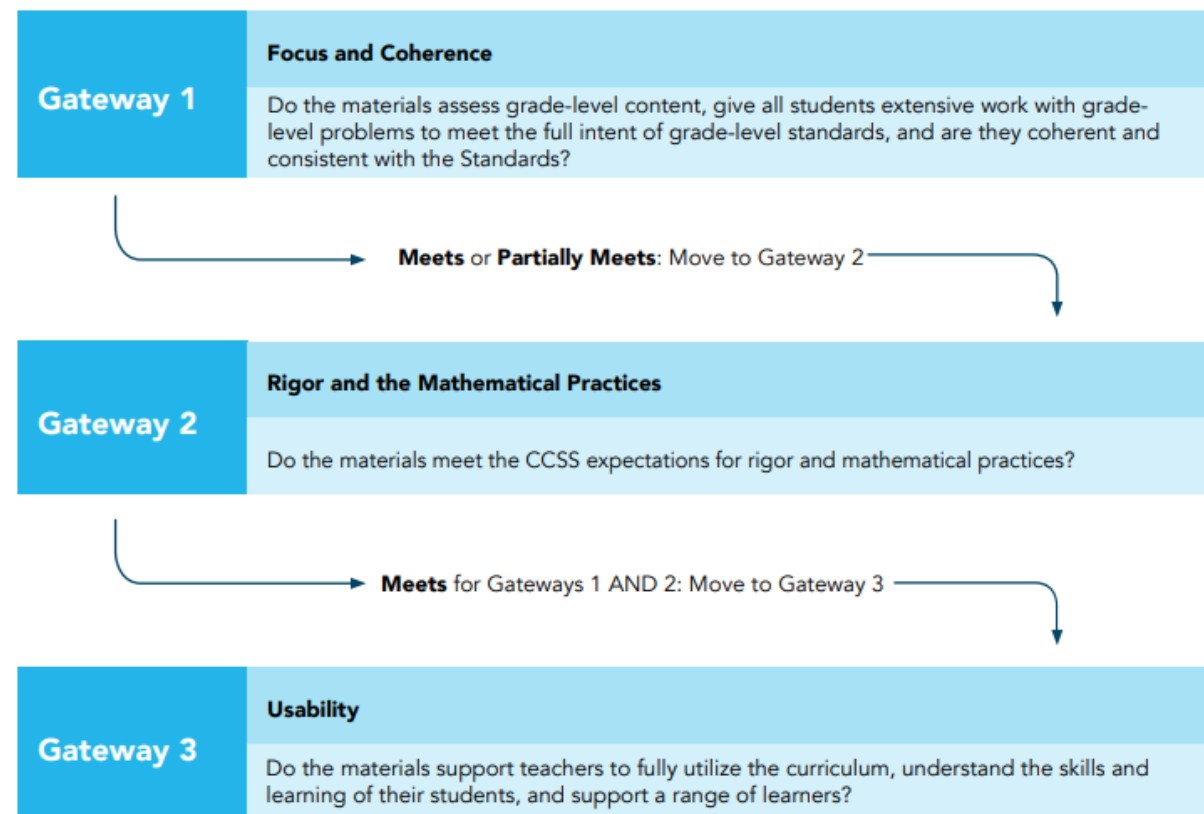


# WHY THESE 5 OPTIONS?

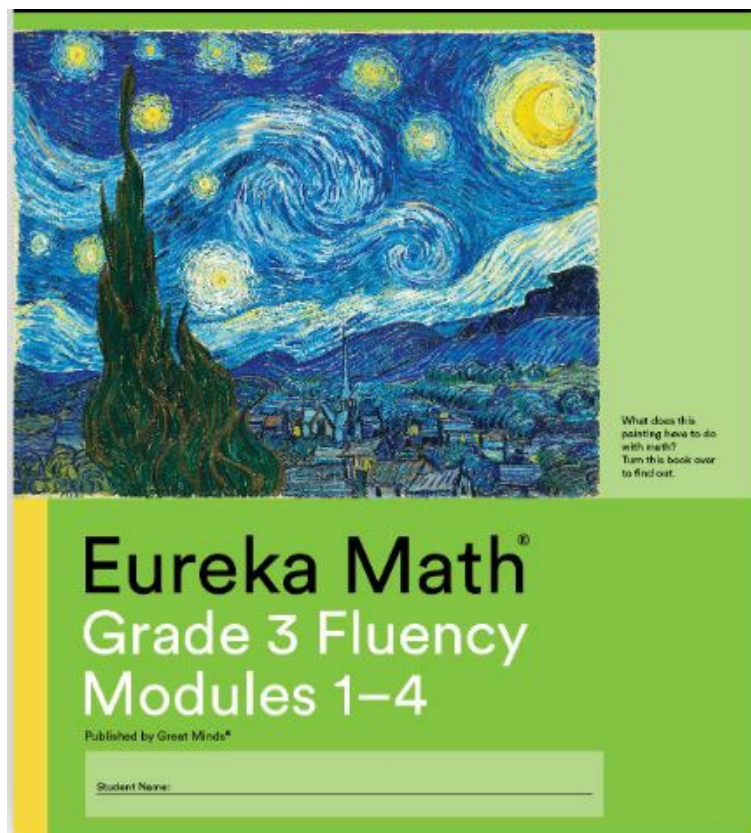


- Edreports - provides free reviews of K-12 instructional materials. Their reports offer evidence-rich, comprehensive information about a program's alignment to the standards and other indicators of quality.

Figure 1: Gateway Evaluation Process for Review of Mathematics Materials (Grades K-8)

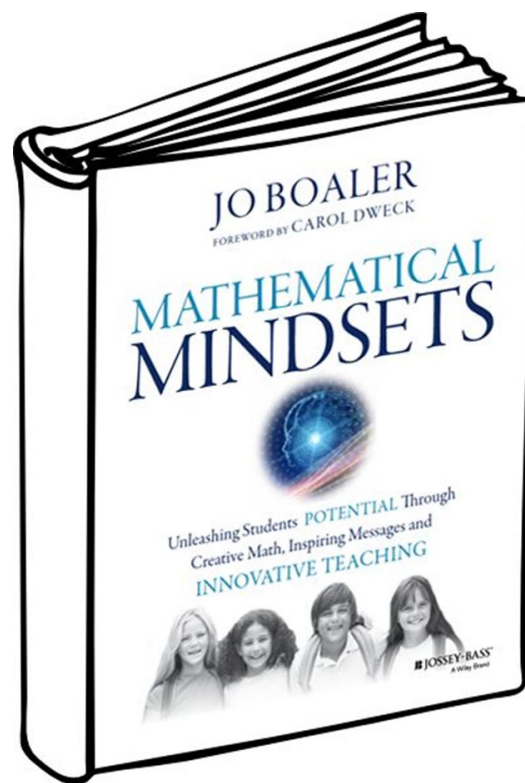


# WHERE WE ARE COMING FROM



# LET'S TALK ABOUT MATH

- The importance of having a **growth mindset**
- Math should be taught in a way that encourages students to **think creatively** and to **make connections** between math concepts and the world around them.
- Incorporate **technology** to make math more accessible and engaging for students
- **GOAL** - help students **develop a love** of math and to see themselves as capable and confident mathematicians.



“Some students think their role in math classrooms is to memorize all the steps and methods. Other students think their role is to connect ideas. These different strategies link, unsurprisingly, to achievement, and the students who memorize are the lowest achieving in the world”

-Jo Boaler

"Never have the **broader aims** of mathematics education been **more important** than they are today when mathematics **underlies much of the fabric of society.**"

- Polling data in politics
- Targeted social media advertisements
- Complex mathematical models in finance
- Tradesman

# THE IMPORTANCE ON THE EARLY GRADES

*"Math is more than just a subject – it is a way of thinking and a way of understanding the world. Children who are taught to think mathematically in the early grades are better equipped to solve problems and to think critically and creatively throughout their lives."*

*Dan Meyer and Debbie Ohanian.*

*"The early grades are a critical time for building a strong foundation in math. Children who are exposed to a rich and varied math curriculum in the early grades are more likely to develop a love of math and to become confident and capable mathematicians."*

*Jo Boaler*



Dan Finkel

# 5 PRINCIPLES OF EXTRAORDINARY MATH TEACHING

- Dan Finkel
  - [TEDx talk](#)
- "Not knowing is not failure, it's the first step to understanding"
- Summary:
  - 1. Start with a question
  - 2. Give students time to struggle
  - 3. You are not the answer key.. try to figure stuff out WITH them.
  - 4. Say yes to students' ideas and questions: take their ideas and go to conclusions.
  - 5. Have a play mindset
- Bonus #6 - Be careful not to confuse. Be sure to summarize at the end what was correct and what wasn't and why.



If you had received more math experiences like this, how would it have influenced your math identity?



# STUDENT MATH HABITS OF MIND (STANDARDS FOR MATH PRACTICE)



## GATHER AND ORGANIZE INFORMATION

Finding what you do know and don't know and making sense of this information



## VISUALIZE

Imagining and creating ways to understand the problem (e.g. drawings, tools, etc.)



## FIND PATTERNS

What's the same, different in this problem? What's repeated? What connections can you make?



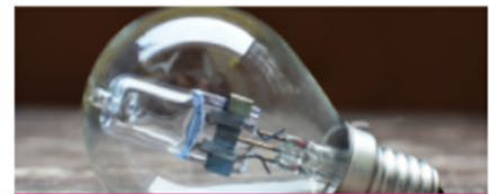
## TINKER

Figuring out what works and what doesn't work.



## EXPERIMENT

Testing out your answer and trying out other ways to solve the problem



## CONJECTURE

Making a conclusion and understanding whether it's right or wrong.

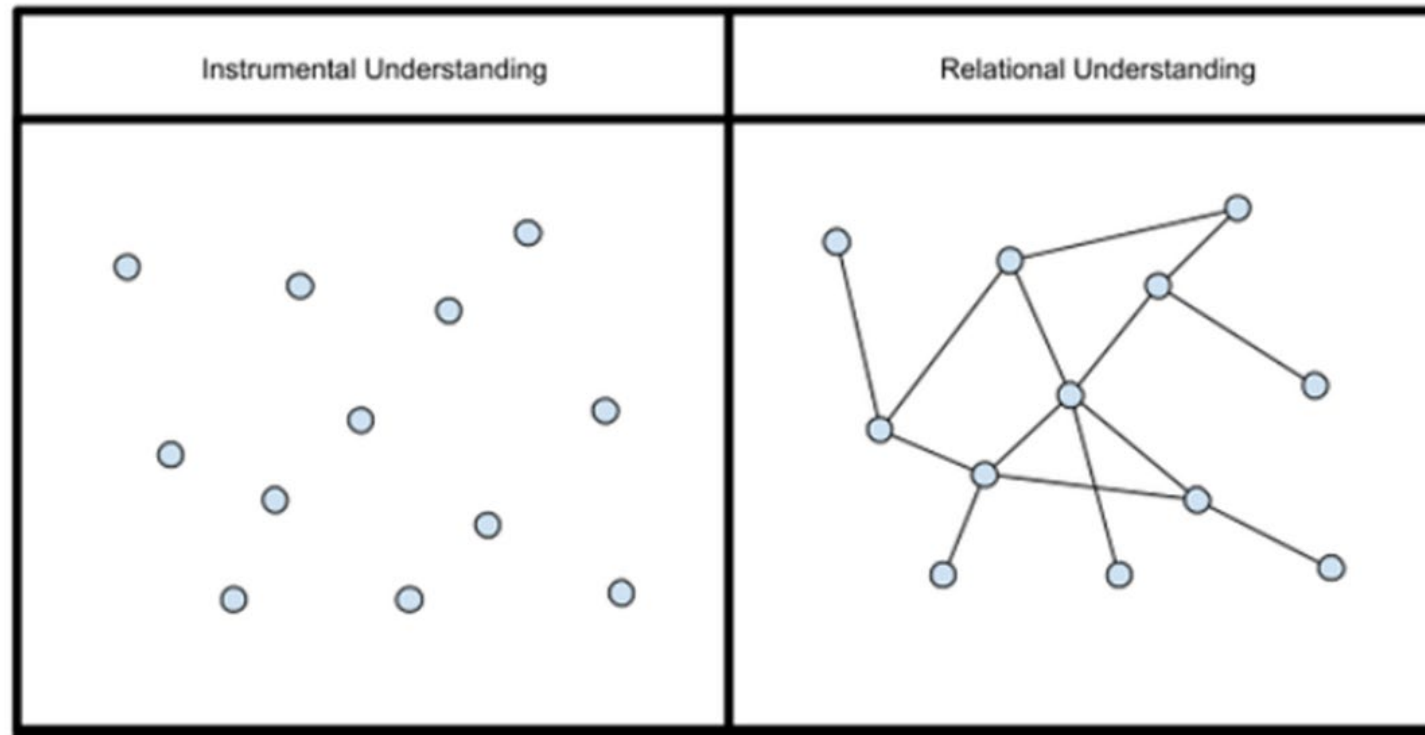


### **Instrumental Understanding**

Knowing how to follow a rule or procedure accurately

### **Relational Understanding**

Knowing what to do, being able to explain why, and knowing how to alter procedures in new situations.



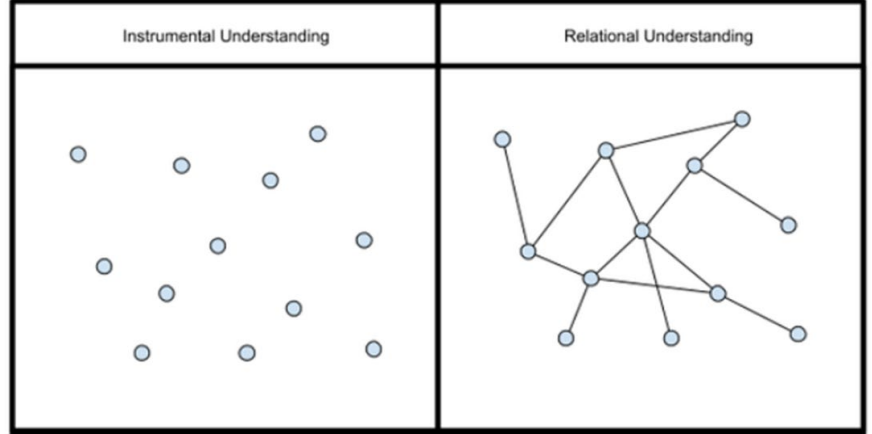
	<b>Teacher Teaches Instrumentally</b>	<b>Teacher Teaches Relationally</b>
<b>Child Learns Instrumentally</b>		
<b>Child Learns Relationally</b>		



	Teacher Teaches Instrumentally	Teacher Teaches Relationally
Child Learns Instrumentally	<p><b>SHORT TERM:</b> All appears well as there is a match between child and teacher goals.</p> <p><b>LONG TERM:</b> Child needs to learn and memorize more and more unrelated rules and procedures</p>	<p><b>SHORT TERM:</b> Frustration for the teacher and child as the child just wants to be shown how to "do" the math</p> <p><b>LONG TERM:</b> Child develops, relates, applies, analyzes, evaluates new understanding</p>
Child Learns Relationally	<p><b>SHORT TERM &amp; LONG TERM:</b> Child tries to understand relationally that which is being taught instrumentally. Feels as though they are not smart enough to understand mathematics. Disengages, stops learning mathematics when given the opportunity.</p>	<p><b>SHORT TERM &amp; LONG TERM:</b> Teacher and child develop greater relational understanding and application of mathematical concepts. Develops positive attitude towards mathematics learning.</p>



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**Mismatch:** Students who want to make sense of the concepts, but not given the experiences or time to do so.

**Result:**

- Student may come to believe that they are not good at mathematics.
- Student may view themselves as "not a math person"
- Student may stop taking math classes as soon as they can.

	Teacher Teaches Instrumentally	Teacher Teaches Relationally
Child Learns Instrumentally	<p><b>SHORT TERM:</b> All appears well as there is a match between child and teacher goals.</p> <p><b>LONG TERM:</b> Child needs to learn and memorize more and more unrelated rules and procedures</p>	<p><b>SHORT TERM:</b> Frustration for the teacher and child as the child just wants to be shown how to "do" the math</p> <p><b>LONG TERM:</b> Child develops, relates, applies, analyzes, evaluates new understanding</p>
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SO.....WHAT IS IMPORTANT TO LOOK FOR?





## A FEW IMPORTANT ITEMS

- Pacing and alignment to Idaho Math Standards
- Intervention program
- Hands-on activities and use of manipulatives
- Includes a digital component
- Consumable student materials provided each year
- Robust word problems and rich tasks
- Promotes differentiation for all levels
- Includes a spiral review component
- Promotes Math Habits of Mind – Gather Info. & Organize / Visualize / Find Patterns / Tinker / Experiment / Conjecture
- Includes parent supports
- On-going and on-demand professional development for teachers



# RUBRIC

## Elementary Math Curricular Resource Rubric

Elementary Math Curricular Resource Committee 2023

Name of Curricular Resource: \_\_\_\_\_

Please evaluate each resource based on components using the scoring system below.

Score	Explanation
3	<b>Meets the described component.</b> The resource does not require any revision to meet the component.
2	<b>Partially meets the described component.</b> The resource would require some revision to meet the component.
1	<b>Barely meets the described component.</b> The resource would require significant revision to meet the component.
0	<b>Does not meet the described component.</b>

### Curricular Resource Components

#### Component #1: Well-aligned to the Idaho Math Content Standards and District K-5 Math Sequence

Resource Components	Circle your score below:
1.1 The resource enables teachers to help students develop the Standards for Mathematical Practice (Math Habits of Mind).	0 1 2 3
1.2 The resource aligns to the Idaho Content Standards for Math and each lesson has identified standard(s).	0 1 2 3
1.3 The resource presents math concepts in a logical flow.	0 1 2 3
1.4 The resource allows ample time for development of each of the Kimberly Priority Standards.	0 1 2 3
<b>Looking at Component #1 holistically, what score would you give this resource for this component?</b>	<b>0 1 2 3</b>

#### Component #2: Appropriately balances mathematical procedures, deeper conceptual understanding, and application to engage students in challenging mathematics

Resource Components	Circle your score below:
2.1 The resource helps teachers engage students in "doing mathematics" (productive struggle) through relevant, thought-provoking tasks and problems.	0 1 2 3
2.2 The resource helps teachers engage students in discourse through thought-provoking questions and use of strong academic vocabulary.	0 1 2 3
2.3 The resource implements application problems and tasks that stimulate interest and elicit mathematical thinking.	0 1 2 3
2.4 The resource helps teachers and students with using and connecting mathematical models and representations which are developmentally appropriate.	0 1 2 3
2.5 The resource has a good balance between tasks and concept/skill practice which build a strong sense of number.	0 1 2 3
2.6 The resource incorporates group work that encourages collaborative problem solving.	0 1 2 3
<b>Looking at Component #2 holistically, what score would you give this resource for this component?</b>	<b>0 1 2 3</b>

#### Component #3: Strong instructional supports for learning

Resource Components	Circle your score below:
3.1 The resource includes differentiated supports which promote student learning including remediation and extension. (ELL, Special Education, GT)	0 1 2 3
3.2 The resource supports parents in assisting students at home.	0 1 2 3
3.3 The resource incorporates hands-on activities and use of manipulatives.	0 1 2 3
3.4 The resource includes strong digital/technology resources for instruction that are user-friendly for students, teachers, and parents (specifically including an eBook and digital tools like manipulatives).	0 1 2 3
3.5 The resource includes review of concepts (spiral).	0 1 2 3
3.6 The resource includes on-going and on-demand professional development for teachers.	0 1 2 3
<b>Looking at Component #3 holistically, what score would you give this resource for this component?</b>	<b>0 1 2 3</b>

#### Component #4: Various tools for assessment that measure student proficiency

Resource Components	Circle your score below:
4.1 The resource includes a diagnostic assessment capable of determining student strengths and next steps for learning.	0 1 2 3
4.2 The resource includes various assessment tools for teachers to measure student proficiency on specific math standards.	0 1 2 3
4.3 The resource includes the ability to assess students with online/digital assessment tools.	0 1 2 3
<b>Looking at Component #4 holistically, what score would you give this resource for this component?</b>	<b>0 1 2 3</b>

QUESTIONS?

