



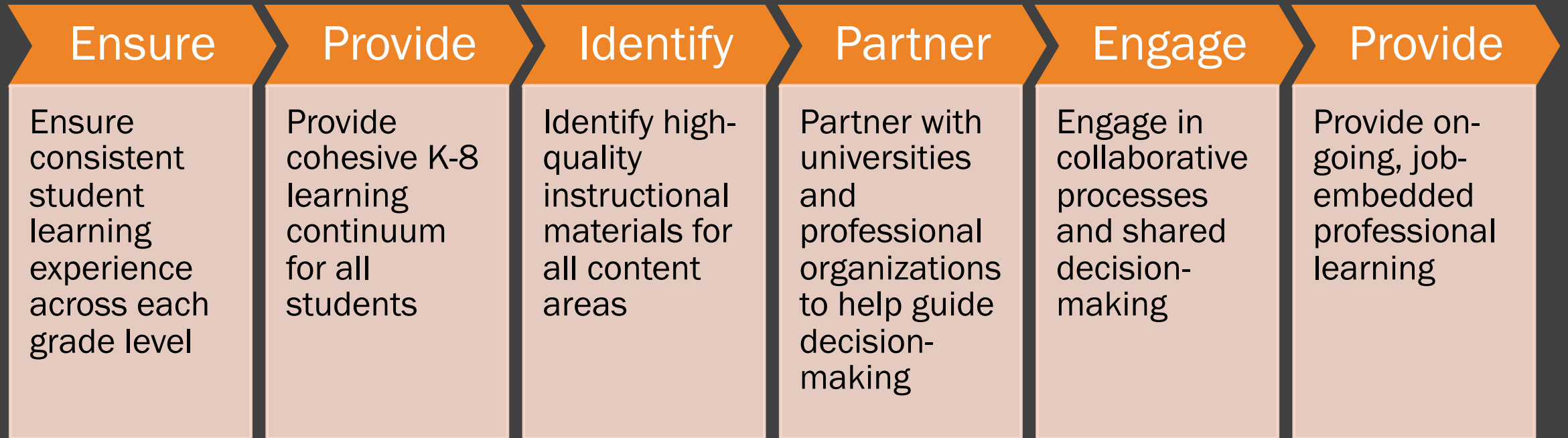
DISTRICT 90 CURRICULUM & INSTRUCTION OVERVIEW

OCTOBER 17, 2022

TOWN HALL MEETING AGENDA

- D90 Curriculum and Instruction goals
- Curriculum review process overview
- Instructional materials pilot process
- Content area overviews: Science Pilot, Math, English Language Arts, and Social Studies
- Professional learning and collaboration

DISTRICT 90 CURRICULUM AND INSTRUCTION GOALS



DISTRICT 90 CURRICULUM REVIEW PROCESS



Form a representative curriculum review committee



Review current educational research and best practices instruction



Develop vision statement for content area under review



Apply screening rubric to recommended materials



Pilot top two finalists in classrooms with students



Gather quantitative and qualitative feedback from piloting teachers



Analyze results

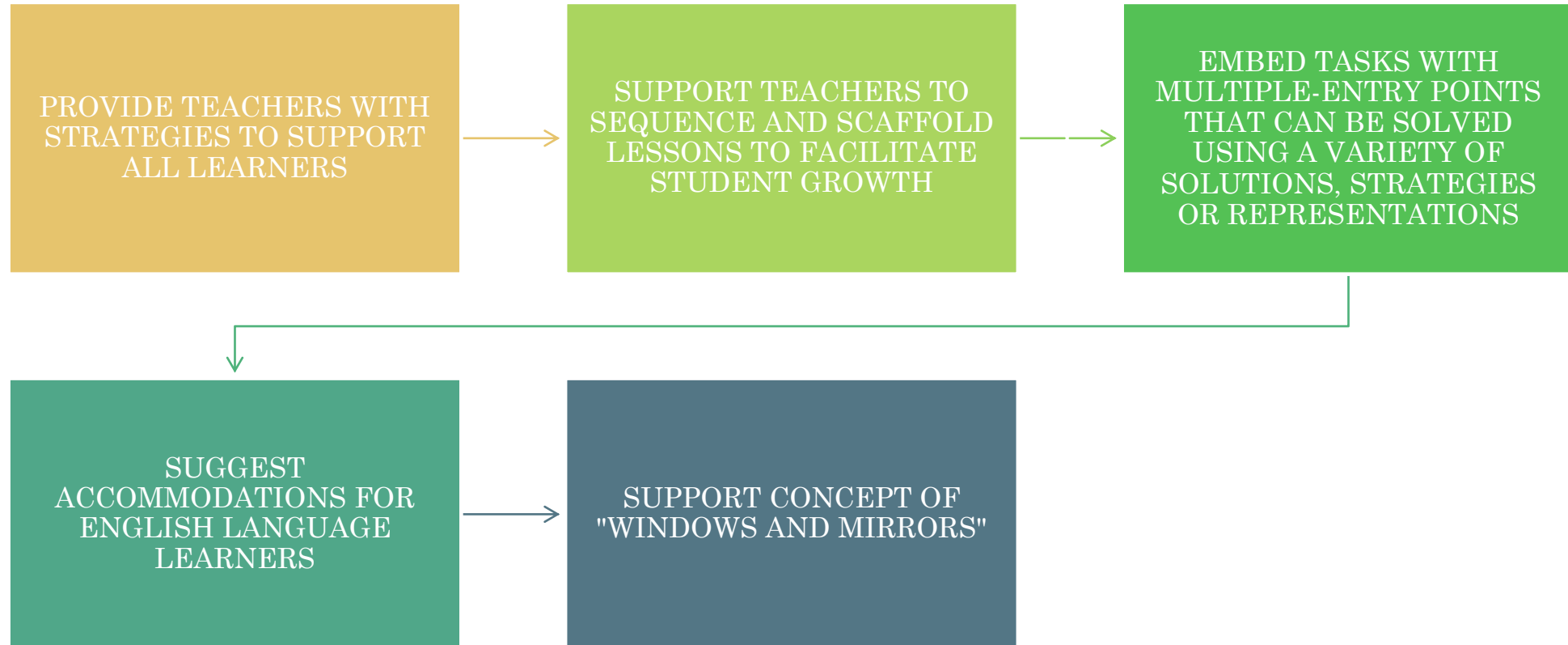



Provide recommendation to the Board of Education for adoption

THE ROLE OF STANDARDS IN TEACHING AND LEARNING

- Serve as the building blocks for curriculum and instruction
- Ensure learning is cohesive - skills and concepts scaffold over time
- Provide consistency and alignment horizontally across grade levels and vertically from grade to grade
- Support grade level and department collaboration
- Required by Illinois State Board of Education

EQUITABLE INSTRUCTIONAL PRACTICES





ESSENTIAL
UNDERSTANDINGS
FOR SELECTING
INSTRUCTIONAL
MATERIALS

Teachers guide student learning; materials support the process

There is no perfect instructional program or set of materials

The pilot process has acknowledged limitations

Professional development is critical for the success of the implementation

On-going professional collaboration is essential for instructional alignment

INSTRUCTIONAL MATERIALS RUBRIC CRITERIA



ALIGNMENT TO
CONTENT AND
PRACTICE STANDARDS



COHERENCE OF
STUDENT LEARNING
PROGRESSIONS



PRESENCE OF
TEACHER SUPPORT



QUALITY OF FORMATIVE
AND SUMMATIVE
ASSESSMENTS



EQUITABLE PRACTICES

Instructional Materials Screening Rubrics and Consulting Partners

Content Area	Rubric	Consulting Partner
English Language Arts	California County Superintendents: Adoption Toolkit – English Language Arts (2015)	Columbia University (NY), Teachers College Reading and Writing Project
Mathematics	Council of Chief State School Officers: Math Curriculum Materials Analysis Project (2011)	University of Illinois at Chicago – Metro Chicago Math Initiative
Science	NextGen Time (2018)	BSCS Science Learning
Social Studies (5-8)	TBD	Illinois Civics Hub & DuPage Regional Office of Education

BSCS SCIENCE LEARNING PARTNERSHIP

- Non-profit organization devoted to science education
- Mission is to transform science teaching and learning through research-driven innovation
- Supported by National Science Foundation to develop tools and guidelines to evaluate quality of science programs
- Facilitates NextGen Time professional learning

NEXT
GENERATION
SCIENCE
STANDARDS:
THE THREE
DIMENSIONS OF
SCIENCE
LEARNING



Crosscutting concepts: exploring connections across the four domains of science



Science and Engineering Practices: describe what scientists do to investigate the natural world and what engineers do to design and build systems

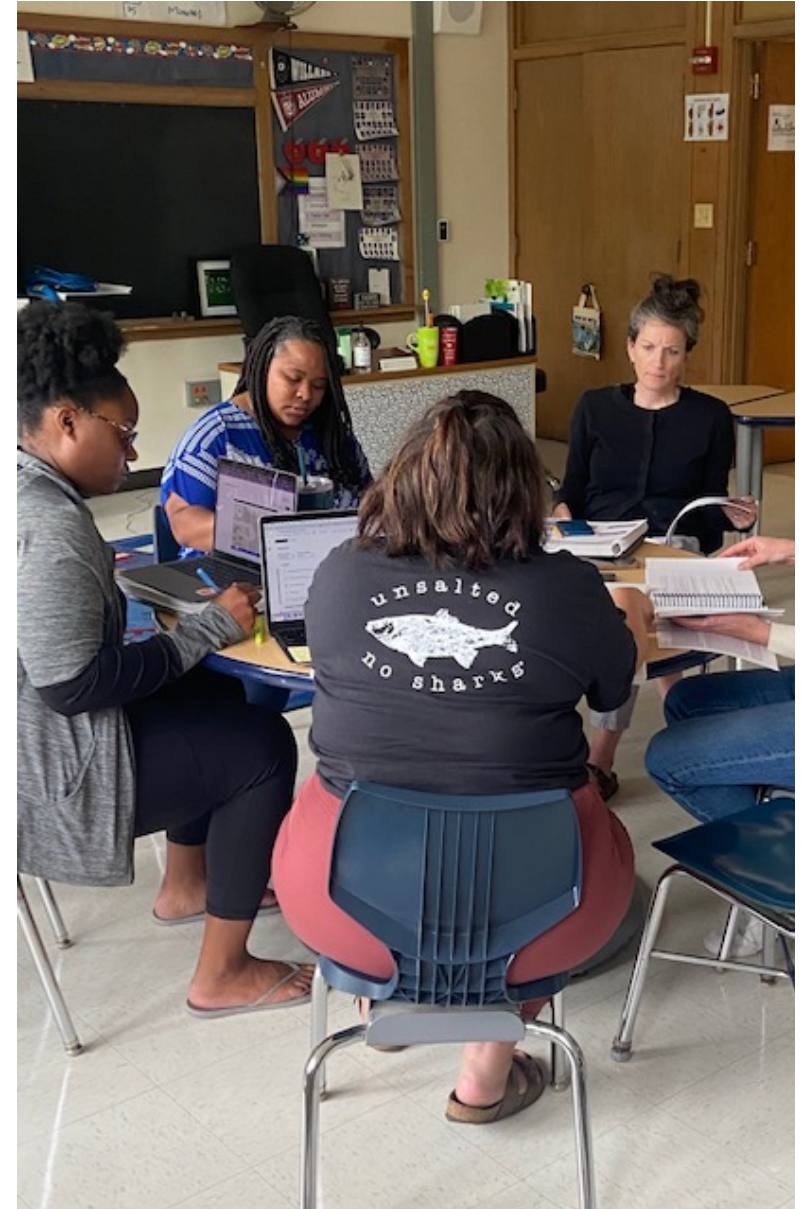


Disciplinary Core Ideas: key ideas in science that have broad importance within or across multiple science or engineering disciplines

SCIENCE PILOT MATERIALS VETTING

2nd 3rd 4th

Amplify Science	2nd	3rd	4th
F1: Phenomena	5	5	5
F2: 3-Dimensions	5	5	5
F3: Logical Sequence	5	5	5
ST1: Phenomena	5	5	5
ST2: 3D conceptual	5	5	5
ST3: Prior Knowledge	5	5	5
ST4: Metacognition	3	5	5
ST5: Equitable Learning	5	3	5
SP1: 3D Performance	5	5	5
SP2: Varied Measures	5	5	5
SP3: Progress Over Time	5	5	5
SP4: Equitable Access	5	3	5
F123: Foundations	5	5	5
ST1234: Student Thinking	5	5	5
SP1234: Student Progress (Teacher Support)	5	5	5



Science Pilot Tool: Teacher Reflection on Student Learning

Program _____ **Grade** _____

Chapter/Module # and Title _____ **Lesson Title** _____

Student Learning Experience
 (e.g., investigation, experiment, lab, concept map, graphic organizer, assessment, discussions, etc.) _____

Phenomena/Problem _____

Summarize key lesson learned (e.g., what did students “get”, what are they still missing?) from analyzing student work? (Tool #1)	
Summarize student reflections (e.g., range and trends in student responses (Tool #2)	
Strengths	Limitations
Modifications/Recommendations for Customization	

Science Pilot Tool: Team Reflection on Student Learning

Program _____ Grade _____

Chapter/Module # and Title _____ Lesson Title _____

Overall Student Score (Combine individual class results from Tool #1)					
High Quality Work		Medium Quality Work		Low Quality Work	
Pooled Tally for All Students	Pooled Percentage <i>(Pooled Tally/N X 100%)</i>	Pooled Tally for All Students	Pooled Percentage <i>(Pooled Tally/N X 100%)</i>	Pooled Tally for All Students	Pooled Percentage <i>(Pooled Tally/N X 100%)</i>
Score <i>How well did the instructional materials support student learning? Circle the score (i.e., 5, 3 or 1) based on Pooled Tally Percentage based on the percentage of <u>high-quality</u> work. Record on Next Gen AIM Pilot Score Sheet.</i>			5 (66% and above High- Quality Student Work)	3 (33 to 65% High-Quality Student Work)	1 (32% and below High-Quality Student Work)

As a team, would you recommend that this student learning experience remain as is? Why or why not? What changes would you recommend?

What professional learning is needed to better implement this learning experience to increase student understanding?

Science Pilot Rubric: Evidence of Support for Teachers

Directions: Record the score from the Paperscreen for each component in the space provided. Record and analyze evidence from your actual experience using the following questions as a guide.

- To what extent did the evidence cited and the score in Paperscreen match your experience with the materials?
- How did the materials support your use? What were the missed opportunities?

Determine score (5 = high- quality, 3 medium-quality, 1 low-quality) for each component of the Support for Teachers based on your pilot experience.

Component of Support for Teachers	Pscreen Score	Pilot Score	Response to Questions (Cite Evidence)
<p>TS1. Phenomenon/Problem Driven Three-Dimensional Learning. Teacher materials provide:</p> <ul style="list-style-type: none"> • background information about the phenomena or problems included in the learning sequence and across sequences. • an explanation of the role of phenomena or problems in driving student learning. • rationale for why the unit phenomena or problems were selected for the targeted DCIs, SEPs, and CCCs. 			
<p>TS2. Coherence. Teacher materials describe and provide a rationale for:</p> <ul style="list-style-type: none"> • the conceptual framework and sequence of ideas, practices, and learning experiences in the learning sequences and across sequences. • strategies for linking student experiences across lessons to ensure student sense-making and/or problem-solving focused on phenomena or problems is linked to learning across all three dimensions. • Connections to other science domains, nature of science, engineering, technology, and applications of science, math, and ELA. 			
<p>TS3. Effective Teaching. Teacher materials support the use of and provide a rationale and evidence of effectiveness for strategies that:</p> <ul style="list-style-type: none"> • support students in learning through authentic and meaningful phenomena or design problems. • support student learning across the three dimensions. • make student thinking visible; promote reasoning, sense-making, and problem-solving; challenge student thinking; and develop metacognitive abilities. 			
<p>TS4. Support for Students with Diverse Learning Needs. Teacher materials provide an array of strategies:</p> <ul style="list-style-type: none"> • to support student access to the targeted learning goals, experiences, and performances. • that help teachers differentiate instruction. 			
<p>TS5. Support to Monitor Student Progress. Materials provide support for teachers to:</p> <ul style="list-style-type: none"> • monitor student learning and progress over time. • make decisions about instruction and provide feedback to students. 			

PROFESSIONAL LEARNING AND CURRICULUM IMPLEMENTATION

Professional learning is required when new instructional materials are adopted

District 90 collaborates with universities or professional organizations to provide training

In-depth training is provided by experts in the field

Implementation plans outline expectations for implementation and continued collaborations

K-8 OVERARCHING STUDENT GOALS FOR LITERACY INSTRUCTION

Students will...

- read strategically and think critically about text
- become flexible thinkers who gather evidence to support, refute, or re-evaluate ideas based on new information
- be able to communicate clearly with purpose and intent
- see themselves as life-long readers and writers

THE SCIENCE OF READING

- Phonics instruction is beneficial to students in Grades K-2
- Instruction should be explicit and systematic
- Duration of effective instruction is 30 minutes/day
- It is not a product, a package, or a program
- The Science of Reading is always evolving



FOUNDATIONAL LITERACY SKILLS

- Phonemic Awareness
- Phonological Awareness
- Phonics
- Word Attack
- Spelling



COMPONENT OF A BALANCED LITERACY PROGRAM

Reading

- Read Aloud
- Shared Reading
- Guided Reading
- Reading Workshop
- Class Novels
- Book Clubs
- Independent Reading

Writing

- Writing Workshop: brainstorming, drafting, revising, editing, publishing
- Shared Writing
- Handwriting
- Exploration of Writing Genres: narrative, opinion, informational, argument, poetry
- Grammar and conventions

D90 Foundational Balanced Literacy Resources

Balanced Literacy Component	Resource	Author(s)
Phonemic Awareness	Heggerty Phonemic Awareness: The Skills They Need to Help Them Succeed!	Michael Heggerty
Phonics	Fundations (K) Fountas and Pinnell Classroom (1-5)	Wilson Language Training Irene Fountas & Gay Su Pinnell
Guided Reading	Guided Reading: Responsive Teaching Across the Grades	Irene Fountas & Gay Su Pinnell
Handwriting	Handwriting Without Tears	Learning Without Tears
Reading Workshop	Units of Study for Teaching Reading	Columbia University (NY) Teachers College Reading and Writing Project
Writing Workshop	Units of Study for Teaching Writing	Columbia University (NY) Teachers College Reading and Writing Project
Read Aloud, Book Clubs, Independent Reading	Classroom Library Collections: fiction, non-fiction, picture books, poetry	Various

COMPONENTS OF WORKSHOP MODEL OF TEACHING



Name the teaching point for the day



Provide a 10-12 minute mini-lesson to model teaching point objective



Active engagement



Independent practice



1:1 conferences with students or small group instruction



Share

READING SUPPORT: INTERVENTION RESOURCES



- Foundations (phonics)
- Heggerty – Bridge the Gap: Intervention Lessons (phonemic awareness)
- Learning A to Z (fluency)
- Fountas and Pinnell: Leveled Literacy Intervention (comprehension)
- Wilson Reading System (supplementary)

DISTRICT 90 VISION FOR MATHEMATICS INSTRUCTION

- Instruction provides a balance of conceptual understanding and skill development
- Emphasis is placed on multiple solutions to problems
- Students engage in authentic, real world problem-solving
- Instruction provides opportunity for student discourse
- Instruction is differentiated to meet the range of learners



Five Strands of Mathematical Proficiency:
Intertwined strands of proficiency

Strategic Competence
The ability to formulate, represent, and solve mathematical problems.

Adaptive Reasoning
Capacity for logical thought, reflection, explanation, and justification



Conceptual Understanding
Comprehension of mathematical concepts, operations, and relations.

Procedural Fluency
Skill in carrying out procedures flexibly, accurately, efficiently, and appropriately

Productive Disposition
Habitual inclination to see mathematics as sensible, useful, and worthwhile coupled with a belief in diligence and one's own efficacy.

Source: *Adding it Up: Helping Children Learn Mathematics*,
National Research Council
(2001)

District 90 Middle School Mathematics Progressions

Instructional Progressions	Grade 5	Grade 6	Grade 7	Grade 8
Instructional Math	Content: Grade 5 with modifications	Content: Grade 6 with modifications	Content: Grade 7 with modifications	Content: Grade 8 with modifications
	Materials: Aligned to IEP goals	Materials: Aligned to IEP goals	Materials: Aligned to IEP goals	Materials: Aligned to IEP goals
Grade-Level	Content: Grade 5 Standards	Content: Grade 6 Standards	Content: Grade 7 Standards	Content: Grade 8 Standards
	Materials: Investigations in Number, Data, and Space 3	Materials: Connected Math Project 3 (CMP3)	Materials: Connected Math Project 3	Materials: Connected Math Project 3
ATP-1	Content: Grade 5/6	Content: Grade 6/7	Content: Grade 7/8	Content: Algebra
	Materials: Investigations & CMP 3	Materials: CMP 3	Materials: CMP 3	Materials: CMP 3 + supplements
ATP-2	Content: Grade 6/7	Content: Grade 7/8	Content: Algebra	Content: Geometry
	Materials: CMP 3	Materials: CMP 3	Materials: CMP 3 + supplements	Materials: Discovering Geometry

D90 Mathematics Supplemental Resources

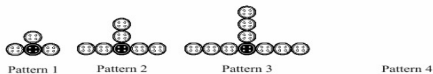
MARS Tasks

<https://www.insidemathematics.org/performance-assessment-tasks>

Buttons

This problem gives you the chance to:
 • describe, extend, and make generalizations about a numeric pattern.

Gita plays with her grandmother's collection of black and white buttons. She arranges them in patterns. Her first 3 patterns are shown below.

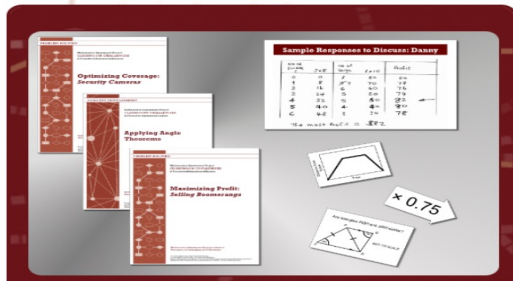


1. Draw Pattern 4 next to Pattern 3.
2. How many **white** buttons does Gita need for Pattern 5 and Pattern 6?
 Pattern 5 _____ Pattern 6 _____

Explain how you figured this out.

Formative Assessment Lessons

<https://www.map.mathshell.org/lessons.php>



Problems of the Month

<https://www.insidemathematics.org/performance-assessment-tasks>

inside mathematics

Inside Problem Solving

Polly Gone

Level A

Polly works in a zoo and needs to build pens where animals can live and be safe.

The walls of the pens are made out of cubes that are connected together. Each section of fencing has a length of 1 cube.

Polly has 40 cubes and wants to make the largest rectangular pen possible, so the animals can move around freely but not get loose.

How can she use all 40 cubes to make the walls of the pen so that it has the greatest area for the animals?

The walls must:

- Be fully enclosed, with no doors or windows, so Polly's animals can't get out (no gaps).
- Not overlap each other.

Help Polly by making several different-shaped pens and determine what pen provides the largest area for the animals. You might want to build the pen on the grid paper, so that it will be easier to determine the area.

Use the grid paper to show the shape of the pen. Explain to Polly why you believe your pen is the largest one that can be made.

IAR Released Items

<https://resources.newmeridiancorp.org/released-items/>



Multiplication by Heart

<https://mathigon.org/>



Multiplication by Heart

These beautiful flash cards use spaced repetition to teach multiplication facts. Achieve fluency with just five minutes of practice per day!

Play

Shuffle Mode

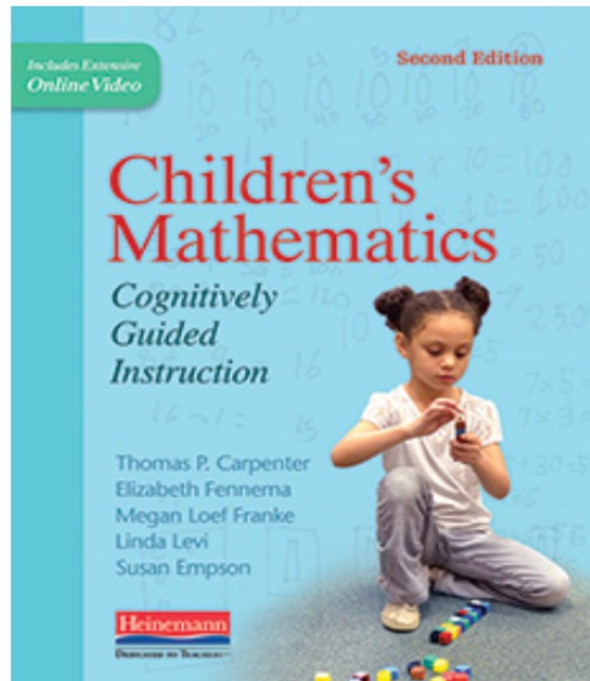
Three Act Tasks

<https://gfletchy.com/3-act-lessons/>

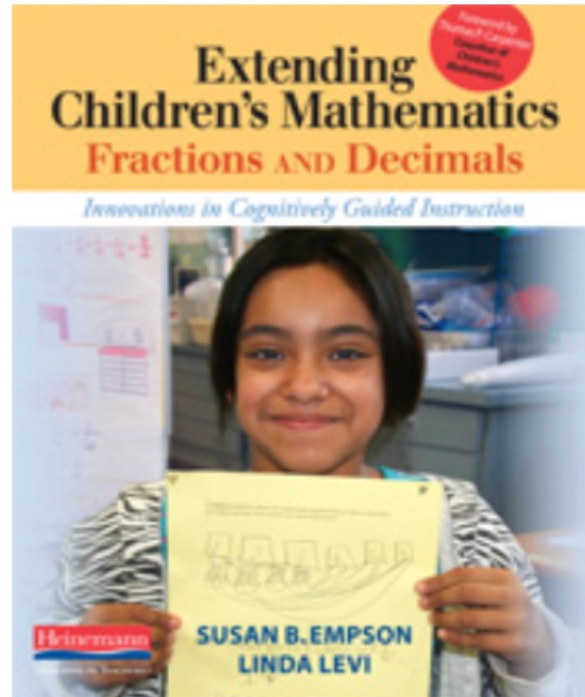


Professional Resources for Math Educators in D90

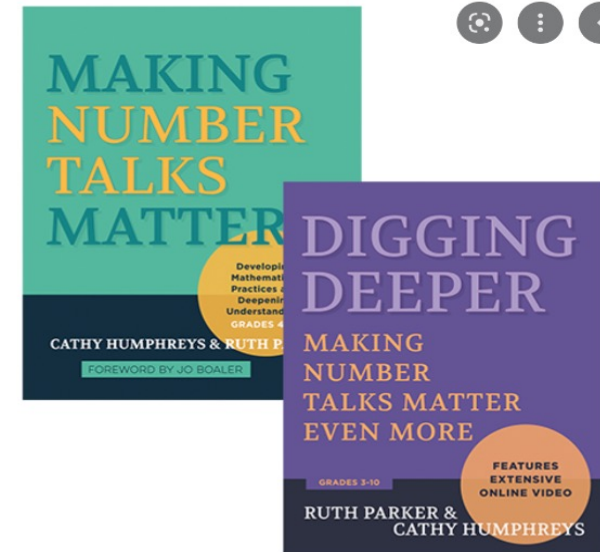
Children's Mathematics Cognitively Guided Instruction



Extending Children's Mathematics Fractions and Decimals



Making Number Talks Matter



District 90 Math Partners

Silicon Valley Mathematics Initiative

<https://svmimac.org/>



Metro Chicago Mathematics

<https://mcmi.uic.edu/>

**METROCHICAGO
MATH INITIATIVE**

K-8 MATH SUPPORT: BRIDGES INTERVENTION PROGRAM



Identifies students through Multi-Tiered Systems of Support



Targets individual skill development



Aligns math support with classroom content



Monitors student progress over time



Offers core instruction plus additional intervention time

ROOSEVELT AM MATH ACADEMY

- Before school opt-in math support
- Unit pre- and post-assessments identify students who could benefit
- Facilitated by the Math Department
- Supports skills and concepts currently being taught in the classroom
- Accessible to students as needed
- Progress noted by participating students and teachers



MIDDLE SCHOOL SOCIAL STUDIES REVIEW

- Illinois State Board of Education revised Social Science Learning Standards to be inclusive and reflective of all individuals in this country (HB2170)
- Emphasizes inquiry skills and disciplinary concepts (civics, geography, economics, history)
- New conceptual frameworks: Recognizing Perspectives and Articulating Identities and Evaluate the Roles and Systems of Power
- Content area changes: multiple perspectives/viewpoints, diverse perspectives/viewpoints, marginalized groups, and underrepresented
- Focus: inquiry-based instruction and expansion of resources to include more diverse perspectives and viewpoints



LOOKING AHEAD: CURRICULUM WORK IN PROGRESS

- Elementary and Middle School Science and STEM Pilot
- Middle School Social Studies Curriculum Review
- ATP-2 Math Materials Review
- Phased implementation of Center for Applied Linguistics recommendations for English Learners
- D90 Diversity, Equity, and Inclusion Committee work
- Standards-based unit planning and assessment alignment
- Multi-needs classroom curriculum and instruction



Thank you!



Questions?