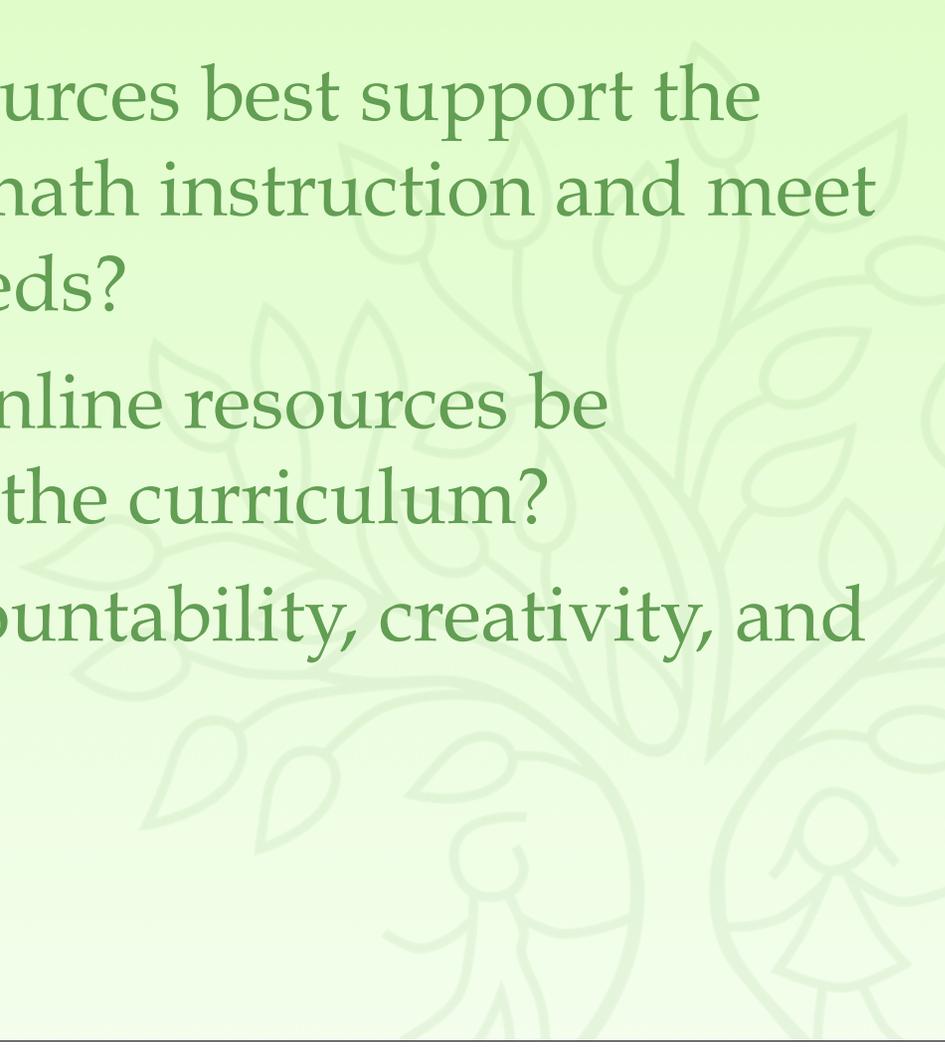




6-8 Math Materials Pilot

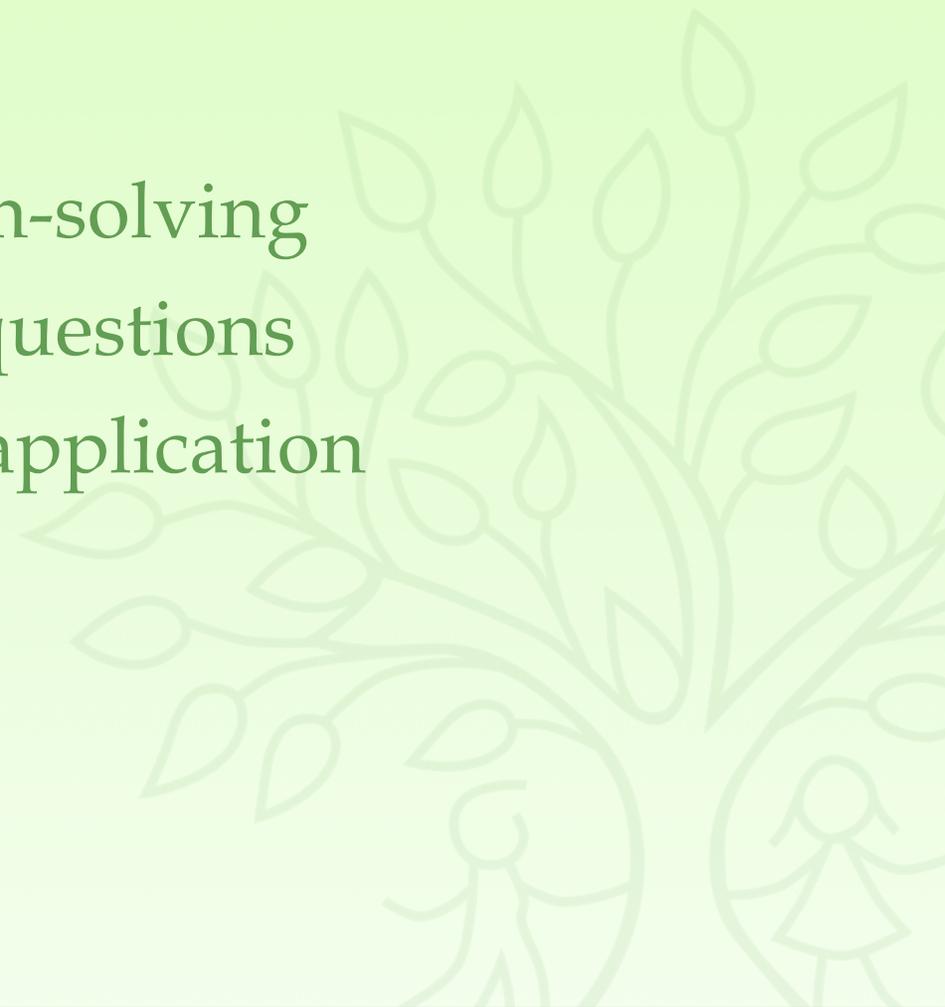
October 21, 2014

Essential Questions

- ▶ Which instructional resources best support the rigor of Common Core math instruction and meet the range of learning needs?
 - ▶ How should print and online resources be incorporated to support the curriculum?
 - ▶ How do we balance accountability, creativity, and innovation?
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Engaging Math Learning

Facilitates:

- ▶ Student Initiative
 - ▶ Persistence with problem-solving
 - ▶ Student formulation of questions
 - ▶ Real world context and application
 - ▶ Math reasoning
 - ▶ Shared discussion
 - ▶ Retention
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Key Components

- ▶ Reach out to constituents and network of experts in the field
- ▶ Utilize established vetting tools to narrow the field of recommended materials
- ▶ Conduct the math pilot and gather relevant quantitative and qualitative data
- ▶ Analyze collected data collaboratively to reach final decision

Next Steps

Date	Action
Oct. 24th	Conduct initial vetting of materials with sub-committee
Oct. 29th	Distribute pilot teacher applications
Oct. 27th-28th	Establish dates for pilot training
Nov. 3rd	Finalize schedule for pilot implementation in classrooms



Q & A



A Community of Learners

Math Grades 6-8 Pilot Process

TO: School Board
Trisha Kocanda, *Superintendent*

FROM: Alison Hawley, *Director of Curriculum, Instruction & Assessment*

October 21, 2014

Executive Memo

Essential Questions

- Which instructional resources support the rigor of Common Core math instruction and meet the range of learning needs?
- How should print and online resources be incorporated to support the curriculum?
- How do we blend accountability, creativity, and innovation?

6-8 Math Materials Pilot Goals

1. Select foundational resources aligned to the Common Core State Standards-Math (CCSS-M) and *The Standards for Mathematical Practice* to support the 6-8 math curriculum;
2. Maximize teacher collaboration and professional development across grade, building, and District;
3. Provide vehicle for the development of meaningful common assessments;
4. Provide technology components that connect teachers and students to dynamic online math resources;
5. Implement selected resources in 6-8 classrooms beginning in 2015-2016.

Overview of Initiative

In April of 2013, The School Board approved the newly revised K-8 mathematics curriculum aligned to the CCSS-M and *The Standards for Mathematical Practice*. This

represented the first time Winnetka Public Schools adopted a completely aligned K-8 math curriculum that incorporated both K-8 overarching and unit based essential questions and essential understandings, and clearly defined what students are expected to **know**, **understand**, and **do** (KUD).

The curriculum design process, guided by the Understanding by Design Framework, facilitated the organization of the Common Core State Standards into units of study for each grade level and outlined the learning expectations for each unit as well as across the year. Materials are targeted and selected to support the goals of the curriculum. Curriculum and materials work in tandem to achieve the established learning goals. Because of a lack of Common Core aligned 6-8 math materials available in the marketplace last year, the selection of materials to support the 6-8 curricula was delayed. However, the enhanced development of online resources and revised print materials has increased availability, providing school districts with options to support a CCSS-M aligned curriculum.

Traditionally, print materials have served as the foundational resource to support math curricula. The recent proliferation of online resources such as Illustrative Math, Desmos, and instructional blogs have started to play a larger role in supporting Common Core based math learning. In some cases the online resources are dynamic - they are frequently updated with innovative real-world based problems. In other cases, the online resource is a static document that resembles a traditional print resource, but is accessible only online. This resource does not change or get refreshed as frequently as the more dynamic online resources. The 6-8 math pilot will identify and review both print and online resources with the intention of reviewing both static and dynamic options.

Key Understandings

1. Teachers guide student learning; materials support this process.

It is high-quality instruction that matters most for student learning. Teachers draw upon their expertise of effective instructional techniques to create meaningful experiences for students. These thoughtful experiences are designed to ensure deep conceptual understanding of math. Materials DO NOT teach students. It is the social aspect of learning, facilitated by teachers, which helps students make sense of mathematical concepts.

2. There is no perfect math program (set of materials).

All math programs have specific strengths and weaknesses. Publishers develop materials to meet the needs of school districts serving diverse learners, communities, and educational settings. As we enter into the piloting process, we are very aware that our selected program will demonstrate strengths to be

capitalized on, and weaknesses to be addressed. For that reason, we have determined the key indicators of effective programs to inform our final recommendation. These key indicators are derived from the Winnetka Public Schools Math Mission & Beliefs and CCSS-M literature and research. It is our intent to address any identified weaknesses with supplemental materials.

3. The math pilot process includes acknowledged limitations.

The Curriculum Department recognizes that there are various ways to implement a pilot process. Given the number of initiatives and the recognition of limitations on staff time, it was determined that the potential materials would be piloted in classrooms a minimum of 20 days (approximately 4 weeks) for each set of materials. The goal of the pilot is to gather data that is focused, aligned, and informative, as well as tied to clear criteria to help inform the final decision.

4. Professional development is critical for success of implementation.

To support a major shift in the math curriculum, due to the CCSS-M and the implementation of a foundational resource, it is essential that professional development be supported with the necessary time and funding. In order to implement the lessons in a math program as intended by the authors, teachers must participate in high-quality training to understand the complexities of the program design and underlying research. Teachers must also be afforded common and collaborative planning time to support instruction, drawing on their own expertise. These professional learning experiences will afford teachers the opportunity to implement the curriculum and materials with greater confidence, common understanding, and integrity.

Vetting Documents and Tools

The following tools and documents will serve to anchor the 6-8 Math Pilot process:

Document	Source/Purpose
Winnetka Public Schools Mission and Belief Statement	Developed by the District Math Committee based on best practices understanding of high quality mathematics programs. High quality math learning provides focus, coherence, deep conceptual understanding, problem-solving, communication, and <i>The Standards for Mathematical Practice</i> .
Common Core State Standards Mathematics Curriculum Analysis Project (2011)	Funded by the Brookhill Foundation and Texas Instruments and supported by the Council of

	Chief State School Officers and the National Council of Supervisors of Mathematics. This study produced a series of tools (see below) to support school Districts in determining which published materials are truly aligned to the CCSS-M and which are not, despite any claims publishers may make. The provided tools establish rigorous criteria and allow for consistency in documentation across pilot users.
Tool 1: Mathematics Content Grades 6-8	This tool supports pilot teachers to analyze content coverage and gather evidence in terms of how the set of materials attends to the specific standards within a curricular unit and determine balance as it relates to mathematical (conceptual) understanding and procedural skills.
Tool 2: Mathematical Practices	<i>The Standards for Mathematical Practice</i> are also considered standards and skills that carry equal weight to the grade level content standards. Traditionally, publishers have not incorporated these math behaviors or habits of mind into their materials. The practices are essential to support a well-rounded math education and for meeting the CCSS-M. This tool analyzes the materials ability to facilitate student engagement with these skills.
Tool 3: Overarching Considerations - Equity, Formative Assessment & Technology	This tool is designed to analyze the extent to which the materials “reflect equitable practices, embed high quality and high cognitive formative assessments, and encourage the use of technology in rich and appropriate ways.”
6-8 Math Materials Pilot Timeline	Click here to view timeline

Key Pilot Process Milestones

Date	Milestone
October 24th	Vetting of the recommended materials by members of sub-committee to determine the two pilot programs

October 29th	Distribute pilot teacher applications
November and January	Schedule math materials training for two selected programs
Early November	Finalize pilot classroom schedules and conduct 4-6 week pilot
March 9th – 20th	Analyze pilot data to determine final materials selection
April	Share selected materials with the School Board
May	Gain Board approval of materials selection

Click [here](#) to view the materials that will be presented at the Board meeting.