INDEPENDENT SCHOOL DISTRICT NO. 625
Saint Paul, Minnesota
COMMITTEE MEETING OF THE BOARD OF EDUCATION
Administration Building
360 Colborne Street
Saint Paul, Minnesota 55102

March 7, 2023
4:30 PM

A G E N D A

1. **CALL TO ORDER**
2. **AGENDA**
    A. Superintendent's Announcements
    B. K-12 Math Adoption
       1. Introduction
       2. Presentation   2
       3. Discussion
       4. Action (TBD)
    C. Reflections on February 28, 2023 Special Meeting and Listening Session
       1. Introduction
       2. Discussion
    D. Reflections and Discussion on March 3-4, 2023 Students Outcomes Focused Governance Training Workshop and Retreat
       1. Introduction
       2. Discussion
3. **ADJOURNMENT**

#BoldSubject#

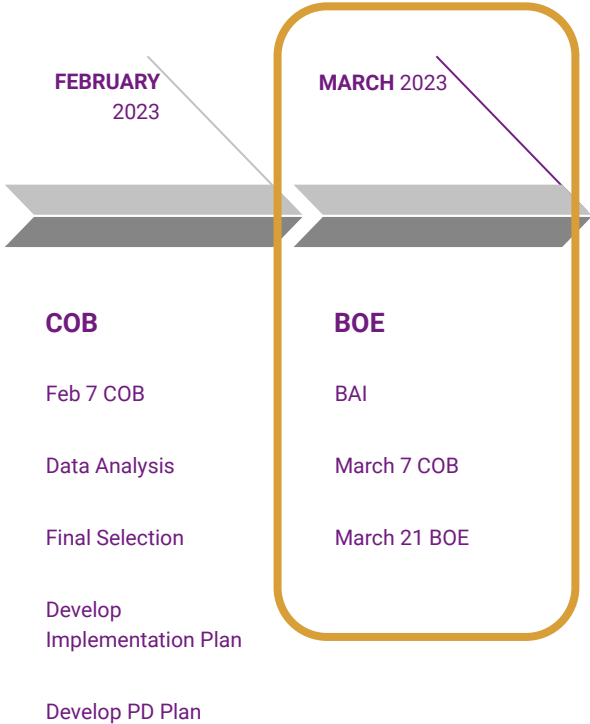# K-12 Math Adoption

COB March 7, 2023

Guide to Presentation

1	Process Overview Updates
2	K-12 Math Curriculum Recommendations
3	Purchase Cost
4	Questions?

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1 Process Overview Updates

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Timeline

FEBRUARY 2023

MARCH 2023

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COB

Feb 7 COB

Data Analysis

Final Selection

Develop Implementation Plan

Develop PD Plan

BOE

BAI

March 7 COB

March 21 BOE

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Percent of students proficient on MCA math in 2021 & 2022

Legend: ■ 2021 ■ 2022

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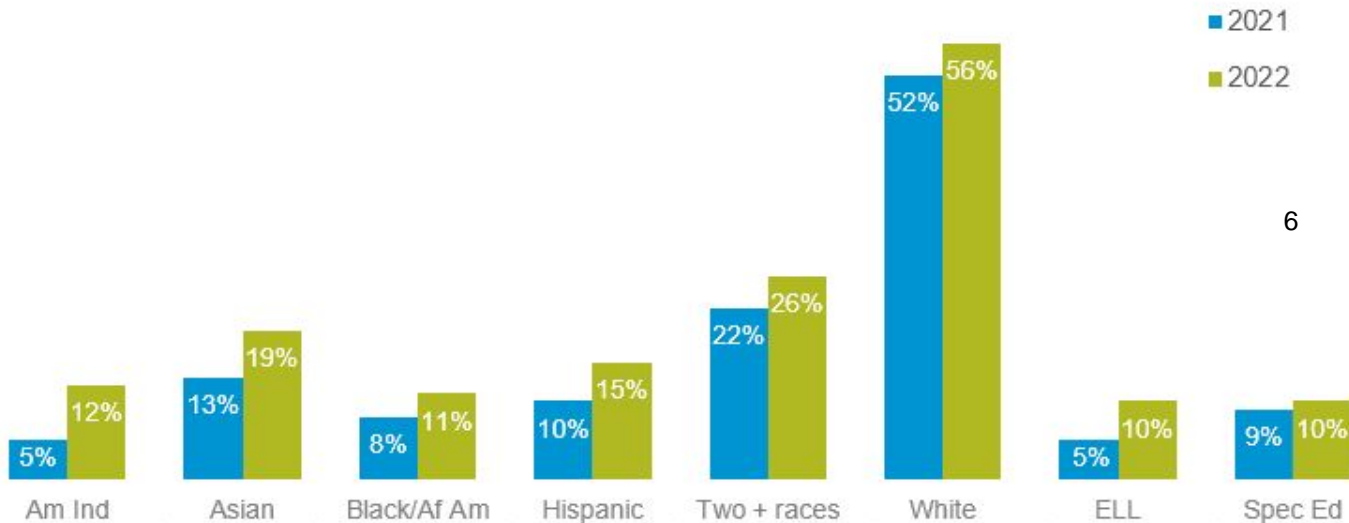
% of enrolled students taking the math MCA		Am Ind	Asian	Black/Af Am	Hispanic	Two + races	White	ELL	Spec Ed
	2021	37%	46%	49%	51%	51%	58%	52%	41%
	2022	69%	82%	78%	78%	78%	81%	83%	65%

Chart values:
- Am Ind: 2021 5%, 2022 12%
- Asian: 2021 13%, 2022 19%
- Black/Af Am: 2021 8%, 2022 11%
- Hispanic: 2021 10%, 2022 15%
- Two + races: 2021 22%, 2022 26%
- White: 2021 52%, 2022 56%
- ELL: 2021 5%, 2022 10%
- Spec Ed: 2021 9%, 2022 10%

Engagement Sessions

- ## 25 Sessions
  - [12 Open House Sessions](#) (K-12 Teachers, PACs, Academic Offices)
  - 7 PLC Sessions at the High Schools
  - 3 Principal Sessions
  - 3 Learning Lead & Math Lead Sessions

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- ## Over 301 Educators Participated
  - Elementary School   209 Teachers
  - Middle School   46 Teachers
  - High School   46 Teachers

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Culturally Responsive Curriculum

Both elementary and secondary curriculums are designed to **empower** students while **building** their conceptual understanding of math. **Promote** students' voice and choice, interdependence and self-confidence.

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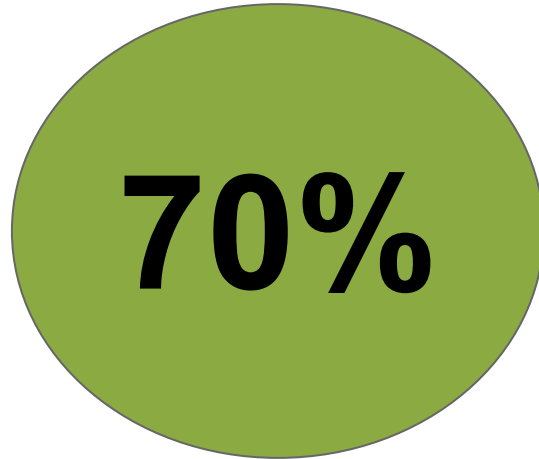# K-12 Math Curriculum Recommendations

Elementary & Secondary

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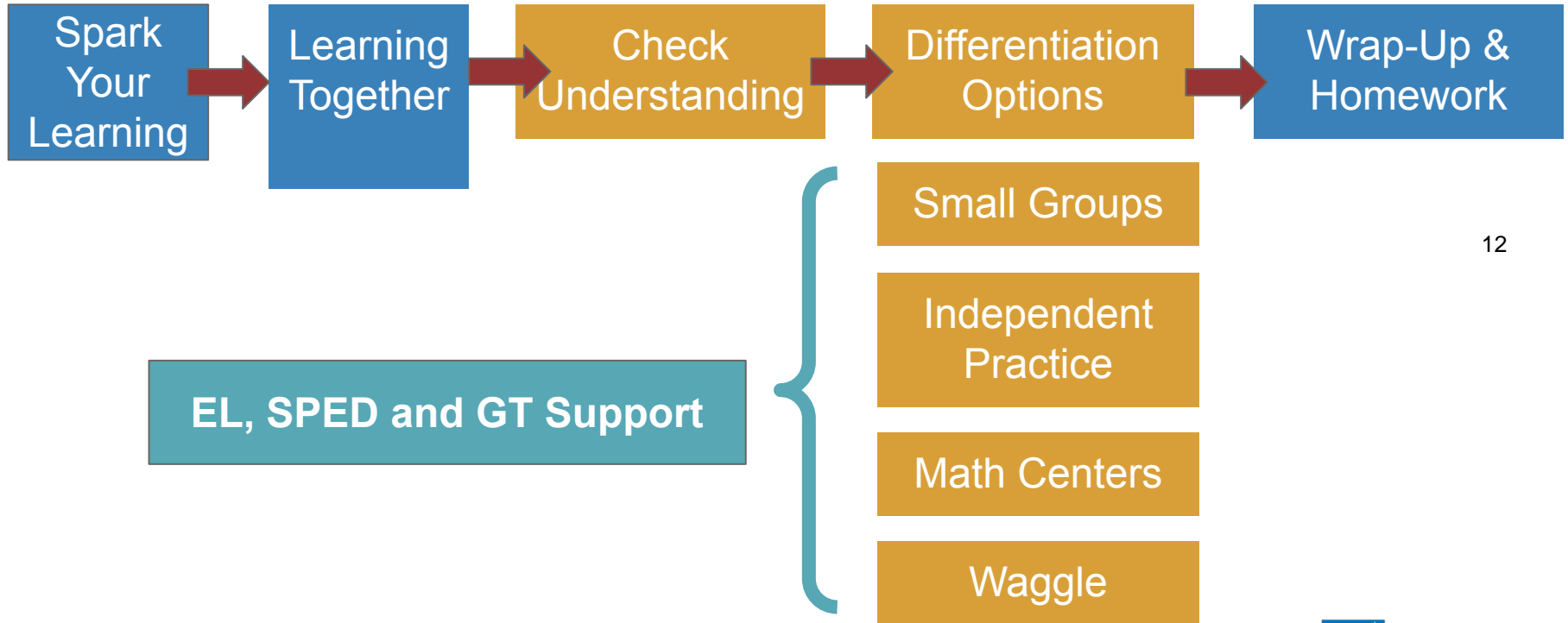
Elementary Recommendation

(Houghton Mifflin Harcourt)

K-5 Teachers' Ranking for HMH

70%

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HMH Into Math Program Structure

Spark Your Learning → Learning Together → Check Understanding → Differentiation Options → Wrap-Up & Homework

Differentiation Options:
- Small Groups
- Independent Practice
- Math Centers
- Waggle

EL, SPED and GT Support

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Waggle: Differentiation/Intervention

- **Meet students where they are**
  - Auto assign with HMH Growth Measure
  - Assign content from the Into Math table of contents
- Teachers can **view individual student's skill gaps or view groups** of students
- **Actionable data insights** pinpoints precise skill gaps in real time
- **Waggle math games** reinforce foundational skills
- **Skills quizzes** provide check for understanding
- Acceleration through **Personalization**, **Inclusive Supports**, **Game Rewards**

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Sample Waggle Activity

Click here to play video or scan the QR Code below.

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Culturally Responsive Curriculum Examples

- **Planning and Pacing Guide:** Provides relevant publications on equity, SEL for teachers to make cultural consider when planning and teaching
- Supports teachers in **honoring home languages and ways of communicating**: Giving blank spaces with each entry so students can ₁₅ make graphic organizers, drawings or notes.
- **Spark your Learning Tasks:** options to show understanding through the use of manipulatives, pictures, algorithms, discourse and descriptions to explain thinking.
- **Talk Move Strategies:** structure conversations and encourage students to share understandings in respectful ways

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EL Supports

- **Aligned to WIDA** specifications
- **Vocabulary:** Allow for vocabulary to emerge after the student is exposed to a concept and develop understanding instead of frontloading new vocabulary. EL students simultaneously boost their disciplinary and English language skills.
- **Language Objectives** in each lessons
- **Teacher Tabletop Flipcharts:** contains language proficiency level scaffolding and support for EL
- **Teacher Manual:** Differentiated language routines and key vocabulary embedded in every lesson
- **Language Routine Cards & Talk Moves Cards:** PD resource for teachers to ensure student reasoning and discourse play a key role in instruction

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SPED Supports

- Visual supports
- **Check Understanding** embedded in every lesson & online with Ed
- Small-group options are identified for **"On Track, Almost There, or Ready For More"**

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- Teacher Notes referencing Tier 2 & Tier 3 interventions tied **to prior learning** in prerequisite content
- **Teacher Tabletop Flipcharts** use an alternate approach who need additional support
- Waggle (Adaptive)

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Teacher Tabletop Flipcharts

Support

Teacher Tabletop Flipcharts (Grades K–8) and **point-of-use lesson supports** (High School) contain leveled scaffolding and support for English learners. These scaffolding suggestions ensure teachers will maintain the rigor and cognitive complexity level required for mathematical reasoning when supporting English learners.

The three proficiency levels

Represent 3-Digit Numbers

Give children three sets of connecting cubes, such as blue, green, and red. Let blue cubes represent hundreds, red cubes represent tens, and green cubes represent ones.

Write a number greater than 100 on the board. Ask children to group their cubes to represent the number of hundreds, tens, and ones. Repeat. This process will reveal children's ability to differentiate hundreds, tens, and ones. Assess children's understanding by asking them questions such as:

- How many hundreds? How many tens? How many ones?
- What do you notice about the number of ones, tens, and hundreds?
- How can you check your answer?

Grade 2

EL PROFICIENCY LEVEL

Beginning
Write the terms −2x and 3x. Say, "These are like terms because each term has the same variable, x, raised to the same power—the first power." Then write the term $4m^2$ and ask students to write a like term for $4m^2$.

Intermediate
Have students work in groups. Give each group a set of index cards. Each card should show two terms, such as 5x and −3x or $6y^3$ and $6y^2$. Ask students to explain why the terms on each card either are or are not like terms.

Advanced
Have students explain how to use the Distributive Property to combine like terms.

Algebra 1

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Support for Families

- **Family Room**, a dedicated space with personalized, easily accessible, on-demand resources to support parents and children
- Families and caregivers can **access their child's lessons and assignments 24/7** and find simple, bite-sized articles, videos and tips for parents and educators in both English and Spanish, personalized to their child

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Middle & High School Recommendation

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Teachers' Ranking for SAVVAS

Middle School	High School
1st Choice: 70% **2nd Choice: 24%** **3rd Choice: 6%**	**1st Choice: 49%** **2nd Choice: 49%** **3rd Choice: 2%**

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enVision In MN

Bringing Learning to You!

Students all over Minnesota are connecting with Savvas Mathematics Programs.

Welcome to the family!
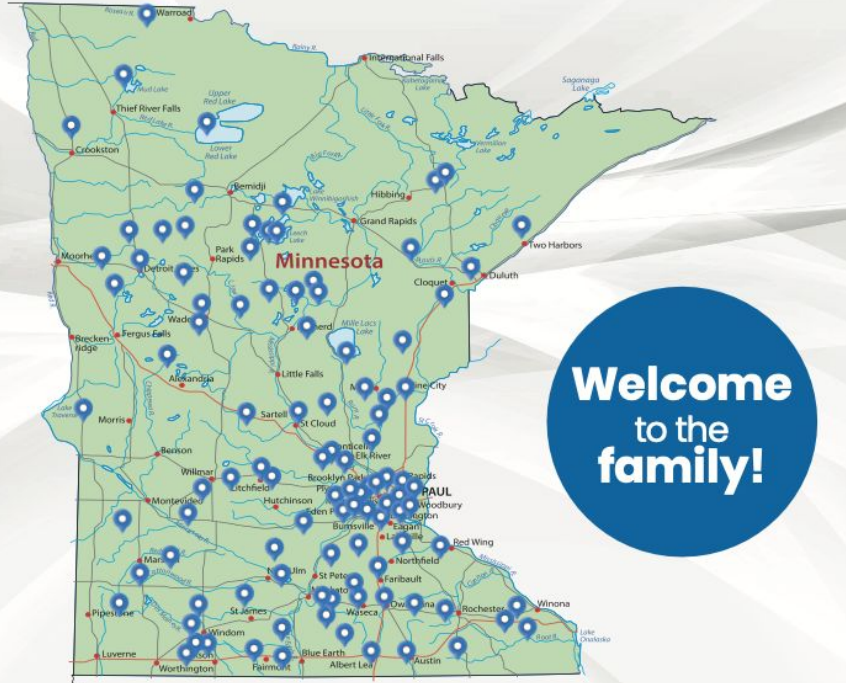
Brooklyn Center
Robbinsdale
Roseville
Burnsville

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Instructional Model Gr 6-8

STEP 1: Problem-Based Learning	STEP 2: Visual Learning	STEP 3: Assess & Differentiate
Opens each lesson with rich problem for students to discuss and share solution strategies. **Problem-based learning is an educational approach in which complex problems serve as the context and the stimulus for learning.** Teachers may incorporate the use of physical or digital manipulatives as appropriate.	Visual learning **bridge connects thinking** from the Problem-based Learning task to the lesson.	A variety of engaging differentiation options in each lesson encourage and challenge students of all learning levels. **Teachers use data form the Lesson Quiz to prescribe intervention, on-level or advanced differentiation.**

Inspire students to think critically, pursue their dreams and change the world.

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Instructional Model Gr 9-12

STEP 1: Explore Problem-Based Launch	STEP 2: Understand & Apply	STEP 3: Practice & Problem Solving
Students work independently, then come together in small groups to **discuss strategies and extend thinking**. Focus on process, not answers.	Series of **visual examples** that promote understanding followed by quick formative assessment called, **"Try It!"**	Students apply learning on intentionally sequenced exercises (Understand, Practice, Apply and Assessment Practice)
	Guided Practice	**STEP 4: Assess & Differentiate**
	"Do you understand?" & "Do you know how?"	Lesson Quiz as formative assessment to determine differentiation needs.

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SuccessMaker
Intervention Support

- Online personalized system
- Uses diagnostic screener to place students
- Provides intervention and enrichment

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- Continuously adaptive
- Builds procedural and conceptual understanding
- Aligns with the in class core curriculum instruction and to the Minnesota State Standards
- Real-time data

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Culturally Responsive Curriculum Examples

- **Problem-based learning:** promotes collaboration and engagement through sharing unique perspectives and bring their cultural experiences in the discussions.
- **3-Act Mathematical Modeling lessons** that make learning contextual. Students get to choose the strategy to solve a problem leveraging student voice and cultural capital.
- **STEM Projects** explore real-world social, economical & environmental issues
- **Language support Handbook** helps teachers support the cultural and linguistic needs.
- **Activities allow students to respond in multiple modalities:** reading, writing, listening, speaking and representing

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CRI Example

3-Act Math

Build students' confidence to think mathematically and solve problems on their own.

ACT 1: THE HOOK

A video or photo hooks students with the task and provokes questions.

ACT 2: THE MODEL

Capacity: 10 gallons

Students develop mathematical models to arrive at a solution that makes sense to them.

ACT 3: THE RESOLUTION

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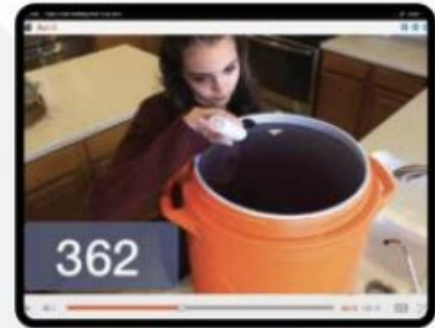
Visuals help students explain differences between their own conjectures and a possible solution.

EL Supports

- **Aligned to WIDA** specifications
- **EL Instructional suppor**t is in the Teacher's Manual for each lesson.
- **Visual Learning Animation:** short animations for each lesson to reduce language barriers. Questions read aloud also appears on screen to help EL students connect oral and written language.
- **Student's Edition Realize Reader:** Downloadable for offline work, digital eText allows students to highlight and annotate, compatible with Google Translate
- **Academic Vocabulary Activities** online
- **Development of academic vocabulary**, have read-aloud functionality and ask students to engage with meaning of the words.

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Academic Vocabulary Example

Academic Vocabulary Activity

Students preview and demonstrate understanding of academic language through an online activity that supports each vocabulary word. Complete the vocabulary routines as a class or in partner activities.

Vocabulary Routine

Listening: Read the word and definitions.

Speaking: Recite the word and definition orally.

Reading: Read the sample instruction and then discuss and record your responses.

Writing: Write a sentence using the word.

Language Development for All Students

Language Support Handbook provides Topic and lesson instructional support that promotes language development. Includes teaching support for academic vocabulary and more!
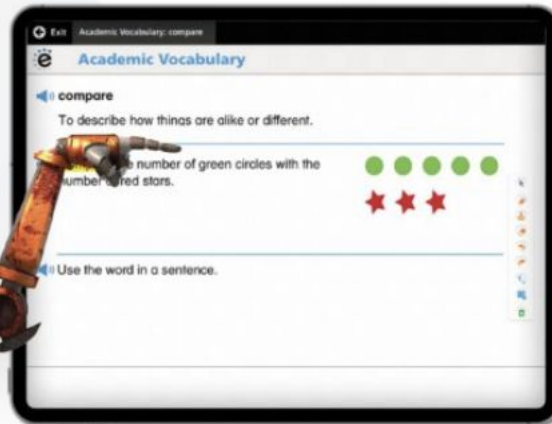
SPED Supports

- **Lesson Quiz data** can be used by teacher to prescribe intervention (SuccessMaker) in small groups, in pairs on assigned differentiated resources.
- **Examples of Differentiation Resources**
  - Online Savvy adaptive Homework & Practice
  - Virtual Nerd Tutorial Video(s)
  - Fluency Practice
  - MathXL (practice & reteach)
- **SuccessMaker** (Tier 2 & 3 Intervention)
  - Online personalized system for continuously adaptive intervention and differentiation with real-time data

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Support for Families

- **Family engagement:** Share topic and lesson-level resources to engage students at home with support for parents/caregivers. Compatible with Google Translate.
  - Overview of Resources
  - Support with individual lessons
  - Lesson video tutorials
  - Data dashboard for overall performance and results

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Support Math Learning at Home

Family Engagement materials provide teachers with easy-to-share tools that inform students' support networks. Compatibility with Google Translate™ allows for translation into more than 100 languages!

Topic Support

The Topic overview gives families a preview of upcoming content with visuals to support understanding.

Lesson-Level Support

Families are provided with video tutorials and vocabulary review that support standards.

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Purchase Cost

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Elementary & Secondary

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(HMH) 10 Year Adoption

Total Investment: $6.2M

Cost Per Student Per Year: $37.00

Note: Includes teacher resources (digital & print), student resources (digital), math manipulatives, Waggle (Tier 1 & 2 digital supplements), data dashboard, Family resources (digital), and Professional Learning (digital, virtual & in-person), Shipping & Handling to each site

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(SAVVAS) 10 Year Adoption Middle School

Total Investment: $2.2M

Cost Per Student Per Year: $35.11

Note: Includes teacher resources (digital & print), data platform for teachers, parents, & students (digital), student resources (digital), limited classroom sets, math manipulatives (digital & print), Savvy/MathXL/SuccessMaker (automated adaptive practice & intervention), diagnostic test (digital), Language support handbook (digital & print), Family resources (digital), and Professional learning (digital, virtual & in-person), Shipping & Handling to each site

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(SAVVAS) 10 Year Adoption High School

Total Investment: **$2.1M**

Cost Per Student Per Year: **$22.44**

Note: Includes teacher resources (digital & print), data platform for teachers, parents, & students (digital), student resources (digital), limited classroom sets, math manipulatives (digital & print), Savvy/MathXL/SuccessMaker (automated adaptive practice & intervention), Language support handbook (digital & print), Family resources (digital), and Professional learning (digital, virtual & in-person), Shipping & Handling to each site

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Total Investment

Elementary	$6.2M
Middle School	$2.2M
High School	$2.1M
Total Investment:	$10.5M

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Questions?

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