Delta Math Introduction

Recorded Zoom Video
(1 hour)

Agenda

- Welcome
- What should students know and be able to do?
- How will we know if they know and can do it?
- What will we do if they don't know or can't do it?
- Reflect

Welcome

- Who am I?
  - Mike Klavon (mklavon@oaisd.org)
    - Ottawa Area ISD (Regional Education Service Agency)
    - Alt+Shift (Michigan Department of Education, Office of Special Education)

- Why use Delta Math?
  - To identify and support students with unfinished learning.

  - Important Delta Math Websites
    - **Implementation Support**
    - **Screening and Reporting**

What should students know and be able to do?

- Tier 2 and tier 3 standards focus on **conceptual understanding** and **procedural fluency** of whole numbers, fractions, integers, expressions, equations and functions.
  - **Tier 2** standards focus on end-of-year benchmarks from the **previous** grade level.
  - **Tier 3** standards focus on end-of-year benchmarks from **2 more previous** grade levels.
  - **Tier 1** standards focus on end-of-year benchmarks from the **current** grade level.

  - *Preview the standards of the **current grade level** you teach and the standards for the **next grade level**. (Delta Math Standards by Grade Level)*

How will we know if they know and can do it?

- Screening recommendations for all students
  - **Tier 2 Identification and Support** *(Readiness for the **current grade level**)*
    - **(Sept/Oct)** Fall screeners provide diagnostic data for each readiness standard.
    - **(Jan)** Winter screeners are post assessments to show growth and identify students who would benefit from additional support.
    - ***(May)*** *Spring screeners are post assessments to show growth and identify students who would benefit from additional support.* ***(Optional)***
  - **Tier 1 Identification and Support** *(Readiness for the **next grade level**)*
    - **(Feb)** Late winter screeners provide diagnostic data for each readiness standard for the next grade level.
    - **(May)** Late spring screeners are post assessments used to show growth and identify students who would benefit from additional support.

  *Refer to the **Delta Math Assessment Overview** for the who, when, and why for using each type of Delta Math screener.*

- Support for online screening includes scripts, work paper and powerpoints.
  - Watch how the script provides structure to the **Online Screening Experience**.
    - Update: Beginning for the 2022-23 school year, proficiency with the math facts is now measured online.

- Reports can be generated as soon as students turn-in their screeners and data protocols are available on the **Implementation Training** support page.to guide data conversations.
  - **Course Overview** displays all students and their performance for each readiness standard.
  - **Standard Summary** displays the percent of students who performed below benchmark for each readiness standard.
  - **Intervention Group** displays the students who performed below benchmark for each readiness standard.
  - **Student Performance** displays how each student performed on each readiness standard.

What will we do if they don't know or can't do it?

- Intervention lessons support explicit and systematic instruction that includes the following evidence-based recommendations:
  - Learning targets and success criteria
  - Personal goal setting
  - Gradual release of teacher responsibility
  - Mathematical structure:
    - Visual representations (C/R/A)
    - Modeling problem solving thinking
    - Precise mathematical language
  - Frequent progress monitoring
  - Immediate and descriptive feedback

- The **Tier 2 intervention cycle** includes one day for each purpose:
  - Re-engage students with the learning target.
  - Build the math with manipulatives.
  - Draw the math to represent the manipulatives.
  - Write the math based on visual images developed by building and drawing the math.
    - Watch the Tier 2 Intervention Cycle Overview **support video**.

- The **Tier 3 intervention cycle** does not include the re-engagement session and provides extended time for each stage of the build-draw-write instructional sequence.

- Sample teacher prompts provide an opportunity to hear what each session can sound like
  - Read one of the documents below to find a sentence that sounds like you and modify a sentence that doesn't sound like you.
    - Tier 2: **Session 1** and **Sessions 2 through 8**
    - Tier 3: **Sessions 1 through 8**

- **Tier 2 Intervention resources** are available for each readiness standard.
  - **Teacher Packets** include:
    - Planning Guides
    - Teacher Notes
    - Suggested Solutions
    - Reflection Questions
    - Modeling and Guided Practice Cards
    - Independent Practice Directions and Cards
    - Multiplication/Division Mats, Expression/Equation Mats,...
    - Problem Solving Questions
  - **Student Packets** include:
    - Guided Review (Actual screener questions)
    - Guided practice problems (We Do Together and You Do Together)
    - Quick Checks - Forms A through H
    - Growth Chart with the learning target and goal
  - **Modeling Videos** are linked for each readiness standard.
    - Build - Session 2
    - Draw - Session 3
    - Write - Session 4
  - **Virtual Manipulatives** are located at:
    - The Math Learning Center
    - NCTM Illuminations
    - Desmos
  - *Familiarize yourself with the handouts included in a **student packet** and with the support provided in session 2 of a **teacher packet**.*

- Prepare for Tier 2 and Tier 3 intervention
  - Guides for **Tier 2** and **Tier 3** intervention help teachers and interventionists become familiar with the math and to print and organize resources for each standard.

Additional resources for distributed practice

- **Visual Guided Practice**
  - To strengthen and maintain basic fact fluency using 5-frame, 10-frame and area models.
  - Available for 1st grade through Algebra 2 readiness

- **Visual Fluency Cards**
  - To strengthen and maintain basic fact fluency using 5-frame, 10-frame and area models.
  - Available for adding, subtracting, multiplying and dividing whole numbers.

- **Virtual Card Sorts**
  - To strengthen and maintain conceptual understanding by matching cards with multiple representations
  - Available for whole number operations and integer operations and fractions concepts.

- **Online Practice**
  - To strengthen and maintain procedural fluency using visual and symbolic representations.
  - Available for 1st grade through Algebra 2 readiness.

- **Independent Practice**
  - To strengthen and maintain procedural fluency using card games and matching activities.
  - Available for 1st grade through 8th grade readiness.

Reflection

- Revisit today's learning goal.
  - Each participant will understand how Delta Math readiness screeners and intervention lessons identify and support students with unfinished learning.
  - What final questions do you have?