Math Curriculum in Deaf Education

Nick Catalano

02 INTRO MATH CLASS
03 PROBLEM MATH CLASS
04 PROPOSAL MATH CLASS
05 OUTREACH MATH CLASS
06 FINDINGS MATH CLASS
07 NEXT STEPS MATH CLASS
08 QCCs MATH CLASS

Who Am I?

Nick Catalano M.Ed

High School Mathematics Teacher of the Deaf (12 years)

Currently teach at the Horace Mann School for the Deaf in Boston

Huge fan of Chess!



Who are you?

Who teaches Mathematics?

High School?

Middle School?

Other??

Problem

- **Accessibility with curriculum**
- **Collective Resources**
- **Lack of PLCs amongst MS/HS STEM Teachers**
- **Often re-inventing the wheel as teachers in Deaf Education**

Proposal?

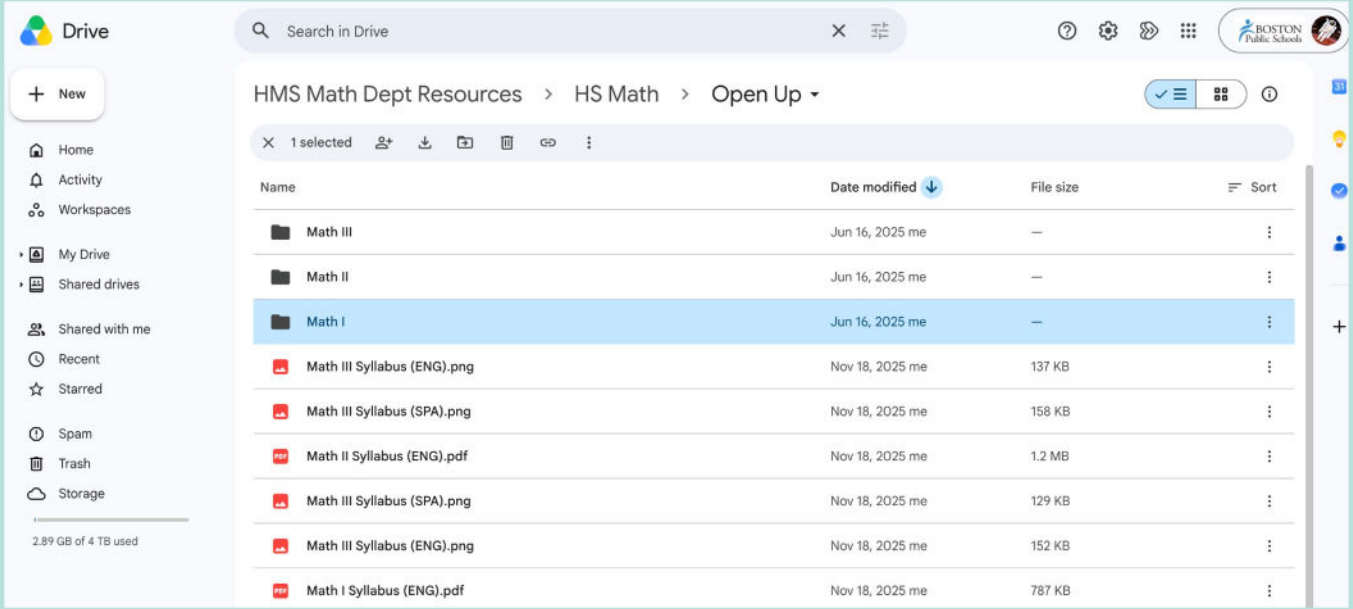
- Organize PLCs amongst TODs on a national scale within Deaf Education based on curriculum

Share Accessibility Materials

Collaborate with other TODs within the curriculum

Allow for feedback on potential curriculum switches

Proposal?


Drive
Search in Drive
BOSTON Public Schools
New
HMS Math Dept Resources
HS Math
Open Up
1 selected
Home
Activity
Workspaces
My Drive
Shared drives
Shared with me
Recent
Starred
Spam
Trash
Storage
2.89 GB of 4 TB used
Name
Date modified
File size
Sort
Math III — Jun 16, 2025 me —
Math II — Jun 16, 2025 me —
Math I — Jun 16, 2025 me —
Math III Syllabus (ENG).png — Nov 18, 2025 me — 137 KB
Math III Syllabus (SPA).png — Nov 18, 2025 me — 158 KB
Math II Syllabus (ENG).pdf — Nov 18, 2025 me — 1.2 MB
Math III Syllabus (SPA).png — Nov 18, 2025 me — 129 KB
Math III Syllabus (ENG).png — Nov 18, 2025 me — 152 KB
Math I Syllabus (ENG).pdf — Nov 18, 2025 me — 787 KB

Proposal?

- Directory of Deaf Education Schools and their Curriculum Programs

Outreach

I reached out to OPEN UP to see if any Deaf Education Programs used their curriculum……



Lesson 2: Growing Dots

Develop Understanding

Learning Focus

Describe a growing pattern with tables, graphs, and equations.

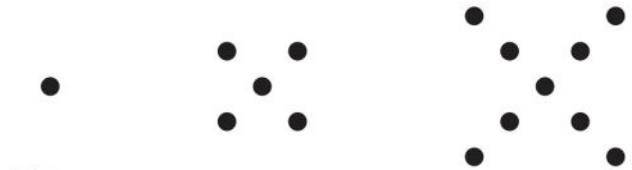
How does the pattern change from one figure to the next?

How can I use a mathematical representation to show how I see a pattern?

Open Up the Math

Launch, Explore, Discuss

1. Mark the way you see the pattern growing in the sequence of figures given.



At the beginning | At one minute | At two minutes

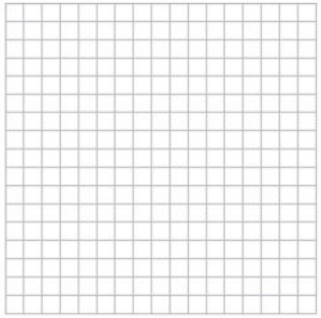
2. Assuming the pattern continues in the same way, how many dots are there at 3 minutes?

3. How many dots are there at 100 minutes?

4. How many dots are there at t minutes? Model the pattern using a table, a graph, and an equation. Your model should indicate how many dots will be in the pattern at 3 minutes, 100 minutes, and t minutes. Be sure to show how your solution relates to the picture and how you arrived at your solution.

Table:

Equation:



Ready for More?

Create a pattern of dots that increases by 3 each minute, starting with $t = 0$. Write an equation that models your pattern.

Takeaways

Representations of an arithmetic sequence:

Table:

Graph:

Explicit equation:

Recursive equation:

Adding Notation, Vocabulary, and Conventions

Arithmetic sequence:

Lesson 2: Growing Dots

Ready, Set, Go

Ready

Use the given values in the table to determine a pattern and complete the table.

1.

Term	1st	2nd	3rd	4th	5th	6th	7th	8th
Value	3	6	12	24				

2.

Term	1st	2nd	3rd	4th	5th	6th	7th	8th
Value	76	60	44	28				

3.

Term	1st	2nd	3rd	4th	5th	6th	7th	8th
Value	320	160	80	40				

4.

Term	1st	2nd	3rd	4th	5th	6th	7th	8th
Value	-15	-8	-1	6				

Some equations have two variables. You may recall seeing an equation written in slope-intercept form: $y = 5x + 2$. When given an x-value, the equation can be used to determine the associated y-value. A solution to an equation is the value that makes the equation a true statement. Therefore, a solution to an equation with two variables must include both the x-value and the y-value. Often the answer is written as an ordered pair. **The x-value is always first**. Example: (x, y).

Determine the y-value of each ordered pair based on the given x-value.

5. $y = 7x - 13$

   $(6, __), (-3, __), (1, __)$

6. $y = -3x + 8$

   $(-8, __), (5, __), (0, __)$

7. $y = 5x - 2$

Outreach

I emailed about 45 Deaf Education programs across the country and received about 27 responses

#1

What Math Curriculum does your program use?

#2

How would you rate it for accessibility and rigor?

High School Findings

INSPIRE MATH

SAVVAS LEARNING COMPANY

Mc Graw Hill

HMH

Big Ideas Learning

iM

desmos EXPLORE MATH

High School Findings

Atlanta Area
Alabama

Edison, OK
Oregon
South Carolina
Indiana
Illinois
Texas
Rocky Mountain

Fanwood
Tennessee
The Learning Center
Rhode Island
South Hills, CA

Horace Mann
(Boston)

Kansas
Ohio
Model Secondary

Western Pennsylvania

Lexington
Phoenix Day

Iowa

High School Findings - Feedback

"While it's academically challenging for the academic kiddos, the sequencing and pace of instruction don't necessarily align with the needs of our students. We've had to modify the materials to meet the unique needs of students."
- WPSD Principal (IM Curriculum)

"I use HMH because it is deaf-friendly and presents math in a straightforward manner. I particularly appreciate HMH because it provides comprehensive assessments, including diagnostics, quizzes, tests, exams, and end-of-course evaluations."
-Kansas Teacher (HMH)

"I would rate it a 7/10. While I like the worksheets I find that the way the topics are scaffolded are sometimes a little bit disjointed."
- Lexington Teacher (Big Ideas)

"When I attended NCTM in Chicago last year, Amplify by Desmos really caught my attention, & I'm hoping we'll adopt it next year."
- CSDF Teacher

"For McGraw Hill Glencoe Algebra 1, it's great for our grade-level kids. I've had to create many scaffolded lessons throughout the years though. 8/10 for rigor."
- Fanwood Teacher (McGraw Hill)

Benefits of a Directory?

- **Curriculum directory allows access to signed videos and resources**
- **Similar signs used**
- **Not “reinventing the wheel”**
- **Feeling a part of community**

Next Steps

What curriculum does YOUR school use?

Are you considering changing?

What factors impact your decision?

Pair/Share

Turn to your partner and discuss these questions:

1. **What curriculum does YOUR school use?**
2. **How accessible are the materials?**
3. **Are you considering changing?**
4. **What factors impact your decision?**

Share?

Any thoughts you'd like to share on the curriculum you use?

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Questions?
Comments?
Concerns?
Thoughts?

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thank you.

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