



KENTUCKY CENTER
FOR MATHEMATICS

**Math Intervention
Expert Talks
with
Michael Hines**

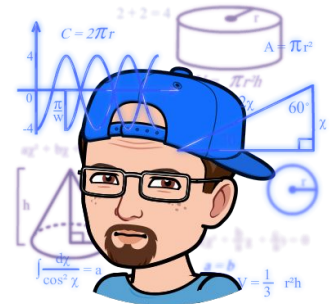
Welcome!

Expert Math Interventionist

Michael Hines

The New Haven School
Nelson County Public Schools
New Haven, KY

michael.hines@nelson.kyschools.us



All About Me

- Teacher in Nelson County for 13 years
- MIT for 5 years
- Assessing Math Concepts
 - Developing Number Concepts (Kathy Richardson)
- Love spending time with family
 - camping, boating, sports, board games, cards, watching movies, eating food

KY Math Intervention



Thank You!

Kentucky legislators created the Mathematics Achievement Fund in 2005.

The goal of the MAF is...

“to provide developmentally appropriate diagnostic assessment and intervention services to students, primary through grade 12, to help them reach proficiency in mathematics on the state assessments.”


Agenda

- Topic - What is my role as an MIT in this never before seen challenge?
- 8 Math Practices
- Research
- Card games
- Content - Money video
- Distance Number Talks
- Next Steps

Research 8 Math Practices

Make sense of problems and persevere in solving them.

When given a problem, I can make a plan, carry out my plan, and check my answer.



BEFORE...
Think about the problem.
Ask myself, "Which strategy will I use?"
Make a plan to solve the problem.

DURING...
Stick to it!
Ask myself, "Does this make sense?"
Change my plan if it isn't working out.


AFTER...
Check my work.
Ask myself, "Is there another way to solve the problem?"

Reason abstractly and quantitatively.

I can use numbers and words to help me make sense of problems.


Numbers to Words
 $26 + 27 = 53$

Words to Numbers
There are 26 boys and 27 girls on the playground. How many children are on the playground?



Construct viable arguments and critique the reasoning of others.

I can explain my thinking and respond to the mathematical thinking of others.



I can explain my strategy using...

- objects, drawings, and actions
- examples and non-examples
- contexts

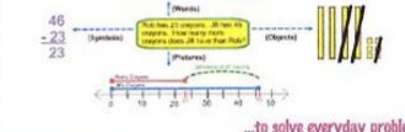
I can compare strategies with others by...

- listening
- asking useful questions
- understanding mathematical connections between strategies

Model with mathematics.

I can recognize math in everyday life and use math I know to solve problems.


I can use...



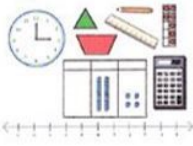
...to solve everyday problems.

Use appropriate tools strategically.

I can use certain tools to help me explore and deepen my math understanding.



I have a math toolbox.

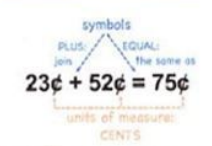


- I know *HOW* and *WHEN* to use math tools.
- I can reason: "Did the tool I used give me an answer that makes sense?"

Attend to precision.

I can be precise when solving problems and clear when I share my ideas.


Careful and clear mathematicians use...



- math vocabulary
- symbols that have meaning
- context labels
- units of measure
- calculations that are accurate and efficient

Look for and make use of structure.

I can see and understand how numbers and shapes are organized and put together as parts and wholes.



Numbers
For example:
Base Ten System

Shapes
For example:
Orientation
Attributes

Look for and express regularity in repeated reasoning.

I can notice when calculations are repeated.

$5 \times 2 = 10$

$2 + 2 + 2 + 2 + 2 = 10$
I am adding 2 five times.

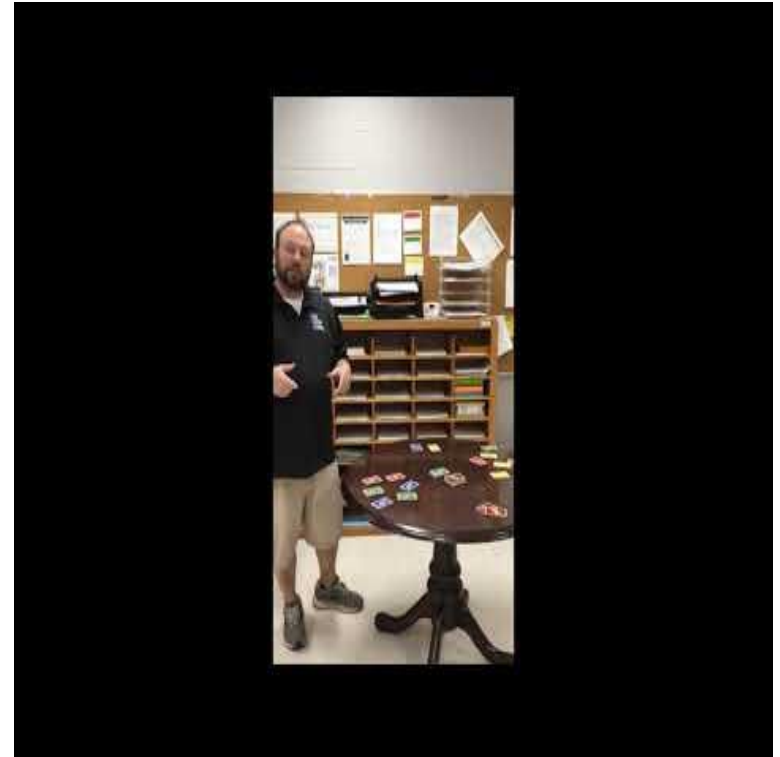
I am counting rows with 2 in each row five times.

I am making 5 hops of 2 on the number line.

- Focus on 8 math practices when preparing digital learning / at home experiences.
- 8 practices are applicable in all areas

Card Games

- Speed Make 10 or 5
- 3v3 or 4v4 Bingo
- Flip 2 or 3
- Fan Tan
- UNO
- DREME



Development and Research in Early Math Education - Stanford University

Content - Money



1. Construct a clock (math tool)
2. Discuss each grade level.
3. Provide an activity for each grade level.
4. Encourage discussion with proper math vocabulary in real world applications.

Virtual Number Talks

- ❖ Google Meet
 - Google District (one to one)

BE CAREFUL!

- Zoom
 - Lookout for “Zoom Bombs”
 - [Tips from PCMag.com](#)

Confidentiality!

Next Steps

- ❖ Virtual Number Talks
 - Offer Math Flips
- ❖ Dice Games Video
 - Offer chance to play against Mr. Hines online.
- ❖ Play Card Games
 - Offer chance to play against Mr. Hines online.

Next Steps Continued:

- ❖ Number of the Day (FB / Dojo)
 - Families post various ways of portraying the number such as collections, math problems, story problems, etc...

- ❖ Virtual small groups
 - Math Flips
 - Pose a question ahead of time
 - Connect with the students

Resources

youcubed.org

[DREME](#)

PCMag.com

Upcoming Virtual Professional Learning

APRIL 6 - 10
2:00-2:30 PM EST



Math Intervention Expert Talks!

w/ KY Math Leaders

Monday, April 6 - Meet the Expert- Kristie Manley

Tuesday, April 7 - Instructional Moves with KCM's Lisa Riggs

Wednesday, April 8 - Meet the Expert- Michael Hines

Thursday, April 9 - Instructional Moves with KCM's Tonda Thompson

Friday, April 10 - Meet the Expert- Jackie Damron

Visit Our KCM Website

www.kentuckymathematics.org



Good News!

The KCM is hard at work to ensure Kentucky teachers have access to innovative professional development from home.

Through the newly launched [KCM Virtual](#) site, mathematics teachers from all grade levels will have access to live zoom meetings, video records and corresponding materials. [Read more.](#)

[Elementary: Make 'n Take Supporting Number Sense and Fluency - Mar. 23-27](#)

[Middle: Fractions, Decimals & Percents - Mar. 30-Apr. 3](#)

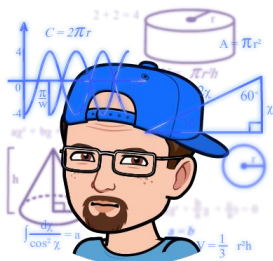
[High: Algebra & Geometry - Thursdays, Mar. 26 - Apr. 16](#)

[Math Intervention Expert Talks - Apr. 6 - Apr. 10](#)

[Focus on Place Value - Apr. 13 - Apr. 17](#)

KCM is here to support teachers!

Expert Math Interventionist



Michael Hines

The New Haven School

Nelson County Public Schools

New Haven, KY

michael.hines@nelson.kyschools.us