Creating a Math Classroom of #DreamChasers

NCTM 100 Days of Professional Learning
#NCTM100

Joanna Stevens
@MrsStevensMath
WE MUST NOT TOLERATE ACTS OF RACISM, HATE, BIAS, OR VIOLENCE.
CREATE THE ROOM WHERE IT HAPPENS

Joanna Stevens
bit.ly/nctmdream
@MrsStevensMath
Meet Ben: a teacher 🙌 who loves the Boston Red Sox

Meet Lindsey: a businesswoman who knows very little about baseball
“I LIKE BEING A PART OF SOMETHING BIGGER THAN ME.”
“I LIKE BEING PART OF SOMETHING BIGGER THAN ME”
“I LIKE BEING PART OF SOMETHING BIGGER THAN ME”
“I LIKE BEING A PART OF SOMETHING BIGGER THAN ME.”
Will you go to opening day with me?
Will you chase your dreams with me?
IN 5 YEARS...

OUR GOALS FOR THE YEAR
- Problem solve
- Persevere
- Collaborate

AUGUST 15, 2019

5 YEARS
- 60 months
- 1,825 days
- 43,800 hours
- 2,628,000 minutes

@MrsStevensMath
Our 5 Year Dreams
I want to become an architect in 5 years.

I wanna be a lawyer or a R.N.

I want to be a beautician because I love doing other people's hair!

In 5 years, I want to be graduated, be in college, and be able to find a good job.

I dream of being a 2019 KMEA State Champion.

Playing softball in college

BE SUCCESSFUL
Know what I want to do

Our 5 Year Dreams

@MrsStevensMath
“ACTIVE CARING DEMANDS A TWO-WAY RELATIONSHIP INDEPENDENT OF THE STUDENT’S ACADEMIC DISPOSITIONS.”

GEOFF KRALL
@GEOFFKRALL

@MrsStevensMath
IN 5 YEARS...

OUR GOALS FOR THE YEAR
- Problem Solve
- Persevere
- Collaborate

AUGUST 15, 2019

5 YEARS
- 60 MONTHS
- 1,825 DAYS
- 43,800 HOURS
- 2,628,000 MINUTES

@MrsStevensMath
IN 5 YEARS...

OUR GOALS FOR THE YEAR

- Problem Solve
- Persevere
- Collaborate

5 YEARS

57 months
1,732 weeks
41,568 days
41,568 hours
2,494,080 minutes

NOV 18, 2019
INTENTIONALLY REVISIT THE 5 YEAR DREAM

★ 2nd Trimester → Dream Boards via Google Slides

Google YOU

CLASS OF 202?

5 YEAR DREAMS

YOUR NAME

YOU DO YOU

#DREAMCHASERS

@MrsStevensMath
By 2025, I want to be going to college, job-shadowing an Aerospace engineer for NASA, and to start work on the first of many inventions, maybe start my own company.

in 5 years...

- have graduated high school in 2022
- still be in college doing well
- be in touch with family and friends
- be happy
- have a job and steady income and know what I want to do for the rest of my life
- to have many I
IN 5 YEARS...

OUR GOALS FOR THE YEAR
× PROBLEM SOLVE
× PERSEVERE
× COLLABORATE

MARCH 3, 2020

@MrsStevensMath

5 YEARS

53 × 60 MONTHS
1,627 × 365 DAYS
39,048 × 24 HOURS
2,342,880 × 60 MINUTES
INTENTIONALLY REVISIT THE 5 YEAR DREAM

★ 3rd Trimester → Dream Grids via FlipGrid

@MrsStevensMath
INTENTIONALLY REVISIT THE 5 YEAR DREAM
PROMOTE YOUR BRAND

- Truth: All ages love stickers.
- Students decorate their devices with stickers.
- Watch for deals on StickerMule
  - Here’s $10 off

@MrsStevensMath
A CLASSROOM OF MATHEMATICIANS

Credit to Shana McCay @scaffoldedmath for the sticker design

@MrsStevensMath
I’m a MATH person.

A CLASSROOM OF MATHEMATICIANS

@MrsStevensMath
Cost Effective Option

- Create your own
  - Buy label sheets
  - Design and print yourself
“NORMAL” OPENER ROTATION

#MultipleChoiceMonday
ACT Prep

#ThoughtfulTuesday
Quote Reflection

#WednesdayWisdom
Literacy

#ThinkingThursday
Problem Solving
How Many? Which One Doesn’t Belong, Notice and Wonder, Estimation

#FlashbackFriday
ACT Prep

@MrsStevensMath
"Non-Traditional" Opener Rotation

#MissYouMonday
Videos on Flipgrid

#ThoughtfulTuesday
Quote Reflection

#WellnessWednesday
How are you taking care of you?

#ThinkingThursday
Problem Solving
(Many! Which One Doesn’t Belong, Notice and Wonder, Estimation)

#FunnyFriday
Let’s share a laugh!

@MrsStevensMath
MISS YOU MONDAY

- Favorite Movies
- Favorite Song / Musician
- Dream Travel Destination
- If you could have dinner with one person...
- If you could be on any reality show ...
Every Tuesday, students respond to a quote.

I try to relate it to their 5 year dream or current events as much as possible.

#ThoughtfulTuesday Desmos Collection
"You've made this day a special day, by just your being you. There's no person in the whole world like you. And I like you just the way you are."

KATHERINE JOHNSON, NASA LEGEND
1918-2020

THOSE TIMES WHEN YOU DON'T FEEL LIKE WORKING. YOU'RE TOO TIRED, YOU DON'T WANT TO PUSH YOURSELF BUT YOU DO IT ANYWAY.

THAT IS ACTUALLY THE DREAM.

-- KOBE BRYANT

VOTE TO BE THE CHANGE YOU WANT TO SEE IN THE WORLD.
CHANGE
will not come if we wait
for some other person
or some other time.
We are the ones
we’ve been waiting for.
We are the change
that we seek.
—Barack Obama

Brave, Not Perfect
Fear Less,
Fail More,
Live Bolder
—Rashma Sanjani

Genius has no race.
Strength has no gender.
Courage has no limit.
—Hidden Figures

I want an adventure in the great wide somewhere.
**THOUGHTFUL TUESDAY**

**Who Inspires You? Who inspires you to chase your dream?**

Thoughtful Tuesday (Algebra 2)

---

**Amberley Snyder**
Paralyzed Barrel Racer
"Attitude is a little thing that makes a big difference"
-Sallie

**Louie Giglio**
Pastor
"You'll never lose by digging deep, staying true, not giving up, building character, in the crucible of challenge breathing in, hanging on, and becoming more weighty below the surface than you are impressive above it."
-Lauren

**John Wooden**
Basketball Coach
"Don't let what you can't do interfere with what you can do."
-Jade

**Michael Scott**
Businessman
The Office
"Society teaches us that having feelings and crying is bad and wrong. Well, that's baloney, because grief isn't wrong. There's such a thing as good grief. Just ask Charlie Brown."
-Luke

**Katherine Johnson**
NASA mathematician
Hidden Figure
"Genius has no race, strength has no gender, courage has no limit."
-Mrs. Stevens

---

[@MrsStevensMath](https://twitter.com/MrsStevensMath)
Wellness Wednesday

- Favorite Foods/Recipes
- Favorite Stress Reliever
- Favorite Book
- Favorite App
- Favorite Video Game
- Favorite Show

@MrsStevensMath
WELLNESS WEDNESDAY
Wellness Wednesday

Peanut Butter Pie

Recipe below

Sushi

Chips and Salsa

Pizza

@MrsStevensMath
Redefining their definition of mathematics through a rotation of activities that focus on their thinking process.

#ThinkingThursday Desmos Collection

@MrsStevensMath
How Many?

Christopher Danielson @triangledancsd
#howmany
#unitchat
#tmwyk

Photo from Adam Hillman via Instagram @witenry
I didn't count suckers, I counted the spaces in between.
Christopher Danielson
@trianglemancsd
#wodb
Top Left
It is the only liquid

Bottom Left
Not in a cylinder container

Top Right
It is the only one I can juggle :)

Bottom Right
Nothing edible

Photo from Lauren Johnson
@mrsjohnsonCA
I notice most of the people and things on this list are targeted towards younger people. I wonder why these are the most searched things, yet I don't know half of them.

I notice people are trying to figure out what people are talking about. I wonder if these are old people trying to catch up with the times.

Notice-A lot are beginning or just ended wonder-Why is it a trend to be dead?
How many Waterford Crystal triangles cover the NYE ball?
How many Waterford Crystal triangles cover the NYE ball?
<table>
<thead>
<tr>
<th>lower limit</th>
<th>my estimate</th>
<th>upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>4500</td>
<td>5000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>lower limit</th>
<th>my estimate</th>
<th>upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>2000</td>
<td>3000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>lower limit</th>
<th>my estimate</th>
<th>upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>256</td>
<td>500</td>
<td>1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>lower limit</th>
<th>my estimate</th>
<th>upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>10000</td>
<td>20000</td>
</tr>
</tbody>
</table>
And the answer is...

2,688

The number of Waterford crystals that adorn today’s ball. These crystals are handmade in Ireland and shipped over to the States.
FUNNY FRIDAY

- Meme / Gif / Video to represent 2020
- Favorite Comedy TV Show
- Favorite Comedy Movie
- Pic in a Funny Hat
- Favorite Comedic Character
Funny Friday

Memes, Gifs, Videos, Fun, Encyclopedeia 2020
How are you feeling today?

If you’d like, say more about your response below.
Check In Screens

- “Check-In” screen
STUDENT FEEDBACK

I really enjoy these morning things, they are the first thing I do when I wake up. I eat my breakfast with them so it's a nice little start of the day.

Thank you, I'm doing alright, not much to do. I appreciate your efforts to keep up with all of us. It means more to us than you realize. Hope you're also doing well.
"...WHEN TEACHERS CREATED TRULY RANDOM GROUPS EVERYDAY... PUBLICLY, VISIBLY, IN FRONT OF STUDENTS, THERE WERE PROFOUND CHANGES IN THE EFFECTIVENESS OF GROUP WORK.”
FLIPPITY

- Live Random Grouping
  - Students trust that groups are temporary and random
- Random Name Generator
- [www.flippity.net](http://www.flippity.net)
- Demo
FLIPPITY + GROUP NUMBERS

1. Gary
   Spencer
   Robert

2. Daniel
   Bette
   Jessica

3. Katharine
   Jane
   Jack

4. Denzel
   Marlon
   Meryl

5. Ingrid
   Dustin
   Cate
“When mathematics is taught as an open and creative subject, all about connections, learning, and growth, and mistakes are encouraged, incredible things happen.”
DESOMOS ART PROJECT

@MrsStevensMath
Desmos Art Project

Artist: Saragrace Ramlochan

Artist: Hannah Roark

Artist: Miranda Robinson

Artist: Stephanie Rosas

@MrsStevensMath
Desmos Art Project

@MrsStevensMath
DESmos
Pet House
Project
@MrsStevensMath
FUNCTION
COMPOSITION
MEME PROJECT

Idea from Mary Williams @merryfwilliams
Function Composition Meme Project

Idea from Mary Williams @merryfwilliams
FACT OR FICTION

(RUBRIC)

&

(EXAMPLES)

Claim:
There are 318,000 flavor stack combinations of Pringles.

I claim that there are NOT 318,000 flavor stack combinations of Pringles. My warrant is:

- This is a Fundamental Counting Principle problem.
- According to the Pringles stack website, there are 17 different Pringle flavors.
- There are 3 chips in a stack.
- I have 17 flavors to choose from for the bottom chip, middle chip, and top chip
- \(17 \times 17 \times 17 = 4,913\) stack combinations.
- Since \(4,913 < 318,000\), Pringles’ claim is false.
Fact or Fiction (Rubric) & (Examples)

I claim that there are NOT 8,400 combinations for a popsicle at steel city pops.

- This is a FCP problem.
- According to the Steel City Pops website, there are 28 pop flavors, 3 dip options, 8 dredge options, 5 drizzle options, and 5 dust options.
  - See Here
- You pick one of each, so there are 5 categories to choose from.
  - 28 * 3 * 8 * 5 * 5 = 16,800
  - Since 16,800 > 8,400, their claim is false.
**Fact or Fiction**

*(Rubric)*

&

*(Examples)*

---

I claim that there are NOT 12,326,391 combinations of colors on account that:

- This is a Combination problem.
- There are 12 colors to choose from and we are able to mix two of the colors together.
- There are 4 pieces of armor
- Because of this, there are 4 pieces of armor and 12 colors - that can be multiplied by 2- the equation will be $12 \times 2^4 = 331,776$ possible dye combinations.
- Since 331,776 < 12,326,391, the Minecraft Official Wiki is **FALSE**.
Is my purpose as an educator to select talent or develop talent?

Dr. Thomas Guskey
@tguskey

@MrsStevensMath
Target Based Grading

- All targets are aligned to the Kentucky Academic Standards (or College Board for AP Courses).
- Each learning target is assessed on a scale of 0-5.
  - 5 Mastery of Target
  - 4 Nearly Mastery
  - 3 Partial Mastery
  - 2 Attempt at Mastery
  - 0 No evidence
TARGET BASED GRADING

WHERE AM I?

WHERE AM I GOING?

HOW DO I GET THERE?

@MrsStevensMath
Target Based Grading

- Provides a more accurate representation of student achievement
- Increases student achievement
- Fosters student ownership of the learning process
- Promotes a growth mindset
TARGET BASED GRADING

By allowing retakes,

● Students are encouraged to persevere.
● Students see mistakes as learning opportunities.
● All students have a chance to succeed.
● Students master more targets.
TARGET BASED GRADING RESOURCES

- Presentation
- Newsletter
“I am a **better** teacher
- not better than you him, her, or them -
  not better than anyone.

I am just **better** than I was.
Good and great suggest an end.

I am more interested in my next better around the bend.
I just keep chasing **better.**”

**Teacher Monte Syrie**
@MonteSyrie

@MrsStevensMath
“I dream of being a better teacher and I need your help. Please take a moment to reflect and help me improve my instruction. All responses are anonymous. Please be honest and respectful.”

My favorite question → Describe Mrs. Stevens as a teacher in 3 words.

Student Voice
#ObserveMe

Please come in and #ObserveMe.

I would appreciate feedback on my goal to:

- Provide opportunities for my #DreamChasers to
  - Persevere
  - Problem solve
  - Collaborate

Send feedback via:

- Email joanna.stevens@garrard.kyschools.us
- QR Code
CHASE YOUR DREAMS

Desmos Fellowship

Google Certification

National Board Certification
What is your brand?

- #DreamChasers is my brand that I selected to match my goals, my passions, and my personality.
- What is the message you want to send your students?
What is your brand?

I promise that you'll never find another like me!

#packofthecurious

@MrsStevensMath
FROM THE FIRST DAY OF SCHOOL TO THE LAST DAY OF SCHOOL

★ End the Year with a “Farewell Address”
  ○ I’m PROUD of you
  ○ I’m THANKFUL for you
  ○ I DREAM for you
  ○ I TOAST to you

Cheerio!

@MrsStevensMath
BOTTLE OF DREAMS

- The Inspiration
  - NCTM 2018
  - John Berray’s Bottle of Dreams

- Bottle Labels
  - PDF file
  - DOC file

- Farewell Address
  - Google Slides
BOTTLE OF DREAMS
Establish your brand
- Pick something that captures your goals, your passions, and your personality

Revisit your brand as much as possible
- Special Activities: Dream Boards & Dream Grids
- Stickers
- Openers: #ThoughtfulTuesday & #ThinkingThursday
- Student Voice
- Classroom Activities
- Personal Growth

Farewell Address
- Make it memorable
- Toast with Bottle of Dreams

Creating a classroom of #DreamChasers

@MrsStevensMath
Collaborating + Problem Solving + Persevering = #DreamChasers

History has its eyes on you

Joanna Stevens

bit.ly/nctmdream
@MrsStevensMath
joannahstevens@gmail.com