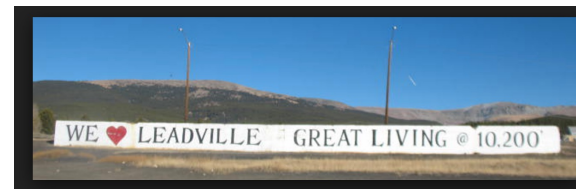
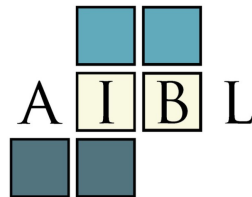


TACTIVITIES AS A WAY TO ENGAGE LEARNERS IN THE MATHEMATICS CLASSROOM

BURST SPEAKERS: ANGIE HODGE-ZICKERMAN, ERIC STADE, & CINDY
YORK

A little about Angie



WHO IS THIS ERIC GUY?



数学が大好き
です！



University of Colorado
Boulder



A BIT ABOUT CINDY

- Associate Professor at Northern Illinois University
- PhD in Instructional Technology from Purdue (2010)
- 4th/5th grade teacher (1996-1998)
- Teaching using technology since 1994
- Teaching teachers online since 2004
- Working with a combination of mathematics, active learning, and technology since 2015



THINKING ABOUT TECHNOLOGY...

- Because of technology, what can we do now that we couldn't do before technology?
- How do we fundamentally change how we teach - using technology in classrooms?
- What can we do BEYOND “better, faster, easier”?
- With so much of learning/teaching moving online because of COVID, how can we continue keeping/getting learners engaged?



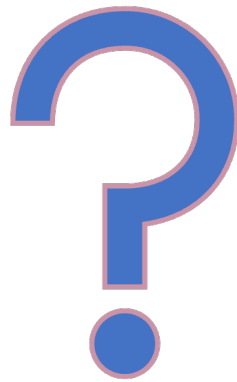
<http://www.amazon.co.uk/CTA-Digital-Potty-Activity-Seat/dp/B00B3G8UGQ>

TRY A VIRTUAL TACTIVITY!
NOTE: IT IS YOUR JOB TO "FIGURE OUT" THE DIRECTIONS.

Go to student.desmos.com
and type in:

537 HCJ

WHAT IS A TACTIVITY?
THINK, PAIR, SHARE



WHAT ARE SOME FEATURES OF A TACTIVITY? WHAT ARE SOME FEATURES
OF A VIRTUAL TACTIVITY? TRY ALL 3 SLIDES!

Go to student.desmos.com
and type in:

H32 MYE

WHAT IS A TACTIVITY?

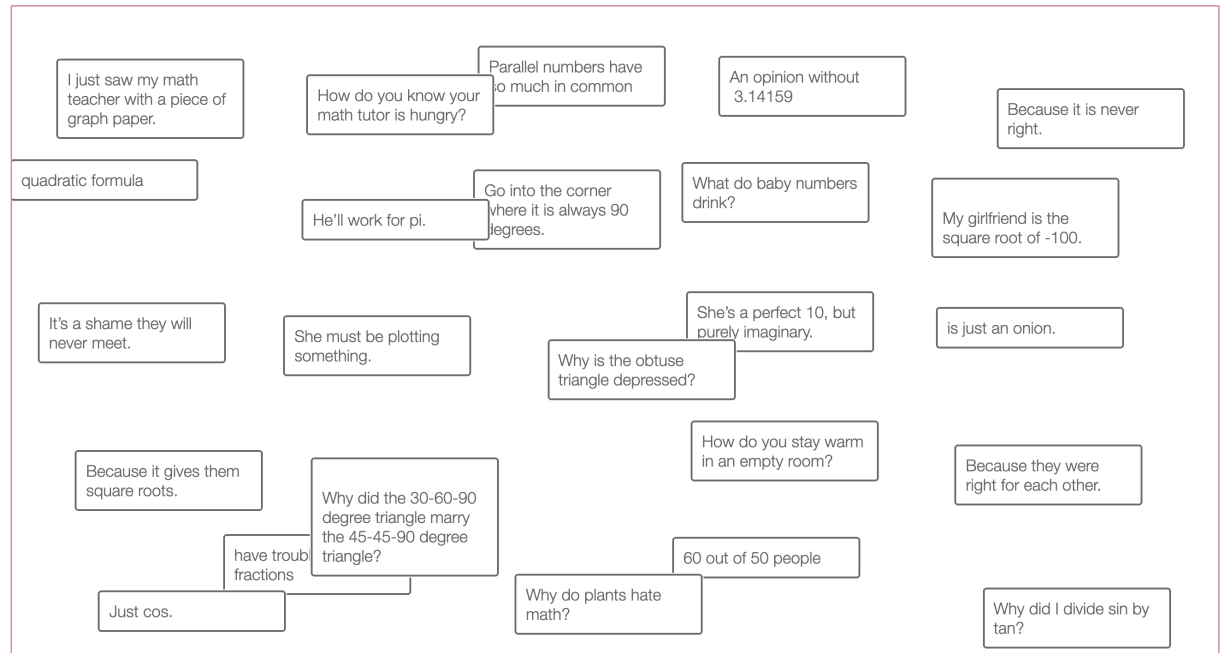
- A tactile activity that encourages collaboration and engagement.
- Tactile (movable pieces)
- Actively engages students
- Can be used to help teach or to review a concept
- Most are designed for groups of 2–4 students
- Often self-checking
- Very few (if any) directions needed
- No moves are permanent

TEACHER.DESMOS.COM

Virtual tour "behind the scenes in Desmos."

SOME TYPES OF TACTIVITIES

MATH JOKE SORT



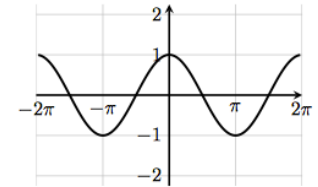
SORTING TACTIVITIES

$$f(x)$$

1

$$\cos(x)$$

L



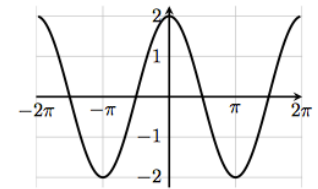
@

$$2f(x)$$

2

$$2\cos(x)$$

I



∞

FOUR FOURS

4	4	4	4	=3	(+ - + ÷
4	4	4	4	=8) +) + ×
4	4	4	4	=5	- - ÷ × ×
					(- + ()

FOUR FOURS: TRY IT!

ONCE ON THE SLIDE, "COPY"
IT (FILE -> MAKE A COPY ->
ENTIRE PRESENTATION), THEN
PLAY WITH THE COPIED
VERSION

4	4	4	4	=3	(+ - + ÷
4	4	4	4	=8) +) + ×
4	4	4	4	=5	- - ÷ × ×
4	4	4	4		(- + ()

<https://tinyurl.com/FourFoursNCTM>

HOW TO MAKE A GOOGLE PLACEMAT TACTIVITY

- **Step 1:** After the desired background for the slide is created in Google Slides, use the "Download" tool under the "File" menu in Google Slides to save the slide to your computer as a JPEG file.
- **Step 2:** Click on the "+" symbol in the upper left of Google Slides to add a new, blank slide to your presentation.
- **Step 3:** Click on the "Background" menu in the Google Slides toolbar, then click on "Choose Image" to select the JPEG you saved to your computer in the previous step. This will import this JPEG as a fixed, uneditable background for your new slide.
- **Step 4:** If you wish, you can now save a separate copy of your editable template, in case you want to use or further edit that template in the future. (Use the "Make a copy" submenu from the "File" menu.) You can then delete the editable slide from the presentation that you will be using in class, and keep the slide with the fixed background.
- **Step 5:** You may now add whatever moveable pieces you want to your new slide with the fixed background. Users who have edit access to your slides will be able to move these new pieces around, but will not be able to accidentally (or intentionally!) move or alter the background.

TACTIVITIES FOR OTHER CONTENT AREAS

DOMINOES USING GOOGLE SLIDES

Michigan	Florida	Wyoming	Delaware	Minnesota
This state is the birthplace of Kool-Aid	It's the world's popcorn capital	Only state ever to turn down the Olympics	Mammoth numbers of mammoths died here	The Peace Garden State
Colorado	Arkansas	Alaska	Hawaii	Indiana
It used to be part of Virginia	The 49 th state to join the union	The peach state	Famous for its diamond trade	Cheyenne is the state capitol
Georgia	Iowa	North Dakota	South Dakota	Kentucky
The magic capital of the world	Crazy Horse monument is here	The First State	Has its own language	Montpelier is the state capitol
		Rhode Island	Vermont	Mississippi
		The only place where both gators and crocs coexist	Cutting down a cactus can get you prison time here	Land of 10,000 Lakes

CREATE A (VIRTUAL) TACTIVITY!



Desmos activity builder: <https://teacher.desmos.com>



Card sort



Ordering steps



Interactive slides



Google slides



Dominoes



Other - ???

SOME PRECALCULUS AND CALCULUS TACTIVITIES!

<http://math.colorado.edu/activecalc/>

WE WANT YOUR INPUT...

<https://tinyurl.com/TACTivity>



THANK YOU!!

- Angie.Hodge@nau.edu
- Eric.Stade@Colorado.edu
- Cindy.York@niu.edu

