00:18:56 Trena Wilkerson: Hello everyone! Welcome from Waco, TX!
00:19:00 Kevin Dykema: Hi from southwest Michigan!
00:19:10 Dewey Gottlieb: Aloha from Hawaii!
00:19:12 Adam Kellam: Atlanta, GA
00:19:12 Ryan Dougherty: Fort mill SC
00:19:15 Isabelle Stimson: Hello from Elon, NC
00:19:15 Emerlina Binuya: Good evening! I'm Emerlina from Petersburg, VA.
00:19:16 Mary Hayburn: Hi from Philly, PA
00:19:16 Mollie McDermott: Hello from Buffalo, NEw York!
00:19:16 Denise Rawding: New Jersey
00:19:19 Tabatha Ridenour: Oregon
00:19:20 Tammy Jones: Good evening from middle TN
00:19:20 Irina Lyublinskaya: Hello from NYC
00:19:20 Kimberly Bender: Richmond, VA
00:19:21 Liz Colleran: NJ
00:19:23 Aamir Ammermann: Hello from Flagstaff Arizona
00:19:23 Ken Krehbiel: Hello everyone from Washington, D.C.
00:19:24 Laurel Pollard: New Hampshire
00:19:26 Amanda Gray: Lake Regions, Maine
00:19:27 Lynn Selking: Iowa
00:19:29 Michael Porrazzo: NEK, VT
00:19:31 Tom Reardon: Hello from Columbus Ohio!
00:19:33 Liz Colleran: NJ
00:19:34 Michelle Breaux: Avondale, Arizona
00:19:34 David Glassmeyer: Atlanta, GA
00:19:35 Karin Lee: Hello - I am From So Cal - San Jacinto California'
00:19:36 Katelyn Dilley: Hammond, Louisiana
00:19:37 Tracey Takase: Maui
00:19:37 Ryan Castle: Central PA
00:19:44 Cindy Kraus: Manhattan KS the little apple
00:19:44 Hong Pun: Hi from San Jose, California
00:19:51 Laurel Pollard: Hi from NH
00:19:54 Lynn Selking: iowa
00:19:55 Robert Cop: Ottawa, ON, Canada
00:20:05 Maulik Shah: India
00:20:06 Anthony Robb: from Yalligup western australia
00:20:07 Edmond Lau: Hi, this is Edmond from Hong Kong. ;)
00:20:14 Emily Kavanagh: Hello from Columbia, MD
00:20:36 Renee Hoard: Hello from Georgia USA!
00:20:57 Leslee Francis-Pelton: Hi from Victoria, BC, Canada
00:21:04 Kyunghoon Son: Hello from Boston :)
00:21:18 Trena Wilkerson: Welcome all! From all over the world! :-) 
00:22:11 Trena Wilkerson: Hi Kevin!
00:22:25 Trena Wilkerson: Hi Dewey!
00:24:18 Liz Colleran: Access (or lack of)
00:24:21 Kyunghoon Son: accessibility
00:24:25 Lynn Selking: Some people have access to more resources than others
00:24:31 Anthony Robb: not all have access to reliable technology
Renee Hoard: equal access to equipment and internet
Jennifer McDougall: Fair access and accessibility
Andrea DePaolo: All students should have equal access to digital tools
Kyunghoon Son: equitable digital literacy
Tracey Takase: Tech ability and access for all students
Mollie McDermott: The difference in access to technology and resources makes things unequal
Cindy Kraus: Technology in hand does not mean knowing how to capitalize using it
Melanie Slocum: We can’t leave behind those who don’t have access. We leave too much talent on the table.
Dewey Gottlieb: access to digital resources, but also access to effective instruction with those resources
Kevin Dykema: HI Trena- hope your travels tomorrow go well! Enjoy!!
Allison McCulloch: https://student.desmos.com/join/33hej8
Lydia DeRuiter: Can you please share the link again
Allison McCulloch: https://student.desmos.com/join/33hej8
Tracey Takase: Isn’t there a linguistic difference between middle (median) and mean?
Denise Rawding: This doesn't seem much different than using a textbook or worksheet.
Trena Wilkerson: All packed! Excited and a bit nervous! :-) 
Denise Rawding: The technology doesn't do anything to make the math come alive,
Lydia DeRuiter: I like how the students can reflect on the problem and not just provide an answer
Monica Vestal-Mashburn: How do we access the pages you are referring to?
Jennifer Lovett: https://student.desmos.com/join/33hej8
Tracey Takase: Are there prepared lessons on Desmos?
Allison McCulloch: https://student.desmos.com/join/c4sw5g
Blaga Nichols: It’s working
Kate Reselosa: The first activity seemed to focus on understanding the procedure of finding the mean
Kate Reselosa: The first activity seemed to focus on understanding the procedure of finding the mean
Amanda Grossi: Visual/physical representation with students being able to manipulate the bears/data in order to build conceptual understanding
Lydia DeRuiter: I agree Amanda Grossi
Michelle Hayward: much better activity for mean!
Kevin Dykema: both focus on mean
Jennifer McDougall: They both get at the idea of mean and average
Sarah Tahir: data points are located on a scale
Cindy Kraus: students explain their thinking
Jennifer McDougall: They both put mean into context
Lydia DeRuiter: The mean and average visually
Denise Rawding: Students are exploring in this activity
Ryan Dougherty: Both have students doing the work and not the teacher showing how to.
Lydia DeRuiter: It allows the work to be checked as students progressed.
Adam Kellam: static v dynamic.
Isabelle Stimson: Second definitely has more progression for understanding.
Liz Colleran: Activity 1 = focus on formula; Activity 2 = exploring.
Kevin Dykema: 1st- procedural; 2nd- building conceptual understanding.
Melanie Slocum: More discovery with #2.
Kyunghoon Son: The later utilized 'guided reinvention'.
Tracey Takase: Do they get to draw the bar models?
Melanie Slocum: Much more interactive on #2.
Jennifer McDougall: Concept visually vs just numbers (concrete vs abstract). Plus who doesn’t love gummy bears?!
Anthony Robb: no other colour for L.
Ryan Dougherty: Very cool to see the girls making connections.
Charity Cayton: Anthony, Machine L provides a green can each time.
Denise Rawding: I love it when the one says, It's crazy!
Allison McCulloch: Me too Denise :-)!
Kate Reselosa: It’s interesting how the idea of a function in this vending machine activity transcends language barriers.
Amanda Grossi: I appreciate how the visual introduction to functions is easily understandable across a language barrier.
Tracey Takase: I just like students having conversations but trial and error.
Melanie Slocum: Click and go!
Liz Colleran: The visual nature gave everyone an entry point.
Cindy Kraus: low floor, everyone could experiment, formulate ideas and test them.
Elizabeth Barlow: It gave the students a context that they are familiar with the explore.
Edmond Lau: It is very inviting.
Anthony Robb: at start no right or wrong answer.
Anne Feeney: They could all just click and look for patterns.
Jennifer McDougall: Observations using color and a common product vs numbers.
Mollie McDermott: They didn't need any real instruction, just start using the applet.
Linda Jones: Love that they were discovering what a function is.
Blaga Nichols: Students are constructing their own vocab.
Ryan Dougherty: Simple easy to use tool.
Tabatha Ridenour: The could explore with no pressure of a right or wrong answer.
Denise Rawding: By using the applet, they could try it over and over.
Dewey Gottlieb: They started with simply "notice and wonder" without having their exploration constrained by a formal definition.
Melanie Slocum: Take as much time to decide as needed.
Mollie McDermott: exactly!
Linda Jones: They did not need much common language, they have used a vending machine.
Tracey Takase: I think the word “wonder” is so important to start off investigations
Denise Rawding: Takes the fear out of learning about functions.
Jennifer McDougall: It looks like there are many machines (A-L?) so students can work at different paces
Lydia DeRuiter: It gives them power in their exploration
Tracey Takase: It gave them a chance to experiment
Blaga Nichols: It has enough constraints that you can extrapolate from it
Anthony Robb: they were able to work together and make changes
Liz Colleran: It gave them a context they could relate to so that they could create their own definition
Cindy Kraus: cause and effect or input/output
Edmond Lau: It gives the students some real-life experience to match the definition.
Jennifer McDougall: It showed whether each button gave the same type of soda each time it was pushed or not.
Kyunghoon Son: easily reverse their experiment result
Melanie Slocum: Back to notice and reason out which is a function, what is not.
Katelyn Dilley: They were able to play with it to discover the meaning and an experience.
Denise Rawding: Students were able to see how the one machine only gave out green even when they clicked on different colors.
Linda Jones: I gave examples of “Almost a function” but then the colors switched
Anne Feeney: It allowed them to work at their own paces.
Anthony Robb: its like guess and check but with an aim
Kate Reselosa: This can help students start to think about the inputs & outputs of a function
Cindy Kraus: persistence required
Kyunghoon Son: It allows student to construct the concept of function based on their experience and instinct that have already existed.
Jennifer McDougall: No numbers involved for those who “fear” then
Liz Colleran: The students were SMILING!!
Charity Cayton: 😊
Ryan Dougherty: Both were really engaged
Adam Kellam: They were communicating and excited about the concepts
Cindy Kraus: stayed engaged with learning
Isabelle Stimson: They were using non-mathematical terms to describe what was happening
Anthony Robb: when would you bring them together to discuss results
Melanie Slocum: Both really engaged in the task.
Katelyn Dilley: They were curious.
Kyunghoon Son: It was nice to see one student could finish her explanation with reflection and modification.
Anthony Robb: the task was accessible to all students
Tom Reardon: I prefer the phrase "trial and success"
Allison McCulloch: https://teacher.desmos.com/activitybuilder/custom/59de912a3f06a210c73513fa?collections=featured-collections%2C2C5da8a6474d5c010a4455b470
Allison McCulloch: https://student.desmos.com/join/c4sw5g
Blaga Nichols: No need for prior stats knowledge
Cindy Kraus: it seems like playing
Melanie Slocum: Click and move the bears.
Jennifer McDougall: Immediate feedback
Kevin Dykema: they could use trial and error
Denise Rawding: Students moved the bears and then checked if it balanced.
Isabelle Stimson: use of a balance beam, like a seesaw
Bernadette Carnes: Their own experience with balancing.
Linda Jones: Started with one bear.
Kyunghoon Son: a huge impulse to touch bears...
Cindy Kraus: seemed less judgemental
Jennifer McDougall: Fewer words!
Kate Reselosa: Not sure if this makes sense, but in what situations should we introduce a working definition versus a formal definition?
Melanie Slocum: I actually thought the graph was confusing, took a moment to see all the parts on that graph.
Denise Rawding: How many of us were never taught that it's a balance point? We just learned the procedure.
Kyunghoon Son: By doing the bear activity, the concept of outlier sensibility is naturally drawn. I think outlier issue is very important when learning average.
Anthony Robb: where do we find these tasks
Anthony Robb: thanks
Tracey Takase: I love to use scales for also balanced equations
Cindy Kraus: the balance create opportunities for mental math
Anthony Robb: the article is great!!
Renee Hoard: Thank you so much for sharing. These are great examples to show the difference between using technology to redeliver a worksheet and using technology to inspire student thinking.
Trena Wilkerson: Thank you! Using technology in this thoughtful way empowers students and engages them deeply in the mathematics!
Kate Reselosa: In what situations should we introduce a working definition versus a formal definition?
Renee Hoard: Is Geogebra free?
Tracey Takase: Can you send us a link to the article and hyperdoc
Tracey Takase: Thank you!
Kyunghoon Son: Thank you so much for the presentation. It helps me a lot to apply Desmos/GeoGebra to elementary mathematics levels.
Cindy Kraus: the issue for many is the time to develop activities for a entire curriculum. I have spent time looking but many concepts we need to
teach just don't resources available.
01:11:09 Melanie Slocum: Thank you. This is such an important discussion of leveling the playing field for all the Mathers of the world!
01:11:15 Michelle Hayward: @Cindy= DITTO
01:11:25 Ryan Dougherty: Thank you
01:11:47 Jennifer Lovett: It depends. But I think all definitions could start as working definitions and formalize them across a lesson, series of lessons, or a unit
01:12:01 Stephen Levesque: Thank you. Definitely made me think about making entry points to content more accessible for all.
01:12:17 Blaga Nichols: Saving paper on some geometry explorations for sure :)
01:13:01 Renee Hoard: what is the breakdown of technology activities vs paper activities in your classroom??
01:13:01 Adam Kellam: So much paper has been used in my geometry classes over the years, lol
01:13:28 Elizabeth Barlow: Thank you!
01:13:30 Kate Reselosa: Thank you!
01:13:31 Mollie McDermott: Thank you!!
01:13:39 Blaga Nichols: Between Desmos and formative there’s no paper lost
01:13:39 Isabelle Stimson: Thank you!
01:13:41 Lydia DeRuiter: Thank you for a great presentation
01:13:41 Edmond Lau: Thank you!
01:13:42 Renata Carvalho: Thank you!
01:13:43 Karen Hollebrands: Thank you!
01:14:07 Michael Blasberg: Will the recording be shared? I had to join late.
01:14:08 Lisa Stonefoot: Thank you
01:14:09 Adam Kellam: Do you have any suggestions on how to learn to create these kinds of activities
01:14:15 Chonda Long: The recording will be shared
01:14:17 Renee Hoard: Do you guys do f2f presentations??
01:14:18 Anthony Robb: thanks it was really worthwhile getting up early in the morning for your session
01:14:18 Lynn Selking: Thank you! I’m inspired!
01:14:21 Pip Arnold: Thank you. That was really useful.
01:14:23 Michael Blasberg: Thanks!
01:14:25 Karin Lee: thank you
01:14:43 Leslee Francis-Pelton: Thank you!
Tammy Jones: Where is the table you mentioned?

Amanda Grossi: As we return to in-person instruction, and in light of the importance of students interacting face-to-face, what guidelines would you recommend for a teacher who is making an instructional decision about whether/when to use technology for a particular task?

Emerlina Binuya: Thank you!

Tracey Takase: Do you have an algebra tile PD that you lead?

Liz Colleran: I took an online workshop through the Bureau of Education Research about how to create your own customized Desmos activities.

Anthony Robb: thanks this is my first ever zoom and it worked great

Tom Reardon: Do you have suggestions for the teachers who are using graphing calculators and have been using them?

Amanda Grossi: Thank you, Jennifer.

Mary Hayburn: Thank you.

Renee Hoard: awesome!!

Tammy Jones: Thanks!

Jennifer McDougall: Thank you so much!

Tom Reardon: I agree. We use graphing calculators as a teaching and learning tool and as an exploration and discovery tool. Thanks.

Tammy Jones: I love to have students paper cut the difference of squares!

Liz Colleran: Desmos = a free graphing calculator!

Tracey Takase: Thank you ....I have to get back to class. I was able to sneak this in and my students got to hear the first part of the webinar.

Michelle Hayward: what was that math goggle thing called?

Anthony Robb: Plop it is great for stats

Lydia DeRuiter: desmos connects to google classroom

Jennifer Lovett: CODAP

Ryan Dougherty: Have you used Brainingcamp Virtual manipulative?

Renee Hoard: Stats Medics just released a series of DESMOS activities!! All Free

Cindy Kraus: most resources are procedural based. our textbook attempts to include an exploration but many times its not interactive nor does it really invite creativity - the time to create the ideas for a curriculum is the issue.

Anne Feeney: Thank you!

Amanda Grossi: Thank you Jennifer, Allison, Charity, and Chonda.

Michael Porrazzo: Thank you, all!

Christina Azmy: Thank you!


Allison McCulloch: Thanks for joining us!

Liz Colleran: Thanks so much - this was inspirational!

Charity Cayton: Thank you so much for taking time to join us!!

Katelyn Dilley: Thank y'all!

Denise Rawding: Thank you so much! This was wonderful!

Karen Hollebrands: Great job Allison, Jen, and Charity!
01:22:24 Blaga Nichols: Thank you!