

00:19:34 Emese Bede: Hello from Bothell, WA  
00:19:34 Trever Reeh: Hi from Omaha, NE  
00:19:38 Abigail Gragg: New Jersey!  
00:19:43 Robert Vottero: hello from nj  
00:19:47 Marlene Naquin: Hello from Long Beach, Mississippi!  
00:19:47 Kelly Ward: Greetings from the Angelina National Forest, Deep  
East Texas!  
00:19:54 Kim Smith: not yet  
00:19:54 Menchie Besa: Hello from Jacksonville, Florida  
00:19:55 Paula Fitzpatrick: no  
00:20:03 Skip Fennell: Hello from Westminster, Maryland  
00:20:04 Katina Odoms: Katina Odoms from Monroeville, AL  
00:20:04 Dr Deborah Smith: From Antioch, TN  
00:20:05 Laura Montague: Hello from Vermont  
00:20:07 William Speer: Hi, Jeff  
00:20:11 Kim Smith: Hello Robert Berry. Nice to see you  
00:20:12 Patrick Montague: Hello from Weslaco, Tx  
00:20:13 Katlynn Craig: Hi from Kokomo, IN  
00:20:13 Nadia Messadi: Hi from Fayetteville, Arkansas!  
00:20:15 Cathy Cox: Greetings from Kansas. :)  
00:20:18 Sharon Black-MacKinnon: Hello from small town New Brunswick Canada  
00:20:20 irene Batchelder: Hello from Elizabethton, Tennessee  
00:20:20 Barbara Kuehl: Repping Salt Lake City, Utah!  
00:20:21 Jennie Brown: HI Montgomery, AL  
00:20:23 Laurie McCord: Good evening from Idaho  
00:20:24 Lesa Turner: Hello from Springfield, TN  
00:20:26 Cindy Kroll: Hello from Las Vegas, Cindy Kroll  
00:20:28 Barbara Cymanski: Hello Barb Cymanski from NEOhio  
00:20:28 KIM ARMSTRONG: Hello from Murfreesboro, TN  
00:20:29 Judy Keeney: Hello from Los Angeles, CA  
00:20:30 Michael Brown: love the breakfast club background  
00:20:34 Eva gomez: from Phoenix, Az  
00:20:34 Lisa Piandes: from NH  
00:20:36 Jeanetta Glass: Hello from Memphis, TN  
00:20:38 Kim Smith: I can see the Breakfast Club  
00:20:38 Jackie Santoro: Hello from Massachusetts  
00:20:46 Richard Robinson: Hello from Charleston, SC  
00:20:51 SARAH AMBEAULT: There you go  
00:20:54 Amy Brunson: hello from Monticello, AR  
00:20:55 dana dulzo: hellofrom novi mi  
00:20:58 Veronica Elfe: Hello from Charlotte, NC  
00:21:00 Carole Bamford: Hi from Montreal, Quebec  
00:21:02 Ann Assad: Hi from Paducah, KY  
00:21:13 Mary Mills: Yuma, Arizona  
00:21:15 Mike Steele: Katlynn Craig wins the prize so far for closest to  
me right now...  
00:21:15 Mercy Ajuonu: Mercy Ajuonu from CA  
00:21:17 Michael Lanstrum: Hello from Cleveland, OH  
00:21:26 Joseph Bittner: Hello from Fort Wayne, IN  
00:21:30 Lynda Ginsburg: Hi from Yardley, PA

00:21:31 Jazka Prickett: I can't hear anything :(  
 00:21:32 Kate McCann: Hello from Vermont  
 00:21:38 Tim Bartlett: Lake Stevens. WA  
 00:21:47 Maryam Ayazi: Hello, from New York City - Maya  
 00:21:50 Tina Mott: Hi from Anacortes, WA  
 00:21:57 Jolene Peterson: Jazka, try your volume button or change your  
 sound options in Zoom.  
 00:21:59 Naomi Simpson: from Manalapan, NJ  
 00:22:01 Larry Arnett: Hello, Harker Heights TX  
 00:22:09 Cynthia Sumpter: Hello from Red Springs, NC  
 00:22:11 Jasmina Ivanov: Hello from Palm Springs, California  
 00:22:12 Kim Blagmon: Hi from Drexel Hill, PA!!  
 00:22:18 Jennifer Hagman: Hello from Redlands, CA  
 00:22:20 Lei V.: Aloha from HI  
 00:22:29 Deborah Chapdelaine: Hi from Edmonds WA  
 00:22:30 Bruce Graham: Hello from Durham, NC  
 00:22:32 Carrie Danaher: Hi from Huntington Woods, MI  
 00:22:42 Xiangquan Yao: From State College, PA  
 00:22:50 Laura Yannarella: hi from Hampton, VA  
 00:22:54 Veronica Elfe: Love the background Mike Steele! Epic!  
 00:23:00 Daria Sinrod: Hi from Henderson, Nv  
 00:23:30 David Barnes: Yes!  
 00:23:31 Andrea Touhey: Love it, Mike!  
 00:23:37 Tamara Sechler: Hi!  
 00:23:53 Carly Jardinier: Hello from MD!  
 00:23:58 Sarah Stecher: Hello from Michigan!  
 00:24:02 David Dai: Happy Thursday from Mobile, Alabama!  
 00:24:52 Chonda Long: You can access the handouts here -  
[www.nctm.org/uploadedfiles/fivepractices.pdf](http://www.nctm.org/uploadedfiles/fivepractices.pdf)

00:25:20 Amie Henry: Greetings from Arlington, WA  
 00:25:41 Daria Sinrod: 3  
 00:25:45 Rachel Lawrence: 3  
 00:25:46 Elizabeth Sasse: 3  
 00:25:48 Cathy Cox: 3  
 00:25:48 Jenny Rolling: 3  
 00:25:48 Bruce Graham: 3  
 00:25:48 Jazka Prickett: 0  
 00:25:49 Robin OBrien: 4  
 00:25:49 Chrystina Harich: 2.5  
 00:25:49 Gabby Trojanowski: 0  
 00:25:49 Rita Kwong: 0  
 00:25:49 Shelley Mosier: 0  
 00:25:50 Carly Jardinier: 2  
 00:25:50 Joseph Bittner: 1  
 00:25:51 Carrie Danaher: 0  
 00:25:51 Laura Montague: 0  
 00:25:51 C Glover: 0  
 00:25:52 Melissa Walther: 0  
 00:25:52 Stacie Kyhn: 4

|          |                        |                               |         |
|----------|------------------------|-------------------------------|---------|
| 00:25:52 | Robert Berry:          | 5                             |         |
| 00:25:52 | David Bradford:        | 1                             |         |
| 00:25:52 | Liz:                   | 3                             |         |
| 00:25:52 | Jeanetta Glass:        | 1                             |         |
| 00:25:52 | Laura Yannarella:      | 0                             | 0       |
| 00:25:53 | Matt Zeboor:           | 0                             |         |
| 00:25:53 | Barbara Cymanski:      | 2                             | 2       |
| 00:25:53 | penina kamina:         | 1                             |         |
| 00:25:53 | Anne Gallagher:        | 4                             |         |
| 00:25:54 | Amy Goodman:           | 4                             |         |
| 00:25:54 | Sarah Stecher:         | 3                             |         |
| 00:25:54 | Andrea Touhey:         | 1                             |         |
| 00:25:54 | Naomi Simpson:         | 5                             |         |
| 00:25:54 | Kim Ellis:             | 0                             |         |
| 00:25:54 | Sarah Scanlon:         | 0                             |         |
| 00:25:54 | Veronica Elfe:         | 2                             |         |
| 00:25:54 | Tamara Sechler:        | 3                             |         |
| 00:25:55 | kathy kallmyer:        | 2                             |         |
| 00:25:55 | Kelly Ward:            | 0                             |         |
| 00:25:55 | Aida Kajs:             | 0                             |         |
| 00:25:55 | Christy Gomez:         | 0                             |         |
| 00:25:55 | Kristin Stuby:         | 0                             |         |
| 00:25:55 | Jeanine King:          | 1                             |         |
| 00:25:55 | KIM ARMSTRONG:         | 3                             |         |
| 00:25:56 | Tiffany Lopez:         | 1                             |         |
| 00:25:56 | Abigail Gragg:         | 1                             |         |
| 00:25:56 | Daniel Irving:         | 4                             |         |
| 00:25:57 | Kimya Moyo:            | 2                             |         |
| 00:25:57 | Barbara Kuehl:         | 5                             |         |
| 00:25:57 | Reycl:                 | 0                             |         |
| 00:25:57 | Menchie Besa:          | 2                             |         |
| 00:25:57 | Ana Maria Pabayos:     | 0                             | 0       |
| 00:25:57 | Vinci Daro:            | 3.85                          |         |
| 00:25:57 | Corrine Williams:      | 3                             | 3       |
| 00:25:58 | Francis Kisner:        | 1                             |         |
| 00:25:58 | Nadia Messadi:         | 0                             |         |
| 00:25:58 | Cindy Calm:            | 3                             |         |
| 00:25:59 | Joanne OConnor:        | 3                             |         |
| 00:26:02 | Richard Robinson:      | 3.14159                       | 3.14159 |
| 00:26:06 | Emese Bede:            | 0                             |         |
| 00:26:08 | Mark Beitler:          | 0                             |         |
| 00:26:11 | Cindy Kroll:           | 3                             |         |
| 00:26:12 | Angela Tseng:          | There is no zero              |         |
| 00:26:14 | Leticia Tucker-Mickle: | 3                             |         |
| 00:26:17 | Kristin Stuby:         | Where is zero?                |         |
| 00:26:19 | Kim Ellis:             | There is no 0                 |         |
| 00:26:20 | Pamela Gavina:         | there's no zero in the poll   |         |
| 00:26:26 | Chonda Long:           | Sorry. That is my fault       |         |
| 00:26:30 | Chonda Long:           | Forgot the zero               |         |
| 00:26:40 | Abigail Gragg:         | The poll wasnt working for me |         |

00:26:43 Mark Phipps: decay of the virus

00:26:52 Emese Bede: 1

00:27:05 hoang nguyen: 1

00:27:14 Sandhya Raman: WHAT????? Hahahaha

00:27:35 Pamela Gavina: the mayans would disagree

00:27:45 Angela Tseng: ^

00:27:48 Gabby Trojanowski: ^

00:27:51 Gabby Trojanowski: :)

00:27:57 Naomi Simpson: Hi Chonda! From A4A

00:28:05 Lesly Brown: Good Evening from Lenoir City, TN-Lesly Brown here. The NCTM Webinars have been so good to help me learn new techniques and think about math in additional ways to teach.

00:28:25 Janice Holland: Suffolk, VA here

00:29:05 Emily Barbee: Hi Chonda! Will this deck be shared?

00:29:18 Chonda Long: A recording will be available on [www.nctm.org/100](http://www.nctm.org/100)

00:29:33 Kim Smith: Is the high school book available for purchase?

00:29:44 Chonda Long: Handouts are available here - [www.nctm.org/uploadedfiles/fivepractices.pdf](http://www.nctm.org/uploadedfiles/fivepractices.pdf)

00:30:06 Kim Smith: Thank you!

00:30:34 Ann Cola: The 5 practices change the classroom dynamics

00:30:56 Veronica Elfe: Are we going to be able to access the presentation when the sessions is over?

00:31:16 Veronica Elfe: \*Are we going to be able to access the presentation when the session is over?

00:31:31 Chonda Long: You will be able to access the recording at [www.nctm.org/100](http://www.nctm.org/100)

00:31:37 Larry Arnett: tomorrow, read above

00:31:49 Ann Cola: High school teachers are often reluctant to use the 5 Practices

00:32:05 Soo Han: When I checked the previous webinar, I found only chat is downlable not the videos.

00:32:05 Veronica Elfe: Thank you Mrs. Long

00:32:44 Leticia Tucker-Mickle: Will you talking about applying this right now with virtual teaching?

00:32:45 Nancy Walters: Hi everyone N. Walters from Monroe County High School Alabama

00:33:28 Catherine VanNetta: Task is low floor, high ceiling

00:33:50 Chonda Long: The videos are not downloadable but they are viewable

00:33:55 Kate McCann: is the goal more like the objective for the lesson

00:33:56 Laurie McCord: I also have the similar question as Leticia Tucker-Mickle--online; I'm having a harder time wrapping my brain around "monitoring"

00:34:11 Eileen Murray: What do people think of Illustrative Math tasks for high-level tasks?

00:34:13 Christina Grace: Could you move the poll results so we can see the powerpoint a little better, please and thank you?

00:34:16 Michael Brown: So the goals are more like "I can" statements

00:34:36 Robin OBrien: Chose close on the poll.

00:34:49 Christina Grace: Thanks, everyone!!

00:34:58 Jazka Prickett: you should be able to move it Christina

00:35:05 Trever Reeh: I love IM tasks.

00:35:55 George Constance: hello from ny

00:35:57 Catherine VanNetta: Tasks can be represented in many ways.

00:36:07 Catherine VanNetta: many

00:36:11 Allison Dean: Where can I find tasks besides IM?

00:36:40 Lainey Moe: Mathalicious

00:36:43 Lainey Moe: Mars Tasks

00:36:48 Cynthia Sumpter: Walsh publications

00:36:54 Jenny Sagrillo: I collected a bunch of task sources. Links here:  
<https://uwm.edu/mmtpr/resources/>

00:37:07 Anne Gallagher: <https://www.map.mathshell.org/tasks.php> Great rich tasks here

00:37:07 Lisa Hennefarth: MARS Tasks, inside mathematics,

00:37:20 April Mazziotta: MARS task are great!

00:37:33 Barbara Kuehl: MVP is an entirely task-based program

00:37:36 vaughn laptiste: teacher.desmos.com

00:37:59 David Bradford: Hey way to rep American Fork UT. Graduated from American Fork High School

00:37:59 Barbara Cymanski: Hi Fred!!!

00:38:09 Catherine VanNetta: Algebraic representations vs geometric representations

00:38:15 Ann Cola: Map.mathshell and MARS are the same

00:39:14 Barbara Kuehl: I've watched Travis use the 5 Practices and he is amazing!

00:39:24 Jolene Peterson: The 5 practices are a GAME CHANGER! It moves teaching from "popcorn" class sharing (whoever I see with their hand raised) to intentional selection and sequence based on your instructional goal. (Move from concept to procedures, etc.)

00:39:28 Mike Steele: Travis is in the new high school book!

00:39:43 Deborah Chapdelaine: I'd like to see an example of a monitoring chart

00:39:49 Eileen Murray: ^^

00:40:11 Mike Steele: Deborah, I'll show you a little snippet of one in a bit! We have examples in the book as well

00:40:22 Deborah Chapdelaine: awesome

00:40:31 David Bradford: ""

00:41:51 Michael Brown: dinner and a show!

00:42:10 Catherine VanNetta: Try to walk away after you ask an advancing question to promote productive struggle

00:42:13 Laura Knight: I use my family as my teaching guinea pigs too!!

00:42:25 Kate McCann: I'm enjoying using breakout rooms in zoom to observe what groups are doing and saying in our zoom classes

00:42:26 Ann Cola: Anticipation is a game changer for teachers...so much better than waiting to see what happens

00:42:46 Naomi Simpson: Hey Ann Cola!

00:43:05 Ann Cola: HI Naomi

00:44:07 Lisa Piandes: How do you make sure everyone is involved in the task and discussion? That is my challenge.

00:44:08 Catherine VanNetta: I love to prep students that I'm going to have them share their idea with the class. Particularly helpful in developing confidence and risk taking.

00:44:10 Michael Brown: how can we get these discussions started and moving in the confines of remote learning. And I don't have Zoom we are Google Meet

00:44:53 Eileen Murray: ^^ I've been using Google docs with some success

00:44:54 Angela Tseng: May I suggest FlipGrid?

00:44:55 Tina Hill: @Michael We use Canvas which has a discussion option. Really helps

00:45:10 Cynthia Sumpter: Walch.com i ih

00:45:11 Angela Tseng: You may also consider Google Form to get Ss voice

00:45:17 Catherine VanNetta: Michael Brown, you might consider posing some question in advance and collecting student work prior to a group session.

00:46:08 Eileen Murray: Write the name down?

00:46:15 Laurie McCord: thank you for Theresa info

00:46:30 Lisa Hennefarth: Canvas discussion has been great for us to

00:46:51 Mike Steele: Theresa Wills is @theresawills on Twitter. She's awesome!

00:46:58 Veronica Elfe: My district in NC has Canvas and we use discussions to start class and get students on a topic

00:47:13 Kate McCann: For AP stats, I'm spending a lot of time anticipating

00:47:23 Jenise Sexton: Ive used the 5 practices to begin a unit through a contextual situation and identify what students know already about the unit's concepts to build on what they know.

00:47:30 Barbara Cymanski: I have had no knowledge of 5 practices before this, but I feel like teaching CPM math for the last 7 years, I have followed a lot of these 5 steps.

00:47:34 Michele Cheyne: I see this as an equity strategy - monitoring and sequencing provides the opportunity to assign competence.

00:47:34 Laurie McCord: Selecting a task and have really been impressed with knowing different strategies

00:47:34 Richard Robinson: Used 5 practices to bring a Three Act Math task to life (one with dog and balloons in a calc class)

00:47:36 Lisa Piandes: I have done some task work but struggle with those students who are disengaged and or do not wish to be part of the discussion even if they contributed to the task

00:47:36 Eileen Murray: We use the book for our methods class - its great to have PSTs really focus on 0 & 1!

00:47:41 Ann Cola: As a coach I share the 5 practices with all my teachers. Some of my teachers use the practices and the classrooms are night and day

00:47:41 David Bradford: @Jenise, I love that idea

00:47:42 Kate McCann: monitoring within the zoom breakout rooms

00:47:50 Kim Smith: As a math special I have introduced the 5 practices to middle school teachers and supporting them with implementing. Still working on ancticipating as teachers are struggling

00:47:51 April Mazziotta: I monitor and ask a lot of questions for my Algebra students

00:47:54 Catherine VanNetta: In geometry, I enjoy trying to make connections between algebraic and geometric representations

00:47:56 dana dulzo: asking students questions about thier thinking if they havent gotten to the correct soln as a learning discovery

00:48:02 Judy Keeney: We have used the 5 practices to support building co-teaching teams. One of our big takeaways—all kids don't have to be finished before we start the conversation.

00:48:02 Dr Deborah Smith: Monitoring the discussion in Integrated Math I allows me to hear the discourse.

00:48:03 Dewey Gottlieb: There some TIMSS Videos of Japanese classrooms where the teacher does an amazing job of taking his class through steps 3-5. These videos are a bit old, and they are in Japanese with English subtitles, but when I first viewed it over 10 years ago, it blew me away. For example, here's a link to a video that I think demonstrates a great example of steps 3-5:  
<https://www.timssvideo.com/jp3-solving-inequalities>

00:48:03 Daria Sinrod: I use IM so some of the practices are planned for me. But because I'm a 1st year teacher, I have hard time anticipating and sequencing even with help if I have help of Illustrative Math

00:48:11 Kimya Moyo: I have used them without consciously knowing that I was using them.

00:48:18 Lainey Moe: I've used the 5P in the middle school space with a 50 min class period, curious how this works in HS with a longer block and with older kids!

00:48:30 Laurie McCord: Taking pictures on my phone really is appreciated with students for taking their work seriously

00:48:33 Jenise Sexton: @David its really great for students with disabilities as they often feel they don't know, but this shows what they do know.

00:48:38 Jolene Peterson: Sequence for Perimeter:

1. Trace the perimeter with your finger
2. Use numbers to add them up in that order  $l+w+l+w$
3. 2 times the length and 2 times the width  $2l+2w$
4. Add the length and width, then double it...  $2(l+w)$

00:48:57 Mark Williams: Connecting -linking the concepts to what students experience out of school.

00:49:00 Kate McCann: pear deck is a nice way to capture what all students are thinking, creates a record now that we aren't in the classroom

00:49:00 Lesly Brown: What I found helpful was to set the goal and look at the details of how you measure knowledge the student gleans from the presentation where you can monitor what aspects the students understands and what requires further teaching and breaking down the task or goal into smaller pieces.

00:49:04 Ann Cola: One of my teachers has so internalized the practices she has students conducting the discussions...she uses response cards since her students are grade 6

00:49:06 Jasmina Ivanov: Projects are a great way to involve all 5 of them. Most projects cannot be done within one day only. It takes more time.

00:49:44 Barbara Cymanski: If I am a K-12 Instructional Math coach which book should I start with?

00:49:50 Catherine VanNetta: Maintaining cognitive demand

00:50:00 Eileen Murray: Related, I teach a 6-12 methods course

00:50:02 Eileen Murray: Which one?

00:50:07 Lisa Hennefarth: I will typically use 5 practices using a MARS task. The tasks give good entry level points and allows you to use basically

all of the practices but notably anticipating and sequencing

00:50:18 Veronica Elfe: We have 90minutes classes in my district in NC, sometimes I start class with an end game problem and put it in the discussion tab to start the ideas flowing and the students converse there first before actually talking to me then we go into the lesson, individual practice, small group work

00:50:20 Lisa Hennefarth: love IM as well!

00:50:30 Jolene Peterson: What happens if your students think all the same way? You say, "In another class, someone did this." :) Since you've anticipated responses, you'll already know who to weave them in.

00:51:06 Kate McCann: should 4 be sequencing?

00:53:05 Monica Maddox: 16 and 10

00:53:13 Jill Perry: @KateMcCann yes

00:53:30 Catherine VanNetta: I have 42 minute periods!!!

00:53:54 hoang nguyen: I have just reconnected

00:53:56 Trever Reeh: We have 35 minute periods hard to do all the connecting you want to do.

00:54:27 Kate McCann: When I finish making the connections at or even after the bell, it's a very good day! kids are engaged bell to bell

00:54:35 Pamela Gavina: share! share!

00:54:46 Eileen Murray: Where are the results?

00:54:58 Randal Nelson: The Making Math Moments that Matter podcast has at least a couple of podcasts that get into the 5 practices. I recommend the podcast enthusiastically!

00:55:04 Angela Tseng: He anticipated our answers!

00:58:01 Barbara Kuehl: This problem is in MVP almost word for word.

00:58:57 Catherine VanNetta: Hmmm, most of those anticipated solutions seem geometric.

01:00:03 Stephanie Matisiak: yes

01:00:04 David Bradford: good

01:00:05 NICOLE RIGELMAN: yes

01:00:05 Kristin Stuby: yes

01:00:05 Melissa Walther: yes

01:00:06 Kate McCann: yes

01:00:06 Eileen Murray: yes

01:00:09 Dee Dee: yes

01:00:12 Quintealia Cato: yes

01:00:15 Sandra I Ruiz-Davila: yes

01:00:22 Jill Perry: YEP

01:00:50 Catherine VanNetta: Open question--what are you NOTICING? Very accessible

01:01:20 Amy Goodman: When I taught, this task was in Algebra 1

01:01:41 Jenny Rolling: yep Alg I

01:01:57 Quintealia Cato: where are the handouts located

01:02:05 Jasmina Ivanov: She's guiding them further with questions, without giving them any answers.

01:02:08 Mike Steele: Cori's district organized AlgI to focus more on linear and exponential, and saved quadratic relationships for later

01:02:12 mellanie braga: <https://www.nctm.org/uploadedfiles/fivepractices.pdf>

01:02:28 Elizabeth Dunn: Teacher is working with one group

01:02:36 Catherine VanNetta: She is connecting the geometric and tabular



representations

01:02:44 Laura Knight: she had questions ready to go to ask the students  
01:02:46 Kate McCann: asking a lot of questions  
01:02:48 Matt Zeboor: she's good at listening  
01:02:49 Mark Phipps: The table behind her needs attention  
01:02:52 Allie Smith: great questioning!  
01:02:53 KIM ARMSTRONG: She asks, "What if...."  
01:02:55 Stephanie Matisiak: She only asked questions. gave no answers.  
lead them down their own path  
01:02:55 Megan Slaney: effective questions  
01:02:56 PAVNEET BHARAJ: Effective questioning  
01:02:56 Jennifer Gailey: students in other groups were not all  
working  
01:02:57 Christina Grace: Questions built on each other  
01:03:00 Laura Yannarella: she never answers, just asks  
01:03:02 Gabby Trojanowski: Called out misuse of terminology  
("constant")  
01:03:03 Stephanie Matisiak: did not direct them onto her path  
01:03:04 Brian Odiwuor: Her questions make students think aloud  
01:03:05 Tiffany King: questions, but not answers  
01:03:06 Bruce Graham: She left them with something to have ready when she  
returns  
01:03:06 Sarah Scanlon: played "dumb", never giving her thinking  
01:03:06 Veronica Elfe: She did a really good job not answering her students  
directly but posing questions  
01:03:07 Christina Tully: Ms. Moran spoke succinctly and allowed the  
students do most of the talking  
01:03:07 Lisa Piandes: "What are you noticing?"  
01:03:14 Delmar Christian: She asked questions that allowed her to  
understand student thought.  
01:03:15 Marlene Naquin: what if,,  
01:03:15 Matt Zeboor: she didn't force them to keep reconsidering if it  
was constant change  
01:03:17 Kim Ellis: I saw a girl looking bored behind her sticking a  
pencil in her hair  
01:03:17 Jeanette Poe: Her final question provided an alternate path of  
thought that also allowed a student to bring up her thinking that had been different  
from the rest of the group  
01:03:18 Kate McCann: validated  
01:03:19 Sharon Black-MacKinnon: asking for deeper understanding  
01:03:21 Derrick Keister: She never said anything was correct or  
incorrect  
01:03:22 PAVNEET BHARAJ: wait time and being patient  
01:03:22 Jill Perry: notice: CLIPBOARD [opinion: GAME CHANGER]  
01:03:22 Kyle Vanderteems: Asking how the figure relates to the figure  
number; maintaining context  
01:03:23 Robert Vottero: made good eye contact, gave positive feed back to  
continue explaining  
01:03:25 Jackie Santoro: truing to initiate answers by asking questions and  
having them think more and respond to her questions

01:03:26 Timothy Harms: She questioned until all students responded  
01:03:26 Laurie McCord: pressing the relationship between the stage and the figure number  
01:03:27 Nadia Messadi: She is guiding with her questions to take them where she wants them to be  
01:03:27 C Glover: she's asking assessing and advancing questions  
01:03:27 Ann Cola: She asked very brief questions  
01:03:28 Kristin Stuby: Answered students with a question instead of an answer  
01:03:29 Nancy Walters: Her letting students talk about their thinking. Also she just asked what did you notice about the shape.  
01:03:31 Maryam Ayazi: She provided students with deliberate questions to get them to explain their thinking process.  
01:03:31 Leslie Sorace: open ended questions to allow them to build their own thoughts  
01:03:38 Grant Weed: She asked students what they did to go from one stage to another...then asked how they could relate the number of squares to the stage number, moving them to build an algebraic model of the situation  
01:03:41 Mark Phipps: Valued everything students said to her  
01:03:44 Carrie Bedell: Didn't lead students with non verbals  
01:03:53 Matt Zeboor: Did all the students talk?  
01:04:01 Cynthia Sumpter: She left the students with a question to ponder  
01:04:07 hoang nguyen: posing questions  
01:04:22 David Bradford: Building on what they are already thinking so so crucial  
01:04:24 Grant Weed: I didn't notice her write anything down on her clipboard...maybe I missed something  
01:05:16 Barbara Cymanski: This is scary for lots of teachers because it puts control with the students and they feel like they need to have more control of what is going to happen. Hard for teachers to take this leap of faith.  
01:05:55 Dee Dee: It is especially difficult to take this leap as a Special Ed teacher  
01:05:56 Tiffany King: this is very hard. I think the clipboard can help a lot  
01:06:24 Grant Weed: What if students still don't know where to go so solve..is there every a point where you throw them a bone to get them moving back to productive struggle?  
01:06:27 Dr Deborah Smith: This helps the students do the heavy lifting  
01:06:31 Nadia Messadi: would this work for k-5?  
01:06:47 Lisa Piandes: I agree with Grant  
01:06:54 Shelley Mosier: I would use clipboard to also put notes to self...  
01:06:58 David Bradford: Waiters would do so well with this. They always remember what you order without writing what everyone ordered down.  
01:07:00 David Bradford: haha  
01:07:07 Dee Dee: I like that students the heavy lifting. I think it is a great idea, just will be challenging  
01:07:10 Ann Cola: Jotting notes are so helpful especially in high school teachers in NY can have as many as 170 students a day  
01:07:19 Barbara Cymanski: I believe this can work with K-5. Bridges

Math calls it Math Forums and it follows these 5 practices pretty closely.

01:07:58 Nadia Messadi: Thank you Barbara

01:07:58 Veronica Elfe: This works on the high school level as well. I've used it for certain aspects of the curriculum

01:08:12 Jazka Prickett: Are these videos available on YouTube?

01:08:20 Ann Cola: The 5 practices are embedded in the Illustrative Math curriculum all grades'

01:09:52 Veronica Elfe: Sorry I might have missed this but what grade level/math course are these students in the videos?

01:09:54 Mike Steele: The videos are available with the book - we have QR codes and a URL in the book to access them.

01:10:00 Jill Perry: The Formative Assessment lessons from the Math Shell Center have sample assessing and advancing questions for anticipated student responses to the initial tasks.

01:10:10 Angela Tseng: 12th grade

01:10:23 Jackie Meggs: What step of the 5 Practices is this right now?

01:10:45 Daniel Henderson: They're also deep in CPM. I'm not even sure how someone would teach CPM without the five practices. They share "pocket questions" for every lesson too!

01:10:45 mellanie braga: selecting?

01:10:49 Mike Steele: This is the whole-class discussion - Cori has selected and sequenced and invited this group to present (second of three). She'll do some connecting here too.

01:10:57 Mike Steele: (Those three happen together)

01:11:17 Catherine VanNetta: She asks presenters to share their ideas in both written and verbal forms.

01:11:50 Catherine VanNetta: Audience members are asking questions of the presenters, and presenters are addressing the questions.

01:12:22 Catherine VanNetta: She breaks with a turn and talk so small groups can "digest" the presented solution.

01:12:22 Timothy Harms: "At your table turn and talk if that would work."

01:12:27 Jasmina Ivanov: The student is explaining her thinking; this way everybody from the class can relate to her "vision" of solving the problem and answering the questions. They also have to explain the meaning of the variables. Students are taking over the class and the teacher is asking questions for clarification.

01:12:34 Allison Dean: Helped the students define the variables

01:12:35 Veronica Elfe: Ms.Moran had her students pause from the presentation and turn and talk on top of having the students ask the group presenting some questions!! LOVE IT!!!

01:12:44 Melissa Walther: She asked the other groups to verify for the other stages

01:12:45 Tiffany King: she asked them all to check to see if it worked

01:12:46 Amanda Roble: Turn and talk to test the presenting groups ideas for all other students

01:12:47 Stephanie Matisiak: she used a turn and talk and mentioned that there were questions from the peanut gallery

01:12:47 Allison Dean: Clarifying for other students

01:12:49 David Bradford: Allowing entire class to get involved with the presenter

01:12:50 Jolene Peterson: Turn and talk -- required students to listen and then converse with their team

01:12:51 Grant Weed: She asked the class to verify the formula for the other stages

01:12:54 Vaughn Laptiste: Asking probing and clarifying questions

01:12:57 Derrick Keister: She had them apply the group's equation to other stages

01:12:57 Leslie Sorace: she asked them to see if their equation would work for then

01:12:57 Nancy Walters: Letting students evaluate each other

01:12:58 Barbara Cymanski: Turn and talk, great for every classroom K-12!!

01:13:01 Elizabeth Dunn: Another student asked a question

01:13:01 Donald Wahlers: She had other students apply what presenting students stated, ensuring all had to attend to presentation

01:13:02 Ann Cola: Love the students are involved and "checking the work"

01:13:04 Jackie Santoro: clarifying

01:13:10 Jeanette Poe: Validating the good conversations happening even while presenters are presenting

01:13:10 Tyler Peabody: The teacher was not the only person asking questions

01:13:13 Kimya Moyo: Made students focus on the strategy that was presented and building off the strategy

01:13:24 Jackie Santoro: students are involved

01:13:40 Eileen Murray: What do you mean by that third point?

01:13:57 Eileen Murray: Thank you

01:14:12 Grant Weed: Did the teacher establish norms beforehand so that all groups must be attentive to the presentation?

01:14:28 Matt Zeboor: What do you do when students still aren't choosing to engage, even after all these skills are used?

01:14:49 Catherine VanNetta: I also use a weekly class participation rubric.

01:15:00 Larry Arnett: I'm sure she began the year modeling

01:15:56 Chonda Long: Here is a link to the certificate of participation - [www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](http://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)

01:16:19 Leticia Tucker-Mickle: Would this work with students that struggle with math.

01:16:22 Barbara Cymanski: By using engaging tasks you can pull more students in than when you are just watching the teacher solve work...this may not pull all students in but it will help.

01:16:27 Jolene Peterson: YES! My teachers were not ready to do the 5 practices in their totality in year 1 of Illustrative Mathematics. (They had so much to learn first.) But we will get there and make it focus for year 2.

01:16:39 Aida Kajs: How do you encourage students to go outside of their comfort zone in the monitoring stage? I run into students just trying to figure out what the "right" answer I'm looking for is

01:16:40 Alex Kash: How do I incorporate 5 Practices Lessons more

regularly rather than just once in a while as a "drop-in" lesson (like for an observation)?

01:17:04 Kristin Stuby: How often do you do these tasks?

01:17:08 Chonda Long: Here is a link to the certificate of participation - [www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](http://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)

01:17:50 Daria Sinrod: Thanks for the discussion and the webinar!!

01:18:09 Mohamed T: Link not found

01:18:12 Pamela Gavina: the certificate link is missing an "f" in .pdf

01:18:18 Laurie McCord: Chonda, I couldn't get the link to work, just fyi

01:18:20 Veronica Elfe: @Leticia - Walsh has small tasks for Math 1

01:18:24 Mohamed T: ok thanks

01:18:30 Mark Phipps: Chonda, these first 7 days have been great! I think it is a really good approach to have back-to-back days of similar content targeting different levels. Having two different presentations allows many of the concepts to be reinforced.

01:18:31 Dee Dee: Thank you! Aloha everyone

01:18:32 Laurie McCord: thank you

01:18:37 Paula Fitzpatrick: this was great! you said you would mention the books again

01:18:38 Katina Odoms: It worked for me. I copied and pasted.

01:18:40 Cindy Bryant: Takes time, but it's time we'll spent!

01:18:41 April Mazziotta: Does the certificate count towards teacher license hours for professional development?

01:18:41 Mary Dugas: two classes--inconsistent attendance....where is info at help teacher use 5 practices with revolving students

01:18:43 Angela Tseng: It works for me too!

01:18:44 Angela Tseng:

[https://www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)

01:18:56 Sheila Whitley: getting students up to the board with something like 260 math really helps with reluctant students

01:18:58 Cathy Cox: Thank you!

01:18:58 Joanne OConnor: just copy and paste to get the certificate

01:18:59 Randal Nelson: I've seen some really nice tasks, but I have a problem figuring how they will tie into the specific curriculum. Are there any materials that would show how, for example, Task A works with Systems of Linear Equations, Task B works with Exponential Functions, etc.?

01:19:01 Kelly Ward: @Leticia, This might seem silly, but I reward wrong answers (sometimes with candy) just to get them talking at all.

01:19:06 Chonda Long: Here is a link to the certificate of participation - [www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](http://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)

01:19:10 Mohamed T:

[https://www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)

01:19:16 Trena Wilkerson: Thank you Mike! Great questions and comments by participants as well. Thanks to all for sharing!

01:19:20 Abigail Gragg: Thank you so much!

01:19:27 Laurie McCord: thank you!

01:19:33 Quintealia Cato: The link worked for me

01:19:40 Sharon Black-MacKinnon: Thank you so much Mike

01:19:43 Brian Odiwuor: Wonderful presentation

01:19:48 irene Batchelder: The link for the certificate didn't work ... said the page has moved.

01:19:51 Sharon Black-MacKinnon: This is fantastic PD

01:19:53 Larry Arnett: Thank you, stay safe everyone

01:19:57 Quintealia Cato: Awesome presentation

01:19:58 Mark Phipps: Do you feel like a flipped classroom will facilitate this more easily?

01:20:03 Michele Cheyne: Thank you!

01:20:04 Mohamed T: Yes , link fixed by adding 'f' at the end

01:20:05 Sharon Black-MacKinnon: Happy Easter everyone

01:20:13 Chonda Long: This link should work - [www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](http://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)

01:20:20 Kathy Parbs: Stay home - be safe

01:20:24 Lainey Moe: book info please!

01:20:26 Nadia Messadi: thank you very much

01:20:31 Sandra I Ruiz-Davila: Thank You

01:20:31 Deborah Chapdelaine: restate your twitter handle?

01:20:34 hoang nguyen: Thank you so much!

01:20:34 Marlene Naquin: Thanks~~ Take care.. Stay safe

01:20:36 Carly Jardinier: Thank you!

01:20:36 Barbara Cymanski: So impressed to have almost 300 math teachers here on a Thursday night. You are all awesome!

01:20:37 Cindy Bryant: Thank Mike, Chonda, and Scott! Great job Mike!

01:20:39 irene Batchelder: Never mind ... got it.

01:20:47 Mike Steele: @mdsteele47

01:20:48 Melissa Walther: no

01:20:49 Chrystina Harich: No

01:20:49 Stephanie Matisiak: not yet

01:20:50 Kristin Stuby: no

01:20:50 Laurie McCord: no

01:20:51 Chonda Long: It is up to your state whether or not they count the certificate for credit

01:20:51 NICOLE RIGELMAN: yes

01:20:51 Amanda Roble: No

01:20:53 Nadia Messadi: no

01:20:55 Quintealia Cato: not yet

01:20:56 penina kamina: no

01:20:57 Dr Deborah Smith: no

01:20:57 Peter Duong: yes

01:20:58 Robin OBrien: No

01:20:59 Joanne OConnor: no

01:21:15 Chrystina Harich: YEs  
01:21:16 Michael Brown: there it is  
01:21:17 Nadia Messadi: yes  
01:21:17 Dr Deborah Smith: yes  
01:21:18 Quintealia Cato: yes  
01:21:18 Gabby Trojanowski: yes  
01:21:20 Ada Feliciano: yes  
01:21:22 Angela Tseng: Is this your twitter, Mike? @mdsteele47

01:21:24 Lisa Piandes: thank you love the helpful suggestions and videos  
01:21:29 Emily Barbee: Thanks! Have a great weekend!  
01:21:31 Comfort Akwaji-Anderson: Hello Everyone  
01:21:32 Christina Tully: Mike - What was the name of the person you recommended looking up to try to implement these practices in our digital world of distance learning?  
01:21:32 Ann Cola: Thank you!!!  
01:21:42 dana dulzo: Do these sessions qualify as prof dev hours  
01:21:43 Nadia Messadi: Thank you!!!  
01:21:52 Angela Tseng: Christina Tully, @theresawills  
01:21:57 Mike Steele: 5 practices online format was Theresa Wills, Christina - @theresawills  
01:22:02 Mike Steele: And yes, @mdsteele47 is me!  
01:22:04 Ann Cola: Certificate??  
01:22:05 Christina Tully: Thanks!  
01:22:11 Leticia Tucker-Mickle: Do you recommend the next webinar for high school teachers?  
01:22:11 Mike Steele: I see y'all blowing up my phone!  
01:22:12 Lilian Youssef: certificate?  
01:22:12 Jeanne D'Arcy: Thank you! 🙌  
01:22:12 Nicole Kezmarsky: Mike what is your Twitter name?  
01:22:13 Pamela Gavina: Chonda: we did not receive certificate on April 7. link was not working according to presenter.  
01:22:17 Jet Yeung: thank you for all the information. this is very helpful  
01:22:17 Laurie McCord: thank you  
01:22:20 Dr Deborah Smith: Thank you  
01:22:21 Deborah Chapdelaine: Thank you so much  
01:22:21 Jackie Santoro: I can't get the certificate  
01:22:22 Gabby Trojanowski: Thank you!  
01:22:23 Jen McFall: thanks  
01:22:24 Grant Weed: Thank you!  
01:22:25 Leslie Texas: Thank you!  
01:22:25 Joanne OConnor: thank you  
01:22:26 Daniel Irving: Thank you so much!  
01:22:27 Veronica Elfe: Thank you!  
01:22:27 dana dulzo: thank you  
01:22:27 Chrystina Harich: Thank you  
01:22:28 Allison Dean: Thank you!  
01:22:29 Mohamed T: thank you.  
01:22:29 penina kamina: thanks

01:22:31 Cynthia Sumpter: The link for the certificate did not work  
01:22:32 Elizabeth Sasse: thank you  
01:22:32 José Sala: Thanks so much!  
01:22:34 Kim Ellis: I can't get the certificate  
01:22:35 Ada Feliciano: Thanks  
01:22:35 Mel Hefty: Thanks so much!!!  
01:22:36 Marlene Naquin: Thanks!  
01:22:39 Emese Bede: Thank you all!  
01:22:40 Patrick Montague: Thanks  
01:22:40 Rosa Ferreira: Many thanks  
01:22:40 Johnathan Silvas: Thank you and stay safe.  
01:22:40 Menchie Besa: thanks  
01:22:41 David Bradford: THIS WAS THE BEST  
01:22:42 Jill Perry: Thanks!  
01:22:42 Michael Brown:  
[https://www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)  
01:22:44 Jasmina Ivanov: Thanks!  
01:22:49 Jackie Santoro: the link didn't work  
01:22:52 Marlene Naquin: hehe  
01:22:54 Robert Vottero: are you sending certificate and notes  
01:23:01 C Glover: great presentation  
01:23:06 Jackie Santoro: can you send out ;the link again  
01:23:10 Jolene Peterson: Thanks everyone!  
01:23:14 Pamela Gavina: Chonda: we didn't get a certificate on April 7  
01:23:26 David Barnes:  
[https://www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)  
01:23:55 Quintealia Cato: is the agenda available  
01:23:57 Kim Ellis: Thank you  
01:24:10 Randal Nelson: Thanks!!!  
01:24:20 Amirah Cutts: What's the code again for the resources and discount?  
01:24:29 Jeff Shih:  
<https://www.nctm.org/100-Days-of-Professional-Learning/>  
01:24:49 Chonda Long: Here is a link to the certificate of participation - [www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)  
01:24:56 Pamela Gavina: Chonda: we didn't get a certificate on April 7  
01:25:10 Jackie Santoro: I can't get the link opened  
01:25:16 Jackie Santoro: it says page does not exist  
01:25:30 Chonda Long: Use this - Here is a link to the certificate of participation - [www.nctm.org/uploadedFiles/Conferences\\_and\\_Professional\\_Development/Webinars\\_and\\_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf](https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars_and_Webcasts/Webcasts/The-Five-Practices-in-Practice-Orchestrating-Productive-Mathematics-Discussions-in-High-School-Grades-10-12-Certificate-April-9.pdf)



01:25:38 Chonda Long: Sorry not that - Here is a link to the certificate of participation -  
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01:25:41 Chonda Long: This one

01:26:23 Linda Fulmore: Thanks Michael!