```
00:16:43
                Cindy Bryant:
                                Hello from Springfield, MO.
                Trena Wilkerson:
                                         Hello From Waco, TX via Philadelphia, MS
00:16:54
tonight!
00:16:58
                Sheila Kirton-Robbins:
                                        Hi from Nashville, NC
                Catherine Bronikowski:
                                        Hi from Milwaukee, WI
00:17:05
00:17:07
                Esther Winikoff:
                                         hello from Pittsburgh!
                Jennifer Eaton: Hi from San Diego
00:17:08
                Kelli Freiwald: hello from PA
00:17:11
                                Hi from Baton Rouge, LA!
                Tanya Landry:
00:17:11
                                         Hello from Miami, Florida
00:17:13
                Regina Williams:
                Jorge Veloso:
                                Hi from Angola.
00:17:14
00:17:14
                Macobia Harris: Hi from Desoto, TX
                Natasha Gambarov:
                                         Hello from Boston, MA
00:17:17
                Denise Beavers: Hello from Tennessee
00:17:19
                                Hello from Ohio!
00:17:19
                Megan Riley:
                Kelly Sotsky:
                                Hi from NJ!
00:17:20
                Sheila Bishop:
                                Hello from NH
00:17:22
                kim bolf:
                                Hi From Duluth MN
00:17:22
00:17:23
                Jaclyn Murray:
                                Hi from Cumming, GA!
                                 good morning from philippines
00:17:23
                LANY JAMERO:
00:17:24
                Kellie Hammett: Hi from Indiana!
                                hello from dana in novi mi
00:17:24
                dana dulzo:
                                         Hi from DC!
00:17:25
                Kendra Heffelbower:
                                         Hi from Baltimore, Mayland!
00:17:25
                Andrea Graziano:
                Janice Magauay: Hello from Maryland
00:17:25
00:17:26
                Catherine Bertrand:
                                         Hello from IN
00:17:26
                Melonie Smith:
                                Hello from Chicago
00:17:26
                Dale Pasino:
                                Worcester, MA!
00:17:28
                Judy Radigan:
                                Hi fromMaine!
                jennifer SMITH: hello from Vista, Ca
00:17:28
                Olga Kosheleva: Hello, from El Paso, TX
00:17:28
                Lorie Huff:
                                Hello from Fayetteville, Arkansas
00:17:29
00:17:29
                                Hello from IL
                Ana Guerrero:
00:17:30
                Jenny Sagrillo: Hello from Milwaukee, WI
                Shannen Bunoski:
                                         Hi from Bethany Beach, DE!
00:17:30
                                Hello, From Maryland
00:17:30
                CATHY SMITH:
00:17:31
                Jamie Rossi:
                                NY
                Michelle Shirtcliff:
00:17:31
                                         Hello from Burbank, CA
                Harriet Simand: Hi from Canada
00:17:32
                Emily Kavanagh: Hello from Columbia, MD
00:17:33
00:17:34
                Claire Dent:
                                Macon GA
                                Hello from rainy Alexandria, Va
00:17:34
                Christy Rose:
00:17:35
                Dalila Rivera:
                                Hello from Kingsville, Tx
                                         Hi from Dallas, Texas.
00:17:35
                Josephine Romero:
                                Hi from WA
                Wendyk Kraft:
00:17:36
                                         Hello from Rogersville, Tn.
                Catherine Livesav:
00:17:36
                                         Hi from Temple Hills MD
00:17:37
                Jacqueline Colbourne:
00:17:38
                Moreno Tracy:
                                Hello from Phoenixiville, PA
                                         Hello from Prosser, WA
00:17:39
                Robin Humberstad:
00:17:40
                Laura Archer:
                                Hello from Monterey, CA!
```

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Wendy Janerico: Hi from
00:17:40
                Lori Fendel:
                                Hi from Fort Wayne, IN
00:17:40
                Stacie Kyhn:
                                Hey howdy from Apache Junction, AZ!
00:17:40
                Karoulin Aljoris:
                                         Hello all
00:17:42
                                Hello from Clark NJ
00:17:43
                kate killion:
                Laura Semian:
                                Hello from Sarasota, FL
00:17:43
                                Hello from NC
00:17:43
                Debbie Meanev:
                Maral Aznavour: hello from Texas
00:17:43
                Veronica Troup: Hi from Tennessee
00:17:44
                                Hi from Omaha, Nebraska!
00:17:44
                Ann Adkins:
                Jeff Shih:
                                hi from las vegas!
00:17:45
00:17:48
                Imelda Valencia:
                                         Hello Everyone. From Maryland and a native
of the Philippines
00:17:48
                Lesly Brown:
                                Hello from Knoxville, Tennessee and Lesly.
00:17:48
                Sharon Black:
                                Good evening from sunny New Brunswick Canada
00:17:49
                Karoulin Aljoris:
                                         ΜI
00:17:49
                Aura Fortaleza: Good evening from Charles County MD
                                Hello from Ga
00:17:50
                Amy Price:
                                Hello from Tuscaloosa Alabama
00:17:50
                Rene McNeal:
                Ann Assad:
                                Hello from Paducah KY
00:17:50
                Maria Reid:
                                Howdy from Houston TX, Maria Reid
00:17:50
00:17:50
                Rodney Cooper:
                                Hello from Killeen Texas
00:17:51
                Arlene Bachinela:
                                         Hello from Baltimore, MD
00:17:52
                jacob waxenberg:
                                         Michigan
                                Hello from Annapolis, MD. Looking forward to
00:17:54
                John Halmi:
tonight's presentation!
00:17:55
                Shelley Mosier: Hi from Shel in Lexington KY!!!
00:17:59
                Susan Dahms:
                                Hello from Ridgecrest, CA!
00:18:00
                MAYLYN MAGNO:
                                Good Morning From Davao City, Philippines
                                Hello from Texas!
00:18:02
                Dee Crowell:
                                Hi from Pam in Streator, OL
00:18:06
                Pamela Liegl:
00:18:08
                Alana Roberts:
                                Racine, WI:)
                Wendy Janerico: Hi From Grafton MA
00:18:09
                Cheryl Lowery:
                                hello from tipton county
00:18:10
                Carolyn Nelson: hello from Texas
00:18:11
                                         hello from Newport NC
00:18:12
                jeanine colwell:
00:18:15
                Angi Kellev:
                                Hi from Eagar, AZ!
                                         Greeting from Fort Carson, Colorado
00:18:16
                Ann Wycoff Bagshaw:
                Chauntae Whitter:
                                         Hello from Bermuda
00:18:16
                Valerie Vanderport:
                                        Hello from Everett, Wa
00:18:21
00:18:23
                audrey west:
                                hi from Lexington, KY
                Rosalyn Bantay: Hello from Philippines
00:18:28
00:18:29
                Mohamed T:
                                Hi everyone! Greetings from Mohamed, CT.
00:18:31
                Jov Feinauer:
                                Michigan!
                                Hi from Rita in Senoia, GA
                Rita Shamrock:
00:18:31
                                Good Afternoon from Angie in Arizona
00:18:31
                Angela Wilson:
                                Hello from Chelmsford MA
00:18:32
                Ann Swierzbin:
00:18:36
                Catherine Doiron:
                                         Hi from MV, MA
                                Hello from Charlotte, NC
00:18:40
                Ramona Hall:
00:18:41
                Laurie James:
                                Aloha from Oahu
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00:18:44
                Dave Hankin:
                                Hello again from Globe, Arizona!
                Julie Hutchinson:
                                         Hi - Julie from New Jersey!
00:18:45
                Alicia Kaplan: Hello from NYC
00:18:47
                tracey simmons: Hello from Jamaica NY
00:18:48
00:18:49
                Eunice Dimasangal:
                                        Morning from Indonesia
                Nancy Davis:
                                Hello from Atlanta
00:18:51
                Lesley Collins: Hello from Manchester, Kentucky
00:18:53
                Lorie Bell:
                                Hello from NC
00:18:55
                                Hello from North Providence, RI!
                Daniel Irving:
00:18:55
00:18:57
                Teresa Moore:
                                MA
                maureen prendergast:
00:18:57
                                        New Bern, NC
00:18:59
                Mary Simmons-Chatmon:
                                        South Carolina
                                Hi from Tucson, AZ!
00:18:59
                Ariel Beggs:
00:18:59
                Anupama Anand:
                                hi from san jose california
00:19:00
                Cheryl Lowery:
                                west tennessee
                Patricia Eberhardt:
00:19:02
                                         sunny AZ
00:19:02
                peter zirnis:
                                Hi from Etobicoke Ontario
                                        Hi from Phoenix, Arizona!
00:19:02
                Jessica Lindberg:
00:19:02
                Cindy Bryant:
                                Please change your chat setting to All panelists and
attendees so everyone can see your posts.
                Allison Miller: West Virginia
00:19:02
00:19:03
                Shashidhar Belbase:
                                        Hello from the UAE.
00:19:04
                Nell Thurlow:
                                Louisiana LA
                Ellen Williams: Ellen - Kerrville, TX
00:19:12
                Winnica McLean: Florida
00:19:12
00:19:15
                Portia Felder:
                                Greetings from Snellville, Georgia
00:19:17
                Erica McCord:
                                Good evening from SC
                Susan Danskin: Hi from Ithaca, NY
00:19:23
00:19:24
                Monique Greene: Hi from Ohio
                Gloria Flores: Hello from Texas
00:19:26
                                        Hello from Waukegan, IL
00:19:26
                Angelita Beltran:
                                        Hello from Judith in Santa Cruz , CA
00:19:26
                Judith Montgomery:
                Laura Semian:
                                Hello from Sarasota, FL
00:19:28
00:19:30
                Marian Johnson: Tucson, AZ
                Linda Baker:
                                Indiana
00:19:31
00:19:32
                Julie Leporiere:
                                        Hi from California
00:19:32
                Charese Chambers:
                                        Tennessee
                Patricia Ferris:
00:19:33
                                         chicago
                Joeleen Stanard:
                                        Woodstock, IL
00:19:34
00:19:34
                                         From San Francisco, CA
                Patricia Daugherty:
00:19:36
                Sherral Hartung:
                                        Hello from Seattle
00:19:36
                Catherine Abbott:
                                         Beating the HEAT with NCTM!!!
00:19:36
                Paul Fishwick: Dallas, tX
00:19:37
                Derrick Johsnon:
                                        Maryland
                Billy Sikes:
00:19:37
                                Texas
00:19:37
                Lindsay Ventura:
                                        Hello from Natick, MA!
                Martisha Dunn:
                                Richmond Virginia
00:19:39
00:19:39
                Ma. Lorena Aloquina:
                                        Philippines here...
                                Hello from Portland, OR
00:19:40
                Wenny Liao:
00:19:40
                Lotalinda Castro-Anderson:
                                                 PHILADELPHIA!!!!
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00:19:40
                Tiffany Lace:
                                Portland, OR
                Carolyn White: Hello from Houston, Texas
00:19:40
                                        Hello from Providence, RI.
00:19:40
                Lynn Rakatansky:
                Jacquelyn Wardlow:
                                        Hello from San Antonio, TX
00:19:40
                                        Hello from Calgary, Alberta (Canada)
00:19:41
                Margaret Matheson:
00:19:42
                Christopher Eddy:
                                         Columbia, SC
00:19:44
                Kristin Frerichs:
                                         Crystal Lake IL
                                         Hello all, Dee Rushing from Washington, DC
00:19:46
                Delores Rushing:
                Claudia Cooper: C. Cooper from Maryland
00:19:48
                Mary Beth Kilnoski:
00:19:50
                                         Nebraska
                Shannen Bunoski:
                                         Bethany Beach, DE! Looking forward to the
00:19:51
webinar!
                Cris Armada:
                                good morning everyone... I'm from Philippines...
00:19:53
                Vanessa Stokes: Hello From Chicago Area!
00:19:56
00:19:57
                Eduardo Enjambre:
                                        Hello from Upper Marlboro, Maryland.
                Alejandra Murillo:
                                        Hello From HONDURAS
00:19:58
                                         Southern California.
00:20:02
                Douglas Steinbronn:
                Vicki Clancy:
                                Hello from Orcas Island
00:20:09
                                Hello from DC
00:20:10
                Paval Arora:
                Sun Lee:
                                Hello from Los Angeles!
00:20:12
00:20:13
                Dasha Layne:
                                Hello from MA
00:20:19
                WARA SABON DOMINIKUS:
                                         greeting from Kupang Indonesia
00:20:21
                dawnfurstenberg:
                                         hello from portland oregon
                                        Hello from Vancouver, BC, Canada
00:20:23
                Janice Novakowski:
                                Polly from Bay Area, California
                Polly Mayer:
00:20:24
00:20:32
                Alison Jo Frost:
                                        Hello from Beckley WV
00:20:34
                Sumedha Kumar: hello from New Jersey!
00:20:34
                Mary France Imperial:
                                        Hello from Philippines
00:20:37
                Brenda Silkman: Brenda from Waite Park, MN
                                        Hello from Aptos, CA
00:20:45
                Michelle Voorhees:
                                Hi Aycan Yilmaz from New York
00:20:49
                Aycan Yilmaz:
                                Please set your chat to All panelists and attendees
00:20:51
                Cindy Bryant:
so everyone can see your posts.
00:20:53
                Lance Brauchla: Hello from Ege, IN
                                         Southern Utah
00:20:56
                Todd Smallcanyon:
00:21:00
                Lauren Davenport:
                                        Hello from PA.
00:21:07
                Abigail Santiago:
                                        Hello from Kentucky
                Nora Marasigan: Hello from Philippines
00:21:07
                Penina kamina: Hi from Oneonta NY
00:21:11
00:21:16
                Christina Fallstick:
                                        Philadelphia, PA
00:21:16
                Cindy Bryant:
                                Please set your chat to All panelists and attendees
so everyone can see your posts.
00:21:17
                John Sasko:
                                Good evening from Mt Vernon NY - I work in the Bronx
public schools
                Rachel Smith:
                                Tulsa, OK
00:21:31
                Eric Von Valdez:
                                         Im from Jeddah KSA
00:21:36
                Jennifer Heldenbrand:
                                        Hello from Provo, Utah
00:21:43
00:21:50
                Helen Gamova:
                                Hello from Columbus, OH
                Jennifer Smith: Hello from Annapolis, MD
00:21:56
00:21:58
                J AvH: Hello from Minneapolis
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00:21:59
                Jillane Moulden:
                                         Good evening from the eastern shore of
Maryland
00:22:08
                Konnie Guthrie: Hi from Las Vegas
                Elba Howington: Good evening from Orange Park, Fl
00:22:08
                rachel wingo:
                                Hello from Kentucky
00:22:09
                Jet Yeung:
                                Hello Everyone--Jet from Henderson, Nevada
00:22:16
                Christina Siow Young:
                                         HI from California
00:22:27
                                Hello from Little Rock
00:22:30
                Lianfang Lu:
                Catherine Abbott:
                                         I love using Mondrian with my students. Easy
00:22:30
project using Google Slides. Mondrian works well with fractions, areas, and ratios
and proportions.
                Chris Suurtamm: Welcome from Ottawa, Canada
00:22:32
00:22:35
                Gladys Montoya: Hi from Zion, Il!
                Carmelita Nalzaro:
                                         Hi from Jeddah, Saudi Arabia
00:22:53
00:23:01
                Judy Lamoreux:
                                Picasso
                Stacie Kyhn:
00:23:02
                                 Escher
                Jennifer Eaton: MC Esher
00:23:02
                Laura Semian:
                                escher
00:23:03
                                         Picasso
00:23:04
                Ann Wycoff Bagshaw:
                dana dulzo:
                                Picasso
00:23:04
00:23:06
                Jennifer Hahn: Escher
00:23:06
                dawnfurstenberg:
                                         picasso
                                         Mondrian
00:23:06
                Catherine Abbott:
                Rachel Smith:
00:23:06
                                Escher
                Julie Leporiere:
00:23:07
                                         Mondrian
00:23:07
                Catherine Bronikowski:
                                         Escher
00:23:07
                Margaret Matheson:
                                         Escher
00:23:07
                maureen prendergast:
                                         davinci
00:23:07
                Michelle Voorhees:
                                         MC Escher
                Judy Radigan:
00:23:08
                                Suarat
                Sheila Kirton-Robbins:
                                         MC Esher
00:23:08
                Antoinette Nista:
00:23:08
                                         escher
                Greisy Winicki Landman: Da Vinci
00:23:08
00:23:09
                Catherine Tung: Sol Lewitt
                dawnfurstenberg:
                                         mondrian
00:23:10
00:23:10
                K Kishida:
                                 kandinsky
                dana dulzo:
00:23:10
                                 Escher
                Patricia Ferris:
00:23:10
                                         segat
                Ann Swierzbin:
00:23:10
                                Escher
00:23:11
                Libby Kappler:
                                Mondrian
00:23:11
                Natasha Gambarov:
                                         da vinci
                Macobia Harris: Picasso
00:23:12
                                         MC Escher
00:23:12
                Donna Misciagna:
                                Mondrian
00:23:12
                Sun Lee:
                John Halmi:
                                 rothke
00:23:12
                Linda Baker:
                                 picasso
00:23:12
                Emily Kavanagh: Picasso
00:23:13
                Aura Rodriguez: hello, Aura Rodriguez from Montebello Unified
00:23:13
                Sharon Black:
                                 Escher
00:23:14
00:23:14
                Noe Eugenio:
                                 Escher
```

```
00:23:14
                Pamela DiBiase: Mondrian
                Christy Rose:
                                 da vinci
00:23:14
00:23:14
                dawnfurstenberg:
                                          seurat
00:23:14
                Cathy Cohn:
                                 Frank Lloyd Wright
00:23:15
                Joeleen Stanard:
                                         Picasso
                Polly Mayer:
                                 Iznik tiles
00:23:15
                Marian Johnson: Mondrian
00:23:15
                Christopher Eddy:
                                         Da Vinci or Picasso
00:23:15
                Emily Kavanagh: Monet
00:23:15
                Leslev Collins: Picasso
00:23:16
00:23:17
                Payal Arora:
                                 Picasso, Mondrain
00:23:18
                Anupama Anand:
                                 picasso da vinci
                Delia Kellv:
                                 Kandinsky!
00:23:18
00:23:18
                Sharon Black:
                                 DaVinci
00:23:19
                Patricia Daugherty:
                                         Sol LeWitt
                Rodney Cooper: Cooper
00:23:19
00:23:19
                Nadine Richards-Ramsey: Da Vinci
                Cindy Bryant:
00:23:20
                                 Escher
00:23:21
                Aura Rodriguez: Diego Rivera
                Charese Chambers:
                                         Dali
00:23:21
00:23:21
                Robin Ward:
                                 jasper johns
00:23:22
                Martisha Dunn:
                                 Monet
00:23:23
                Laura Archer:
                                 0 Keefe
00:23:23
                Libby Kappler:
                                 Calder
                Janice Magauay: Da Vinci
00:23:23
00:23:23
                Lance Brauchla: Echer
00:23:24
                Sharon Black:
                                 Picasso
00:23:24
                Kellie Hammett: Escher
00:23:25
                Antoinette Nista:
                                         Chihuly
                Maria Reid:
00:23:26
                                 Escher
                Andrea Graziano:
                                         Mondrian , Escher,
00:23:26
                Xen McCoy:
00:23:26
                                 van gogh
                Jacqueline Colbourne:
                                         Monet
00:23:26
00:23:26
                Leslev Collins: Monet
                Catherine Livesay:
                                         Picasso
00:23:26
00:23:27
                Carolyn White:
                                 Mondrian
                Elizabeth Barlow:
00:23:27
                                         Escher
00:23:27
                Sun Lee:
                                 Pollack
                Sumedha Kumar:
                                 of course Kandinsky
00:23:27
00:23:28
                Michelle Voorhees:
                                         Islamic Tiling
00:23:28
                Laura Semian:
                                 geometry
                Brandi Sidley:
00:23:28
                                 Matisse
00:23:28
                Janice Magauay: Escher
00:23:29
                Sharon Black:
                                 Geometry
                Ann Wycoff Bagshaw:
00:23:29
                                         Walker
00:23:29
                Andrea Graziano:
                                         Geometry
                Jennifer Eaton: Proportions
00:23:29
00:23:29
                John Halmi:
                                 geometry
                                          fractions
00:23:29
                dawnfurstenberg:
                                 Frank LLoyd /wright
00:23:30
                Lori Fendel:
```

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00:23:30
                 Julie Leporiere:
                                          Geometry
                Barbara Lambert:
00:23:30
                                          geometry
00:23:30
                Jacqueline Colbourne:
                                          Symmetry
00:23:30
                Kellie Hammett: Geometry
00:23:30
                Carmelita Nalzaro:
                                          Picasso
00:23:31
                Erica McCord:
                                 Geometry
00:23:31
                Emily Kavanagh: Abstract
00:23:32
                Margaret Matheson:
                                          Angles
00:23:32
                Cathy Cohn:
                                 Patterns, geometry
00:23:32
                Christy Rose:
                                 ratio
00:23:32
                Patricia Ferris:
                                          geometry
00:23:32
                Stephanie Bernabe:
                                          shapes
                Libby Kappler: area and perimeter
00:23:32
00:23:33
                maureen prendergast:
                                          ratios
00:23:33
                Jennifer O'Connell:
                                          fractions
                                 proportions
00:23:33
                TINA LATTIMER:
                                 symmetry
00:23:33
                Laura Archer:
                Alicia Crawford:
00:23:33
                                          geometry
00:23:33
                Julie Leporiere:
                                          symmetry
                Abigail Santiago:
00:23:33
                                          Fractals
00:23:34
                dana dulzo:
                                 Shapes, geometry
00:23:34
                Teresa Moore:
                                 Geometry
00:23:34
                Janice Magauay: symmetry
00:23:34
                Cathy Cohn:
                                  symmetry
                Marian Johnson: parallel lines
00:23:34
00:23:34
                Laura Semian:
                                 proportions
00:23:34
                Donna Misciagna:
                                          Transformations
00:23:34
                Heidi Johnson:
                                 geometry
00:23:35
                Stacie Kvhn:
                                 Geometric
                Shonel fraser:
                                 ratios
00:23:35
                Elizabeth Barlow:
                                          Tessallations
00:23:35
                Robin Ward:
                                 patterns
00:23:35
00:23:35
                Lori Fendel:
                                 Geometry
00:23:35
                Christina Siow Young:
                                          dilation
                Libby Kappler:
00:23:35
                                 geometry
00:23:35
                 Judy Radigan:
                                 Shapes
00:23:35
                Macobia Harris: Geometry
00:23:36
                Sharon Black:
                                 Shapes
                Paul Fishwick:
                                 Just about all math
00:23:36
00:23:36
                Lance Brauchla: Symmetry
00:23:36
                Joann Minner:
                                 Transformations
00:23:36
                Cathy Cohn:
                                 balance
00:23:36
                Rachel Smith:
                                 Tesselation
00:23:36
                Ana Guerrero:
                                 geometry
00:23:36
                Patricia Daugherty:
                                          Geometry and Algebra
00:23:37
                Imelda Valencia:
                                          Geometry
                Greisy Winicki Landman: Torres Garcia - golden ratio
00:23:37
00:23:37
                K Kishida:
                                 conic sections
                                 Pattern ratio
00:23:37
                Polly Mayer:
00:23:38
                Kathryn Swartzenberg:
                                          ratios
```

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00:23:38
                Susan Danskin:
                                 Transformational geometery
                Wendyk Kraft:
                                 geometric shapes
00:23:38
                Macobia Harris: Angles
00:23:38
00:23:38
                Alicia Crawford:
                                         fractions
00:23:38
                Aura Fortaleza: proportions
                Anupama Anand:
                                 angles, translations
00:23:38
00:23:38
                Lesley Collins: Geometry
                Janice Magauay: tessallations
00:23:40
                Sharon Black:
                                 patterns
00:23:40
00:23:40
                Antoinette Nista:
                                         ratios
00:23:40
                Lesley Collins: summetry
00:23:40
                John Sasko:
                                 proportion
                Maria Reid:
00:23:41
                                 Tesellations
00:23:41
                Natasha Gambarov:
                                         algebra and geometry
00:23:41
                Elba Howington: geometry
00:23:41
                Jacqueline Colbourne:
                                         Ratios
00:23:41
                Claire Dent:
                                 Pythagorean spirals
00:23:42
                Payal Arora:
                                 Geometry
00:23:42
                Martisha Dunn:
                                 geometry
                                 transformations
00:23:42
                Cindy Bryant:
00:23:42
                Amy Price:
                                 geometry
00:23:43
                Xen McCov:
                                 golden ratio
00:23:44
                Linda Baker:
                                 geometry repeating shapes
                Sumedha Kumar:
00:23:44
                                 symmetry
                Jennifer O'Connell:
00:23:44
                                         reflections
00:23:45
                Gil Geeran Bangeles:
                                         Modulo Art
00:23:45
                Antoinette Nista:
                                         proportions
                Cathy Cohn:
00:23:45
                                 fractions
00:23:47
                Cathy Cohn:
                                 ratios
00:23:47
                Penina kamina:
                                 geomerty
                                 Yes, to all
00:23:48
                Angela Wilson:
                                 All math
00:23:48
                Rachel Smith:
                                 tessalations
00:23:50
                Amy Price:
00:23:51
                Joann Minner:
                                 Pythagorean Theorem
                Pamela Goff:
                                 Fibonacci sequence
00:23:52
00:23:52
                Patricia Ferris:
                                         fibonnaci
00:23:53
                Christopher Eddy:
                                         Just look at the golden ratio
00:23:56
                Brenda Silkman: proportionality
                                 scale and similarity
00:23:57
                Kim Taylor:
                                 Perspective
00:24:03
                Ann Assad:
00:24:03
                Polly Mayer:
                                 Fibonaci numbers
00:24:06
                Delores Rushing:
                                         Van Gogh
00:24:08
                Catherine Abbott:
                                         Hokusai (Japanese wave)
00:24:09
                Catherine Livesay:
                                         geometry, proportions
                                 patterns and proportions
00:24:14
                Lesly Brown:
                                 the stained glass is great... I've done that...
00:24:24
                Laura Semian:
                Alison Jo Frost:
                                         This is a wonderful lesson
00:24:29
00:24:44
                David Barnes:
                                 https://tinyrul.com/y4fnd88a
                Janice Magauay: My students did that too
00:24:44
00:24:49
                Sheila Kirton-Robbins: Great lesson!
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thanks for the link
00:24:52
                Laura Semian:
                                good points about the rulers
00:25:28
                Laura Semian:
00:25:47
                Sharon Black:
                                love it
00:25:48
                Libby Kappler:
                                I LOVE the stained glass activity and often do more
than one throughout my unit
00:25:51
                Jeff Shih:
https://docs.google.com/document/d/15msoGOT0nd-LKYTXaUeC0IjBR98E2YopGsiyXIce1KY/edit
                Chris Suurtamm: wow - beautiful!
00:25:55
                Delores Rushing:
                                        Wow! Beautiful
00:26:22
                                what an awesome class to get to teach!
00:26:34
                Laura Semian:
00:26:37
                Kathi Holland: Hello from Mountain Home, Idaho
                Emily Kavanagh: Nice pic captured
00:26:55
                Delores Rushing:
                                        Geometry is wonderful! It's all around us!
00:27:19
                                        what was the name of magazine?
00:27:32
                Karoulin Aljoris:
00:27:48
                Joann Minner:
                                Hello from Minerva, Ohio
                                Hello from Jackson, MS
00:28:09
                Tarvn Brown:
                                +Good Evening from Spring Hill Fl
00:28:18
                Heidi Johnson:
                EILEEN BERNARD: Hello from New York
00:28:32
                PALOMA CARRERA-ANDINO: Hi from El Paso, Tx
00:28:34
                Catherine Abbott:
                                        You can bet that the students in that class
00:28:38
remember the Artist AND the math. Cool
00:28:44
                Laura Semian:
                                big time help with engagement
                                        Hello from Cleveland,
00:28:44
                Tom Litwinowicz:
                                                                Ohio
                Laura Semian:
00:29:29
                                thanks for sharing!
                dana dulzo:
                                anyone else having a problem loading the
00:29:37
https://tinyurl.com/y4fnd88a
00:29:46
                Joeleen Stanard:
                                         exciting!
00:29:53
                Emily Kavanagh: That is good to know
00:30:01
                Catherine Livesay:
                                        That's great because I think we will be
distance learning.
                                I am also have issues with the tinyurl
00:30:02
                Angi Kelley:
00:30:12
                Jennifer Smith: Use this:
https://docs.google.com/document/d/15msoGOT0nd-LKYTXaUeC0IjBR98E2YopGsiyXIce1KY/edit
00:30:13
                Chonda Long:
                                The recording and resources will be available
tomorrow at www.nctm.org/100
                Alison Jo Frost:
00:30:17
                                        @Dana - It worked for me but I also have a
file.
                Sharon Black:
                                @dana d yes it will not load
00:30:24
                Dave Hankin:
                                the tiny url doesn't work...
00:30:33
00:30:40
                Carmelita Nalzaro:
                                        love the color combination, it motivates
00:30:47
                Cindy Bryant:
                                The Tinyurl was inadvertently typed as tinyrul...
                Laura Semian:
                                remember Studio Line by L'Oreal... shampoo, etc?
00:30:51
                Alison Jo Frost:
00:31:01
                                        Yes
                                Mondrian all the way! ;)
00:31:08
                Laura Semian:
                                        Sorry, a little late, Portsmouth, VA
00:31:14
                Betty Stallings:
                Cheryl Lowery:
                                myI teach special education geometry
00:31:23
                Cheryl Lowery:
                                my students love doing string art
00:31:33
00:31:36
                dana dulzo:
                                thanks
                Eileen Zymroz:
                                Also sorry, late, West Springfield, Ma
00:32:04
00:32:06
                Jeff Shih:
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https://museeyslparis.com/en/biography/lhommage-a-piet-mondrian
00:32:11
                iacob waxenberg:
                                        This is a great project for middle schoolers
00:32:20
                Catherine Abbott:
                                        Mondrian can also be done with
Sprieadsheets. I found a YouTube video showing how to do this on Google Slides.
                                        Hollister, CA
00:32:32
                Gloria BrownBrooks:
00:32:34
                Akanksha Bajaj: Can you share the YouTube video?
                                Mondrian area/perimeter REALLY drives home when to
00:32:39
                Laura Semian:
use units vs square units... they can SEE it... esp if it's done on graph paper
                David Barnes:
                                @Jeff - Thanks!
00:32:46
00:33:35
                Catherine Abbott:
                                        Mondrian
Deconstructing Mondrian: The Story Behind an Iconic Design
https://www.youtube.com/watch?v=1x8m-7N-Kjo
Mondrian Puzzle - Numberphile
https://www.youtube.com/watch?v=49KvZrioFB0
Mondrian (Artist evolution to music.)
https://www.youtube.com/watch?v=iSCmWnIoRpI
Piet Mondrian: A Life in 10 Snippets
https://www.youtube.com/watch?v=pTIDrkRvCJI
Mondrian at Tate Liverpool and Turner Contemporary
https://www.youtube.com/watch?v=dhv3 nGfETw
Piet Mondrian - 'Abstract Painting as We Know It' | TateShots
https://www.youtube.com/watch?v=xkq5jQhH0WE
00:33:40
                Jamie Rossi:
                                Could totally do this with legos
00:33:49
                Catherine Abbott:
                                        I love the photo.
00:34:12
                Laura Semian:
                                legos would be an interesting twist
00:34:14
                Angela Wilson:
                                I used different size and lengths of construction
paper and a full white sheet of paper in my math class for the "Golden Rule" lesson.
                Janice Magauay: rubric?
00:34:30
00:34:43
                Debbie Meaney: What was the timeframe?
00:34:45
                Pamela DiBiase: Why did you select to use tiles verses canvas?
00:34:51
                Kendra Heffelbower:
                                        Can you repeat the parameters?
00:35:00
                Georgiana Simpson:
                                        Why was an oven used versus a kiln?
                Lotalinda Castro-Anderson:
                                                How do u make sure that all families
00:35:03
had these supplies at home? For remote learning?
                                thanks for sharing all of the resources
00:35:05
                Laura Semian:
                Kristina Sass: So, the glaze you used became permanent in the oven?
00:35:05
00:35:14
                Pamela Goff:
                                I love the fact that it can be differentiated for
the students.
00:35:21
                Janice Magauay: Thanks
                Macobia Harris: Great activity for area and perimeter
00:35:33
00:35:52
                Delores Rushing:
                                        Nice project. What types of templates did
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the students use to create the designs?
00:36:08
                Catherine Livesay:
                                        What were the sizes of tape again?
00:36:12
                Joeleen Stanard:
                                        Great activity to do with the art teacher!
00:36:24
                Catherine Abbott:
                                        For distance learning ....try the spreadsheet
version of the Mondrian project.
                Natasha Gambarov:
                                        1/16 and 1/8 Catherine
00:36:25
                Ellen Williams: Love this
00:36:28
00:36:42
                Natasha Gambarov:
                                        width
                Robin Ward:
                                See http://inspirationlab.org/story/4844 to use
00:36:42
Mondrian to explore number sentences with Kindergarten.
00:36:51
                Christina Williams:
                                        Did they calculate the perimeter of each
rectangle so that became their limit on the amount of tape they could use?
                Chris Suurtamm: nice to bring the problem back to the students -
00:37:17
great idea!
                Laura Semian:
00:37:22
                                great to have the STUDENTS think about the details
of the project upfront...
                                like the different denominators
00:37:44
                Laura Semian:
00:37:47
                Akanksha Bajaj: Here's a link I found:
https://www.techlearning.com/tl-advisor-blog/make-mondrian-art-with-google-sheets
                Jacqueline Colbourne:
                                        Thank you for the link.
00:38:23
00:38:34
                Laura Semian:
                                again, love that students help come up with the
plans...
                                talk about BUY IN!
00:38:45
                Laura Semian:
                                        Nice use of choice
00:38:48
                Patricia Daugherty:
                Judy Lamoreux: These are great! Will the instructions for the
00:38:48
lessons be included at the end of this?
00:39:12
                Pamela Goff:
                                What was your vision for the math?
00:39:13
                Arelys Arenas:
                                we can add area of irregular polygons
00:39:15
                Emily Kavanagh: Very nice samples
                David Barnes:
                                @Judy - Yes. Shared at the end.
00:39:16
                Delores Rushing:
                                        Great! Gets students working together
00:39:31
00:39:31
                Judy Lamoreux: Thanks!
                Linda Baker:
                                thank you for the awesome links!!!!
00:39:39
00:39:51
                Arelys Arenas:
                                find area based on color used can be a great idea
                                I could see using this on graph paper
00:40:51
                Laura Archer:
00:41:05
                Arelys Arenas:
                                Thanks for these amazing ideas
                Gloria Flores:
                                Graph paper would be great
00:41:10
                Robin Ward:
                                See http://inspirationlab.org/story/8926 to use
00:41:10
Klee's Castle and Sun to explore shape, counting, graphing/data analysis. Here's
another Klee Castle and Sun activity I have done:
http://inspirationlab.org/story/6807
                Brenda McNeese: calulate area, costs (use tiles and paint), from
00:41:12
there discountes,,
                                love the problem-solving part
00:41:13
                Laura Semian:
                                Yes, you are muted.
00:41:17
                Cindy Bryant:
                Arelys Arenas: Prices based on materials neeeded
00:41:35
                                        Will we also receive some of the resources
00:41:47
                Georgiana Simpson:
people are typing into the chat?
                Imelda Valencia:
                                        Is this only done in class? This will be a
00:41:56
challenged since we have a lot of concepts to cover.
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00:42:15
                Cindy Bryant:
                                The chat will be posted with the recording.
                                The recording, chat, and resources will be posted
                Chonda Long:
00:42:21
tomorrow at www.nctm.org/100
00:42:31
                Laura Semian:
                                durability factor comes into play!
                                Art is not perfect as math is
00:43:35
                Arelys Arenas:
00:43:44
                Georgiana Simpson:
                                        I like "gulabi!"
                Robin Ward:
00:44:03
                                See
https://www.facebook.com/mathgoggles/posts/1257322474279795 to create a Mondrian
with crayons/grid paper and explore area and perimeter.
                Trena Wilkerson:
                                        Great Book To use with Kandinsky!
00:44:08
https://www.amazon.com/Noisy-Paint-Box-Kandinskys-Abstract/dp/0307978486/ref=sr 1 6?
crid=1H08QNSGNAXOH&dchild=1&keywords=kandinsky+book&qid=1595373032&sprefix=kandinsky
%2Caps%2C176&sr=8-6
00:44:11
                Laura Semian:
                                interesting... re: perfectionism from that angle
00:44:17
                Alison Jo Frost:
                                        Math is an attempt to make order out of
chaos —art offers a different point of view of the same attempt to create order out
of chaos
00:44:29
                ALEX QUYENVO:
                                my Geometry students have to design something
similar: design their dart board, using at least 4 different poligons, then find the
perimeter and area of each, then find the possibility of the dart landing on each
polygon, then they have to assign a point for each polygon, and explain why they
choose the point they choose (smaller shape gets higher points, I expect in their
work)
00:44:42
                Catherine Abbott:
                                        Math is not perfect....that's why estimation
and significant figures are used.
00:45:20
                Arelys Arenas:
                                Can be linked to the Social Emotional Aspect
00:45:29
                Robin Ward:
                                See http://inspirationlab.org/story/8486 for an
Kandinsky activity exploring circles, radius, diameter, measurement, etc.
                                        Can we save the chat for resources?
00:45:42
                Alison Jo Frost:
00:45:46
                                they have a week to do that, and it is a Test
                ALEX QUYENVO:
project students do at school, and can take home to work on it if they want to
                Laura Semian:
                                YES!!! "in terms of pi"
00:45:49
00:45:49
                Jamie Rossi:
                                This could be cool if you did this over 9 days to
show emotion
                Alison Jo Frost:
                                        I don't see my 3 dots to do so for me?
00:45:55
                Emily Kavanagh: This looks fun
00:46:44
                Janice Magauay: I like the idea of 9 days to see their emotions for
00:47:02
straight 9 days
00:47:06
                Catherine Abbott:
                                        I hope this was messy. It looks like fun
00:47:13
                Jamie Rossi:
                                I can see students learning to use a compass with
this too
                Julie Hutchinson:
                                        I had my 6th grade students do this with
00:47:20
Kandinsky Circles and fractions
http://eisforexplore.blogspot.com/2014/04/kandinsky-math.html
                                        Can you talk about the 9 days of emotion?
00:47:25
                Elizabeth Wallace:
00:47:34
                dawnfurstenberg:
                                        How much information on the artists
themselves and the art movements they come from do you incorporate?
00:47:42
                Susan Papert:
                                @Catherine. Right?!
                Natasha Gambarov:
                                        @Alison, the chat will be posted at the nctm
00:47:56
website tomorrow
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00:48:05
                Catherine Abbott:
                                        Estimation is not LESS math. It is IMPORTANT
useful everyday math.
00:48:37
                Laura Semian:
                                ratio practice is great here
                                        funny how you say how precise your boys are
00:48:47
                Tom Litwinowicz:
for getting it correct, I teach HS and my female students are far more concerned
with getting it right compared to the boys (they are at it too)
                Claudia Cooper: So they draw first then do the math?
00:48:53
00:49:14
                Catherine Doiron:
                                        Prep school
                Robin Ward:
                                Another work by Kandinsky that is fabulous is
00:49:24
"Composition VIII."
                      See this activity:
https://www.facebook.com/robin.ward.3954/posts/10207542613835109
                Arelys Arenas: Great to see how to incorporate many standards at
00:49:35
ONCE!
                                        @Tom....my girls are often more concerned
                Catherine Abbott:
00:49:53
with precision than my middle school boys. However, my accelerated math boys are
often concerned with precision.
                Alison Jo Frost:
                                        Those shorts re The Perfect Choice!
00:49:55
00:49:58
                Erica McCord:
                                Google draw
00:50:03
                Jamie Rossi:
                                cereal box
                Laura Semian:
                                using "in terms of pi" is SO important... along
00:50:11
with pi is approx. 3... many students seem to think pi is a really BIG number...
00:50:46
                Susan Papert:
                                jamboard, facial tissue box, home delivery box
                Janice Novakowski:
                                        I was just going to comment on the focus on
00:50:50
"dead white guys" - thank you for addressing this. We all need to be mindful of
representation.
00:50:59
                Myra Absin:
                                Good morning.
00:51:13
                Sheila Kirton-Robbins: Kadinsky-Use different color paper and cut
out different size circles. Maybe use bottle or can tops and glue them
00:51:17
                Laura Semian:
                                lol @ don't throw anything out
00:51:59
                Laura Semian:
                                love the collage of multiples
00:52:10
                                        Nice work
                jacob waxenberg:
                Nora Marasigan: This is so nice!
00:52:12
00:52:14
                Erica McCord:
                                I like that
00:52:27
                Emily Kavanagh: Beautiful
                Gil Geeran Bangeles:
                                        That was awesome.
00:52:27
                Monique Greene: that's cool
00:52:28
                                Lovely— so creative! Great math, too!
00:52:29
                Polly Maver:
                                Interesting idea
00:52:30
                Ana Guerrero:
00:52:33
                Theresa Liddy: that seems very fun and creative!
                Ellen Williams: Cool project
00:52:38
00:52:42
                Joeleen Stanard:
                                        This is a fun activity and seems easy to get
the materials.
00:52:46
                Chris Suurtamm: great way to recycle
                Alicia Kaplan: I like this assignment. Great for those that
00:52:46
struggle with multiples
00:52:49
                Gloria BrownBrooks:
                                        Thank You for listing all supplies
00:52:53
                Katharine Zaragoza:
                                        great idea
                                        Many of my students' families do not get
00:52:55
                Catherine Abbott:
magazines any more.
00:52:56
                Cindy Bryant: Love the use of different materials
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00:52:58
                Arelys Arenas: Amazing project to incorporate multiples
                Michele Convers:
                                        Might be interesting to limit students to
00:53:24
objects from nature.
00:53:29
                Catherine Tung: @Catherine Could they use junk mail advertisements?
                Portia Felder: Students could use pics from the internet to create
00:53:32
a digital collage
00:53:34
                Theresa Liddy:
                                junk mail would work too
                Robin Ward:
                                For those interested in integrating math + art, see
00:53:55
this link for activities/ideas: https://www.facebook.com/mathgoggles/
                                Use the recyclables you are already getting rid of
00:54:02
                Jamie Rossi:
00:54:03
                Elba Howington: great idea
00:54:06
                Delores Rushing:
                                        Nice! Students are learning math and art.
What a beautiful combination. The students learn that these subjects are not taught
in isolation.
00:54:17
                Laura Semian:
                                choosing 15? will probably always now remember what
a multiple is! ;)
00:54:24
                Joann Minner:
                                Love the idea of a digital collage for distance
learning!
                Mohamed T:
                                Wonderful ideas
00:54:57
                Theresa Liddy:
                                leaves, grass,
00:55:05
00:55:19
                Susan Danskin:
                                Chalk on the sidewalk would work
00:55:34
                Michele Convers:
                                        Time to visit the Dollar Store!
00:55:35
                Maureen Kishbaugh:
                                        I liked using nail polish.
00:55:35
                Laura Archer:
                                Could insert images and copy them onto a doc
                Linda Pritchett:
                                        Hello!
00:55:43
00:55:50
                MIKE GENUEL SALAZAR:
                                        Math is an art.
00:56:09
                Janice Novakowski:
                                        The collage project in particular would be
great to do digitally.
00:56:10
                Laura Semian:
                                love the use of creative materials... lipstick, etc
                Tiffany Lace:
                                In the trouble shooting slides there are quotes from
00:56:11
students. Is there a specific reflection form you use that address the math and art
components? If so, do you use a general form or one specific to each project? Are
you willing to share an example one?
00:56:14
                Catherine Abbott:
                                        YAY Flipgrid is great for student verbal
explanations.
00:56:23
                Judy Radigan:
                                Zoom breakout rooms!
                Lourdes Vargas: Bryan Collier also uses collage in his illustrations
00:56:33
                Brenda McNeese: shapes can be created with moveable pieces in ppt or
00:56:40
google slides
00:56:41
                Dee Crowell:
                                Can they upload a photo in Flipgrid?
                                        There are some great virtual manipulatives
00:56:41
                Janice Novakowski:
that could be used to create the Mondrian and Klee projects.
00:56:43
                Cathy Cohn:
                                If you are one to one ... adobe draw
                                        We were able to send colored paper home
00:56:45
                Georgiana Simpson:
during distance learning. Color paper collage can work for Kandinsky.
                Jennifer Smith: non-permanent art (using objects that don't need to
00:56:49
be modified but can be combined to create art - then take a photo of the creation)
                Catherine Abbott:
                                        Invite students to find suitable materials
00:57:01
and share their ideas with each other.
00:57:01
                Greisy Winicki Landman: leaves & seeds - stamping; patterns;
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transformations
00:57:02
                Emily Kavanagh: The Dollar Store is my best friend!
00:57:08
                Laura Semian:
                                bless you for making a house call!
                                Flipgrid is AMAZING!!
00:57:18
                Jamie Rossi:
                                        There's a whole hashtag on twitter to follow
00:57:19
                Janice Novakowski:
re #sidewalkmath
                                        I have used clear plastic dishes and
00:57:19
                Antoinette Nista:
sharpies to create a stained glass look.
                Jennifer Smith: They CAN upload a photo on Flipgrid
00:57:23
00:57:29
                Janice Magauay: Yes they can show the image
00:57:31
                Portia Felder:
                                Students that own them, could also draw on ipads.
00:57:35
                Theresa Liddy:
                                dry pasta noodles!!
00:57:43
                Jamie Rossi:
                                pasta!!
00:57:47
                Elizabeth Wallace:
                                        beans
00:57:53
                Libby Kappler: For distance learning: My kindergartner was asked to
build a structure out of pantry items (cans, boxes, etc...) could be used for volume
and surface area.
00:57:55
                Jamie Rossi:
                                rice too
00:58:02
                Judy Lamoreux: Beans
00:58:20
                Janice Novakowski:
                                        Also on twitter if you search #mathwalk
there are lots of examples of using sidewalk chalk to create math/art with
00:58:31
                Elba Howington: The pantry has tons of geometry!
00:58:36
                Jayson Sentinellar:
                                        Good day
00:58:39
                Christina Fallstick:
                                        I'm teaching our summer enrichment program
virtually and teaching circles tomorrow! Already thinking about creating a Kandinsky
using google slides by creating a table and having them use the circle tool to
create the designs. A template could easily be made and shared on google classroom
as copies for each student.
00:58:46
                Georgiana Simpson:
                                        My students don't have sidewalks, but I
could create homemade chalkboards for them to create temporary artworks.
00:59:08
                                expo markers on windows are great too
                Jamie Rossi:
00:59:36
                                I have used old transparencies for the stain glass
                TINA LATTIMER:
project
00:59:41
                Antoinette Nista:
                                        Combined Chihuly and MC Escher-used clear
plastic dishes and made tessellations and sharpies . Used a heat gun to create
Chihuly like shapes.
00:59:41
                Christy Rose:
                                 these are great ideas thx
                Janice Magauay: Stained glass frame project we just used
00:59:48
transparency paper on top of each artwork
                Alison Jo Frost:
                                        Did someone mention melting the styrofoam
00:59:50
plates to make holiday ornaments?
                Christina Williams:
00:59:55
                                        tissue paper
01:00:06
                David Barnes:
                                The wisdom of the group is fabulous as always!
01:00:18
                Judy Lamoreux:
                                Shrinky dinks
                                I have used Flipgrid as an App on Smart Phone to
01:00:19
                Carolyn White:
Show art work for Math.
                           It is also great that you can comment as a teacher as
you are distance learning Dr Robin Ward is a great Resource
                Judy Radigan:
01:00:33
                                Try: http://www.sidewalkmath.com/
01:00:39
                                Can you share the survey that you give out to your
                Tiffany Lace:
students?
```

01:00:42 Megan Riley: Have you ever done the 100's chart design with their intials and they they have to figure out what percentage, fraction and decimal each letter is

01:00:53 Kara Matthews-Bland: Ih ad my student create an Angry Birds models and create three possible equations for parabolas that could target the pigs in the models.

01:01:21 Galaxy J2 Core: Interesting hands on activites for kids.

01:01:27 Catherine Abbott: Symtry of squares to make interesting shaped tessallation

01:01:39 Jamie Rossi: Revisit the objectives for the kids

01:02:02 Elizabeth Barlow: I love that you incorporated a survey

instead of asking for a written reflection. You could measure their responses too.

01:02:18 Catherine Abbott: Use symmetry of squares to make

tessallations...https://www.youtube.com/watch?v=5FIOF8xsPas 01:02:20 Polly Mayer: These are great— thank you!

01:03:06 Shannen Bunoski: These are awesome! Thank you!

01:03:08 Catherine Doiron: The Russian connection points out what you

were saying about using artists from different groups.

01:03:29 Ann Wycoff Bagshaw: Thank you for some wonderful ideas that

combine art and math and allow for differentiation  $% \left( 1\right) =\left( 1\right) \left( 1\right) +\left( 1\right) \left( 1\right) \left( 1\right) +\left( 1\right) \left( 1\right)$ 

01:03:30 Catherine Abbott: Describing transformations with Tangrams.

01:03:38 David Barnes: Handouts for today's webinar:

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/Webcasts/July21WebinarHandout1.pdf

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/July21WebinarHandout2.pdf

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/July21WebinarHandout3.pdf

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/Webcasts/July21WebinarHandout4.pdf

https://www.nga.gov/content/dam/ngaweb/Education/learning-resources/an-eye-for-art/AnEyeforArt-RomareBearden.pdf

01:03:59 David Barnes: Handouts for todays webinar:

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/Webcasts/July21WebinarHandout1.pdf

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/July21WebinarHandout2.pdf

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/Webcasts/July21WebinarHandout3.pdf

https://www.nctm.org/uploadedFiles/Conferences\_and\_Professional\_Development/Webinars\_and\_Webcasts/July21WebinarHandout4.pdf

https://www.nga.gov/content/dam/ngaweb/Education/learning-resources/an-eye-for-art/AnEyeforArt-RomareBearden.pdf

```
01:03:59
                Robin Ward:
                                To build on today's info...for easy-to-implement
math-art activities for grades preK-2, see
https://robinanneward.wixsite.com/mathgoggles
                                        Absolutely review objectives for students!
01:04:02
                Shannen Bunoski:
                Gloria BrownBrooks:
                                        Thank You
01:04:03
01:04:05
                Catherine Abbott:
                                        Thank you Kristina.
                Alicia Kaplan: Thank you, this was great.
01:04:06
                Judith Montgomery:
                                        could you show the reference screen again?
01:04:08
                Kristin Randall:
                                        thank you!
01:04:09
                Aura Rodriguez: can you please go back to the resource page?
01:04:11
                Winnica McLean: This was very nice, thank you
01:04:11
                                Awesome, Loved it!
01:04:12
                Gloria Flores:
01:04:12
                Martisha Dunn:
                                Thank you!
01:04:13
                Pamela Liegl:
                                Kristina, great presentation.
                                                                Thanks
01:04:13
                Linda Pritchett:
                                        Thank you!
                Carmelita Nalzaro:
                                        Thank you very much
01:04:13
                Shonel fraser:
                                Thank you!
01:04:14
                Elba Howington: Thank you!!
01:04:15
                Maria Reid:
01:04:16
                                This was awesome!
                jenniferdougherty:
                                        Thank you!!
01:04:16
01:04:17
                Laura Semian:
                                thank you so much... this was great
01:04:17
                Judy Lamoreux:
                                I loved this!
                Erica McCord:
01:04:18
                                Thank you
                Andrea Chew:
                                Thank You!
01:04:19
                Kay McHeffey:
01:04:21
                                Thank you!
                CATHY SMITH:
                                I love art integrated lessons. I use to teach Math
01:04:22
at a PVA school and I loved it.
01:04:22
                Chonda Long:
                                Handouts for today's webinar:
https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars
_and_Webcasts/Webcasts/July21WebinarHandout1.pdf
https://www.nctm.org/uploadedFiles/Conferences and Professional Development/Webinars
_and_Webcasts/Webcasts/July21WebinarHandout2.pdf
https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars
and Webcasts/Webcasts/July21WebinarHandout3.pdf
https://www.nctm.org/uploadedFiles/Conferences and Professional Development/Webinars
_and_Webcasts/Webcasts/July21WebinarHandout4.pdf
https://www.nga.gov/content/dam/ngaweb/Education/learning-resources/an-eye-for-art/A
nEyeforArt-RomareBearden.pdf
01:04:22
                Joann Minner:
                                Thank you!
                Catherine Doiron:
                                        Thanks so much! Great presentation.
01:04:22
01:04:23
                Lisa Caudle:
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Thank you
                Payal Arora:
                                Thank you!
01:04:24
                Ann Adkins:
                                Thank you!
01:04:24
                Karoulin Aljoris:
01:04:24
                                         thank you
01:04:24
                Alicia Crawford:
                                         Thank you this was inspiring!
                                         Thank you for the great ideas!
01:04:26
                Regina Williams:
01:04:26
                Catherine Abbott:
                                         I am looking forward to getting the notes
for this project.
```

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01:04:27
                Cheryl Lowery: thanks so much great information
                Julie Mainwaring:
                                        Thank you!!
01:04:27
01:04:28
                Antoinette Nista:
                                        This was wonderful—very inspiring!
                                        Thank you. These are great ideas
01:04:31
                Catherine Bertrand:
                Carmelita Nalzaro:
                                        Thank also to Ms. Chonda
01:04:31
01:04:32
                Rita Shamrock: Thank you
                Lorie Huff:
01:04:32
                                Thank you
                Nadine Richards-Ramsey: Thank you!
01:04:33
                Cris Armada:
                                Thank you so much...
01:04:33
                Antoinette Nista:
01:04:34
                                        Thank you!
                                Do you have a program you recommend for the Klee?
01:04:34
                Laura Archer:
01:04:36
                Kathi Holland:
                                Thank you
01:04:36
                Amy Price:
                                Thank you!
                                Could you repeat the artist that you used for
01:04:40
                Angela Wilson:
polygons and aspect ratios?
                                Handouts for today's webinar:
01:04:40
                Chonda Long:
https://www.nctm.org/uploadedFiles/Conferences and Professional Development/Webinars
and Webcasts/Webcasts/July21WebinarHandout1.pdf
https://www.nctm.org/uploadedFiles/Conferences and Professional Development/Webinars
and Webcasts/Webcasts/July21WebinarHandout2.pdf
https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars
and Webcasts/Webcasts/July21WebinarHandout3.pdf
https://www.nctm.org/uploadedFiles/Conferences and Professional Development/Webinars
_and_Webcasts/Webcasts/July21WebinarHandout4.pdf
https://www.nga.gov/content/dam/ngaweb/Education/learning-resources/an-eye-for-art/A
nEyeforArt-RomareBearden.pdf
01:04:40
                Daniel Irving:
                                Thank you for this incredible presentation!
01:04:43
                dana dulzo:
                                Thank you so much for a cross curricular project to
develop this year.
01:04:44
                CATHY SMITH:
                                thank you very much
01:04:46
                Emily Kavanagh: Thanks so much for this fun presentation
01:04:50
                dana dulzo:
                                awesome presentation
01:04:51
                Eunice Dimasangal:
                                        Thanks a lot! ⊚♡
                                        Excellent session! So many great ideas for
01:04:52
                Trena Wilkerson:
math and art and integrating. Many cultural aspects to consider as well.
                                        Thank you very much for sharing the
01:04:53
                Natasha Gambarov:
interdisciplinary connection between art and math. I truly enjoyed this presentation
:)
01:04:56
                Macobia Harris: Thank you. Great ideas to add to the classroom
(virtually and in-class)
01:04:56
                Jamie Rossi:
                                These are amazing lessons!! I look forward to
incorporating some of these ideas in my STEAM lessons!!
                                        There are great books about artists that you
                Elizabeth Wallace:
01:04:58
can connect literature with the math and art
                                I'm excited about using this with my classes this
01:05:00
                Debbie Meaney:
year. Thanks.
01:05:00
                Nancy Davis:
                                Thank you!
01:05:07
                Alana Roberts:
                                Thank you!
```

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01:05:16
                Joeleen Stanard:
                                        We usually make tetrahedron kites at the end
of they year and go out to fly them. Some great art flying in the sky.
01:05:18
                Katharine Zaragoza:
                                        Thank you, this was great!
                Alison Jo Frost:
                                        David can you send a copy of this chat with
01:05:20
the resources?
01:05:21
                Lourdes Vargas: Wonderful presentation...loved it!!! Thank you!
                                The recording, handouts, and chat will be available
01:05:28
                Chonda Long:
tomorrow at www.nctm.org/100
                Angela Wilson: Thanks so much for these wonderful ideas to conclude
01:05:33
my quarterly lessons in math this year.
01:05:35
                Kendra Heffelbower:
                                        Thanks!
01:05:37
                Monica Balroop: Thank you. Very interesting. These are projects that
I can use.
01:05:38
                Alison Jo Frost:
                                        thank you Chonda
                                        Were the activities developed in the Art or
01:05:40
                Trinidad Vásconez:
math class? Did the Art teacher provide with feedback as well?
                Rosalyn Bantay: ♡ Thanks
01:05:40
01:05:42
                K Kishida:
                                Question: Would you talk a bit about the sierpinski
triangle project you did with your students?
01:05:44
                Alison Jo Frost:
                                        Thank you Kristina
                Lance Brauchla: This are the "different" kind of ideas I see as
01:05:52
allowing great variation to keep lessons fun/exciting....thanks!
01:05:52
                Jayson Sentinellar:
                                        Thanks
                                        This is great Kristina! I'm quite sure you
01:05:54
                Delores Rushing:
have peeked the curiosity of the boys to explore learning more about using art to
learn mathematics.
01:05:57
                Catherine Livesay:
                                        Great ideas. Thank you.
01:05:59
                Pip Arnold:
                                great ideas thank you
                Taryn Brown:
                                Can you please put the links for the handouts back
01:06:04
up.
01:06:05
                Mary France Imperial:
                                        Thank you so much
                Josie Cazares-Adams:
                                        Great presentation, thanks so much. Can't
01:06:05
wait to try these in school!
                Laurel Dietz:
                                I am wondering if the students all did presentations
01:06:06
of their work... hitting some of these mathematics and art concepts in it.
                                        Great Presentations of Awesome Math & Art
                Jacquelyn Wardlow:
01:06:13
Activities! Thank You!
                Maria Padiernos:
                                        Muchas Gracias, Thanks from Detroit, MI
01:06:13
                Allison George: Yes, I do it in high school.
01:06:18
01:06:19
                Maurice Levy:
                                Thank you.
                Andrea Graziano:
                                        Thank you so much! I truly enjoyed this
01:06:22
webinar! Loved the ideas!
                                yes, any ideas for lower grades?
01:06:23
                Maria Reid:
                                        Build models with HS students
01:06:25
                Catherine Abbott:
                Sharon Baltzer: I love this! My school likes to combine art with
01:06:26
ELA, math, etc.
                Libby Kappler: Thank you! Great presentation! Wonderful resources!
01:06:26
                Lauren Davenport:
                                        Thank you. I love how you used art to
01:06:32
involve math concepts. I have wanted to do this my entire career, thank you again.
```

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01:06:34
                Laura Semian:
                                HS would love this... if nothing else to reinforce
what they are "supposed" to already know...
                Mark Phipps:
                                ·.,,.·」別 Amazing Art 別儿·.,,.・
01:06:42
01:07:05
                Libby Kappler: With little ones, you can use graph paper and then
they can count the perimeter and area...(Mondrian)
01:07:06
                ALEX QUYENVO:
                                thanks for the sites ! very helpful !
                                        Thank you for a great presentation!
01:07:06
                Kristie Chandler:
01:07:09
                Laurel Dietz:
                                Also making a concept maps ... with the learning
objectives so it is explicit for the students
                                        @Mark Phipps....how did you do the notes?
01:07:10
                Catherine Abbott:
01:07:11
                Denise Beavers: Thanks so much for the presentation.
01:07:11
                Imelda Valencia:
                                        How did you give them feedback espcially for
the math component?
01:07:18
                TINA LATTIMER: our 4th graders use size of circles to represent
place value
                                        Could you please put up the references
01:07:29
                Antoinette Nista:
again?
01:07:32
                Teresa Moore:
                                Thank you. It may work well when we are on a hybrid
schedule. I can start the lesson in the class and my sixth grade students can work
on the projects at home so that they are not always in front of a Chromebook.
01:08:18
                Sheila Kirton-Robbins: Looks like a quilt.
01:08:27
                Tom Litwinowicz:
                                        This was a great presentation, best of this
group that I have seen. I will definitely look up the artist & collaborate with our
art teachers.
               I teach upper High School math
                Catherine Abbott:
01:08:30
                                        Right...rractals
01:08:33
                Sage Moore:
                                You can use letter sized envelopes
01:08:45
                Mark Phipps:
https://coolfont.org/text-decorator.html?utm source=cf cp&text=Amazing%20Art
01:08:48
                Maria Padiernos:
                                        I love fractals, I use them in both Algebra
1 and Geometry, teenagers love them!
                Trena Wilkerson:
                                        We did a quilt project with Pascal's
01:08:49
Triangle.
01:08:50
                Judy Lamoreux: Do you have the instructions for the triangles?
01:08:55
                Judy Radigan:
                                My students made samples of 4 to the first power
through 4 to the third and I almost had a kite for 4 to the 4th.
01:09:14
                Paul Fishwick:
https://en.wikipedia.org/wiki/Sierpi%C5%84ski triangle
                Alicia Crawford:
                                        I did Sierpinski triangles with my self
01:09:15
contained 6th grade class. They loved it and all chose it for one of their
portfolios projects. They worked with great precision
01:09:32
                Elizabeth Barlow:
                                        You are delightful - clearly teaching for
the whole child!
01:09:33
                Robin Ward:
                                Thank you for sharing!
                                @Sage to do what with envelopes
01:09:34
                KEISHA SMITH:
                Janice Novakowski:
                                        Thank you!
01:09:35
                Catherine Abbott:
01:09:36
                                        Again....You can do this with musical
instruments too?
01:09:38
                Laura Semian:
                                thank you
                Sheila Kirton-Robbins: Thank you
01:09:43
                                yes... the resources in the chat would be helpful
01:09:46
                Laurel Dietz:
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too
                Pamela Goff:
                                We have use the Serpinski triangles as a family math
01:09:50
night activity.
                Sandhya Raman:
                                wonderful session! thank you! love the connections!
01:09:51
                Nora Marasigan: Thank you so much!
01:09:52
01:09:58
                Nell Thurlow:
                                 Thank you for the great ideas!
                Sharon Black:
01:09:58
                                 Thank you so much!
                Hannah Tully:
                                Thank you:)
01:09:58
                                Thank you so much!!
                Wenny Liao:
01:09:59
                Pamela DiBiase: Thank you Kristina!!
01:09:59
                Todd Smallcanyon:
                                         thank you
01:10:00
01:10:01
                Tanya Landry:
                                 Thank you!
                Imelda Valencia:
                                         Thank you so much
01:10:05
01:10:06
                Ana Guerrero:
                                 Thank you for all the creative ideas
01:10:07
                Christy Rose:
                                 Thank you
                                 Thank you!!!
                Carrie Brown:
01:10:09
01:10:09
                ROSALIE MACASPAC:
                                         thank you
                                 Thank you for all the information.
01:10:09
                Jet Yeung:
01:10:10
                Taryn Brown:
                                 Thank you!
                Lesley Collins: Thank You!!!!
01:10:12
                Maria Reid:
                                Thank you Kristina!
01:10:13
                                         Thank you so much.'
01:10:13
                Kristin Frerichs:
                                Thank you again from Globe, Arizona!
01:10:14
                Dave Hankin:
                                         Is was awesome. I tried to open the various
                Jacqueline Colbourne:
01:10:14
links as they came up in the chat.
                Catherine Abbott:
                                         Thank you again for a TERRIFIC presentation.
01:10:16
Great ideas!
                jacob waxenberg:
                                         I am amazed
01:10:18
01:10:19
                Liberty Beckermann:
                                         Thank you!
                Brenda McNeese: so interesting. thank you,
01:10:19
                Portia Felder:
                                Thank you for the inspiration
01:10:20
01:10:22
                Maria Reid:
                                Yes
                Jamie Rossi:
01:10:22
                                 I thank you!!
                Brenda Silkman: Thank you!
01:10:22
                tracey simmons: Thank you!
01:10:24
01:10:25
                Cris Armada:
                                 a very great presentation indeed... congratulations
01:10:25
                Melonie Smith:
                                Great presentation
01:10:26
                Sandy Silverman:
                                         loved this!! thank you!!
                Christopher Eddy:
01:10:26
                                         Thank you
                Josephine Romero:
                                         Thank you very much!
01:10:27
01:10:27
                Julie Hutchinson:
                                         Thank you!
                                         Thank you!
01:10:28
                MIKE GENUEL SALAZAR:
01:10:28
                Anupama Anand: thank you
                Jennifer Eaton: This has been one of my favorite webinars!
01:10:28
you!
                                         Thank you! It was so amazing!
                Emerlina Binuya:
01:10:29
                Angela Rebol:
                                thank you for the inspiration!!
01:10:36
01:10:36
                Sumedha Kumar:
                                Thank you
                                Thank you for the fantastic ideas!
01:10:37
                Ariel Beggs:
01:10:38
                Sun Lee:
                                 loved it. I would recommend Faith Ringgold for
```

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teaching reflections and wall paper patterns
01:10:41
                Jacqueline Colbourne:
                                        I am looking for any way that I can make
math fun during these times.
                Jennifer Heldenbrand:
01:10:45
                                        Thank you, Kristina, for bringing arts
integration into Math!
01:10:47
                danpfliger:
                                Thank you so much for sharing your experiences and
knowledge!
                Konnie Guthrie: Thank you.
01:10:50
                Rodney Cooper:
                                Thank you!
01:10:51
                Alicia Kaplan:
                                Thank you again.
01:10:55
01:11:04
                Wendy Janerico: Thank you!!!
                                Great ideas!
01:11:05
                Cindy Bryant:
                Catherine Tung: Thank you!
01:11:05
01:11:10
                Carolyn White:
                                Thank you
01:11:12
                Allison George: Thank you!
                                        Thank you
01:11:13
                Angelita Beltran:
                                than you!!!
01:11:14
                Susan Papert:
                Halle Kananack: thank you! love to learn more about inspiring
01:11:18
students with art and math!
                Melonie Smith: I tried to RENEW but it didn't deduct $20 from the
01:11:24
regular fee
01:11:24
                Sage Moore:
https://users.math.yale.edu/public_html/People/frame/Fractals/Labs/SierpTetraLab/STL
Procedure.html
01:11:30
                                        So inspirational and realistic. Thank you.
                Mary Beth Kilnoski:
I love that you included the actual work and comments for your students.
01:11:40
                Delores Rushing:
                                        Younger students can learn about Fibonacci
numbers too. Love it!. Great job Kristina. Thank you so much!
01:11:42
                Patricia Eberhardt:
                                        Wonderful presentation! thank you
01:11:55
                Sage Moore:
                                sierpinski w envelopes
https://users.math.yale.edu/public html/People/frame/Fractals/Labs/SierpTetraLab/STL
Procedure.html
01:11:56
                Lorie Bell:
                                Appreciate it!
01:12:01
                Gerald Bruno:
                                Thank you
                TINA LATTIMER:
01:12:03
https://drive.google.com/file/d/1EYCScw87PQU92GAh1jmsJACWO6GRtJ-8/view?usp=sharing
some ideas from a presentation I have done
01:12:19
                Arlene Bachinela:
                                        Thank you so much
01:12:40
                Ann Swierzbin:
                                thank you!
01:12:46
                Erica McCord:
                                Thank you
01:12:50
                Kris Tuerk:
                                As an art teacher from Pennsylvania, great concepts
to bring to my math teachers.
01:12:55
                Harold Miles:
                                Thank you.
                                        Amazing webinar! Thank you so much NCTM!!
01:12:57
                Shannen Bunoski:
                                Thank you so much for your wonderful ideas
01:13:01
                Susan Weiss:
                Marian Johnson: Thank you, I'm super excited to implement this!
01:13:02
                                Thank you!
01:13:09
                Amy Nordhoff:
01:13:09
                Moreno Tracy:
                                Thank you
                Margaret Matheson:
                                        Thank you so much!
01:13:10
01:13:15
                Patricia Daugherty:
                                        Thank you
```

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01:13:16
                Sandra Wildfeuer:
                                        Thank you.
                Carmelita Nalzaro:
                                        Awesome presentation
01:13:18
01:13:19
                Imelda Valencia:
                                        Please keep safe everyone
                Arelys Arenas: Thank you for your presentation
01:13:19
                Georgina Coffin:
                                        Fantastic! Thank you! Fircrest, WA
01:13:21
01:13:23
                CATHY SMITH:
                                is there a survey or attendance sheet
                Abigail Santiago:
                                        Thank vou!!
01:13:23
01:13:27
                Winnica McLean: Thank you again
01:13:28
                kim bolf:
                                Thank you!
01:13:29
                Shashidhar Belbase:
                                        Thank you very much for the nice discussion.
01:13:34
                Vanessa Stokes: Thank you!
01:13:42
                Larisa Whitaker:
                                        I did not receive the certificate from July
20
                Regina Williams:
01:13:44
                                        Thanks again!
01:13:50
                Larisa Whitaker:
                                        Please send it to me
                Jacqueline Colbourne:
                                        This was awesome and so informative.
01:13:52
truly going to use a lot of the resources that was posted!!
                Joeleen Stanard:
                                        Thank you for this art/math webinar!
01:13:56
01:13:58
                Chonda Long:
                                Handouts for today's webinar:
https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars
and Webcasts/Webcasts/July21WebinarHandout1.pdf
https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars
_and_Webcasts/Webcasts/July21WebinarHandout2.pdf
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and Webcasts/Webcasts/July21WebinarHandout3.pdf
https://www.nctm.org/uploadedFiles/Conferences_and_Professional_Development/Webinars
and Webcasts/Webcasts/July21WebinarHandout4.pdf
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https://www.nga.gov/content/dam/ngaweb/Education/learning-resources/an-eye-for-art/AnEyeforArt-RomareBearden.pdf

01:14:05	Robin Humberstad:	Great presentation!
01:14:13	Carmelita Nalzaro:	Bye
01:14:18	Georgiana Simpson:	Thank you so much! This was great fun!

01:14:03

Susan Danskin: Thank you for the wonderful ideas