

walk**STEM**<sup>®</sup>

*DALLAS*  
**EXPLORERS**

presented by talk**STEM**



# Welcome to talkSTEM's Dallas Explorers

We hope your family enjoys taking many stimulating walks in Dallas! Parents and caregivers — we have prepared this document to help with your planning. Students in middle / high school who are working independently, we are proud of you. We hope you will all learn a lot and will share your selfies and #STEMlens with us on social media.

- Each page in this booklet refers to a different self-guided tour you can take.
- Each walking tour has a link to a **YouTube playlist** that consists of all the stops you can make within the tour.
- You can watch the videos listed in the booklet to access the math and science content we came up with. The videos do not refer to each other so you can **walk in any order** and you can include whichever stops you like.
- Each video is focused on a **specific question**. This is what needs to be highlighted to all children.
- **Your guides** are members of the talkSTEM team including Dr Glen Whitney, Founder of the National Museum of Mathematics in New York and walkSTEM initiative adviser.
- Parents of young children in elementary school: these videos were not made for young children to view — they may not find them engaging. The content, is however, great for them to think about when they are in these spaces. We recommend that you preview the videos and use the content as **talking points** when you visit each stop. You know your child best and we want you to use the language that is best suited for them. Remember the goal is for them to feel like they are Science, Technology, Engineering, and Math (STEM) Explorers. **Make it fun** and keep the focus on the questions. See if they can come up with their own questions and share with us.
- On each page, check off the stops that you have visited — either in person or virtually. Remember that the goal is for your child to have some fun exploring. Don't worry too much about what level each particular stop is.
- **Have fun!**

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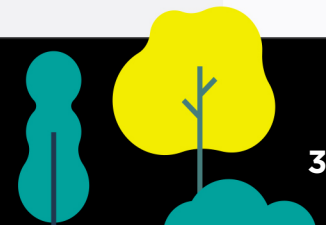


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# walkSTEM@Dallas Arts District

**PLAYLIST:** <https://www.youtube.com/playlist?list=PLOibICAocP-BYfq4iR-r2bk-9Up4csi7M>

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels	Middle School	High School
●	<a href="https://youtu.be/KzygJ6O_a44">https://youtu.be/KzygJ6O_a44</a>	<b>What is the Shape of the Traffic Bollard?</b>	Any traffic bollard e.g. near 2330 Flora St.	X	X	
●	<a href="https://youtu.be/aCh2eZ4VWQ">https://youtu.be/aCh2eZ4VWQ</a>	<b>Where are the Circles?</b>	Cathedral Guadalupe, 2215 Ross Ave	X		
●	<a href="https://youtu.be/uOEMo3ZsBPI">https://youtu.be/uOEMo3ZsBPI</a>	<b>Can Math Help Grass Grow?</b>	Any grass planting e.g. 2330 Flora St.	X		
●	<a href="https://youtu.be/a6g4qo88Npl">https://youtu.be/a6g4qo88Npl</a>	<b>How Did the Architects Play With Numbers? Sammons Park</b>	AT&T Performing Arts Center, 2403 Flora St.	X	X	
●	<a href="https://youtu.be/bi7tgNrGPQE">https://youtu.be/bi7tgNrGPQE</a>	<b>What is the Artist's Favorite Ratio? Nasher Sculpture Center</b>	Nasher Sculpture Center, 2001 Flora St.	X	X	
●	<a href="https://youtu.be/4aW4pR16cJg">https://youtu.be/4aW4pR16cJg</a>	<b>Why is There a Gap in the Building's Facade? Wylie Theater</b>	AT&T Performing Arts Center (Dallas Theater Center), 2400 Flora St.		X	X
●	<a href="https://youtu.be/MZ-ftoK49IO">https://youtu.be/MZ-ftoK49IO</a>	<b>How Many Different Ways Can You Count? One Arts Plaza</b>	One Arts Plaza, 1722 Routh St.	X		
●	<a href="https://youtu.be/Fy7f4wxgICg">https://youtu.be/Fy7f4wxgICg</a>	<b>How Can Latitude Affect Design? Sammons Park</b>	AT&T Performing Arts Center, 2403 Flora St.	X		
●	<a href="https://youtu.be/7WmSbq9-dao">https://youtu.be/7WmSbq9-dao</a>	<b>How Can We Estimate Really Tall Things We Can't Reach? Sammons Park</b>	AT&T Performing Arts Center, 2403 Flora St.	X	X	
●	<a href="https://youtu.be/_rX6ZrehCB8">https://youtu.be/_rX6ZrehCB8</a>	<b>How Do Artists Use Math to Mix Colors? Dallas Museum of Art</b>	Dallas Museum of Art (outside front doors) 717 N. Harwood St.	X		
●	<a href="https://youtu.be/7sAyL4BsXwO">https://youtu.be/7sAyL4BsXwO</a>	<b>How Do Cylinders Make Beautiful Shapes? Hunt Oil Building</b>	Hunt Consolidated, Inc. (exterior), 1900 N. Akard St.	X		
●	<a href="https://youtu.be/LWXcOS3h7Bk">https://youtu.be/LWXcOS3h7Bk</a>	<b>What are Fractals? Harwood St.</b>	Magnolia trees along Harwood Street (between Pearl and Woodall Rogers Freeway)	X		
●	<a href="https://youtu.be/y3EZxzJ4K38">https://youtu.be/y3EZxzJ4K38</a>	<b>What Can You Measure in Bamboo Plants? Nasher Sculpture Center</b>	Nasher Sculpture Center, 2001 Flora St.	X	X	
●	<a href="https://youtu.be/hmTSU3YqQ9g">https://youtu.be/hmTSU3YqQ9g</a>	<b>What is the Really Big Number Here? Flora St.</b>	Sidewalk on Flora Street, 2403 Flora St.	X		
●	<a href="https://youtu.be/6uoDmoywJBg">https://youtu.be/6uoDmoywJBg</a>	<b>How Can Shapes Create Feelings? Myerson Symphony Center</b>	Meyerson Symphony Center (exterior), 2301 Flora St.	X		
●	<a href="https://youtu.be/9SsQG2Oa5GM">https://youtu.be/9SsQG2Oa5GM</a>	<b>What is a Mathematical Fossil Hunt? HALL Texas Sculpture Walk</b>		X		
●	<a href="https://youtu.be/3eV4u_CMzYs">https://youtu.be/3eV4u_CMzYs</a>	<b>How Do You Measure Pitch and How is it Helpful? Wylie Theater</b>	AT&T Performing Arts Center (Dallas Theater Center), 2400 Flora St.		X	X
●	<a href="https://youtu.be/7DYvd7PYLjs">https://youtu.be/7DYvd7PYLjs</a>	<b>How Can Basic Shapes Create Complex Art? Booker T. Washington HS</b>	Booker T Washington School, Dallas ISD, 2501 Flora St.	X	X	
●	<a href="https://youtu.be/Vm9v42TY_jU">https://youtu.be/Vm9v42TY_jU</a>	<b>What's the Most Symmetrical Solid? Klyde Warren Park</b>	Children's Playground, Klyde Warren Park, 2012 Woodall Rodgers Fwy.	X	X	



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# walkSTEM@Fair Park

**PLAYLIST:** <https://www.youtube.com/playlist?list=PLOibICAocP-C5ux9T3XToSMXJw-tG1YOK>

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels	Middle/High School
●	<a href="https://youtu.be/AUhsWCbmyIM">https://youtu.be/AUhsWCbmyIM</a>	<b>Similar Triangles or Not? Esplanade</b>	Fair Park Esplanade, between Centennial Hall and the Automotive Building, just beyond the Park's main entrance off Parry Avenue.		X
●	<a href="https://youtu.be/Sbkrh-9ogX4">https://youtu.be/Sbkrh-9ogX4</a>	<b>What's the Really Big Number Here? Hall of State</b>	Fair Park Hall of State, 3939 Grand Ave, Dallas, TX 75210		X
●	<a href="https://youtu.be/w1zfBijiOo">https://youtu.be/w1zfBijiOo</a>	<b>How Fast Can You Go? Texas Star</b>	Fair Park Texas Star, 3466 Martin Luther King Jr Blvd, Dallas, TX 75240		X
●	<a href="https://youtu.be/E9TFDxoqs-l">https://youtu.be/E9TFDxoqs-l</a>	<b>How Much Gold is there? Tower Building</b>	Tower Building, 3809 Grand Ave, Dallas, TX 75210		X
●	<a href="https://youtu.be/VOliFHLXY7g">https://youtu.be/VOliFHLXY7g</a>	<b>What is Art Deco? Esplanade</b>	Chrysler Building; Fair Park Esplanade, between Centennial Hall and the Automotive Building, just beyond the Park's main entrance off Parry Avenue.	X	X
●	<a href="https://youtu.be/Ylej7029Uo">https://youtu.be/Ylej7029Uo</a>	<b>How Far Can We See? Texas Star</b>	Fair Park Texas Star, 3466 Martin Luther King Jr Blvd, Dallas, TX 75240		X

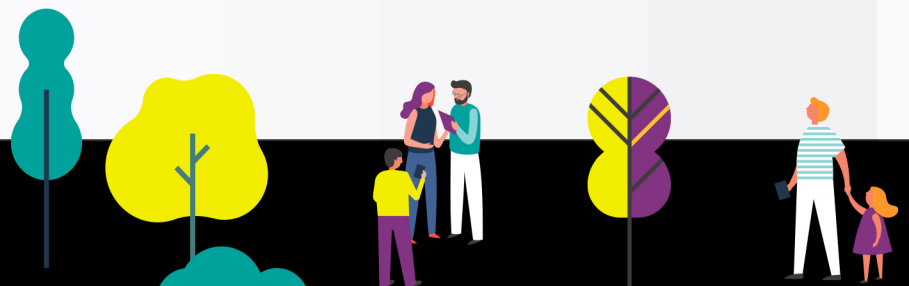


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# walkSTEM@NorthPark Center

**PLAYLIST:** <https://www.youtube.com/playlist?list=PLOibICAocP-AoesWdFPIkEX0im9v09njK>

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels	Middle/High School
●	<a href="https://youtu.be/jzZmtp4BT7o">https://youtu.be/jzZmtp4BT7o</a>	<b>What's the Mathematical Mystery Here? — Fountain</b>	Fountain, Dillard's Court		X
●	<a href="https://youtu.be/G2sgU6Mil2o">https://youtu.be/G2sgU6Mil2o</a>	<b>How symmetrical is a Buckyball? — Buckyball</b>	Buckyball, CenterPark Garden	X	X
●	<a href="https://youtu.be/7zS8DBgSLok">https://youtu.be/7zS8DBgSLok</a>	<b>What is symmetry? — Turtle Pond</b>	Turtle Pond, Neiman Marcus Court	X	X
●	<a href="https://youtu.be/nPZn8PHThOo">https://youtu.be/nPZn8PHThOo</a>	<b>What shapes are in turtles and other living things? — Turtle Pond</b>	Turtle Pond, Neiman Marcus Court	X	X
●	<a href="https://youtu.be/bqaBtUabGhU">https://youtu.be/bqaBtUabGhU</a>	<b>How is the artwork different from a water tower? — This Land Is Your Land</b>	This Land is Your Land, near Gucci	X	X
●	<a href="https://youtu.be/LcfeGTPT8EI">https://youtu.be/LcfeGTPT8EI</a>	<b>How can a mirror help you play with symmetry? — This Land Is Your Land</b>	This Land is Your Land, near Gucci		X
●	<a href="https://youtu.be/PCse9sZrXlc">https://youtu.be/PCse9sZrXlc</a>	<b>What is infinity? — This Land Is Your Land</b>	This Land is Your Land, near Gucci		X
●	<a href="https://youtu.be/ta9A0rqNhYg">https://youtu.be/ta9A0rqNhYg</a>	<b>How do the Hammering Men move? — Hammering Men</b>	Hammering Men, SouthCourt	X	X
●	<a href="https://youtu.be/D3iPQG2P06Q">https://youtu.be/D3iPQG2P06Q</a>	<b>How do gears create movement? — Hammering Men</b>	Hammering Men, SouthCourt	X	X
●	<a href="https://youtu.be/JWhSbsXsjWs">https://youtu.be/JWhSbsXsjWs</a>	<b>Ad Astra: The Power of Triangles</b>	Ad Astra, NorthCourt	X	X
●	<a href="https://youtu.be/DJqbLiU0Xkg">https://youtu.be/DJqbLiU0Xkg</a>	<b>Ad Astra: Similar Triangles</b>	Ad Astra, NorthCourt		X
●	<a href="https://youtu.be/KCbkvhrJ2Nc">https://youtu.be/KCbkvhrJ2Nc</a>	<b>How do you use scale to read a map? — NorthPark Map</b>	Mall directory, near Swatch in NorthCourt	X	X
●	<a href="https://youtu.be/ZuRUWzqqraqk">https://youtu.be/ZuRUWzqqraqk</a>	<b>What's the farthest distance between 2 points on the map? — NorthPark Map</b>	Mall directory, near Swatch in NorthCourt	X	X
●	<a href="https://youtu.be/LBVi71M_FTg">https://youtu.be/LBVi71M_FTg</a>	<b>What's the distance around the mall? — NorthPark Map</b>	Mall directory, near Swatch in NorthCourt	X	X
●	<a href="https://youtu.be/son7aIDDigQ">https://youtu.be/son7aIDDigQ</a>	<b>What's the biggest store? — NorthPark Map</b>	Mall directory, near Swatch in NorthCourt	X	X
●	<a href="https://youtu.be/4iJcxjRy2IM">https://youtu.be/4iJcxjRy2IM</a>	<b>Color Equations</b>	Color Equations, Nordstrom Court	X	X



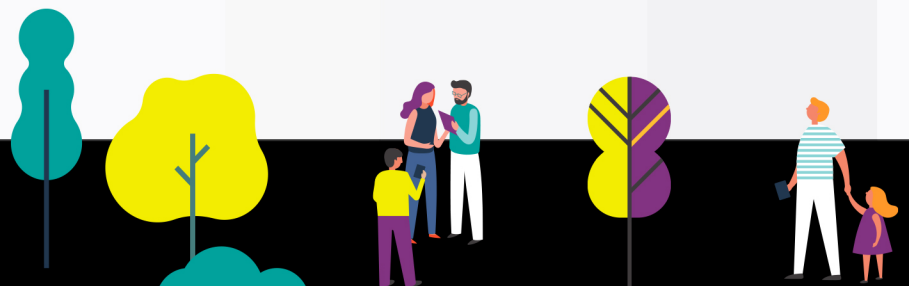
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# walkSTEM@SMU

**PLAYLIST:** <https://www.youtube.com/playlist?list=PLoibICAocP-CMgMWlaodu9Nu8ozukJcjH>

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels	Middle/High School
●	<a href="https://youtu.be/B8XXz-_GAg">https://youtu.be/B8XXz-_GAg</a>	<b>How Does a Sun Dial Work?</b>	Class of 1918 Memorial Sun Dial, Dallas Hall	X	X
●	<a href="https://youtu.be/cs4HNK0lgoE">https://youtu.be/cs4HNK0lgoE</a>	<b>**How symmetrical is it?</b>	Hughes Trigg Student Center	X	X
●	<a href="https://youtu.be/GOXFE7PR7Sw">https://youtu.be/GOXFE7PR7Sw</a>	<b>How do you find mathematical clues?</b>	Blanton Student Service Building	X	X
●	<a href="https://youtu.be/jZVnkSF5RAA">https://youtu.be/jZVnkSF5RAA</a>	<b>**What is an Ellipse?</b>	Blanton Student Service Building		X
●	<a href="https://youtu.be/jEh5XHZcySc">https://youtu.be/jEh5XHZcySc</a>	<b>How does gravity affect flowing water?</b>	Cooper Centennial Fountain, Blanton Student Services Building		X
●	<a href="https://youtu.be/QjxuKXWyyZU">https://youtu.be/QjxuKXWyyZU</a>	<b>**How to Estimate the Capacity of the Football Stadium?</b>	Gerald J. Ford Stadium	X	X
●	<a href="https://youtu.be/owKNtCXLe-Q">https://youtu.be/owKNtCXLe-Q</a>	<b>How do trees function?</b>	Bishop Boulevard	X	X
●	<a href="https://youtu.be/jT0o8wV9i6I">https://youtu.be/jT0o8wV9i6I</a>	<b>How do you measure slope?</b>	The Hillcrest Foundation Amphitheater, Lyle School of Engineering		X
●	<a href="https://youtu.be/7G654MPDzr4">https://youtu.be/7G654MPDzr4</a>	<b>How do you make a labyrinth?</b>	Habito Labyrinth, Perkins School of Theology		X

**\*\* This location is inside a university building and can be visited virtually by members of the public.**

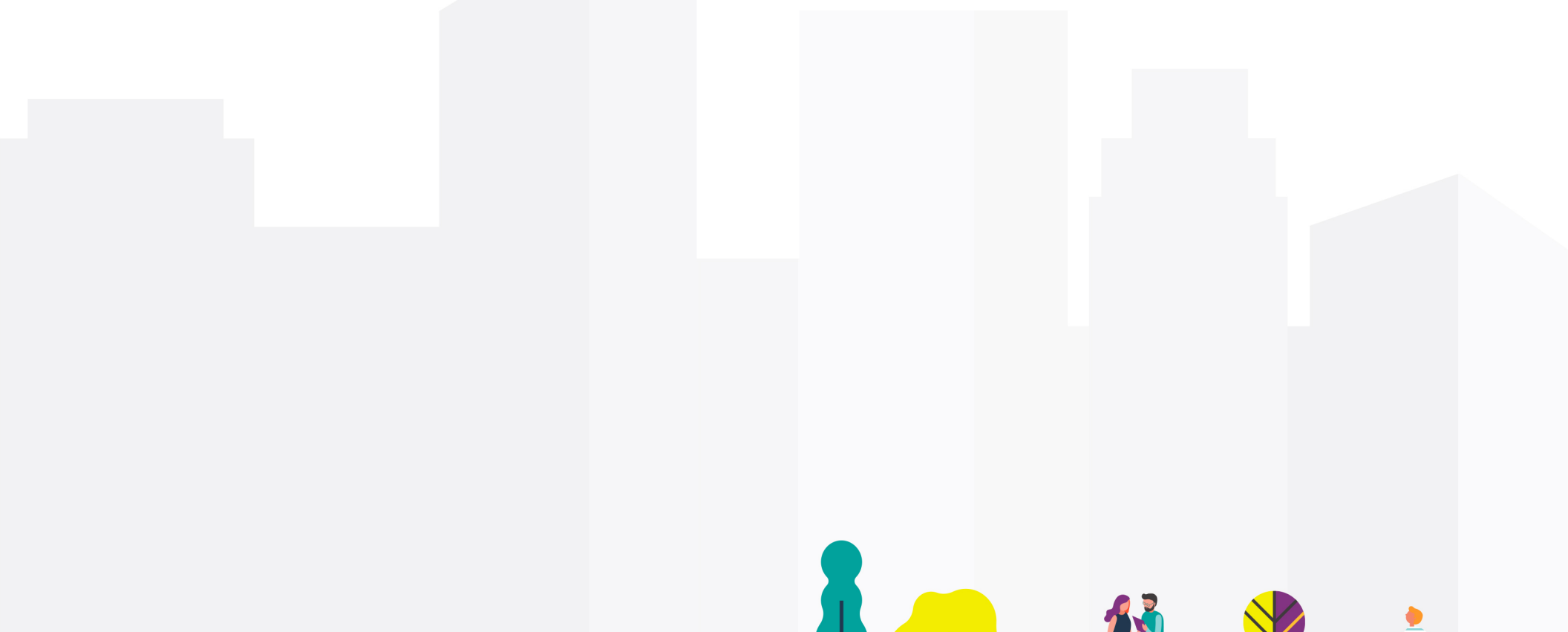


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# walkSTEM@West End Historic District

**PLAYLIST:** [https://www.youtube.com/playlist?list=PLOibICAocP-De7\\_DY4DyNruMRQAMCJqEM](https://www.youtube.com/playlist?list=PLOibICAocP-De7_DY4DyNruMRQAMCJqEM)

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels
●	<a href="https://youtu.be/fdera-Gp7W4">https://youtu.be/fdera-Gp7W4</a>	<b>Using Arrays, How Many Windows Are There?</b>	Texas School Book Depository (6th Floor Museum), 411 Elm St. Dallas, TX	X
●	<a href="https://youtu.be/mjXqpOBW8Hw">https://youtu.be/mjXqpOBW8Hw</a>	<b>How Does Environment Affect a Building? Dallas Holocaust and Human Rights Museum</b>	Dallas Holocaust and Human Rights Museum, 300 N Houston St, Dallas, TX 75202	X
●	<a href="https://youtu.be/PuH5MGqaXHg">https://youtu.be/PuH5MGqaXHg</a>	<b>How Tall are the Gateway Arches?</b>	West End Historic District, 702 Ross Ave, Dallas, TX 75202	X
●	<a href="https://youtu.be/fEZq-E7P3EE">https://youtu.be/fEZq-E7P3EE</a>	<b>How Can We Measure Arches and Lines?</b>	West End Historic District, 702 Ross Ave, Dallas, TX 75202	X
●	<a href="https://youtu.be/CQVhTIMOe_c">https://youtu.be/CQVhTIMOe_c</a>	<b>What Volume of Water is in the Fountain?</b>	Dealey Plaza Fountain, West End Historic District near 6th Floor Museum	X

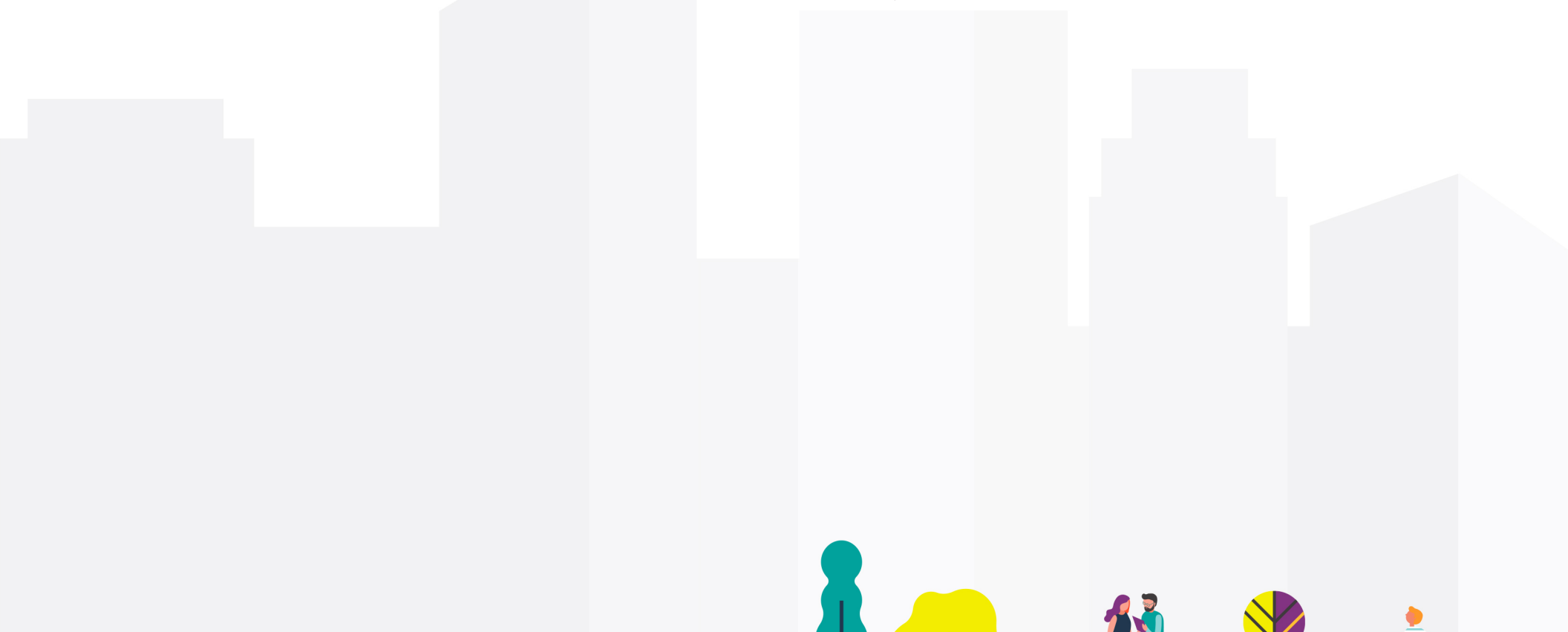


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# walkSTEM@City Hall Plaza

**PLAYLIST:** [https://www.youtube.com/playlist?list=PLoibICAocP-Arm\\_1g3i6JU5aCPhOrA-dK](https://www.youtube.com/playlist?list=PLoibICAocP-Arm_1g3i6JU5aCPhOrA-dK)

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels
●	<a href="https://youtu.be/sOBmWiHcMws">https://youtu.be/sOBmWiHcMws</a>	<b>What is a trapezoid?</b>	City Hall, Dallas City Hall Plaza, 1500 Marilla St, Dallas, TX 75201	X
●	<a href="https://youtu.be/VHWQARs4QZI">https://youtu.be/VHWQARs4QZI</a>	<b>How do you compare shapes?</b>	The Dallas Piece, Dallas City Hall Plaza, 1500 Marilla St, Dallas, TX 75201	X
●	<a href="https://youtu.be/4_AYh4AF-Pk">https://youtu.be/4_AYh4AF-Pk</a>	<b>Reflecting on Circles - Is the Pool Circular?</b>	Reflecting pool, Dallas City Hall Plaza, 1500 Marilla St, Dallas, TX 75201	X
●	<a href="https://youtu.be/2ckYKlhf_CU">https://youtu.be/2ckYKlhf_CU</a>	<b>How do you measure speed?</b>	Floating Sculpture, Dallas City Hall Plaza, 1500 Marilla St, Dallas, TX 75201	X
●	<a href="https://youtu.be/aHJuv6JSx2c">https://youtu.be/aHJuv6JSx2c</a>	<b>How tall are the flagpoles?</b>	Flagpoles, Dallas City Hall Plaza, 1500 Marilla St, Dallas, TX 75201	X



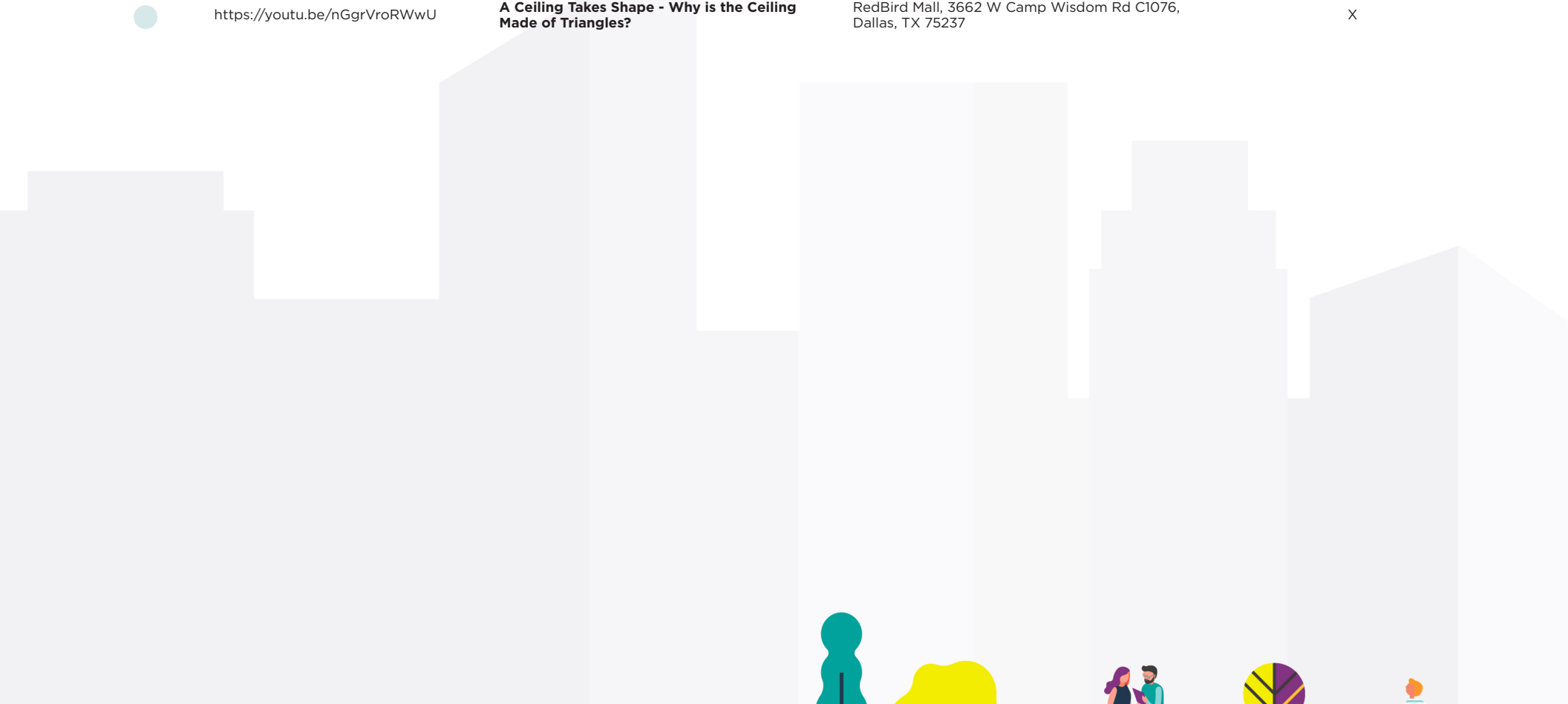


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# walkSTEM@RedBird Mall

**PLAYLIST:** <https://www.youtube.com/playlist?list=PLoibICAocP-B5eQ4ZEzmfzvV4269S8I5G>

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels
●	<a href="https://youtu.be/xT9OfqZMdyO">https://youtu.be/xT9OfqZMdyO</a>	<b>Setting Up Shop - How Can We Determine Map Scale?</b>	RedBird Mall, 3662 W Camp Wisdom Rd C1076, Dallas, TX 75237	X
●	<a href="https://youtu.be/wB4POxzApKg">https://youtu.be/wB4POxzApKg</a>	<b>Fractionating Tiles - What are the mosaic building blocks?</b>	RedBird Mall, 3662 W Camp Wisdom Rd C1076, Dallas, TX 75237	X
●	<a href="https://youtu.be/SbHOZHtOiqM">https://youtu.be/SbHOZHtOiqM</a>	<b>Mosaic Madness - Design Your Own!</b>	RedBird Mall, 3662 W Camp Wisdom Rd C1076, Dallas, TX 75237	X
●	<a href="https://youtu.be/nGgrVroRWwU">https://youtu.be/nGgrVroRWwU</a>	<b>A Ceiling Takes Shape - Why is the Ceiling Made of Triangles?</b>	RedBird Mall, 3662 W Camp Wisdom Rd C1076, Dallas, TX 75237	X

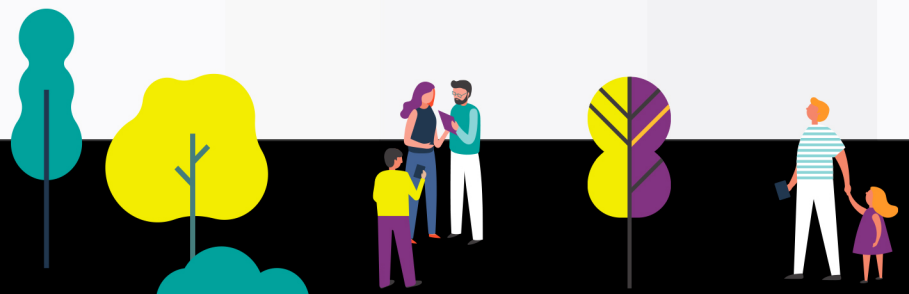


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# walkSTEM@Ronald Kirk Bridge

**PLAYLIST:** <https://www.youtube.com/playlist?list=PLOibICAocP-BIWf6xoCrkE31InbAoztmD>

Stops Visited	Video Link	walkSTEM Video Title	walkSTEM Stop Location	All Levels	Middle/High School
●	<a href="https://youtu.be/cPjUoJFROW4">https://youtu.be/cPjUoJFROW4</a>	<b>Which Mass Travels Faster?</b>	Ronald Kirk Bridge, 109 Continental Ave, Dallas, TX 75207		X
●	<a href="https://youtu.be/SJ4QwU_xSlg">https://youtu.be/SJ4QwU_xSlg</a>	<b>What is the Weight of an Ice Rink?</b>	Ronald Kirk Bridge, 109 Continental Ave, Dallas, TX 75207	X	
●	<a href="https://youtu.be/INSA5EpWVqI">https://youtu.be/INSA5EpWVqI</a>	<b>What is a dodecahedron?</b>	Climbing Structure, Ronald Kirk Bridge, 109 Continental Ave, Dallas, TX 75207		X
●	<a href="https://youtu.be/Z2oLOLatS8k">https://youtu.be/Z2oLOLatS8k</a>	<b>What is the speed of the water?</b>	Ronald Kirk Bridge, 109 Continental Ave, Dallas, TX 75207	X	X



# Notes / Questions

Use this space to write down your new questions or discoveries!

Don't forget to share your family's #STEMLens!



1. How would you graph this pattern?  
I was thinking that you could think about distance from the center of the frame on the X axis and represent each circle- would come up with a wave pattern?
2. Permutations- there are 10 different colors of circles. How many different ways could the artist have arranged them?

