Welcome!
We are so glad that you have joined us for our annual K-12 Educator Conference, bringing educators from across the Central Virginia region together to explore STEM education!

June 20 & 21, 2018
Deep Run High School
Henrico, Virginia

K-12 Educator Conference 2018
About the Center
The MathScience Innovation Center provides extraordinary educational experiences in STEM (science, technology, engineering and mathematics) to K-12 educators and K-12 students, creating enthusiasm, inspiring innovation, and developing skills needed for STEM studies and careers. We do this by forecasting and responding to the needs of higher education and industry through robust classes and programs in order to prepare more students for the demands of college and careers in math, science and technology.

The MSiC is the oldest example of continuous regional partnerships between school divisions in the metro Richmond area. Throughout its 50-year history, the MSiC continues to provide STEM coursework, professional development, and career-focused programs through classroom, virtual, and Center-based lessons to approximately 130,000 students and 2,000 teachers.
KEYNOTE PRESENTATIONS

Yewande Austin, artist, activist and honorary U. S. Cultural Ambassador

From MTV to the historic Rock and Roll Hall of Fame, Yewande's socially charged music has taken center stage with musical icons from the Black Eyed Peas to Maroon 5, but it is her work as an award-winning lecturer, social activist and honorary U. S. Cultural Ambassador that has become her greatest achievement. Today, this 2018 African Women Leaders “Extraordinary Voices” Honoree and 2017 President Barack Obama Lifetime Achievement Award Honoree is recognized as an international expert in strategic diversity leadership, multidisciplinary education, social responsibility and youth development. Under her consultancy, the Global Institute for Diversity and Change, Ms. Austin has been credited with teaching over 3,000 institutions how to improve diversity and inclusion strategies, academic access and achievement, and promote social responsibility. Through an innovative combination of education and the arts, her humanitarian organization, the Change Rocks Foundation, has taught over 250,000 vulnerable youth, advocates and educators in 16 countries from North and Latin America to Africa and Europe how to create sustainable solutions that reduce poverty and injustice. This 2017, 2014 and 2013 CNN Hero nominee is currently building Alheri Village - a sustainable resettlement community for Boko Haram conflict refugees in Abuja, Nigeria. It is this extraordinary mission that is inspiring a legion of everyday heroes to change the world. For more information: www.globalinstituteforchange.com and www.changerocksfoundation.com

Wednesday, June 20, 2018
9:15 am - 10:15 am in the Auditorium

Rachael Mann, speaker, TEDx coach, education consultant, and founder of #TeachlikeTED

Rachael Mann is the founder of #TeachlikeTED, an organization that provides teachers, leaders, and students with tools for presentation literacy. Rachael uses her message and her expertise to broaden the conversation around education reform and to amplify the voices of teachers and students. Prior to #TeachlikeTED, Rachael was the STEM Professional Learning Director for the Arizona K-12 Center and State Director for EdRising Arizona. A former high school Career and Technical Education teacher, Rachael has 14 years of classroom teaching experience. Ms. Mann is co-author of The Martians in Your Classroom, a metaphor for the future of education and where we need to drive the learning space of the future, written in collaboration with Mr. Stephen Sandford, former Director for Space Technology and Exploration at NASA’s Langley Research Center. Rachael is a Google Certified Educator with a master’s degree in Educational Leadership.

Thursday, June 21, 2018
8:45 am - 9:45 am in the Auditorium
### Day 1 Wednesday, June 20

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 am - 9:00 am</td>
<td>Registration</td>
<td>Lobby</td>
</tr>
<tr>
<td>9:00 am - 9:15 am</td>
<td>Welcome and Opening Remarks, Daphne Schmidt, Coordinator of Professional Development &amp; Hollee Freeman, Executive Director, MSiC</td>
<td>Auditorium</td>
</tr>
<tr>
<td>9:15 am - 10:15 am</td>
<td>Keynote Address: Yewande Austin, Creative Thinking and Academic Achievement: The Intersection Between STEM and the Arts</td>
<td>Auditorium</td>
</tr>
</tbody>
</table>

### SESSION 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Grade &amp; Subject</th>
<th>Title &amp; Presenter</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30am - 11:45 am</td>
<td>K - 2, 3 - 5 Science, Engineering, Mathematics</td>
<td>Everyday Life Cycle Mysteries Rhonda Hawley</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>K - 2, 3 - 5 Science, Mathematics, Cross Curricular</td>
<td>Student Voice and Choice Through Flexible Seating Ashley Council</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>K - 2, 3 - 5 Mathematics</td>
<td>I See it Now! Making Math Visible Using Math Aides, Toolkits, and Templates Carol Medawar</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>3 - 5 Science, Mathematics</td>
<td>Measuring Up with Agriculture in the Classroom Lynn Black</td>
<td>211</td>
</tr>
<tr>
<td></td>
<td>3 - 5 Mathematics</td>
<td>Math Movement: Kinesthetic Strategies for Teaching and Practicing Math Concepts Marcia Wade</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td>3 - 5, 6 - 8 Mathematics, Problem-Based Learning</td>
<td>“Fun” Raising - Making Math Meaningful Through Project-Based Learning and Math Modeling Joan Kernan</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>3 - 5, 6 - 8 Science, Mathematics</td>
<td>Music Mic Make It Real Joe Beasley</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>3 - 5, 6 - 8 Mathematics</td>
<td>The Power of &quot;Why?&quot; - How Asking Your Students (and Yourself) One Question Will Improve Your Teaching Morgan Saxby</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>6 - 8 Instructional Technology, Mathematics</td>
<td>Digital Breakout Make and Take Jennifer Laubenthal, Kim Bell</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>6 - 8 Science, Instructional Technology, Engineering, Mathematics</td>
<td>Put a Little Makey Makey into Your Classroom! Amanda Kinsler, Emily Roberts, Andrew Neiburg</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science</td>
<td>Now You See It, Soon You Won’t! - Ice and the Earth System Carroll Ellis, Jr</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Mathematics</td>
<td>Graph Mania I Brian Domroes</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Mathematics</td>
<td>Raising the Curtain on 3-Act Tasks Beth Layne</td>
<td>216</td>
</tr>
<tr>
<td>Time</td>
<td>Grade &amp; Subject</td>
<td>Title &amp; Presenter</td>
<td>Room</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>12:45 pm</td>
<td>K - 2, 3 - 5, 6 - 8, 9 - 12</td>
<td>The Art of Change: Developing an Integrated Arts Curriculum</td>
<td>211</td>
</tr>
<tr>
<td></td>
<td>Science, Instructional Technology,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts, Engineering, Mathematics</td>
<td>Yewande Austin</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>K - 2, 3 - 5, 6 - 8, 9 - 12</td>
<td>Code. Learn. Share.</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>Science, Instructional Technology,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engineering, Mathematics</td>
<td>Joe Beasley, Krystle Demas, and Sarah Prusinowski</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>K - 2, 3 - 5</td>
<td>Student Voice and Choice Through Flexible Seating</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>Science, Mathematics, Cross</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Curricular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>K - 2, 3 - 5</td>
<td>Art of the Future</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>Science, Instructional Technology,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engineering, Mathematics, Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts and Fine Arts</td>
<td>Morgan McMullin &amp; Tanya Elliott</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>K - 2, 3 - 5</td>
<td>&quot;1&quot; Throughout the Year!</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>3 - 5</td>
<td>Teaching the Scientific Method with a Bug</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>3 - 5, 6 - 8</td>
<td>The Power of &quot;Why?&quot; - How Asking Your Students (and Yourself) One Question Will Improve Your Teaching</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>Morgan Saxby</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>6 - 8</td>
<td>The Science Behind Art: Coding, Circuitry, and Teaching Kids to Design and Fail</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>Science, Engineering, Art</td>
<td>Julie Vial &amp; Carrie Hood</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>6 - 8</td>
<td>Math and Movement: Kinesthetic Strategies for Teaching and Practicing Math Concepts</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>Marcia Wade</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>6 - 8, 9 - 12</td>
<td>Now You See It, Soon You Won’t! - Ice and the Earth System</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>Carroll Ellis, Jr.</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>6 - 8, 9 - 12</td>
<td>March Madness: Formative Assessment</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>Science, Instructional Technology,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>Wes Dunnavant, Kristine Vester</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>6 - 8, 9 - 12</td>
<td>Raising the Curtain on 3-Act Tasks</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>Beth Layne</td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>9 - 12</td>
<td>Looking at Medicine Through a Different Lens</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>Science, Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45 pm</td>
<td>9 - 12</td>
<td>Geometry Goes to the Movies</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>Christine Belcher</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Grade &amp; Subject</td>
<td>Title &amp; Presenter</td>
<td>Room</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>2:15 pm - 3:30 pm</td>
<td>K - 2, 3 - 5, 6 - 8, 9 - 12 Mathematics, any subject</td>
<td>Data Driven Differentiation &lt;br&gt;Joan Kernan</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td>K - 2, 3 - 5, 6 - 8, 9 - 12 Science, Instructional Technology, Engineering, Mathematics</td>
<td>Learn. Create. Share. Scaffolding PBLs and Teamwork &lt;br&gt;Joe Beasley and Amanda Steeley</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>K - 2, 3 - 5 Science, Instructional Technology, Engineering, Mathematics</td>
<td>Art of the Future &lt;br&gt;Morgan McMullin &amp; Tanya Elliott</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>K - 2, 3 - 5 Science, Instructional Technology, Engineering, Mathematics</td>
<td>Reboot Your Lessons with Robots! &lt;br&gt;Jeannine Dearmon, Laura Prymak, and Jennifer Simpson</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>2 - 6 Science, Engineering, Mathematics, STEAM/STEM</td>
<td>Teamspiration and the Rube Goldberg Machine &lt;br&gt;Mindy Adamonis, Brittany Ballou</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>3 - 5 Mathematics</td>
<td>Developing Stellar Understanding of Fractions with Paper Folding &lt;br&gt;Valerie Schwarz</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>3 - 5, 6 - 8 Science</td>
<td>Creativity, Curiosity, and Critical Thinking Combined: Using Nuggets of Science to Model Inquiry &lt;br&gt;Dia Michels</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>6 - 8 Instructional Technology, Mathematics</td>
<td>Catch Up with Sketchup &lt;br&gt;Brian Domroes</td>
<td>211</td>
</tr>
<tr>
<td></td>
<td>6 - 8 Science, Engineering, Art</td>
<td>The Science Behind Art: Coding, Circuitry, and Teaching Kids to Design and Fail &lt;br&gt;Julie Vial &amp; Carrie Hood</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science</td>
<td>Birds Without Borders: Investigating Population Trends and Conservation of Migratory Birds &lt;br&gt;Rachel Martin</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science</td>
<td>Teaching the Scientific Method with a Bug &lt;br&gt;Catherine Short</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science, Instructional Technology, Mathematics</td>
<td>March Madness: Formative Assessment &lt;br&gt;Wes Dunnavant, Kristine Vester</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Mathematics</td>
<td>Being Right and Wrong in Different, Interesting Ways &lt;br&gt;Nolan Doyle</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>9 - 12 Science, Engineering</td>
<td>Looking at Medicine Through a Different Lens &lt;br&gt;Vonita Giddings</td>
<td>208</td>
</tr>
</tbody>
</table>
## Session 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Grade &amp; Subject</th>
<th>Title &amp; Presenter</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 am - 8:45 am</td>
<td>K - 2, 3 - 5, 6 - 8, 9 - 12 Science, Instructional Technology, Engineering, Mathematics</td>
<td>Welcome and Opening Remarks, Christine Belcher and Crystal Clark, MSiC K-12 Coordinators</td>
<td>Auditorium</td>
</tr>
<tr>
<td>8:45 am - 9:45 am</td>
<td>6 - 8, 9 - 12 Science, Engineering, Mathematics</td>
<td>Keynote Address: Rachael Mann, The Martians in Your Classroom</td>
<td></td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>K - 2, 3 - 5 Science, Engineering</td>
<td>How Trauma Affects the Brain and What Educators Can Do in the Classroom</td>
<td>212</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>K - 2, 3 - 5 Science, Engineering, Mathematics</td>
<td>Enhancing Instruction Using the 5 E Model of Instruction</td>
<td>219</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>K - 2, 3 - 5 Science, Engineering</td>
<td>Integrating STEAM into the Curriculum</td>
<td>206</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>K - 2, 3 - 5 Science, Engineering, Mathematics, Language Arts</td>
<td>The Sky’s the Limit with KEVA</td>
<td>207</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>K - 2, 3 - 5 Science, Instructional Technology</td>
<td>Foldscope Magnifies Your World!</td>
<td>210</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>K - 2, 3 - 5 Mathematics</td>
<td>I See it Now! Making Math Visible Using Math Aides, Toolkits, and Templates</td>
<td>209</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>3 - 5 Science</td>
<td>Making Sunscreen</td>
<td>208</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>3 - 5, 6 - 8 Science, Engineering, Mathematics</td>
<td>Jack &amp; the Bean Counters</td>
<td>216</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>3 - 5, 6 - 8 Science, Engineering, Mathematics, STEM/STEAM</td>
<td>Build-A-Bot Workshop</td>
<td>217</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>6 - 8 Science</td>
<td>Hypothesis: My Students Can Create Research Projects That I Want to Grade!</td>
<td>211</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>6 - 8, 9 - 12 Science</td>
<td>R-E- A-C- T-I- O-N! Enhancing Student Understanding of Chemical Reactions with Simulations and Online Applications!</td>
<td>218</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>6 - 8, 9 - 12 STEM</td>
<td>Transform your Classroom with Visible Thinking</td>
<td>213</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>6 - 8, 9 - 12 Science, Mathematics</td>
<td>Data on Target</td>
<td>215</td>
</tr>
<tr>
<td>10:00 am - 11:15 am</td>
<td>6 - 8, 9 - 12 Mathematics</td>
<td>High School Math Games</td>
<td>214</td>
</tr>
</tbody>
</table>
## SESSION 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Grade &amp; Subject</th>
<th>Title &amp; Presenter</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:15 pm - 1:30 pm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| K - 2 Mathematics | Count on Books: Using Children's Books to Teach Mathematics  
Crystal Clark | 207 |
| K - 2, 3 - 5 Science, Engineering, Mathematics | Enhancing Instruction Using the 5 E Model of Instruction  
Christine Belcher | 219 |
| K - 2, 3 - 5, 6 - 8, 9 - 12 Science, Instructional Technology, Engineering | Empowering Student Voice in the STEM Classroom  
Rachael Mann | 218 |
| K - 2, 3 - 5, 6 - 8, 9 - 12 Science, Instructional Technology, Engineering | Transportation STEM  
Angela Parsley | 217 |
| 3 - 5 Science | Making Sunscreen  
Maggie Harrington | 208 |
| 3 - 5, 6 - 8 General Pedagogy | Visible Learning - What Really Works to Increase Student Achievement?  
Carol Medawar | 209 |
| 3 - 5, 6 - 8 Mathematics | Making Math Stick  
Andrew Derer | 212 |
| 6 - 8 Instructional Technology, Mathematics | Transformation Animations  
Katelyn Devin | 213 |
| 6 - 8, 9 - 12 Science | Engaging Students through Hands-On Notes  
Jacquelyn Calder | 206 |
| 6 - 8, 9 - 12 Science | Blue Crabs in the Chesapeake Bay  
Lisa Lawrence & Celia Cackowski | 216 |
| 6 - 8, 9 - 12 Science, Instructional Technology | Foldscope Magnifies Your World!  
Rachel Martin and Rhonda Hawley | 210 |
| 6 - 8, 9 - 12 Instructional Technology, Project-Based Learning | Scrum: Focus on Feedback!  
Bea Leiderman & Bryan Doppel  
Double Session | 211 |
| 6 - 8, 9 - 12 Mathematics | High School Math Games  
Monique Merriman | 214 |
| 9 - 12 Science | Evolution in the Classroom - A Selection Activity  
Steve Oden | 215 |
<table>
<thead>
<tr>
<th>Time</th>
<th>Grade &amp; Subject</th>
<th>Title &amp; Presenter</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:45 pm - 3:00 pm</td>
<td>K - 2 Mathematics</td>
<td>Count on Books: Using Children's Books to Teach Mathematics</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>K - 2, 3 - 5 Science, Technology, Engineering, Mathematics</td>
<td>STEM in the Classroom</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>K - 2, 3 - 5, 6 - 8, 9 - 12 Science, Instructional Technology, Engineering</td>
<td>Transportation STEM</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>3 - 5, 6 - 8 Mathematics</td>
<td>Making Math Stick</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>3 - 5, 6 - 8, 9 - 12 Science, Instructional Technology, Engineering</td>
<td>Goodbye Humdrum...Hello Sparkle! Google Drawings in the Classroom</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>6 - 8 Engineering, Mathematics</td>
<td>The Math of Ship Design</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science</td>
<td>Blue Crabs in the Chesapeake Bay</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science</td>
<td>R-E- A-C- T-I- O-N! Enhancing Student Understanding of Chemical Reactions with Simulations and Online Applications!</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science, Technology, Engineering, Mathematics</td>
<td>From STEM to Learn</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science, Engineering, Mathematics</td>
<td>You've Got a Star....I've Got a Rocket!</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>6 - 8, 9 - 12 Science, Technology, Engineering, Mathematics</td>
<td>Data-R-Us</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>9 - 12 Mathematics</td>
<td>Activities Do Matter</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>9 - 12 Science</td>
<td>Evolution in the Classroom - A Selection Activity</td>
<td>215</td>
</tr>
<tr>
<td>3:00 pm - 3:30 pm</td>
<td>Conference Evaluation and Door Prizes</td>
<td></td>
<td>Auditorium</td>
</tr>
<tr>
<td></td>
<td>3:00 pm - 3:30 pm</td>
<td>Conference Evaluation and Door Prizes</td>
<td>Auditorium</td>
</tr>
</tbody>
</table>
SESSION DESCRIPTIONS
Find a complete description of conference sessions. Sessions are open to all, but please note suggested target grades.

Day 1 Wednesday, June 20

".1" Throughout the Year!
Do you struggle with coming up with experiments that go along with science content in your pacing guide? Struggle no more! Check out the long- and short-term experiments that will have your students clamoring for more all year long!

K - 2, 3 - 5 Science
Rhonda Hawley, MathScience Innovation Center, rhawley@mymsic.org

Art of the Future
Explore your creativity and innovation using everyday materials and technology. See how art innovations can help your students build comprehension skills while utilizing mathematics and computer science in project development. Participants will begin using traditional methods of art and then re-create their masterpiece through technology.

K - 2, 3 - 5 Science, Instructional Technology, Engineering, Mathematics, Language Arts and Fine Arts
Morgan McMullin & Tanya Elliott, Goochland County Public Schools, mmcmullin@glnd.k12.va.us & telliott@glnd.k12.va.us

Being Right and Wrong in Different, Interesting Ways
Effective open-ended questions give students opportunities to be right and wrong in different, interesting ways. Desmos gives teachers the opportunity to easily collect and display student responses to these types of questions. This session explores how to use these types of questions in Desmos to drive instruction and improve feedback to students.

6 - 8, 9 - 12, Mathematics
Nolan Doyle, Chesterfield County Public Schools, doyle.nolan@gmail.com

Why do birds matter? From insect control to pollination, birds are a driving force of our ecological systems. In this session we will investigate how students can investigate real scientific data driven questions using an online resource, eBird®. Using web-based mapping tools and mobile technologies students can dive into real-world biodiversity issues that range on the local to international scale.

6 - 8, 9 - 12, Science
Rachel Martin, MathScience Innovation Center, rmartin@mymsic.org

Blended Learning: Where Tradition Meets Tech
Find out more about blended learning, what all the hype is, some tips and tricks in making it work, and ready-made resources for September. Digital resources will include Nearpod®, EdPuzzle®, Khan Academy, and Quizzizz®.

9 - 12, Science, Instructional Technology, Engineering, Mathematics
Eric Byers and Corbin Wright, Henrico County Public Schools, ewbyers@henrico.k12.va.us; clwright@henrico.k12.va.us

Catch Up with Sketchup®
Student engagement is critical to deeper learning, but sometimes student attention wanders. As teachers we ask, “Could it be me? Is the effectiveness of my teaching lagging behind?” Catch up with Sketchup®. Learn how this dynamic, free software can reinvigorate your students and your teaching.

6-8, Instructional Technology, Mathematics
Brian Domroes, MathScience Innovation Center, bdomroes@mymsic.org
Coding is a necessary skill that is quickly becoming the universal language; critical for success in future jobs. In this session we will begin to unfold coding through the inquisitive mind of a child, exploring hands-on experiences with Scratch, Scratch Jr and Hummingbirds.

**K - 2, 3 - 5, 6 - 8, 9 - 12, Science, Instructional Technology, Engineering, Mathematics**

Joe Beasley, Krystle Demas, and Sarah Prusinowski, jbeasley@glnd.k12.va.us

**Creativity, Curiosity, and Critical Thinking Combined: Using Nuggets of Science to Model Inquiry**

Discover strategies to build confidence and encourage curiosity in your students. We will use science questions and brainteasers to spur deductive reasoning and help kids make real life connections.

**3 - 5, 6 - 8, Science**

Dia Michels, Dia@ScienceNaturally.com

**Data Driven Differentiation**

Analyze student work to steer your instruction toward student achievement. Use formative assessment to identify misconceptions and plan next steps to support all students. Teachers will work collaboratively to identify the gaps between expectations and actual performance.

**K - 2, 3 - 5, 6 - 8, 9 - 12, Mathematics, any subject area**

Joan Kernan, MathScience Innovation Center, jkernan@mysic.org

**Developing Stellar Understanding of Fractions with Paper Folding**

Participants will explore an inquiry-based curriculum unit about fractions. Engaging activities using paper folding, Singapore methods, and discussion will be utilized to develop a deeper understanding of fractions.

**3 - 5, Mathematics**

Valerie Schwarz, Richmond City Public Schools, vschwarz@rvaschools.net

**Digital Breakout Make and Take**

First, experience engaging 21st century learning through digital breakout rooms. Then, learn how to create your own digital breakout experience. Can apply to all content areas!

**6 - 8, Instructional Technology, Mathematics**

Jennifer Laubenthal, Kim Bell, Chesterfield County Public Schools, jennifer_laubenthal@ccpsnet.net, kimberly_bell@ccpsnet.net

**Everyday Life Cycle Mysteries**

Sherlock Holmes might have a magnifying glass, but we’ve got loupes! Come see how your students can become sleuths in this Inquiry-based session that presents a mystery to be solved and focuses on shadows, flowering plants and oatmeal bugs. How can you resist the mystery of it all?

**K - 2, 3 - 5, Science, Engineering, Mathematics**

Rhonda Hawley, MathScience Innovation Center, rhawley@mymsic.org

**“Fun” Raising - Making Math Meaningful Through Project-Based Learning and Math Modeling**

Step right up to explore math modeling and project-based learning at the School Carnival! The annual school fundraiser becomes a real world math bonanza of projects to explore, explain, and justify mathematically.

**3 - 5, 6 - 8, Mathematics, Problem-Based Learning**

Joan Kernan, MathScience Innovation Center, jkernan@mysic.org

**Geometry Goes to the Movies**

Movie clips are a great way to enhance content and engage students! Come explore some video excerpts with accompanying activities that will supplement your Geometry instruction while providing students with real life applications of mathematics.

**9 - 12, Mathematics**

Christine Belcher, MathScience Innovation Center, cbelcher@mymsic.org
Graph Mania I
Your Algebra I students will enjoy participating in these hands-on activities to collect multiple data sets. Using a graphing calculator, they will make scatter plots and determine the line or curve of best fit.
6 - 8, 9 - 12, Mathematics
Brian Domroes, MathScience Innovation Center, bdomroes@mymsic.org

I See it Now! Making Math Visible Using Math Aides, Toolkits, and Templates
Looking for new ways to make math visible for your students? Come make a math toolkit, complete with customized templates that can be used at all levels to improve performance and understanding in math.
K - 2, 3 - 5, Mathematics
Carol Medawar, MathScience Innovation Center, cmedawar@mymsic.org

Learn. Create. Share. Scaffolding PBLs and Teamwork
Take your PBL to the next level. Inspire teamwork and inclusion while working together. Learn how to scaffold projects to help students complete projects faster and better than ever before!
K - 2, 3 - 5, 6 - 8, 9 - 12, Science, Instructional Technology, Engineering, Mathematics
Joe Beasley and Amanda Steeley, Goochland County Public Schools, jbeasley@glnd.k12.va.us

Looking at Medicine Through a Different Lens
Nanoscience is an ever expanding integration of STEM at a level that defies traditional logic. Our understanding of the science of the small has fueled the medical research field’s pursuit of targeted treatments for many of our world’s most deadly maladies. Join me to learn about the advances in nanotechnology as it pertains to the biological concepts, thus adding both relevance and intrigue to our beloved discipline.
9 - 12, Science, Engineering
Vonita Giddings, MathScience Innovation Center, vgiddings@mymsic.org

March Madness: Formative Assessment
Are you ready to rumble? During this session, different formative assessment tools (including G Suite Apps) will be experienced and created, as participants vote their favorite application through our March Madness Bracket. Can formative assessment really be fun? Will your favorite application/tool win the prize?
6 - 8, 9 - 12, Science, Instructional Technology, Mathematics
Wes Dunnivant, Kristine Vester, Chesterfield County Public Schools, wesley_dunnivant@ccpsnet.net; kristine_vester@ccpsnet.net

Math and Movement: Kinesthetic Strategies for Teaching and Practicing Math Concepts
Are you looking for ways to get students active while simultaneously teaching Math concepts? Come see how Math and Movement can give you new ideas and activities to teach math! From skip counting on our Math and Movement mats to doing the Square Number and Exponent Hops, your students will boogey their way to understanding. All participants will receive the Math and Movement Training Manual EBook and door prizes will be included.
3 - 5, 6 - 8, Mathematics
Marcia Wade, Director of Operations Southern Region, Math and Movement PE Academic Coach, Anderson County Schools, marciawade12@gmail.com

Measuring Up with Agriculture in the Classroom
Experience Agriculture in the Classroom’s hands-on, problem-based learning unit for the elementary classroom using farms and gardens to teach measurement, area and perimeter, with cross-curricular extensions including plant needs and earth’s resources.
3 - 5, Science, Mathematics
Lynn Black, Agriculture in the Classroom, lynn.black@vafb.com
Music Mic Make It Real
Music Mic Make It Real for your students. Get 'em up and moving. Learn how to incorporate chants, songs, and kinesthetic movement into your instruction for all subjects. Teachers will even get a chance to chime in for a couple of bars.

3 - 5, 6 - 8, Science, Mathematics
Joe Beasley, Goochland County Public Schools, jbeasley@glnd.k12.va.us

Now You See It, Soon You Won’t! - Ice and the Earth System
For the past several decades, the Earth’s climate change has been causing polar ice and alpine glaciers to melt. In this session, we will examine the science and modeling of ice melt data. We will also complete several climate change activities you can use with your students.

6 - 8, 9 - 12, Science
Carroll Ellis, Jr, MathScience Innovation Center, cellis@mymsic.org

Put a Little Makey Makey into Your Classroom!
Bring the joy and excitement in your classroom alive as you watch your students become instant innovators. Makey Makey kits can take normal everyday objects and turn them into amazing interactive objects. This session will overview deeper learning experiences with Makey Makeys and how they can be implemented across all content areas. This hands-on session will include Makey Makey basics, using the coding program Scratch, and lesson ideas to take back to your school!

6 - 8, Science, Instructional Technology, Engineering, Mathematics
Amanda Kinsler, Emily Roberts, Andrew Neiburg, Henrico County Public Schools, afkinselr@henrico.k12.va.us, enroberts@henrico.k12.va.us, arneiburg@henrico.k12.va.us

Raising the Curtain on 3-Act Tasks
Have you ever heard the statements, “Math is too hard!”, “Who cares?”, or my personal favorite, “When are we ever going to use this?” Students are looking for relevance in their learning; giving their work meaning through real world applications. During this workshop, we will engage in a 3-Act Math lesson and apply this concept to mathematical topics that will engage students in meaningful mathematics. Participants will also be introduced to some of the many resources that are available to help you raise the curtain on 3-Act Tasks!

6 - 8, 9 - 12, Mathematics
Beth Layne, MathScience Innovation Center, blayne@mymsic.org

Reboot Your Lessons with Robots!
Want to integrate computer science standards and robotics into core curricula? Reboot your lessons with robots! Join us and experience the power of technology to transform your teaching. Session includes hands-on activities and lessons.

K - 2, 3 - 5, Science, Instructional Technology, Engineering, Mathematics
Jeannine Dearmon, Laura Prymak, and Jennifer Simpson, Chesterfield County Public Schools, Jennifer_Simpson@ccpsnet.net; Laura_Prymak@ccpsnet.net; Jeannine_Dearmon@ccpsnet.net

Student Voice and Choice Through Flexible Seating
Every child learns differently and requires differentiation to succeed in school. Through student voice and choice, success can be achieved. In this session, we will look at ways to provide student voice and choice through flexible seating. We will also look at the benefits of changing your classroom design to heighten student engagement and support problem-based and cooperative learning.

K - 2, 3 - 5, Science, Mathematics, Cross Curricular
Ashley Council, Chesterfield County Public Schools, ashley_council@ccpsnet.net

Teaching the Scientific Method with a Bug
Whether teaching or reviewing the Scientific Method, this workshop will offer fun activities and experiments to engage the students. We'll test the strength of Bess beetles and sniff out the trails of termites.

3 - 5, Science
Catherine Short, MathScience Innovation Center, Clslegal@msn.com
Teamspiration and the Rube Goldberg Machine
Learn how to incorporate STEAM through Rube Goldberg Machines - completing a simple task through complex steps. Instructors will connect simple machines, cause/effect relationships, how-to directions, and more! Participants will receive design briefs to implement Rube Goldberg Challenges in class.

2 - 6, Science, Engineering, Mathematics, STEAM/STEM
Mindy Adamonis, Brittany Ballou, Henrico County Public Schools and Chesterfield County Public Schools, mindyadamonis@gmail.com; baballou13@gmail.com

The Art of Change: Developing an Integrated Arts Curriculum
“The Art of Change” is a compelling professional development workshop that teaches educators how to develop an integrated arts curriculum. History shows irrefutable evidence that music and the arts are disciplines that shape the world around us. Italian Renaissance artist Leonardo Da Vinci was also a scientist and inventor. Dr. Mae Carol Jemison, is an engineer, physician and trained dancer who became the first African-American female NASA astronaut to travel into space. Physicist and Nobel Peace Prize winner Albert Einstein was also a violinist. These iconic figures knew then what educators finally understand today – everything is connected! Nearly 80% of public schools in America have eliminated the arts, but Ms. Austin will demonstrate how teaching students to think “creatively” can improve student engagement, learning outcomes and 10 critical areas of adolescent development. The results of this creative approach to teaching core subjects are astonishing!

K - 2, 3 - 5, 6 - 8, 9 - 12, Science, Instructional Technology, Arts, Engineering, Mathematics
Yewande Austin, Change Rocks Foundation and Global Institute for Change

The Power of "Why?": How Asking Your Students (and Yourself) One Question Will Improve Your Teaching
By regularly and routinely asking "Why?", we can develop our students' reasoning, promote mastery of specific content, and ensure that what we as teachers aligns with our professional vision (Math Process Goals).

3 - 5, 6 - 8, Mathematics
Morgan Saxby, Chesterfield County Public Schools, morgan_saxby@ccpsnet.net

The Science Behind Art: Coding, Circuitry, and Teaching Kids to Design and Fail
Using creativity to explore science, we used coding to paint with Sphero’s, circuitry to light up fashion, and helped our students figure out how to fail and fix their ideas. Bring a previous lesson with you as we collaborate.

6 - 8, Science, Engineering, Art
Julie Vial & Carrie Hood, Henrico County Public Schools, jmvial@henrico.k12.va.us; cbhood@henrico.k12.va.us
Day 2 Thursday, June 21

Activities Do Matter
Interested in exploring ways to creatively review geometry concepts and skills? In this session, cooperative learning activities and ideas for increasing student engagement and discourse will be shared and discussed.
9 - 12, Mathematics
Lear Cook, Hampton City Schools, lcook@hampton.k12.va.us

Blue Crabs in the Chesapeake Bay
Experience two crab-related activities that will challenge your students to apply scientific and mathematical concepts to some real-world issues. Participants will explore a hands-on activity where students quantify crabs in different habitats and an activity on “ghost pots” – crab pots lost at sea that continue to catch animals.
6 - 8, 9 - 12, Science
Lisa Lawrence & Celia Cackowski, Virginia Institute of Marine Science (VIMS)/Virginia Sea Grant, ayers@vims.edu; ccackowski@vims.edu

Build-A-Bot Workshop
Create your very own nanobot and engineer it to complete given tasks. Can you create a vehicle for your bot/motor? Can you get your bot to travel in a straight line? How fast can you get your bot to travel? What tricks can you get your bot to master? What else can you engineer with your bot materials?
3 - 5, 6 - 8, Science, Engineering, Mathematics, STEM/STEAM
Beth Layne, MathScience Innovation Center, blayne@mymsic.org

Count on Books: Using Children's Books to Teach Mathematics
Young children like stories, so why not make sense of math using children's literature? In this session we will explore various children's books that are featured in a soon to be released NCTM book called Get the Picture: Connecting Young Children to Mathematics through Books. You’ll leave with a list of book titles and simple station ideas to enhance your mathematics instruction.
K - 2, Mathematics
Crystal Clark, MathScience Innovation Center, cclark@mymsic.org

Data on Target
According to John Hattie, self-reported grades are the number one influence on student achievement. Come see how our students use data to keep themselves on target.
6 - 8, 9 - 12, Science, Mathematics
Ashley Clear & Kevin Clear, Hopewell City Schools, aclear@hopewell.k12.va.us; kclear@hopewell.k12.va.us

Data-R-Us
Learn how to design and use databases for use in STEM areas. Learn how students can design their own databases to organize data they have collected. In this workshop you will find out how to create and modify a database, and then use easy logic functions to draw meaningful information from it.
6 - 8, 9 - 12, Science, Technology, Engineering, Mathematics
Jim Lehman, MathScience Innovation Center, jlehman@mymsic.org
Empowering Student Voice in the STEM Classroom
In this workshop, participants will learn the principles that all great communicators have in common, whether presenting on the stage, or in 1-1 interactions. Participants will explore resources for teaching presentation literacy so that students know what to say, how to say it, and how to find the inner strength to use their voice with confidence. This session will provide you with free, online, easy-to-use resources to add to your presentation literacy toolkit. Learn how platforms like TED-Ed Clubs, Google Hangouts®, Flipgrid®, and more empower students to share their ideas and use their voice to make a positive impact on society at both the local and global levels.
K - 2, 3 - 5, 6 - 8, 9 - 12, Science, Instructional Technology, Engineering, Mathematics, Language Arts and Fine Arts
Rachael Mann, #TeachlikeTED, LLC, rachael@teachliketed.org

Engaging Students through Hands-On Notes
Obtain practical examples of how to incorporate hands-on activities into the traditional notes setting. We will be working through the Rock Cycle and Plate Boundaries specifically, however these concepts can be applied to any science.
6 - 8, 9 - 12, Science
Jacquelyn Calder, Hanover County Public Schools, jcalder@hcps.us

Enhancing Instruction Using the 5 E Model of Instruction
The 5 E Model of Instruction promotes collaborative, active learning in which students work together to solve problems and investigate new concepts by asking questions, observing, analyzing, and drawing conclusions. During this session you will be Engaged as you Explore the components of the 5 E model, Explain how they are used, Elaborate as you categorize the components of existing 5 E lesson plans, and Evaluate an existing lesson plan and determine how to make it more student centered.
K - 2, 3 - 5, 6 - 8, 9 - 12, Science, Engineering, Mathematics
Christine Belcher, MathScience Innovation Center, cbelcher@mymsic.org

Evolution in the Classroom - A Selection Activity
Is evolution “just” a theory? Examine some common misconceptions about biological evolution and explore some of the evidence that led to the formulation of one of the most controversial theories in science. A hands-on simulation will demonstrate the relevance of Darwin’s finches to a fundamental aspect of evolution: that variation emerges independently of the environmental “forces” that act on it. Come away with new tools for engaging students in the study of evolution.
9 - 12, Science
Steve Oden, MathScience Innovation Center, soden@mymsic.org

Foldscope® Magnifies Your World!
An origami-based microscope that you build yourself! Designed to be durable and affordable, a Foldscope® offers users optical quality similar to a conventional research microscope. Come fold your own and learn to use your smartphone to capture images/movies to share!
K - 2, 3 - 5, 6 - 8, 9 - 12 Science, Instructional Technology
Rachel Martin and Rhonda Hawley, MathScience Innovation Center, rmartin@mymsic.org; rhawley@mymsic.org

From STEM to Learn
Everybody's heard of STEM. But what is it really? How should it be implemented? How should it be evaluated? STEM can be somewhat confusing in practice. Come to this hands-on session to get the "stem to stern" how-tos so your students can experience STEM to learn.
6 - 8, 9 - 12, Science, Technology, Engineering, Mathematics
Brian Domroes, MathScience Innovation Center, bdomroes@mymsic.org
Goodbye Humdrum...Hello Sparkle! Google Drawings in the Classroom
Learn to create your own graphics and interactive content using Google Drawing. Participants will become familiar with Google Drawings tools and how to implement into their classroom. Adaptable for all SOLs.
3 - 5, 6 - 8, 9 - 12, Science, Instructional Technology, Engineering, Mathematics
Jacquelyn Calder, Hanover County Public Schools, jcalder@hcps.us

High School Math Games
Do you need some new and exciting games to invigorate instruction and learning in your high school classroom? Come experience math-based games that reinforce Algebra I, Algebra II, and Geometry topics and engage students immediately. All of the games can easily be adapted for Trig, Math Analysis, and Calculus classes. You will go home with a packet of new ideas that will make your students beg for game time next year!
6 - 8, 9 - 12, Mathematics
Monique Merriman, MathScience Innovation Center, mmerriman@mymsic.org

How Trauma Affects the Brain and What Educators Can Do in the Classroom
During this workshop, we will be discussing what childhood trauma and adverse childhood experiences are, how they affect body and brain development, what this might look like in the classroom, and what we can do about it as educators.
K - 2, 3 - 5, 6 - 8, 9 - 12, Science, Instructional Technology, Engineering, Mathematics
Margo Buchanan, Greater Richmond SCAN (Stop Child Abuse Now), mbuchanan@grscan.com

Hypothesis: My Students Can Create Research Projects That I Want to Grade!
Tired of watching PowerPoint presentations from students who copied and pasted from Wikipedia? Using real classroom examples, the presenter will show how you can create researched, deeper learning, project-based scenarios that are easy to grade.
6 - 8, Science
Calypso Gilstrap, Henrico County Public Schools, cgilstrap@henrico.k12.va.us

I See it Now! Making Math Visible Using Math Aides, Toolkits, and Templates
Looking for new ways to make the math visible for your students? Come make a math toolkit, complete with customizable templates, that can be used by all achievement levels to improve performance and understanding in math.
K - 2, 3 - 5, Mathematics
Carol Medawar, MathScience Innovation Center, cmedawar@mymsic.org

Integrating STEAM into the Curriculum
Do you want to learn more about the design process and how you can make the most of your time in the classroom by embedding engineering into your already existing curriculum? Come see how to use literature to create engaging design briefs that integrate multiple activities related to the SOL's.
K - 2, 3 - 5, Science, Engineering
Marsha Rogers, Chesterfield County Public Schools, Marsha_Rogers@ccpnet.net

Jack & the Bean Counters
Using simple and inexpensive household items, design meaningful inquiry-based science experiments to investigate biology, chemistry and physics. Learn to do analysis using MS Excel for statistics and graphing. We will go through the experimental design from idea to analysis and conclusion.
3 - 5, 6 - 8, Science, Engineering, Mathematics
Wayne Gilchrest, MathScience Innovation Center, wgilchrest@mymsic.org
Making Math Stick
Have you ever taught a math lesson that had your students' attention the entire time only to have them perform poorly on the assessment? See how a few simple changes and an alternate form of assessment can be employed to help students "get it" the first time.

3 - 5, 6 - 8, Mathematics
Andrew Derer, MathScience Innovation Center, aderer@mymsic.org

Making Sunscreen
Want to engage students while teaching them a life lesson? Join us while we connect the electromagnetic spectrum and UV Rays to light. We will discuss how to make a STEM project while learning about light at the same time you get kids thinking. Leave with a lesson plan and a way to get your classroom moving, outside and being creative.

3 - 5, Science
Maggie Harrington, Chesterfield County Public Schools, Maggie_Harrington@ccpsnet.net

R-E- A-C- T-I- O-N! Enhancing Student Understanding of Chemical Reactions with Simulations and Online Applications!
In this exciting workshop, participants will experience the difficulties and misconceptions students have in understanding the basics of chemical reactions. We will also reflect on the impact a teacher's role can have on student learning. Each participant will walk away with a better understanding of how being a "guide on the side" enables students to take ownership of their learning and more effectively use higher order thinking and 21st century skills to demonstrate R-E- A-C- T-I- O-N! mastery. Google Classroom® integrations will be used.

6 - 8, 9 - 12, Physical Science
Yvonne Pfugler, MathScience Innovation Center, ypfugler@mymsic.org

Scrum: Focus on Feedback!
Come learn about how implementing the Scrum framework can lead to organized, student-led projects! Learn the basics of Scrum, and receive materials to help get started in your classroom. Learn about adaptations of the framework to provide better, more effective feedback leading to student mastery.

6 - 8, 9 - 12, Instructional Technology, Project-Based Learning
Bea Leiderman & Bryan Doppel, Goochland County Public Schools, bleiderman@glnd.k12.va.us; bdoppel@glnd.k12.va.us

STEM in the Classroom
This presentation is designed to help you incorporate STEM lessons and activities into your lesson plans. Learn how to develop STEM lessons that include all of the elements of the Engineering Design Loop while still including your required SOLs.

K - 2, 3 - 5, STEM
Jaime Brookman, Richmond City Public Schools, jmejimbo94@gmail.com

The Math of Ship Design
Whose ship can hold the most cargo? Design a ship and use mathematical concepts such as graphs, plots, and measures of central tendency to determine the best ship design.

6 - 8, Engineering, Mathematics
Katelyn Devin, Virginia Beach City Public Schools, katelyn.devine515@gmail.com

The Sky’s the Limit with KEVA
Keva Planks are more than just “blocks,” they are the ultimate tool in math, science, and language arts lessons that highlight collaboration, critical thinking, communication, and creativity. Build your way to STEM!

K - 2, 3 - 5, Science, Engineering, Mathematics, Language Arts
Krista Miller & Maureen Ambrose, Hanover County Public Schools, kmiller8269@gmail.com; mambrose@hcps.us
Transform your Classroom with Visible Thinking
Do you ever wish your students could truly understand their own thinking and work together to make corrections? During this session, you will discover how you can transform your math classroom into a learning community using specific hands-on techniques and activities. You will explore how to effectively use brainteasers, group-worthy problems, and transformed problems to guide your students to critical thinking and conceptual learning.
6 - 8, 9 - 12, STEM
Jim Lehman, MathScience Innovation Center, jlehman@mymsic.org

Transformation Animations
Participants will use mathematical transformations to create an animation. Participants will need a camera (phone is fine) and a device with PowerPoint.
6 - 8, Instructional Technology, Mathematics
Katelyn Devin, Virginia Beach City Public Schools, katelyn.devine515@gmail.com

Transportation STEM
Why is VDOT doing STEM outreach? Join us for an introduction to the VDOT curriculum and training that we have available to teachers! We will be sharing information on the TRAC and RIDES programs. Activity sheets that guide teachers through the activities we do in the workshop will be shared and participants will have the opportunity to sign up for additional training and free kits.
K - 2, 3 - 5, 6 - 8, 9 - 12, Science, Instructional Technology, Engineering
Angela Parsley, VDOT, angela.parsley@vdot.virginia.gov

Visible Learning - What Really Works to Increase Student Achievement?
Participants will investigate John Hattie's research on high yield learning strategies. Activities will be hands-on and ready to implement into the classroom routines. Teachers will learn where to focus their efforts for maximum impact.
3 - 5, 6 - 8, General Pedagogy
Carol Medawar, MathScience Innovation Center, cmedawar@mymsic.org

You’ve Got a Star….I’ve Got a Rocket!
Virginia has some amazing career opportunities in aerospace science, so let’s get our kids ready for them! Participants will explore some of the work needs of our region’s aerospace employers, and experience the rocketry that will launch us into the future.
6 - 8, 9 - 12, Science, Engineering, Mathematics
Vincent Hughes, MathScience Innovation Center, vhughes@mymsic.org
Survey Links

https://www.surveymonkey.com/r/2017-18MSiCPD

Workshop Material Downloads

Download exciting ideas for your classroom from the workshop sessions at the MathScience Innovation Center’s K-12 Educator Conference 2018. Materials will be posted by June 30, 2018. Just go to http://myMSiC.org. Under “Professional Development”, scroll down to “Current Educator Resources”. There you will have access to all the wonderful materials shared by our conference presenters!
The MathScience Innovation Center provides extraordinary educational experiences in science, technology, and mathematics to K-12 educators and students, creating enthusiasm, inspiring innovation and developing skills needed for STEM studies and careers.