HOSTED BY  BLUE SPRINGS SCHOOL DISTRICT
BLUE SPRINGS SOUTH HIGH SCHOOL, BLUE SPRINGS, MO 64014

Mark your calendars:
State Conference 2018: Nov. 4-5, Blue Springs, MO
Welcome to the 2017 Project Lead The Way Missouri State Conference.

It is an honor to join you to collaborate, learn, and share effective practices to help students develop the in-demand and transportable skills that will empower them to thrive in our evolving world. Together, we are nurturing intellectual curiosity and preparing the future generation of innovators, creators, and designers. Thank you for your commitment to education, PLTW, and Missouri’s students.

Over the past few years, Missouri has become a national model for what is possible when parents, educators from PK-12 and higher education, business and community leaders, and legislative leaders collaborate to improve education, build a skilled workforce, and grow the economy. We are extraordinarily proud of our long-standing partnership with Missouri S&T.

We are also inspired by your efforts, impressed with your success, and proud to be your partner. Thank you for all you do for our students and for your continued support of PLTW.

Sincerely,

Vince M. Bertram, Ed.D.
President and Chief Executive Officer
Project Lead The Way, Inc.

pltw.org
Welcome to the 2017 Missouri PLTW State Conference! We are very excited to have this opportunity to meet, share, collaborate, and celebrate your love, support, and dedication for teachers, administrators, and our children as they prepare to inspire the next generation of great problem solvers!

Over the years, PLTW has grown to more than 12,200 programs, 10,000 plus schools that have empowered over 2.4 million students. As of 2017-18, we will have over 46,000 trained teachers! In Missouri alone, nearly 2,800-trained teachers offer 736 programs that affect nearly 900,000 students. We presently cover 59 counties and rank 4th in the nation with the number of programs.

Our Missouri network focuses all of our efforts to provide the highest quality STEM educational opportunities for our students. Let us continue to work together!

Sincerely,

David Hosick
PLTW Senior Affiliate Director,
Missouri S&T

Welcome to the 2017 Missouri PLTW Conference! It has been a great privilege for me to work with Missouri schools this past year as the Director of School Engagement. I have enjoyed my time visiting PLTW classrooms, working with administration teams to implement PLTW, collaborating with PLTW partners, and most importantly seeing firsthand the impact of PLTW through interacting with Missouri students. Missouri PLTW is fortunate to have a strong partnership and engagement with Missouri S&T, KC STEM Alliance, St. Louis Community College and the Missouri Department of Elementary & Secondary Education. Together, we can continue to inspire, engage and empower the next generation of critical thinkers, problem solvers and leaders. I am available along with our entire network to support you in this critical work!

Sincerely,

Andrea Holzwarth
Director of School Engagement
West-Central Region
Project Lead The Way, Inc.
Many thanks to the following individuals who served on this year’s Conference Planning Committee:

Aaron Smith  
CTE Coordinator  
Independence School District

Abe Lewis  
Principal  
Adrian R-3 School District

Alicia Leimkuehler  
Teacher - Biomed  
Blue Springs R-IV School District

Andrea Holzwarth  
Director of School Engagement  
Project Lead The Way

Angelia Schnakenberg  
Teacher  
Blue Springs R-IV School District

Ben Burwell  
Teacher  
Blue Springs R-IV School District

Bill Bishop  
Teacher  
Blue Springs R-IV School District

Brandon Martin  
Principal  
Blue Springs R-IV School District

Brett Richardson  
Manager of CTE Partnerships and Processes  
St. Louis Community College

Christine Lewis  
Instructional Coach  
Blue Springs R-IV School District

Christy Ziegler  
Assistant Superintendent  
Shawnee Mission

Dr. Colleen Jones  
College/Career Readiness and Community Partnerships Director  
Liberty Public Schools

Crystal Alexander  
PLTW Teacher  
Blue Springs R-IV School District

Dave Hosick  
Affiliate Senior Director PLTW  
Missouri S&T

Glenna Bult  
Director of Curriculum and Instruction  
Grain Valley School District

Jay Boleach  
CTE Coordinator  
Ferguson-Florissant School District

Jean Hammer  
PLTW Biomedical Sciences  
Hazelwood School District

Jeanella Clark  
Teacher  
North Kansas City School District

Jennifer Daubendiek  
Teacher  
Fort Osage R-I School District

Jennifer Ewan  
Teacher  
Blue Springs R-IV School District

Jim Hogan  
Launch Lead Teacher  
Adrian R-3 Schools

Dr. Jim Kreyling  
Technology & Engineering Teacher  
Mehlville School District

Kevin Clevenger  
PLTW CSE Master Teacher  
Blue Springs R-IV High School

Lewis McKenzie  
PLTW CSP Master Teacher  
North Kansas City School District

Linda Bright  
Event Manager/PLTW/Enrollment Management  
Missouri S&T

Marilyn Allen  
A+/Career and Technical Education/Perkins Coordinator, Practical Arts Curriculum Chair (6-9)  
Affton School District

Martha McCabe  
Executive Director  
KC STEM Alliance

Matt McClellan  
Special Areas Curriculum Coordinator  
Hazelwood School District

Mike Pantleo  
Director  
Fort Osage R-I School District

Monte Davis  
Teacher  
Blue Springs R-IV School District

Nick Small  
Biomedical Science Instructor  
Grain Valley School District

Pattie Balano  
PLTW Biomedical Sciences  
Blue Springs R-IV School District

Dr. Renee Freers  
Director of College & Career Readiness  
North Kansas City School District

Ronda Altis  
Senior Communication Coordinator  
Marketing & Enrollment Development  
Missouri S&T

Shannan Booth  
CTE/PLTW Facilitator  
Lee’s Summit R-VII School District

Shelley Brown  
Director of Secondary Education  
Blue Springs R-IV School District

Shelly Bockstetter  
Administrative Assistant  
Blue Springs R-IV School District

Tim Albers  
Vice Provost and Dean for Enrollment Management  
Missouri S&T

William Kurt Jaques  
Teacher  
Grain Valley School District
National, Regional, and State PLTW Leaders

Dr. Vince Bertram  
President & CEO  
Project Lead The Way, Inc.

Dr. Margie Vandeven  
Commissioner of Missouri Department of Elementary & Secondary Education

David Dimmett  
Senior Vice President and Chief Engagement Officer  
Project Lead The Way, Inc.

Robin Schott  
Vice President PLTW, West-Central Region  
Project Lead The Way, Inc.

Andrea Holzwarth  
Director of School Engagement  
Kansas/Missouri  
Project Lead The Way, Inc.

Elisa Halpin  
Executive Associate  
Project Lead The Way, Inc.

David Hosick  
PLTW Senior Affiliate Director  
Missouri University of Science and Technology

Terry Wilson  
PLTW Assistant Director, BMS  
Missouri University of Science and Technology

Tom Schlimpert  
Director of Engineering and Technology Education  
Missouri DESE

Shelly Wehmeyer  
Director of Health Sciences Education  
Missouri DESE

Brett D. Richardson  
Manager of CTE Partnerships and Processes  
St. Louis Community College

Martha McCabe  
Executive Director  
KC STEM Alliance

Mark your calendars:  
Missouri Project Lead The Way State Conference 2018

The 2018 Conference will be held in Blue Springs, MO, on November 4 & 5. Watch for Request for Presentation (RFP) announcements and prepare now to submit your nominations for outstanding PLTW teacher, counselor and/or administrator. If you are interested in joining the PLTW Conference Planning Committee, please email Linda Bright (brightlj@mst.edu) or Dave Hosick (hosickd@mst.edu).
Wi-Fi

For your convenience, Wi-Fi is accessible. Connect to the wireless network called: BSSD No Username Password is: 4172523734
Missouri Project Lead The Way Master Teachers

PLTW teachers who meet or exceed National PLTW standards and complete a rigorous application process are selected to be PLTW Master Teachers. Master teachers are those who instruct teachers to become PLTW course specific qualified. We are proud to have 46 master teachers in Missouri. We thank each and every one of them for their service and dedication to the PLTW Network, both on state and national levels.

<table>
<thead>
<tr>
<th>NAME</th>
<th>COURSE</th>
<th># of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beauchamp, Steve</td>
<td>Principles of Engineering</td>
<td>6</td>
</tr>
<tr>
<td>Behr, Hannah</td>
<td>Introduction to Engineering Design</td>
<td>2</td>
</tr>
<tr>
<td>Belt, Tina</td>
<td>Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>Brockett, Todd</td>
<td>Medical Detectives</td>
<td>7</td>
</tr>
<tr>
<td>Brown, J Michael</td>
<td>Engineering Design &amp; Development</td>
<td>9</td>
</tr>
<tr>
<td>Campbell, Jeffery</td>
<td>Design and Modeling</td>
<td>1</td>
</tr>
<tr>
<td>Carnes, Elgin</td>
<td>Introduction to Engineering Design</td>
<td>9</td>
</tr>
<tr>
<td>Clevenger, Kevin</td>
<td>Computer Science Applications</td>
<td>5</td>
</tr>
<tr>
<td>Creen, Ben</td>
<td>Aerospace Engineering</td>
<td>7</td>
</tr>
<tr>
<td>Crosby, Dee</td>
<td>Introduction to Engineering Design</td>
<td>2</td>
</tr>
<tr>
<td>Davis, Courtney</td>
<td>Launch Lead Teacher</td>
<td>1</td>
</tr>
<tr>
<td>Dimmick, Maxcy</td>
<td>Introduction to Computer Science</td>
<td>2</td>
</tr>
<tr>
<td>Dyer, Rochelle</td>
<td>Digital Electronics</td>
<td>2</td>
</tr>
<tr>
<td>Eckert, Jean</td>
<td>Medical Detectives</td>
<td>3</td>
</tr>
<tr>
<td>Fenstermaker, Jason</td>
<td>Introduction to Engineering Design</td>
<td>2</td>
</tr>
<tr>
<td>Fohey, Scott</td>
<td>Principles of Biomedical Science</td>
<td>9</td>
</tr>
<tr>
<td>Fowler, Jodie</td>
<td>Aerospace Engineering</td>
<td>7</td>
</tr>
<tr>
<td>Gregory, Ashley</td>
<td>Engineering Design and Development</td>
<td>7</td>
</tr>
<tr>
<td>Hammer, Jean</td>
<td>Principles of Biomedical Science</td>
<td>11</td>
</tr>
<tr>
<td>Hinzman, Peggy</td>
<td>Biomedical Innovation</td>
<td>8</td>
</tr>
<tr>
<td>Hook, Jared</td>
<td>Computer Integrated Manufacturing</td>
<td>2</td>
</tr>
<tr>
<td>Hopkins, David</td>
<td>Introduction to Computer Science</td>
<td>2</td>
</tr>
<tr>
<td>Jansen, Jami</td>
<td>Principles of Biomedical Science</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAME</th>
<th>COURSE</th>
<th># of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jaworowski, Josh</td>
<td>Introduction to Engineering Design</td>
<td>11</td>
</tr>
<tr>
<td>Johnson, Eric</td>
<td>Introduction to Engineering Design</td>
<td>9</td>
</tr>
<tr>
<td>Kisker, Brett</td>
<td>Introduction to Engineering Design</td>
<td>2</td>
</tr>
<tr>
<td>Korell, Debi</td>
<td>Launch Lead Teacher</td>
<td>3</td>
</tr>
<tr>
<td>Kremer, James</td>
<td>Introduction to Engineering Design</td>
<td>14</td>
</tr>
<tr>
<td>Lauer, Jadee</td>
<td>Human Body Systems</td>
<td>10</td>
</tr>
<tr>
<td>Lawrence, Michelle</td>
<td>Medical Interventions</td>
<td>2</td>
</tr>
<tr>
<td>Lewis, Brandon</td>
<td>Launch Lead Teacher</td>
<td>3</td>
</tr>
<tr>
<td>Mackin, John</td>
<td>Aerospace Engineering</td>
<td>6</td>
</tr>
<tr>
<td>Martin, Lesley</td>
<td>Computer Science Principles</td>
<td>2</td>
</tr>
<tr>
<td>McAllister, Mark</td>
<td>Introduction to Engineering Design</td>
<td>14</td>
</tr>
<tr>
<td>McKenzie, Lewis</td>
<td>Computer Science Principles</td>
<td>5</td>
</tr>
<tr>
<td>Milholland, John</td>
<td>Introduction to Engineering Design</td>
<td>12</td>
</tr>
<tr>
<td>Moore, DeeAnn</td>
<td>Medical Detectives</td>
<td>1</td>
</tr>
<tr>
<td>Neth, Cammy</td>
<td>Launch Lead Teacher</td>
<td>1</td>
</tr>
<tr>
<td>Nikodym, Brian</td>
<td>Automation and Robotics</td>
<td>10</td>
</tr>
<tr>
<td>Oakley, Brian</td>
<td>Principles of Engineering</td>
<td>13</td>
</tr>
<tr>
<td>Selle, Steve</td>
<td>Aerospace Engineering</td>
<td>8</td>
</tr>
<tr>
<td>Simmons, Jeremiah</td>
<td>Computer Science Applications</td>
<td>2</td>
</tr>
<tr>
<td>Stobaugh, Ryan</td>
<td>Computer Integrated Manufacturing</td>
<td>10</td>
</tr>
<tr>
<td>Valli, Stephanie</td>
<td>Launch Lead Teacher</td>
<td>3</td>
</tr>
<tr>
<td>Wilson, Kimberly</td>
<td>Automation and Robotics</td>
<td>1</td>
</tr>
<tr>
<td>Wright, James</td>
<td>Medical Interventions</td>
<td>11</td>
</tr>
</tbody>
</table>
**Missouri Project Lead The Way Outstanding Dedication & Service Awards**

Each year Missouri Project Lead the Way recognizes the dedication, outstanding service and teaching of Missouri PLTW teachers, administrators, counselors and/or a partnership team member. The following teachers, administrators, counselors and/or partnership team members were recognized last year at our state conference. This year’s recipients will be recognized during the Awards Banquet. Please consider nominating a PLTW teacher, counselor, administrator and/or a partnership team member.

### 2014-15

<table>
<thead>
<tr>
<th>Outstanding Engineering Teacher</th>
<th>Outstanding Gateway Teacher</th>
<th>Outstanding Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Michael Brown</strong>&lt;br&gt;Kirkwood High School</td>
<td><strong>Sandro Medina</strong>&lt;br&gt;Antioch Middle School, North Kansas City</td>
<td><strong>Brandon Martin</strong>&lt;br&gt;Blue Springs Freshman Center</td>
</tr>
<tr>
<td><strong>Outstanding Biomedical Science Teacher</strong>&lt;br&gt;Pattie Balano&lt;br&gt;Blue Springs South High School</td>
<td><strong>Outstanding Computer Science Teacher</strong>&lt;br&gt;Kevin Clevenger&lt;br&gt;Blue Springs High School</td>
<td><strong>Outstanding Partnership Team Member</strong>&lt;br&gt;Libbey Yates&lt;br&gt;Pfizer, Inc.</td>
</tr>
</tbody>
</table>

### 2015-16

<table>
<thead>
<tr>
<th>Outstanding Administrator</th>
<th>Outstanding Engineering Teacher</th>
<th>Outstanding Biomedical Science Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jay Boleach</strong>&lt;br&gt;McCluer South-Berkeley High School&lt;br&gt;Ferguson-Florisssant School District</td>
<td><strong>Hannah Behr</strong>&lt;br&gt;Ladue Horton Watkins High School&lt;br&gt;Ladue School District</td>
<td><strong>Outstanding Launch Teacher</strong>&lt;br&gt;Jessika Zink&lt;br&gt;Rolla Middle School&lt;br&gt;Rolla Public Schools</td>
</tr>
<tr>
<td><strong>Outstanding Computer Science Teacher</strong>&lt;br&gt;Jeremiah Simmons&lt;br&gt;Pattonville High School&lt;br&gt;Pattonville School District</td>
<td><strong>Outstanding Dedication &amp; Service</strong>&lt;br&gt;<strong>Dr. Ralph Flori</strong>&lt;br&gt;Missouri University of Science and Technology&lt;br&gt;Rolla, MO</td>
<td><strong>Outstanding Biomedical Science Teacher</strong>&lt;br&gt;Jami Jansen&lt;br&gt;Kickapoo High School&lt;br&gt;Springfield Public Schools</td>
</tr>
<tr>
<td><strong>Outstanding Gateway Teacher</strong>&lt;br&gt;Eric Brown&lt;br&gt;Cross Keys Middle School&lt;br&gt;Ferguson-Florisssant School District</td>
<td><strong>Outstanding Counselor</strong>&lt;br&gt;Joshua Jaworowski&lt;br&gt;Kirkwood High School&lt;br&gt;Kirkwood School District</td>
<td><strong>Outstanding Partnership Team Member</strong>&lt;br&gt;Jeremy Sutton&lt;br&gt;Ranken Technical College - Wentzville&lt;br&gt;Wentzville, MO</td>
</tr>
</tbody>
</table>

### 2016-17

<table>
<thead>
<tr>
<th>Outstanding Administrator</th>
<th>Outstanding Computer Science Teacher</th>
<th>Outstanding Gateway Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Matthew McClellan</strong>&lt;br&gt;Hazelwood School District</td>
<td><strong>Kevin Clevenger</strong>&lt;br&gt;Blue Springs High School&lt;br&gt;Blue Springs School District</td>
<td><strong>Sandro Medina</strong>&lt;br&gt;Antioch Middle School&lt;br&gt;North Kansas City School District</td>
</tr>
<tr>
<td><strong>Outstanding Engineering Teacher</strong>&lt;br&gt;Louis Breinin&lt;br&gt;North Kansas City High School&lt;br&gt;North Kansas City School District</td>
<td><strong>Outstanding Launch Teacher</strong>&lt;br&gt;Brandon Lewis&lt;br&gt;Shoal Creek Elementary&lt;br&gt;Liberty School District</td>
<td><strong>Outstanding Business Partner</strong>&lt;br&gt;CoxHealth&lt;br&gt;Kickapoo High School&lt;br&gt;Springfield Public Schools</td>
</tr>
<tr>
<td><strong>Outstanding Biomedical Science Teacher</strong>&lt;br&gt;Kyle McFarland&lt;br&gt;Pattonville High School&lt;br&gt;Pattonville School District</td>
<td><strong>Outstanding Counselor</strong>&lt;br&gt;Holly Click&lt;br&gt;St. Clair High School&lt;br&gt;St. Clair R-XIII District</td>
<td><strong>Outstanding Partnership Team Member</strong>&lt;br&gt;Jeremy Sutton&lt;br&gt;Ranken Technical College - Wentzville&lt;br&gt;Wentzville, MO</td>
</tr>
</tbody>
</table>
2017-2018 Project Lead The Way
Outstanding Dedication and Service Awards

Outstanding Launch Teacher
Jana Monzyk
Washington School District

Outstanding Gateway Teacher
Mindy Gray
Kearney R-I School District

Outstanding Counselor
Chancy Glynn
Adrian R-3 School District

Outstanding Business Partner
Burns & McDonnell
Kansas City, MO
100% Student Access School Districts

ALL current 100% access school districts are listed below. We grew from 23 districts last year to 45 in 2017!!!! The NEW districts are listed in red and will be recognized at the 2017 PLTW State Conference.

CONGRATULATIONS TO:

Adrian R-3 School District
Affton 101 School District
Bayless School District
Belton School District No 124
Blue Springs R-IV School District
Brentwood School District
Brookside Charter School
Butler R-V School District
Camdenton R-III School District
Cameron R-1 School District
Carthage R-9 School District
Center School District 58
City of St. Charles School District
Columbia Public School District
Fairview R-XI
Farmington R-7 School District
Grandview Consolidated School District 4
Harrisonville Cass R-IX School District
Hazelwood School District
Independence School District
Kansas City Missouri School District
Kirkwood School District
Lebanon R-3 School District
Lee’s Summit School District
Liberty 53 School District
Lincoln County R-III
Lindbergh School District
Lonedell R-XIV School District
McDonald Co. R-1 School District
Montgomery County R-2 Schools
Ozark R-VI School District
Parkway School District
Pattonville School District
Pleasant Hill R-111 School District
Ritenour School District
Rolla Public School District
Saint Therese School
School District of Clayton
School District of Jennings
Sedalia School District
Success R-VI
Union R-XI School District
Van Buren School District
Warren County R-111 School District
West Plains R-VII School District
## Project Lead The Way State Conference
### Scheduling Form for Breakout Sessions

### Monday, November 6, Morning

**Light Breakfast**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1</th>
<th>Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30am-9:50am</td>
<td>Check In &amp; Registration</td>
<td>Opening General Session</td>
</tr>
<tr>
<td>10:00am-10:50am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00am-11:40am</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Location**

<table>
<thead>
<tr>
<th></th>
<th>Lobby</th>
<th>Auditorium</th>
</tr>
</thead>
</table>

### Monday, November 6, Afternoon

**Lunch & Learn**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 3</th>
<th>Session 4</th>
<th>Session 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:15pm-1:45pm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00pm-2:50pm</td>
<td>Round Table Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00pm-3:50pm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Location**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

---

Audience indication is just a **suggestion**. Please review all following sessions to determine if you would be interested in attending:

- **A** = Administrator
- **G** = Guidance
- **L** = Launch
- **GA** = Gateway
- **E** = Engineering
- **B** = Biomedical Science
- **C** = Computer Science
- **ALL** = All Audience

---

**Twitter:** @PLTW_MO  
**Hash Tag list:** #PLTW_MO, #MOPLTW2017

**Facebook:** www.facebook.com/PLTWMO/

---

**Wi-Fi**

For your convenience, Wi-Fi is accessible. Connect to the wireless network called: BSSD  
No Username  
Password is: 4172523734
Breakout Session descriptions are online at pltw.mst.edu/stateconference/conferencebreakoutsessions/.
Or download the app "EventsXD" in the Google Play Store or iTunes.
Once installed: Open APP
Search for Missouri (FIND)
Open: Missouri Project Lead The Way State Conference 2017

**Monday, November 6**

**7:00 AM – 8:30 AM - CHECK IN AND REGISTRATION**

**8:30 AM- 9:50 AM - OPENING GENERAL SESSION**

**10:00 - 10:50 AM - CONCURRENT SESSION 1**

1.01: Let's LAUNCH Into PLTW K-5
Let's LAUNCH into PLTW K-5 curriculum with Launch Lead teachers tried and true suggestions. Learn about ideas for organization, record-keeping, resources and insights to successfully and effectively facilitate Launch in your classroom. Whether you teach one or all of the Launch modules, join us as we share our ideas and strategies. Participants will be able to apply our “add-ons” and “how-tos” in your own PLTW Launch classroom.

Presenters: Jana Monzyk, PLTW Launch Lead Teacher, Michelle Bobo PLTW Launch Lead Teacher Washington School District
Audience: L- Launch, Room 909

1.02: Connecting Missouri Learning Standards Curriculum (OER) to PLTW LAUNCH
An interactive workshop where you work with Liberty Public School Innovation & Learning Coaches to see how LPS designed and aligned curriculum, through the use of open educational resources (OER) and PLTW LAUNCH modules.

Presenters: Dr. Jeanette Westfall/Director of Curriculum, Instruction & Staff Development, Brandon Lewis, Ashley Duvall, Ashley Allen, Molly Henley, Dawn Shannon, Liberty Public Schools Elementary Innovation & Learning Coaching Team
Audience: L- Launch, Room 918

1.03: Making Sense of Microarray
Medical Intervention teachers, do you struggle with microarrays? This presentation will help to better understand microarrays. We will go through the activity in more detail and at the end explore an extension activity.

Presenter: Kevin McCormick, LSR7
Audience: B- Biomedical Science, Room 1010

1.04: Gateways New and Old!
Learn about adding supplemental projects and alternate projects to the existing gateways curriculum. DM, AR, and MD will be covered.

Presenter Eric Brown, Ferguson Florissant
Audience: GA- Gateway, Room 1015
1.05: Linking the PLTW courses site to an existing LMS - Customizing your Classroom
Attendees will learn how to manage their classroom via the new PLTW courses online system through a personal Canvas learning management account.
Presenter: Mark McAllister, Rockwood School District
Audience: E- Engineering, Room 1018

1.06: CTE, the Community College, and the Workforce
This session introduces a unique arrangement between high school programs and a community college to create a pathway to the workforce. Using college coursework in a career and technical education field is one way to add direct industry connections to a project-based learning classroom. We lead you through an exercise to help identify possible collaborations, unique ways to meet both high school and college course competencies, and hurdles to overcome in the process. Additionally, we explore the benefits of this type of collaboration.
Presenter: Brett Richardson; Manager of CTE Partnerships, St. Louis Community College
Audience: A- Administrator, Room 917

1.07: Creating Excitement for STEM through Coding and Robotics Competitions
Learn how we generated buzz for incorporating STEM thinking by hosting our 1st Annual District Wide Coding Competition (Code A Palooza) and Robotics Competition (Robot Fest). We will share our processes, rubrics, ad campaign and criterion.
Presenters: Angie Brewer- Assistant Superintendent, Joyce Pacheco and Shannon Matthews, McDonald County.
Audience: C- Computer Science, E- Engineering, A- Administrator, Room 1020

1.08: Middle School Recruitment: CSI Springfield
Help Wanted: computer scientists! To get more students interested in CS, we need to attract students to the subject earlier in their academic careers. For this reason, Jarrett Middle School hosted a middle school computer science conference for 6th, 7th, and 8th graders, called Computer Science Inspires Springfield. Students attended an opening session with a keynote speaker, several breakout sessions with hands-on activities, and a career fair focused on local tech businesses and education programs. The post-conference survey supports the premise that students are interested and willing to study computer science and are excited about computer science opportunities.
Presenter: Maxcy Dimmick, Gateway to Tech Teacher, Springfield
Audience: GA- Gateway, Room 103

1.09: The Ideal Medical Detectives Class – Challenging, Professional, and Fun!
This workshop will give you ideas on how to increase the professionalism of your middle school PLTW classes. These changes can empower your students and allow them to become enthusiastic independent learners. Topics include the following: an idealized routine that can apply to any topic, document aesthetics, professional laboratory notebook standards, high school vs. middle school students.
Presenter: Nathan Fleming - MD, PBS, and HBS PLTW Instructor at West Plains High School
Audience: GA- Gateway, Room 107
1.10: STEM Education Planning - Carnegie STEM Excellence Pathway

The Carnegie STEM Excellence Pathway initiative is built on the belief that school systems, individual schools, departments, or individual teachers can improve their STEM education practices through a positive, collaborative approach. Designed to help the widest possible range of school districts and schools adopt best practices in STEM education. The Carnegie STEM Excellence Pathway is a self-assessment instrument, through which participating schools and school districts first evaluate themselves in six areas: Teacher Qualifications, Curriculum, Instructional Practices, Assessment and Demonstration of Skills, Family Engagement and Real-World Connections.

Presenter: Martha McCabe, Director KC STEM
Audience: A- Administrator, Room 912

1.11: Let’s GIT Serious!

One of the non-negotiable requirements for getting hired as a software developer is “familiarity with a Version Control System”. PLTW introduces us to GIT, the original, and blueprint for, pretty much every other VCS out there. But, the activity that incorporates GIT is somewhat contrived. Some don’t even use it. Learn how GIT can be easily incorporated into your entire program, giving your students (and yourself) access to a powerful development tool not just for software development, but Knowledge Creation in general.

Presenter: Thorin Schmidt / CS Instructor, St Charles School District
Audience: C- Computer Science, Room 1011

1.12: Adrian Schools - Building a K-12 PLTW Program at a Small School

Adrian R-III has the entire PLTW Curriculum for our students. Please join us as we discuss how we have implemented the Launch, Gateway, and all three high school programs into our curriculum. We are a small school, but we want every opportunity for our students.

Presenters: Abe Lewis, Matt Sears and Jim Hogan, Adrian School District
Audience: A- Administrator, Room 914

1.13: Biomed Teacher Externships

As part of a collaborative, regional effort in Kansas City, biomed teachers were able to participate in teacher externships this summer at three facilities; MCC-Penn Valley Health Science Institute, Children’s Mercy Hospital and the Sarah Cannon Cancer Center at Centerpoint. This opportunity was created by a regional effort and partnership with DESE, the local Career Ed Consortium and the Independence School District. Teachers were able to experience the following over three days: lab simulations, virtual hospital, genome labs, pharmacy, radiation, infusion centers, etc. At the end of this experience, they had time to create a PBL to use in their classes this fall.

Audience: B- Biomedical Science, Room 1012

**Audience indication key:**
- A = Administrator
- G = Guidance
- L = Launch
- GA = Gateway
- E = Engineering
- B = Biomedical Science
- C = Computer Science
- ALL = All Audience
1.14: Professional Based Learning in PLTW Classrooms
This session will include: • How to acquire business partners in appropriate industry pathways related to their classroom content areas • How to communicate with partners • How to integrate content expectations, while facilitating professional based learning, through industry partnerships
Presenters: Stephanie Amaya/Director of Professional Studies, Sarah Haferkamp, Professional Studies Facilitator, Park Hill School District
Audience: ALL, Room 1013

1.15: What to Expect as a First Year Launch Teacher
Attendees will learn what to expect during the first year of PLTW Launch. We will discuss how to implement Launch in the classroom, how to save money on projects, and tips and hacks to making Launch go smoothly.
Presenters: Teresa Cordry, 6th grade Teacher, Stacy Harlan, 3rd grade teacher, South Nodaway School District
Audience: L- Launch, Room 1016

1.16: Importance of STEM in Elementary Education
Open discussion on how teachers are implementing Launch into their districts, schools, or classrooms. Discussion items to include: Time management, Student Notebook Organization, Supplement Materials, Student Assessment
Presenter: Nicole Cooper, K-5 STEM & Technology Specialist, Visitation Academy
Audience: L- Launch, A- Administrator, Room 1017

1.17: Enhancing Student Work Through Local Experts & Online Engagement
The incorporation of medical designs in the new Design & Modeling unit provides additional opportunities. In this session, you will identify ways to reach out to local experts who can partner with your classroom, providing students with professional feedback and learning. We will also identify strategies to further engage students through online content creation, class websites, and social tools.
Presenter: Jeff Campbell, Design & Modeling Master Teacher, St. Joseph School District
Audience: GA- Gateway, Room 915

1.18: PLTW Sub-Plans, What I do. What do you do?
Scenario: You have to be gone (coach, sick, just need a sub!), you’ve already shown “the engineering video” and you don’t want to leave the kids alone in the PLTW room with “that project” and “that sub”... what do you do? I will present alternate sites, programs, YouTube videos, and ideas you can use that tie directly to the PLTW curriculum, and are “Sub-Friendly”. These plans also reinforce real world application, show possibilities, and the end product of the opportunities we are exposing them to. Time for Q&A, Google classroom link, and your ideas at the end.
Presenter: Michael Broyles, Carrollton Middle School, Science teacher/PLTW teacher
Audience: GA- Gateway (Emphasis: DM, AR, MD, can adapt) Room 913
1.19: Growing Your PLTW Program By Recruiting Girls!
This session will go over several proven strategies to help grow a PLTW program, particularly the number of female students. These strategies were used in a program that grew to a point where the girls actually outnumbered the boys! Come hear how we did it!
Presenters: Ashley Gregory, Wentzville School District and Jennifer Strathman, Wentzville School District (both formally with Ritenour School District)
Audience: E- Engineering, GA- Gateway, Room 1009

1.20: IED Automata - Construction and Implementation
Hear from two IED teachers that piloted the Automata unit last year and learn from their successes and mistakes. We will go through the entire project, but most of the session will focus on implementation, timelines, best practices, and physical construction.
Presenters: Brett Kisker - Liberty North HS (Liberty, MO) and Greg Thiel - Center for Academic Achievement (Shawnee Mission, KS)
Audience: E- Engineering, Room 101

1.21: Relevance of Computer Integrated Manufacturing in the Engineering Pathway
Attendees will learn the importance and relevance of Computer Integrated Manufacturing (CIM) into the pathway to engineering program. We will discuss how easy it is to implement, and its very relevant tie in to a new, or already existing program.
Presenters: Ryan Stobaugh and Jared Hook, St. Joseph School District
Audience: E- Engineering, Room 106

1.22: Teaching Troubleshooting to Future Engineers
Troubleshooting problems is an important skill for anyone who is designing and building. This presentation will present instructional methods and resources that can be used to help students develop the ability to effectively and efficiently troubleshoot their circuits, computer programs and/or build projects.
Presenter: Lydia Spoor, Wentzville School District
Audience: E- Engineering, Room 105

1.23: Differentiating Design and Modeling
This session will focus around differentiating the materials of Design and Modeling for all students. This will include ideas for enrichment, including a culminating activity related to the TV Show Shark Tank, as well as strategies to make Design and Modeling work in a co-teaching or class-within-a-class environment. Attendees will walk away with strategies, graphic organizers, and assessment ideas to help them better meet the needs of all their students. Although this class will be geared towards design and modeling, any PLTW course could implement these strategies to help better meet their students’ needs.
Presenters: Caleb Clawson, 6th Grade Teacher; Brook Filis, 6th Grade Teacher, Pleasant Hill Intermediate School
Audience: GA- Gateway, Room 108
I.24: Building Test Banks for PLTW Engineering Classes
In a project based class with a written end of the year exam, it’s a constant challenge to figure out how to assess your students in a way that will reinforce concepts, all while preparing them for the PLTW National End of Course Exam. This session will be a start in developing test banks for each class written by you, the current classroom teachers. There will also be other teachers doing the same and then we’ll all share our homemade questions which will provide a new community of assessment support!
Presenter: Jodie Fowler, Lafayette High School and current Aerospace Master Teacher
Audience: E- Engineering, Room 110

Teachers and Administrators will learn about Computer Integrated Manufacturing (CIM), another PLTW elective class, as it is part of the enhancement of student Inventor, Vex, and programming skills. If you currently teach CIM and want to share or listen about possible enhancements you might make, you should definitely come to collaborate. Have questions? Interested in offering CIM or have difficulty filling the class, come to the session for help.
Presenter: Eric Walters, Summit Technology Academy
Audience: E- Engineering, Room 109

I.26: You Need HOSA for Your Biomed Program. Get one. Be Awesome!
In this session, we will discuss everything you need to know about starting a successful HOSA chapter at your school. Purpose, mission, goals, logistics, competitions, funding and things to do will all be topics of discussion.
Presenter: Matthew Riffee - Teacher Francis Howell School District
Audience: B- Biomedical, Room 102

I.27: DESE UPDATE
The Department of Elementary and Secondary Education continues to support PLTW Programs across the state. This session will update information on PLTW related topics such as Career and Technical Education (CTE), program approval, grant funding, MSIP 6, TSA, HOSA, and after school programs.
Presenters: Tom Schlimpert, Director of Engineering and Technology Education DESE and Shelly Wehmeyer, Director of Health Science Education, DESE
Audience: ALL, Room 916

I.28: Computer Hardware and Software in PLTW
This presentation will cover this year’s PLTW hardware/software requirements and some of the reasoning behind them. It will also cover some migration / setup methods from older hardware.
Presenter: Allen Wilkins - Innovation Support Manager - Missouri S&T
Audience: A- Administrator, C- Computer Science, Room 104
2.01: Let's LAUNCH Into PLTW K-5
Let's LAUNCH into PLTW K-5 curriculum with Launch Lead teachers' tried and true suggestions. The focus of this presentation will include ideas for organization, record-keeping, resources and insights to successfully and effectively facilitate Launch in your classroom. Whether you teach one or all of the Launch modules, join us as we share our ideas and strategies. Participants will be able to apply our “add-ons” and “how-tos” in your own PLTW Launch classroom. This presentation will offer successful, tested, ready to use practices.
Presenters: Jana Monzyk, PLTW Launch Lead Teacher, Michelle Bobo, PLTW Launch Lead Teacher Washington School District
Audience: L- Launch, Room 909

2.02: Connecting Missouri Learning Standards Curriculum (OER) to PLTW LAUNCH
This interactive workshop will allow participants to work with Liberty Public School Innovation & Learning Coaches to see how Liberty schools designed and aligned curriculum, through the use of open educational resources (OER) and PLTW LAUNCH modules.
Presenters: Dr. Jeanette Westfall/Director of Curriculum, Instruction & Staff Development, Brandon Lewis, Ashley Duvall, Ashley Allen, Molly Henley, Dawn Shannon/ LPS Elementary Innovation & Learning Coaching Team
Audience: L- Launch, Room 918

2.03: Making Sense of Microarray
This presentation is for teachers of Medical Interventions who want to better understand microarrays. We will go through the activity in more detail and at the end explore an extension activity.
Presenter: Kevin McCormick, LSR7
Audience: B- Biomedical Science, Room 1010

2.04: Gateways new and old!
Learn about adding supplemental projects and alternate projects to the existing Gateways curriculum. DM, AR, and MD will be covered.
Presenter: Eric Brown, Ferguson Florissant
Audience: GA- Gateway, Room 1015

2.05: Linking the PLTW courses site to an existing LMS - customizing your classroom
Attendees will learn how to manage their classroom using the new PLTW courses online system through a personal canvas learning management account.
Presenter: Mark McAllister, Rockwood School District
Audience: E- Engineering, Room 1018
2.06: Creating Excitement for STEM through Coding and Robotics Competitions
Learn how we generated buzz for incorporating STEM thinking by hosting our 1st Annual District Wide Coding Competition (Code A Palooza) and Robotics Competition (Robot Fest). We will share our processes, rubrics, ad campaign and criterion.
Presenters: Angie Brewer- Assistant Superintendent, Joyce Pacheco and Shannon Matthews, McDonald County
Audience: A-Administrator, Room 1020

2.07: Middle School Recruitment: CSI Springfield
We need more computer scientists! To get more students interested in CS, we need to attract students to the subject earlier in their academic careers. For this reason, Jarrett Middle School hosted a middle school computer science conference for 6th, 7th, and 8th graders, called Computer Science Inspires Springfield. Students attended an opening session with a keynote speaker, several breakout sessions with hands-on activities, and a career fair focused on local tech businesses and education programs. The post-conference survey supports the premise that students are interested and willing to study computer science and are excited about computer science opportunities.
Presenter: Maxcy Dimmick, Gateway to Tech Teacher, Springfield
Audience: GA- Gateway, Room 103

2.08: The Ideal Medical Detectives Class – Challenging, Professional, and Fun!
This workshop will give you ideas on how to increase the professionalism of your middle school PLTW classes. These changes can empower your students and allow them to become enthusiastic independent learners. Topics include the following: an idealized routine that can apply to any topic, document aesthetics, professional laboratory notebook standards, high school vs. middle school students.
Presenter: Nathan Fleming - MD, PBS, and HBS PLTW Instructor at West Plains High School
Audience: GA- Gateway, Room 107

2.09: STEM Education planning - Carnegie STEM Excellence Pathway
“The Carnegie STEM Excellence Pathway initiative is built on the belief that school systems, individual schools, departments, or individual teachers can improve their STEM education practices through a positive, collaborative approach. Designed to help the widest possible range of school districts and schools adopt best practices in STEM education.” The Carnegie STEM Excellence Pathway is a self-assessment instrument, through which participating schools and school districts first evaluate themselves in six areas: Teacher Qualifications, Curriculum, Instructional Practices, Assessment and Demonstration of Skills, Family Engagement and Real-World Connections.
Presenter: Martha McCabe, Director KC STEM
Audience: A-Administrator, Room 912

Audience indication key:
A = Administrator
G = Guidance
L = Launch
GA = Gateway
E = Engineering
B = Biomedical Science
C = Computer Science
ALL = All Audience
2.10: Let’s GIT Serious!

One of the non-negotiable requirements for getting hired as a software developer is “familiarity with a Version Control System”. PLTW introduces us to GIT, the original, and blueprint for, pretty much every other VCS out there. But, the activity that incorporates GIT is somewhat contrived. Some don’t even use it. Learn how GIT can be easily incorporated into your entire program, giving your students (and yourself) access to a powerful development tool not just for software development, but Knowledge Creation in general.

Presenter: Thorin Schmidt / CS Instructor, St Charles School District
Audience: C- Computer Science, Room 1011

2.11: Exploring the co-curricular link between PLTW and TSA, and How to Start Up your Chapter!

Attendees will learn about Missouri Technology Student Association (TSA), one of nine nationally recognized Career and Technical Student Organizations (CTSOs) that effectively aligns with PLTW. Learn how to start a middle level and/or high school local chapter that reinforces PLTW classroom activities through state and national competitive events, team building, community service, and leadership development (through LEAP exercises). TSA is a natural fit for the PLTW Gateway curriculum and the high school Engineering/Computer Science curriculums. Hear from practicing local Chapter Advisors and board members to understand how PLTW and TSA support each other and enhance student development.

Presenters: Louis Breinin, Jim Hogan, Ted Wilkinson, Tom Schlimpert
Audience: E- Engineering, Room 914

2.12: Integrating Chromebooks with Vernier Technology

Participants will use Vernier sensors with Chromebooks to conduct hands-on experiments from the PLTW Biomedical Science Curriculums (PBS, HBS, MI and BI). Teachers will participate in hands-on examples, discuss pedagogy, and make plans for implementation.

Presenters: Dr. Christina Hughes, Science Curriculum Coordinator, Bobby Hughes, Hazelwood East High School/PLTW Teacher
Audience: B- Biomedical Science, A- Administrator, Room 1017

2.13: Using CodingBat To Help Computer Science Students Build Their Muscles

“CodingBat is my students’ favorite tool to practice writing code. This workshop will introduce you to CodingBat and show you ways to utilize it within your CS courses for Java and Python practice. Specific topics include... 1. Keeping track of student progress 2. Authoring your own problems 3. Utilizing CodingBat within a testing (or contest) environment

Presenter: Vince LaVergne, Shawnee Mission Schools
Audience: C- Computer Science, Room 108
2.14: Canvas Basics for new PLTW instructors
New PLTW teachers have access to the Instructure Canvas LMS and need some help with how to utilize it for their classrooms. This session will provide them with ideas and practical knowledge whether they have canvas or some other LMS in their school. Grade-book, testing and assignment help will be addressed.
Presenter: Michael Gurley, POE instructor, Joplin Schools
Audience: E- Engineering, Room 916

2.15: PLTW + AVID = College & Career Ready Students
AVID, Advancement Via Individual Determination, is a global nonprofit organization dedicated to closing the achievement gap by preparing all students for college and other postsecondary opportunities. AVID also impacts the entire student body by bringing research based strategies and curriculum to elementary, secondary and post-secondary classrooms. Combining AVID with PLTW creates a complete college and post-secondary education preparation package. PLTW brings hands on, real world problem solving and engineering activities to the classroom and AVID gives students the academic skills they need to tackle challenging courses in high school and beyond. Both offer unique and proven career preparation skills, as well. AVID combined with PLTW offers a platform for life-long success. Presenter: Renee Freers/ Director of College & Career Readiness, North Kansas City Schools
Audience: A- Administrator, G- Guidance, Room 110

2.16: Enhancing Student Work Through Local Experts & Online Engagement
With the incorporation of medical designs in the new Design & Modeling unit comes new opportunities. In this session, you will identify ways to reach out to local experts who can partner with your classroom, providing students with professional feedback and learning. We will also identify strategies to further engage students through online content creation, class websites, and social tools.
Presenter: Jeff Campbell, Design & Modeling Master Teacher, St. Joseph School District
Audience: GA- Gateway, Room 915

2.17: Starting a PLTW program in your district- Years 1-3
This session will discuss starting a new PLTW program in a district. We will outline the process from beginning through certification. We will look at gaining board approval, teacher training, purchasing, student recruitment, EOC exams and the certification process.
This training will be for administrators, counselors, teachers in all fields. Emphasis on High School and Middle School.
Presenters: Thom Alvarez/Principal, Heather Stoecklein/Biomed, Phil Stone/Engineering, Maryville School District
Audience: A- Administrator, Room 917

2.18: Growing Your PLTW Program By Recruiting Girls!
This session will go over several proven strategies to help grow a PLTW program, particularly the number of female students. These strategies were used in a program that grew to a point where the girls actually outnumbered the boys! Come hear how we did it!
Presenters: Ashley Gregory, Wentzville School District and Jennifer Strathman, Wentzville School District (both formally with Ritenour School District)
Audience: E- Engineering, GA- Gateway, Room 1009

Audience indication key:
A = Administrator
G = Guidance
L = Launch
GA = Gateway
E = Engineering
B = Biomedical Science
C = Computer Science
ALL = All Audience
2.19: IED Automata - Construction and Implementation
Hear from two IED teachers that piloted the Automata unit last year and learn from their successes and mistakes. We will go through the entire project, but most of the session will focus on implementation, timelines, best practices, and physical construction.
Presenters: Brett Kisker - Liberty North HS (Liberty, MO) and Greg Thiel - Center for Academic Achievement (Shawnee Mission, KS)
Audience: **E - Engineering**, Room 101

2.20: An Academic Performance Assessment of Missouri University of Science and Technology (Missouri S&T)
Students with Project Lead the Way Experience
This study of academic performance over the spring and fall semesters for the 2015 and 2016 academic years provides tangible evidence that Missouri S&T students with PLTW course experience attained higher average course grade results in 34 of the 41 Missouri S&T courses. Subject areas included math, speech, English, statistics, chemistry, economics, physics, freshman engineering, and seven engineering programs.
Presenters: Joe Stanley and Stuart Baur, Associate Professors, Missouri University of Science and Technology
Audience: **E - Engineering, G - Guidance, A - Administrator**, Room 106

2.21: Assessing Students in PLTW Engineering
Attendees will discuss strategies for using effective formative and summative assessments in the PLTW classroom. A variety of assessment formats will be discussed and examples of quizzes, tests, and rubrics will be shared. Attendees will have the opportunity to develop their own assessment during the presentation. Bring a laptop!
Presenter: Jennifer Ewan/PLTW Engineering & CS Teacher, Blue Springs School District
Audience: **E - Engineering**, Room 1012

2.22: Promoting PLTW through Partnerships
Why partner? How can you leverage others to help expand PLTW Launch or secondary courses? Learn how to expand partnerships within your district and the community. Learn about specific examples such as Medical Careers Night, Library Media partnerships through makerspaces and the STEAM bus.
Presenters: Colleen Jones - Liberty Public Schools - CCR Director, Julie Simpson - Liberty Hospital - PR Director, Katie Fisher - Liberty Public Schools - LMC Specialist
Audience: **ALL**, Room 1013

2.23: Unconventional Career Pathways. It’s a new day!
Career pathways for great paying careers and no student debt. Did you say pathways for great paying jobs and no student debt? Sources tell us student loan debt is reported at $1.4 trillion plus. To add to the dilemma, many students choose programs not suited for them. They either change majors or withdraw completely emerging sometime later to realize there might be an alternative path. What would it look like if, with little to no college, a company hired a student? Then paid their way to completion. A living wage before the age of 20! No student loan debt- that on average is equal to a new car payment for 10 years. How can my students sign up for this?”
Presenters: Joseph Roche, Dean of Instruction, Metropolitan Community College and Steve Pankey, MCC BT Enrollment Manager
Audience: **A - Administrator, G - Guidance**, Room 1016

**Audience indication key:**
- **A** = Administrator
- **G** = Guidance
- **L** = Launch
- **GA** = Gateway
- **E** = Engineering
- **B** = Biomedical Science
- **C** = Computer Science
- **ALL** = All Audience
2.24: Teaching Troubleshooting to Future Engineers
Troubleshooting problems is an important skill for anyone who is designing and building. This presentation will present instructional methods and resources that can be used to help students develop the ability to effectively and efficiently troubleshoot their circuits, computer programs, and/or build projects.
Presenter: Lydia Spoor, Wentzville School District
Audience: E- Engineering, Room 105

2.25: Never accept NO!
Experiencing many different “no’s” throughout my life in the educational realm, it seemed that I was always facing a brick wall. From being told by my high school counselor that I shouldn’t ever consider going to college, to a public relations college instructor telling me that I had too much of a southern accent and I should drop the class. In 2016, having heard about PLTW, and then the opportunity to introduce the classes in my school district, I feel that students having the PLTW classes will gain confidence, knowledge, personal strength to face challenges and experiences without any hesitation. From day one, students are introduced to PLTW by a simple exercise that allows them all to be critical thinkers using their soft skills, promoting differences and creativity in problem solving. All participants will have the opportunity to experience the “day one” activity I plan for all my students.
Presenter: Janet Brewer, Doniphan R1 School District
Audience: ALL, Room 112

2.26: Computer Integrated Manufacturing: Product Ideation, Creation, Enhanced Curriculum
Teachers and Administrators will learn about Computer Integrated Manufacturing (CIM), another PLTW elective class, as it is part of the enhancement of student Inventor, Vex, and programming skills. If you currently teach CIM and want to share or listen about possible enhancements you might make, you should definitely come to collaborate. Have questions? Interested in offering CIM or have difficulty filling the class, come to the session for help.
Presenter: Eric Walters, Summit Technology Academy
Audience: E- Engineering, Room 109

2.27: Body Building with Clay
Hands on approach to teaching anatomy and body systems. A proven method used from middle schools to medical schools that allows for learning, not memorization, how the human body systems work together. Learning workshop, participants will be involved in building, and discussion about how the system works in the classroom.
Presenter: Travis Hamilton, Educational Consultant, Anatomy in Clay Learning System
Audience: B- Biomedical Science, Room 1022

2.28: Computer Hardware and Software in PLTW
This presentation will cover this year’s PLTW hardware/software requirements and some of the reasoning behind them. It will also cover some migration / setup methods from older hardware.
Presenter: Allen Wilkins - Innovation Support Manager - Missouri S&T
Audience: A- Administrator, C- Computer Science, Room 104
2.29: Connecting PLTW Pathways to College
What do PLTW students need to know if they plan to pursue an engineering degree? Come learn how the engineering, computer science, and biomedical pathways transition to college. We will explore types of engineering degrees and what students can be doing right now to prepare. We will also look at engineering careers and opportunities for students after they graduate.
Presenter: Leanne Reineman, Kansas State University- College of Engineering
Audience: G- Guidance, A- Administrator, E- Engineering, Room 102

12:15 - 1:45 PM - CONCURRENT SESSION 3 - ROUND TABLE DISCUSSION
Lunch and Learn - box lunches available at various stations around building - eat in designated classrooms.
In this session, participants will be grouped based on their desired pathway of PLTW. Facilitators will focus on best practices within each pathway, encourage collaboration, and promote the sharing of ideas for immediate implantation in the classroom.

A. Launch, Room 918
   Presenter: Stephanie Valli

B. Gateway, Room 915
   Presenter: Jeff Campbell

C. Biomedical Sciences, Room 1010
   Presenters: Jean Hammer and Jennifer Strathman

D. Computer Science, Room 909
   Presenter: Kevin Clevenger

E. Engineering, Room 1009
   Presenters: Ashley Gregory and Jim Kreyling

F. Administrators and Guidance Counselors, Room 1012
   Presenter: Aaron Smith

Audience indication key:
A = Administrator
G = Guidance
L = Launch
GA = Gateway
E = Engineering
B = Biomedical Science
C = Computer Science
ALL = All Audience

2:00 - 2:50 PM - CONCURRENT SESSION 4

4.01: Girls in Tech KC Initiative
Girls in Tech KC encourages girls to explore opportunities in computer science through outreach, mentoring and hands-on learning. The movement addresses an increasing demand for a qualified and diverse workforce to fill tech jobs in the region. The initiative follows a research-based approach that includes: • early hands-on exposure to computer science through the Hour of Code events and girls-only app camps • connecting female students with female mentors • a social media campaign to raise awareness, help girls interested in tech connect with each other and learn more about the types of work available by connecting with women already in the field.
Presenter: Martha McCabe, Director KC STEM
Audience: C- Computer Science, Room 912
4.02: Can Elementary Students Really Code?
In this session, you will deepen your knowledge of computer science through hands-on experiences that illustrate computer science in both unplugged and plugged experiences. You will walk away seeing how these experiences connect to the MO Learning Standards and how we can teach computer science to even our youngest students all the way up through 5th grade.
Presenter: Stephanie Valli - Middle School STEM Coordinator, Parkway School District
Audience: L- Launch, A- Administrator, Room 918

4.03: Launch Model for Small Schools
Adrian has incorporated a different model for Launch. Small schools could benefit from this model since it does not require a complete training of all elementary teachers in the program. Administrators could see a different approach to incorporating the program in their small schools to save teacher overload.
Presenter: Jim Hogan, Launch Lead Teacher, Adrian R-3 Schools
Audience: A- Administrator, Room 914

4.04: Using GitHub as an LMS in a CS Classroom
The successes and pitfalls of using GitHub as a substitute for a student learning management system will be discussed and attendees will be shown the ideal configuration of GitHub for use as an LMS in their classrooms. The advantages of using this as an LMS in a computer science classroom will also be highlighted. Session attendees will receive electronic materials to aide them in implementing GitHub as an LMS in their classrooms.
Presenter: Monte Davis, PLTW CS Teacher, Blue Springs South High School
Audience: C- Computer Science, Room 1011

4.05: PLTW Computer Science Pathway
Overview of the PLTW Computer Science pathway as a whole will be presented with information of the new CSE course and information pertaining to the new Cybersecurity course coming in 2018-19 School year.
Presenters: Kevin Clevenger, Blue Springs HS and Lewis McKenzie, Computer Science Teacher, North Kansas City
Audience: C- Computer Science, Room 909

4.06: Integrating Chromebooks with Vernier Technology
Participants will use Vernier sensors with Chromebooks to conduct hands-on experiment from the PLTW Biomedical Science Curricula (PBS, HBS, MI and BI). Teachers will participate in hands-on examples, discuss pedagogy, and make plans for implementation.
Presenters: Dr. Christina Hughes, Science Curriculum Coordinator, Bobby Hughes, Hazelwood East High Science/PLTW Teacher
Audience: B- Biomedical Science, A- Administrator, Room 1017
4.07: Using CodingBat To Help Computer Science Students Build Their Muscles

“CodingBat is my students’ favorite tool to practice writing code.” This workshop will introduce you to CodingBat and show you ways to utilize it within your CS courses for Java and Python practice. Specific topics include...

1. Keeping track of student progress
2. Authoring your own problems
3. Utilizing CodingBat within a testing (or contest) environment

Presenter: Vince LaVergne, Shawnee Mission Schools
Audience: C- Computer Science, Room 108

4.08: Biomedical Teacher Externships

As part of a collaborative, regional effort in KC, Kansas City Biomed teachers were able to participate in teacher externships this summer at three facilities; MCC-Penn Valley Health Science Institute, Children’s Mercy Hospital and the Sarah Cannon Cancer Center at Centerpoint. This opportunity was created by a regional effort and partnership with DESE, the local Career Ed Consortium and the Independence School District. Teachers were able to experience the following over three days: lab simulations, virtual hospital, genome labs, pharmacy, radiation, infusion centers, etc. At the end of this experience they had time to create a PBL to use in their classes this fall.

Presenters: Linda Washburn, Director Career Ed Consortium, Ann Starling-Horner, DESE Pathways to Prosperity
Audience: B- Biomedical Science, Room 1012

4.09: Professional Based Learning in PLTW Classrooms

This session will include:

- How to acquire business partners in appropriate industry pathways related to their classroom content areas
- How to communicate with partners
- How to integrate content expectations, while facilitating professional based learning, through industry partnerships

Presenters: Stephanie Amaya/Director of Professional Studies, Sarah Haferkamp, Professional Studies Facilitator, Park Hill School District
Audience: ALL, Room 1013

4.10: Intro to 3D Printing in the Classroom

Discover how you can incorporate 3D printing in your classroom and help your students design their own models to print. Session will include ideas on incorporating Tinkercad to help students design their own prints, locating existing files on the web and incorporating 3D printing in a variety of content areas. Eric is a middle school classroom teacher who also serves as a Dremel 3D Printer Teaching Ambassador.

Presenter: Eric Langhorst, Liberty Public Schools
Audience: GA- Gateway, Room 1010
4.11: LAUNCH Lead Teachers, Empower your Classroom Teachers with these Tips and Tricks!
LAUNCH Lead Teachers, help your classroom teachers ease into PLTW with these tips and tricks for module implementation and instruction. This session will provide strategies and tools that enable teachers to be successful with integrating the APB Approach and LAUNCH modules into their curriculum. With added support that provides ongoing guidance and targeted practices, your classroom teachers will flourish with Project Lead the Way!
Presenters: Tracie Joiner, PLTW Launch Lead Teacher and K-5 Instructional Coach. Lori Shannon, Instructional Coach
Audience: L- Launch, Room 1015

4.12: Girls N2 STEM
Girls N2 STEM is a club I started last year that increases girls interest in STEM. I will share two units: Technology and Fashion and Engineering a City. In these units students unleashed their creativity through a variety of activities that introduced them to careers in engineering and technology. During Technology and Fashion, students learned how to use technology to create a one of a kind outfit. During our Engineering unit, students built a city model. Students created building codes, learned about weathering and erosion as they designed bridges and roads, stopped storm water runoff and created an electrical system that powered their city. These activities allowed students to see the different careers engineering and technology have to offer.
Presenter: Carly Coleman - Elementary teacher - Liberty Public School District
Audience: E- Engineering, Room 915

4.13: Launch organization and journaling
PLTW Launch can have many materials to store and prep. Let me show you some shortcuts I use for organization storage and management of materials, as well as journaling I use to synthesize and assess students learning.
Presenter: Christine Davenport-Launch Lead Teacher
K-5 (specials teacher), West Platte Elementary
Audience: L- Launch, Room 1018

4.14: What to Expect as a First Year Launch Teacher
Attendees will learn what to expect during the first year of PLTW Launch. We will discuss how to implement Launch in the classroom, how to save money on projects, and tips and hacks to making Launch go smoothly.
Presenters: Teresa Cordry, 6th grade Teacher; Stacy Harlan, 3rd grade teacher, South Nodaway School District
Audience: L- Launch, Room 1016

4.15: Liberty North High School SWEnext Chapter
Liberty North's SWEnext (a high school version of the Society of Women Engineers) Chapter will be bringing projects created by SWEnext members in PLTW engineering classes. As an attendee, you will learn about how we connect with professional mentors, our outreach program for younger girls, and see some of our creations from various PLTW courses. The presentation will be run by SWEnext members who are current engineering students at Liberty North High School.
Presenters: Hannah Leonard and Delaney Clawson, SWEnext members, Liberty North High School
Audience: E- Engineering, Room 1020
4.16: PLTW + AVID = College & Career Ready Students
AVID, Advancement Via Individual Determination, is a global nonprofit organization dedicated to closing the achievement gap by preparing all students for college and other postsecondary opportunities. AVID also impacts the entire student body by bringing research based strategies and curriculum to elementary, secondary and post-secondary classrooms. Combining AVID with PLTW creates a complete college and post-secondary education preparation package. PLTW brings hands on, real world problem solving and engineering activities to the classroom and AVID gives students the academic skills they need to tackle challenging courses in high school and beyond. Both offer unique and proven career preparation skills, as well. AVID combined with PLTW offers a platform for life-long success. Presenter: Renee Freers/ Director of College & Career Readiness, North Kansas City Schools
Audience: A- Administrator, G- Guidance, Room 110

4.17: A Twist on the Therapy Toy Project
In order to give students a real life experience with the PLTW curriculum, the toy project for the new Design and Modeling class was modified with the help of a special education teacher to create a real product, for a real student, with a real need. This has positively impacted my classroom environment, interdisciplinary practices, and student successes with this project. I will share my failures, successes, and student outcomes.
Presenters: Britney Costanzo and Nahawon Saxon, Fort Osage School District
Audience: GA- Gateway--Design and Modeling, Room 101

4.18: PLTW Sub-Plans, What I do. What do you do?
Scenario: You have to be gone (coach, sick, just need a sub!), you’ve already shown “the engineering video” and you don’t want to leave the kids alone in the PLTW room with “that project” and “that sub”... what do you do? I will present alternate sites, programs, YouTube videos, and ideas you can use that tie directly to the PLTW curriculum, and are “Sub-Friendly”. These plans also reinforce real world applications, show possibilities, and the end product of the opportunities we are exposing them to. Time for Q&A, Google classroom link, and your ideas at the end.
Presenter: Michael Broyles, Teacher, Carrollton MS, Science teacher/PLTW instructor.
Audience: GA- Gateway (Emphasis:DM,AR,MD, can adapt), Room 913

4.19: Medical Detectives Extensions
This session is designed to provide teachers with supplemental resources to extend your Medical Detectives curriculum and explain how to find additional resources in the future.
Presenter: Jean Eckert/8th Grade Science/PLTW Teacher, Cameron Schools
Audience: GA- Gateway, Room 103
4.20: Starting a PLTW program in your district. Years 1-3
This session will discuss starting a new PLTW program in a district. We will outline the process from beginning through certification. We will look at gaining board approval, teacher training, purchasing, student recruitment, EOC exams and the certification process. This training will be for administrators, counselors, teachers in all fields. Emphasis on high school and middle school.
Audience: A- Administrator, Room 917

4.21: Laser Scanning, Point Clouds and the Inventor Workflow
This presentation/demonstration will show how 3D scanning can interact with Inventor and other software packages. It will include a tutorial on setting up and using a FARO Focus scanner with a pre-scanned point cloud; how to properly setup and prepare a site for 3D scanning and will use ReCAP Pro 2018 to demonstrate how to combine scans together automatically and manually to export into a design package. Then lastly, we will show how to use Inventor Professional 2018 to import scan data to enhance the design process. Presenter: Mike Cline, Metropolitan Community College
Audience: E- Engineering, Room 104

4.23: DESE UPDATE
The Department of Elementary and Secondary Education continues to support PLTW Programs across the state. This session will update information on PLTW related topics such as Career and Technical Education (CTE), program approval, grant funding, MSIP 6, TSA, HOSA, and after school programs.
Presenters: Tom Schlimpert, Director of Engineering and Technology Education DESE and Shelly Wehmeyer, Director of Health Science Education, DESE
Audience: ALL, Room 916

4.24: Relevance of Computer Integrated Manufacturing in the Engineering Pathway
Attendees will learn the importance and relevance of Computer Aided Manufacturing (CIM) into the pathway to engineering program, and how easy it is to implement, and have a very relevant tie in to a new, or already existing program.
Presenters: Ryan Stobaugh and Jared Hook, St. Joseph School District
Audience: E- Engineering, Room 106

4.25: How do I teach Biology within the Biomedical Classroom?
Aligning Principles of Biomedical Sciences PLTW curriculum with state Biology Standards and preparing students for success on the state EOC and PLTW EOC.
Presenter: Jennifer Daubendiek, Fort Osage R1 School District
Audience: B- Biomedical Science, Room 105
4.26: Never accept NO!
Experiencing many different “no’s” throughout my life in the educational realm, it seemed that I was always facing a brick wall. From being told by my high school counselor, that I shouldn’t ever consider college to a public relations class instructor telling me that I had to much of a southern accent and I needed to drop the class. Having the privilege of hearing about PTLW and then the opportunity to introduce the classes in my school district. I feel that students having exposure to the PTLW classes will gain confidence, knowledge, personal strength to face challenges and experiences without any hesitation. PTLW allows for doors to open and young minds to explore in an accepting and challenging positive environment.
Presenter: Janet Brewer, Doniphan
Audience: GA- Gateway, Room 112

4.27: Body Building with Clay
Hands on approach to teaching anatomy and body systems. A proven method used from middle schools to medical schools that allows for learning, not memorization, how the human body systems work together. Learning workshop, participants will be involved in building, and discussion about how the system works in the classroom.
Presenter: Travis Hamilton, Educational Consultant, Anatomy in Clay Learning System
Audience: B- Biomedical Science, Room 1022

4.28: You Need HOSA for Your Biomed Program. Get one. Be Awesome!
In this session, we will discuss everything you need to know about starting a successful HOSA chapter at your school. Purpose, mission, goals, logistics, competitions, funding and things to do will all be topics of discussion.
Presenter: Matthew Riffee - Teacher Francis Howell School District
Audience: B- Biomedical Science, Room 102

3:00 - 3:50 PM - CONCURRENT SESSION 5

5.01: Girls in Tech KC initiative
Girls in Tech KC encourages girls to explore opportunities in computer science through outreach, mentoring and hands-on learning. The movement addresses an increasing demand for a qualified and diverse workforce to fill tech jobs in the region.
The initiative follows a research-based approach that includes:
• early hands-on exposure to computer science through the Hour of Code events and girls-only app camps
• connecting female students with female mentors
• a social media campaign to raise awareness, help girls interested in tech connect with each other and learn more about the types of work available by connecting with women already in the field.
Presenter: Martha McCabe, Director KC STEM
Audience: C- Computer Science, Room 912
5.02: Using GitHub as an LMS in a CS Classroom
The successes and pitfalls of using GitHub as a substitute for a student learning management system will be discussed and attendees will be shown the ideal configuration of GitHub for use as an LMS in their classrooms. The advantages of using this as an LMS in a computer science classroom will also be highlighted. Session attendees will receive electronic materials to aide them in implementing GitHub as an LMS in their classrooms.
Presenters: Monte Davis, PLTW CS Teacher, Blue Springs South High School
Audience: C- Computer Science, Room 1011

5.03: Exploring the co-curricular link between PLTW and TSA, and how to start up your chapter!
Attendees will learn about Missouri Technology Student Association (TSA), one of nine nationally recognized Career and Technical Student Organizations (CTSOs) that effective aligns with PLTW. Learn how to start a middle level and/or high school local chapter that reinforces PLTW classroom activities through state and national competitive events, team building, community service, and leadership development (through LEAP exercises). TSA is a natural fit for the PLTW Gateway curriculum and the high school Engineering/Computer Science curriculums. Hear from practicing local Chapter Advisors and board members to understand how PLTW and TSA support each other and enhance student development.
Presenters: Louis Breinin, Jim Hogan, Ted Wilkinson, Tom Schlimpert
Audience: E- Engineering, Room 914

5.04: PLTW Computer Science Pathway
Overview of the PLTW Computer Science pathway as a whole will be presented with information of the new CSE course and information pertaining to the new cybersecurity course coming in 2018-19 School year.
Presenters: Kevin Clevenger, Blue Springs HS, and Lewis McKenzie, Computer Science Teacher, North Kansas City
Audience: C- Computer Science, Room 909

5.05: Intro to 3D Printing in the Classroom
Discover how you can incorporate 3D printing in your classroom and help your students design their own models to print. Session will include ideas on incorporating Tinkercad to help students design their own prints, locating existing files on the web and incorporating 3D printing in a variety of content areas. Eric is a middle school classroom teacher who also serves as a Dremel 3D Printer Teaching Ambassador.
Presenter: Eric Langhorst, Liberty Public Schools
Audience: GA- Gateway, Room 1010
5.06: LAUNCH Lead Teachers, Empower your Classroom Teachers with these Tips and Tricks!
LAUNCH Lead Teachers, help your classroom teachers ease into PLTW with these tips and tricks for module implementation and instruction. This session will provide strategies and tools that enable teachers to be successful with integrating the APB Approach and LAUNCH modules into their curriculum. With added support that provides ongoing guidance and targeted practices, your classroom teachers will flourish with Project Lead the Way!
Presenters: Tracie Joiner, PLTW Launch Lead Teacher and K-5 Instructional Coach. Lori Shannon, Instructional Coach
Audience: L- Launch, Room 1015

5.07: Girls N2 STEM
Girls N2 STEM is a club I started last year that increases girls interest in STEM. I will share two units: Technology and Fashion and Engineering a City. In these units students unleashed their creativity through a variety of activities that introduced them to careers in engineering and technology. During Technology and Fashion, students learned how to use technology to create a one of a kind outfit. During our Engineering unit, students built a city model. Students created building codes, learned about weathering and erosion as they designed bridges and roads, stopped storm water runoff and created an electrical system that powered their city. These activities allowed students to see the different careers engineering and technology have to offer.
Presenter: Carly Coleman - Elementary teacher - Liberty Public School District
Audience: E- Engineering, Room 915

5.08: Launch organization and journaling
PLTW Launch can have many materials to store and prep. Let me show you some shortcuts I use for organization storage and management of materials, as well as journaling I use to synthesize and assess students learning.
Presenter: Christine Davenport-Launch Lead Teacher K-5 (specials teacher), West Platte Elementary
Audience: L- Launch, Room 1018

5.09: Canvas Basics for new PLTW instructors
New PLTW teachers have access to the Instructure Canvas LMS and need some help with how to utilize it for their classrooms. This session will provide them with ideas and practical knowledge whether they have canvas or some other LMS in their school. Grade-book, testing and assignment help will be addressed.
Presenter: Michael Gurley POE instructor, Joplin Schools
Audience: E- Engineering, Room 916

5.10: Liberty North High School SWE next Chapter
Liberty North’s SWEnext (a high school version of the Society of Women Engineers) Chapter will be bringing projects created by SWEnext members in PLTW engineering classes. As an attendee, you will learn about how we connect with professional mentors, our outreach program for younger girls, and see some of our creations from various PLTW courses. The presentation will be run by SWEnext members who are current engineering students at Liberty North High School.
Presenters: Hannah Leonard and Delaney Clawson, SWENext members, Liberty North High School
Audience: E- Engineering, Room 1020

Audience indication key:
A = Administrator
G = Guidance
L = Launch
GA = Gateway
E = Engineering
B = Biomedical Science
C = Computer Science
ALL = All Audience
5.11: Importance of STEM in Elementary Education

Open discussion on how teachers are implementing Launch into their districts, schools, or classrooms. Discussion items to include:
- Time management
- Student Notebook Organization
- Supplement Materials
- Student Assessment

Presenter: Nicole Cooper, K-5 STEM & Technology Specialist, Visitation Academy

Audience: **L- Launch, A- Administrator**, Room 1017

5.12: A Twist on the Therapy Toy Project

In order to give students a real life experience with the PLTW curriculum, the toy project for the new Design and Modeling class was modified with the help of a special education teacher to create a real product, for a real student, with a real need. This has positively impacted my classroom environment, interdisciplinary practices, and student successes with this project. I will share my failures, successes, and student outcomes.

Presenters: Britney Costanzo and Nahawon Saxon, Fort Osage School District

Audience: **GA- Gateway**, Design and Modeling, Room 101

5.13: Starting a PLTW program in your district. Years 1-3

This session will discuss starting a new PLTW program in a district. We will outline the process from beginning through certification. We will look at gaining board approval, teacher training, purchasing, student recruitment, EOC exams and the certification process.

This training will be for administrators, counselors, teachers in all fields. Emphasis on high school and middle school.

Presenters: Thom Alvarez/Principal, Heather Stoecklein/Biomed, Phil Stone/Engineering, Maryville School District

Audience: **A- Administrator**, Room 917

5.14: Medical Detectives Extensions

This session is designed to provide teachers supplemental resources to extend your Medical Detectives curriculum and explain how to find additional resources in the future.

Presenter: Jean Eckert/8th Grade Science/PLTW Teacher, Cameron Schools

Audience: **GA- Gateway**, Room 103

5.15: Growing Your PLTW Program By Recruiting Girls!

This session will go over several proven strategies to help grow a PLTW program, particularly the number of female students. These strategies were used in a program that grew to a point where the girls actually outnumbered the boys! Come hear how we did it!

Presenters: Ashley Gregory, Wentzville School District and Jennifer Strathman, Wentzville School District (both formally with Ritenour School District)

Audience: **E- Engineering, GA- Gateway**, Room 1009
5.16: Laser Scanning, Point Clouds and the Inventor Workflow
This presentation/demonstration will show how 3D scanning can interact with Inventor and other software packages. It will include a tutorial on setting up and using a FARO Focus scanner with a pre-scanned point cloud; how to properly setup and prepare a site for 3D scanning, and will use ReCAP Pro 2018 to demonstrate how to combine scans together automatically and manually to export into a design package. Lastly, we will show how to use Inventor Professional 2018 to import scan data to enhance the design process.
Presenter: Mike Cline, Metropolitan Community College
Audience: E- Engineering, Room 104

5.17: Can Elementary Students Really Code?
In this session, you will deepen your knowledge of computer science through hands-on experiences that illustrate computer science in both unplugged and plugged experiences. You will walk away seeing how these experiences connect to the MO Learning Standards and how we can teach computer science to even our youngest students all the way up through 5th grade.
Presenter: Stephanie Valli - Middle School STEM Coordinator, Parkway School District
Audience: L- Launch, A- Administrator, Room 918

5.18: Promoting PLTW through Partnerships
Why partner? How can you leverage others to help expand PLTW Launch or secondary courses? Learn how to expand partnerships within your district and the community. Learn about specific examples such as Medical Careers Night, Library Media partnerships through makerspaces and the STEAM bus.
Presenters: Colleen Jones - Liberty Public Schools - CCR Director,
Julie Simpson - Liberty Hospital - PR Director,
Katie Fisher - Liberty Public Schools - LMC Specialist
Audience: ALL, Room 1013

5.19: Unconventional Career Pathways. It’s a new day!
Career pathways for great paying careers and no student debt. Did you say pathways for great paying jobs and no student debt? Sources tell us student loan debt is reported at $1.4 trillion plus. To add to the dilemma, many students choose programs not suited for them. They either change majors or withdraw completely emerging sometime later to realize there might be an alternative path. What would it look like if, with little to no college, a company hired a student? Then paid their way to completion. A living wage before the age of 20? No student loan debt— that on average is equal to a new car payment for 10 years. How can my students sign up for this?
Presenters: Joseph Roche, Dean of Instruction, Metropolitan Community College and Steve Pankey, MCC BT Enrollment Manager
Audience: A- Administrator, G- Guidance, Room 1016

5.20: How do I teach Biology within the Biomedical Classroom?
Aligning Principles of Biomedical Sciences PLTW curriculum with state Biology Standards and preparing students for success on the state EOC and PLTW EOC.
Presenter: Jennifer Daubendiek, Fort Osage R1 School District
Audience: B- Biomedical Science, Room 105

Audience indication key:
A = Administrator
G = Guidance
L = Launch
GA = Gateway
E = Engineering
B = Biomedical Science
C = Computer Science
ALL = All Audience
5.21: Differentiating Design and Modeling
This session will focus around differentiating the materials of Design and Modeling for all students. This will include ideas for enrichment, including a culminating activity related to the TV Show Shark Tank, as well as strategies to make Design and Modeling work in a co-teaching or class-within-a-class environment. Attendees will walk away with strategies, graphic organizers, and assessment ideas to help them better meet the needs of all their students. Although this class will be geared towards design and modeling any PLTW course could implement these strategies to help better meet their students’ needs.
Presenters: Caleb Clawson, 6th Grade Teacher; Brook Filis, 6th Grade Teacher, Pleasant Hill Intermediate School
Audience: GA- Gateway, Room 108

5.22: Building Test Banks for PLTW Engineering Classes
In a project based class with a written end of the year exam, it’s a constant challenge to figure out how to assess your students in a way that will reinforce concepts, all while preparing them for the PLTW National End of Course Exam. This session will be a start in developing test banks for each class written by you, the current classroom teachers. There will also be other teachers doing the same and then we’ll all share our homemade questions which will provide a new community of assessment support!
Presenter: Jodie Fowler, Lafayette High School and current Aerospace Master Teacher
Audience: E- Engineering, Room 110

5.23: Assessing Students in PLTW Engineering
Attendees will discuss strategies for using effective formative and summative assessments in the PLTW classroom. A variety of assessment formats will be discussed and examples of quizzes, tests, and rubrics will be shared. Attendees will have the opportunity to develop their own assessment during the presentation. Bring a laptop!
Presenter: Jennifer Ewan/PLTW Engineering & CS Teacher, Blue Springs School District
Audience: E- Engineering, Room 1012

5.24: Connecting PLTW Pathways to College
What do PLTW students need to know if they plan to pursue an engineering degree? Come learn how the engineering, computer science, and biomedical pathways transition to college. We will explore types of engineering degrees and what students can be doing right now to prepare. We will also look at engineering careers and opportunities for students after they graduate.
Presenter: Leanne Reineman, Kansas State University- College of Engineering
Audience: G- Guidance, A- Administrator, E- Engineering, Room 102

Audience indication key:
A = Administrator
G = Guidance
L = Launch
GA = Gateway
E = Engineering
B = Biomedical Science
C = Computer Science
ALL = All Audience
Certificate of Participation

Completed by

Eight (8) hours of professional development at

Missouri Project Lead The Way Conference
Blue Springs South High School, Blue Springs, Missouri

David K. Hosick, Project Lead The Way Missouri Senior Affiliate Director
Missouri University of Science and Technology

November 6, 2017
Missouri Project Lead The Way Growth
From 2002 to 2017

2017-18 AY:

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS Engineering Programs</td>
<td>155</td>
</tr>
<tr>
<td>HS Biomedical Programs</td>
<td>104</td>
</tr>
<tr>
<td>HS Computer Science Programs</td>
<td>76</td>
</tr>
<tr>
<td>Gateway Middle School Programs</td>
<td>194</td>
</tr>
<tr>
<td>Launch Elementary Programs</td>
<td>207</td>
</tr>
</tbody>
</table>

TOTAL MISSOURI PROGRAMS FOR 2016-17 736

Note: These are programs, not unique schools. Some high schools have Engineering, Biomedical and Computer Science offerings.
You’re leading the way to a brighter future.

Thank you for encouraging and empowering students as they discover their potential in science, technology, engineering and math. We’re proud to celebrate and support the teachers who are building that passion in tomorrow’s leaders. Learn about our STEM offerings at burnsmd.com/PLTW17.
How do I order my ANATOMY IN CLAY® Supplies for the Project Lead The Way Biomedical Science Program?

1 myPLTW Store

As a reminder, the myPLTW Store provides an easy-to-use online guided experience, allowing users the opportunity to build customized lists of equipment and supplies for PLTW programs, generate detailed quotes, purchase select PLTW products with a credit card or purchase order, view the status of an order, and pay open invoices.

2 Obtaining a Quote / Placing an Order

To obtain a quote or place an order for your Project Lead The Way Biomedical Science program, login to your myPLTW account at www.myPLTW.org. If you don’t yet have an account, contact your PLTW Program Coordinator or the PLTW Solution Center at solutioncenter@pltw.org or 877.335.PLTW.

www.anatomyinclay.com  |  (p) 800.950.5025  |  (f) 970.667.5025  |  info@anatomyinclay.com

View how other PLTW BMS instructors are using the ANATOMY IN CLAY® Learning System in their classrooms: https://youtu.be/07A7he_YFhU
Teaches the new Missouri Learning Standards!

A brand-new K–12 program, built from the ground up specifically for NGSS*, to help all students achieve science literacy with:

Three-Dimensional Learning
Professional Support from HMH®
Activity-Driven Learning
Integrated Engineering & STEM
Digital-First Flexibility
Performance-Based Assessment

Visit hmhco.com/ScienceDimensions for more information.

Contact your HMH Account Executive to receive samples of this groundbreaking new program!

*Next Generation Science Standards and logo are registered trademarks of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards was involved in the production of, and does not endorse, this product. HMH Science Dimensions™, HMH®, and Houghton Mifflin Harcourt® are trademarks or registered trademarks of Houghton Mifflin Harcourt. © Houghton Mifflin Harcourt. All rights reserved. 08/17 Pre-WF201220
Imagine a world where every interested student can delve into engineering and computer science, explore opportunities in biomedical sciences and get hands-on with robotics. From today’s STEM students come the problem solvers of tomorrow—in Kansas City and beyond.

Join KC STEM Alliance’s work to inspire all students to explore the innovative, world-changing possibilities found through STEM.

WWW.KCSTEM.ORG
INVEST IN YOUR FUTURE
WITH A DEGREE FROM
THE PATHWAY TO SUCCESS
MISSOURI UNIVERSITY OF SCIENCE & TECHNOLOGY
ROLLA, MISSOURI | FOUNDED 1870 | mst.edu
On behalf of the Missouri Project Lead The Way State Conference Planning Committee, we would like to express our appreciation to this year’s sponsors.

THANK YOU SPONSORS

THANK YOU PLTW STUDENT EXHIBITORS FROM AREA SCHOOLS