

Illinois PLTW Teacher Workshop Day Agenda - November 5, 2015

9:00 - 10:00 am **Registration and Coffee** (Lobby and Ballroom Foyer)
Informal Teacher Display Sharing and Success/Challenges

10:00 - 11:00 am **OPENING GENERAL SESSION (Salon A)**

Welcome and Introductions--*Brenda Pacey, U of Illinois PLTW Affiliate Director*

Introduction to the APB Instructional Approach



Project Lead The Way curriculum is founded on the Activity-, project-, problem-based (APB) instructional approach. In this interactive opening general session, teachers will view an introductory video, gain hands-on experience in designing graphic organizers to enhance mapping lessons to scaffolded APB instruction approach, and reflect on the impact of effective APB approaches on student learning in PLTW classrooms and beyond. (This session debuts the first of a series of APB professional development resources developed by PLTW which will become available to the whole network in the coming months.)

11:10 - 12:00 pm **Concurrent Sessions #1**

12:00 - 12:45 pm **WORKING LUNCH - Box Lunches**
Roundtables - Salons BC
or **Working lunches in extended Session 1 classrooms**

12:45 - 1:35 pm **Concurrent Sessions #2**

1:45 - 2:35 pm **Concurrent Sessions #3**

2:45 - 3:35 pm **Concurrent Sessions #4**

3:35 - 3:55 pm **“BALLPARK” RECEPTION (Salons BC and Ballroom Foyer)**
Roundtables - Salons BC
or **Working sessions in extended Session 4 classrooms**

3:55 - 4:45 pm **Concurrent Sessions #5**

4:45 - 5:00 pm **Lobby**

Concurrent Session 1 - 11:10 - 12:00 PM

L=Launch; G=Gateway; DM=Gateway DM; AR=Gateway AR; EE=Gateway EE; GA=Gateway GA; ST=Gateway ST; ME=Gateway ME; FS=Gateway FS; MD=Gateway Medical Detectives; Biomed=PBS, HBS, MI, BI; Eng=HS Engineering—all courses; IED=Intro to Eng Design; POE=Principles of Engineering; DE=Digital Electronics; CEA=Civil Engineering and Architecture; CIM=Computer Integrated Manufacturing; AE= Aerospace; BE/ES= Biotech/Environmental Sustainability; EDD=Eng Design and Development; CS=Computer Science (ICS, CSE)

- Presentation Title: Gateway Middle School Curriculum Review/Success and Challenges**
Description: Large group summary review of Gateway curriculum (DM, AR, EE, GA, ST, ME, FS, MD), with special focus on DM and AR foundations.
Presenters: Gateway Master Teachers Patrick Kirk, Kathryn Rabolt, Elizabeth Straczek, Sydney Schuler, facilitators
Room: Salon BC
Target Audience: G All
- Presentation Title: POE Curriculum Review/Success and Challenges**
Description: Curriculum review, and best practices sharing discussions.
Presenters: POE Master Teacher Paul Zurek, Affiliate Professor Bob Becker, facilitators
Room: Salon D
Target Audience: POE
- Presentation Title: DE Curriculum Review/Success and Challenges**
Description: Summary review of newer DE curriculum, with best practices sharing discussions.
Presenters: DE Master Teachers Gary Cotie and Michael Karasch, facilitators
Room: Salon E
Target Audience: DE
- Presentation Title: PLTW Biomedical Science Program: Just What the Doctor Ordered**
Description: Review of the high school Biomedical Science program and how the program is different from traditional science courses. Roundtable discussions among PBS, HBS, MI, BI teachers. **(continues over lunch).**
Presenters: Terry Aukeman, PLTW Associate Director of School Engagement for Northern Indiana
Room: Salon F
Target Audience: Biomed
- Presentation Title: Computer Science (CSE/ICS) Curriculum Review/Success and Challenges**
Description: Curriculum review, and best practices sharing discussions **(continues through lunch and Session 2).**
Presenters: Mike Crowhurst, CSE Master Teacher, facilitator
Room: Salon G
Target Audience: CS
- Presentation Title: IED Curriculum Review/Success and Challenges**
Description: Curriculum review, and best practices sharing discussions.
Presenters: IED Master Teachers Don Whitman, Corey Duzan, Ken Albert, facilitators
Room: Elmhurst 1 & 2
Target Audience: IED
- Presentation Title: Innovation Portal One Day Workshop (Sessions 1 - 5)**
Description: In depth hands-on IP workshop—creating IP accounts, building portfolio pages and utilizing functionalities rubric scoring and reviewing discussions, competition and special opportunities through IP. *(NOTE: A Two-hour Primer version will be offered during the day if interest warrants).*
Presenters: Mark Schroll, PLTW Senior Director of Strategic Partnerships; EDD Master Teacher Stephen Buchs; Anthony Holub, Oswego East HS
Room: Elmhurst 3
Target Audience: EDD, BI, IED, POE
- Presentation Title: Launch VEX IQ Hands on Robotics**
Description: Hands-on time with VEX materials, trouble-shooting errors, and brief overview of Modkit. **(continues over lunch).**
Presenters: Launch Master Teachers Kathy Feser and Emily Schaefer
Room: Elmhurst 4
Target Audience: Launch
- Presentation Title: CEA Curriculum Review/Revit Tips and Techniques**
Description: Curriculum review successes and challenges, best practices sharing, and hands-on Revit tips. **(continues over lunch)**
Presenters: CEA Master Teacher Jason Huber
Room: Wheaton
Target Audience: CEA, GA

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Concurrent Session 2 - 12:45 - 1:35 PM

- Presentation Title:** **Maker Mindset in a PLTW High School Classroom**
Description: Invited to share special student projects at a White House roundtable on the Maker Movement, Holthouse highlights 3D prosthetic hands (IED Parametric concepts), engineering club fighting robot (POE simple machines), and other problem-solving activities building on PLTW curriculum concepts.
Presenters: Frank Holthouse, Leyden High Schools
Room: Salon BC
Target Audience: ALL
- Presentation Title:** **Beginner/Intermediate VEX/Robot C Troubleshooting**
Description: So you were trained at a CTI bootcamp. You actually built the hardware for the activity the other person in your group programmed the CORTEX. Now you are trying to help your students in class, but issues have occurred and you need some help—join other POE and AR colleagues for troubleshooting help.
Presenters: Bob Becker, UIC PLTW Affiliate Professor; Paul Zurek, Gary Cotie, Michael DeWees, Patrick Kirk, Elizabeth Straczek, facilitators.
Room: Salon D
Target Audience: POE, CIM, Gateway AR
- Presentation Title:** **IT's Easy Going Green**
Description: Going green in the high school PLTW classroom, focusing on integrating the LMS with students' Chromebooks and mobile apps to create a paperless classroom.
Presenters: Ken Albert, Niles West HS
Room: Salon E
Target Audience: ENG ALL
- Presentation Title:** **PLTW End of Course Assessment Item Writing**
Description: Do you struggle with knowing how to write challenging multiple choice questions for your students? Come to this session to learn, from a Master Teacher, how PLTW writes EoC Assessment questions, as well as to learn a process using the understandings, knowledge and skills from PLTW courses to guide in writing better multiple choice questions for your students. **(repeated in Session 3)**
Presenters: Terry Aukeman, Associate Director of School Engagement for Northern Indiana
Room: Salon F
Target Audience: ENG ALL, Biomed
- Presentation Title:** **Computer Science (CSE/ICS) Curriculum Review/Success and Challenges (continued from Session 1 and lunch).**
Description:
Room: Salon G
- Presentation Title:** **Autodesk Inventor "The First 50 Minutes Must Know Basics"**
Description: MUST KNOWS to teach to your students the first time they used Inventor. Tips and techniques demonstrated will prepare students to be able to self-diagnose issues and determine correct workarounds. Bottom-up design method will be discussed—students first design and model parts, then insert them into an assembly. To change parts, you must edit them individually. Concept of "Ask Three Before Me" will be explained.
Presenters: IED Master Teacher Don Whitman
Room: Elmhurst 1 & 2
Target Audience: IED, DM, POE, EDD, EE
- Presentation Title:** **Innovation Portal One Day Workshop (continued from Session 1).**
Description:
Room: Elmhurst 3
- Presentation Title:** **Launch K-5 Grade Level Module Reviews**
Description: Overview of all 24 K-5 Launch modules, showing connections with other modules, and providing pictures and videos of hands-on units and student engagement
Presenters: Launch Master Teachers Kathy Feser and Emily Schaefer.
Room: Elmhurst 4
Target Audience: Launch
- Presentation Title:** **Learning Management System Worksession**
Description: Interactive session—whether you are a beginner or experienced, this session will offer customized QA and idea sharing about student rostering, curriculum modules, assignment and grading functionality, End-of-Course Assessment, and teacher and student resources—including a demonstration of the new STEM Premier. **(repeated Session 3)**
Presenters: Illinois Master Teachers Jason Huber and Paul Zurek; Channele Ragland, STEM Premier (remote)
Room: Wheaton
Target Audience: ENG, Biomed, CS, Gateway

Concurrent Session 3 - 1:45 - 2:35 PM

Presentation Title: **Student Documentation - Eportfolios and Engineering Notebook Tips and Techniques**
Description: Interactive best practice discussion session.
Presenters: IED Master Teacher Corey Duzan, facilitator
Room: Salon BC
Target Audience: ENG

Presentation Title: **Intermediate/Advanced VEX/Robot C Troubleshooting**
Description: You have been teaching POE/CIM/AR curriculum for programming the CORTEX and have a good basic understanding and feel comfortable with getting through activities, but a few problems come up or you need some more advanced features to help our students. You may have questions on how to handle your VEX equipment (more students than equipment, organizational issues, etc). This session features best practice sharing and personalized assistance
Presenters: Bob Becker, UIC PLTW Affiliate Professor; Paul Zurek, Gary Cotie, Michael DeWees, Patrick Kirk, Elizabeth Straczek, facilitators.
Room: Salon D
Target Audience: POE, CIM, AR

Presentation Title: **Middle School Gateway Curriculum Specialty Units Roundtables and Best Practices**
Description: Energy and the Environment (EE), Green Architecture (GA), Medical Detectives (MD), Science of Technology (ST), Magic of Electrons (ME), Flight and Space (FS) **(continues Session 4)**
Presenters: Gateway Master Teachers Sydney Schuler, Elizabeth Straczek, Kathryn Rabolt, Patrick Kirk, facilitators
Room: Salon E
Target Audience: EE, GA, ST, ME, MD, FS

Presentation Title: **End of Course Assessment Item Writing**
Description: **(repeated from Session 2)**
Room: Salon F

Presentation Title: **Assessment Tools in the PLTW Classroom**
Description: If you are looking for interactive tools to help assess your students both informally or formally, then this is the session for you! Explore the use of Kahoot, Socrative, and the LMS quiz feature. There will be time to practice and create for your own classroom. **(continues Session 4)**
Presenters: Kathryn Rabolt, Gateway Master Teacher, George Evans JHS
Room: Salon G
Target Audience: ENG, Biomed, Gateway

Presentation Title: **Autodesk Inventor Advanced (Top-Down Approach to Design)**
Description: In Top-down design, parts' shapes, sizes, and locations can be designed in the assembly. The advantage is that much less rework is needed when design changes occur. Parts know how to update themselves based on the way you created them. Use top-down techniques on certain features of a part, complete parts, or entire assemblies. In practice, designers typically use top-down techniques to lay out their assemblies and to capture key aspects of custom parts.
Presenters: IED Master Teacher Don Whitman
Room: Elmhurst 1 & 2
Target Audience: IED, POE, EDD

Presentation Title: **Innovation Portal One Day Workshop**
Description: **(continued from Session 2)**
Room: Elmhurst 3

Presentation Title: **Launch Technology Tool and Tablet Applications Review**
Description: Review of presentation apps used in many of the units. We will focus on Popplet and Educreations but will also take a look at other apps. (iPads with PLTW Launch apps downloaded).
Presenters: Launch Master Teachers Kathy Feser and Emily Schaefer.
Room: Elmhurst 4
Target Audience: Launch (CS/ICS may observe if space available)

Presentation Title: **Learning Management System Worksession**
Description: **(repeated from Session 2)**
Room: Wheaton

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Concurrent Session 4 - 2:45 - 3:35 PM

- Presentation Title:** **Advanced Topics and 3D Printing**
Description: Using common objects to teach advanced methods of 3D modeling and printing—or how we used Mr. and Mrs. Potato Head—to dive deeper into the design process, advanced Inventor techniques, and 3D printing.
Presenters: Michael DeWees, St. Charles East HS
Room: Salon BC
Target Audience: IED, EDD
- Presentation Title:** **VEX/Robot C Open Work Session**
Description: Continuation/personalized idea-sharing and troubleshooting advice.
Presenters: Bob Becker, U of Illinois; Master Teacher facilitators
Room: Salon D
Target Audience: AR, POE, CIM
- Presentation Title:** **Using Fake “Budgets: to Increase Student Engagement in POE Project Management**
Description: Showcase of a “budget” system Zurek uses for major projects to encourage students to solve their own problems. Students “pay” teacher for consulting services and equipment/supplies or extra VEX parts. Presentation will share google spreadsheets and project forms, and features student testimonials.
Presenters: Paul Zurek, POE Master Teacher, Barrington HS
Room: Salon E
Target Audience: AR, POE, CIM
- Presentation Title:** **Middle School Gateway Curriculum Specialty Unit Roundtables and Best Practices (repeated from Session 3)**
Description:
Room: Salon F
- Presentation Title:** **Computer Science (CS/ICS) Curriculum Discussions (continued from Session 3)**
Description:
Room: Salon G
- Presentation Title:** **Sweet Success of Reverse Engineering Cupcakes**
Description: This presentation discusses concept of using cupcakes as a hook to increase student excitement during the reverse engineering process. Participants will first design a custom cupcake creation (food ingredients provided), and the, following reverse engineering guidelines, will measure and create a CAD model. Sample engineering notebooks will be created during this hands-on session. Laptops with CAD software not required but useful. **(limited to 35 - continued through Reception break)**
Presenters: IED Master Teachers Don Whitman and Ken Albert
Room: Elmhurst 1 & 2
Target Audience: IED
- Presentation Title:** **Innovation Portal One Day Workshop (continued from Session 3)**
Description:
Room: Elmhurst 3
- Presentation Title:** **Launch Hands On Intro to Computer Science and Human Body Modules**
Description: Hands-on workshop presents overview of the new 2015 units including the essential questions that drive each unit. We will utilize iPad apps Scratch Jr and Hopscotch to work through some of the puzzles and activities presented in the K, 2nd, and 3rd grade Computer Science modules. (iPads with Scratch Jr and Hopscotch downloaded). **(continued through Reception break)**
Presenters: Launch Master Teachers Kathy Feser and Emily Schaefer.
Room: Elmhurst 4
Target Audience: Launch (MD, Biomed, CS may observe if space available)
- Presentation Title:** **Practical Application of Materials Science Research/Sustainable Architecture**
Description: Member of UIUC Materials Science Professor Trudi Kriven’s research team presents an overview of current research on geopolymer composites and their use in manufacturing and building construction materials. Special focus will be on composites made from Amazonian kaolin clay reinforced with chopped bamboo, to produce construction materials that are as strong as cement, but more environmentally efficient.
Presenters: Kashik Sankar, UIUC College of Engineering
Room: Wheaton
Target Audience: CEA, POE, ST, GA, E

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Concurrent Session 5 - 3:55 - 4:45 PM

Presentation Title: **Round Table Discussion Topics**
 Room: Salon BC

Presentation Title: **VEX/Robot C Worksession**
 Description: Small group and individualized assistance.
 Presenters: Bob Becker, Gary Cotie, Paul Zurek, Michael DeWees, facilitators
 Room: Salon D

Presentation Title: **PR Make and Take - Promoting Your Program through Student Produced Engineering Projects**
 Description: Session focuses on how students can create promotional items such as t-shirts, memo pads, coffee mugs, stickers, custom engineering notebooks, banners and buttons to help connect classroom engineering concepts to real-life projects. Participants will be involved in hands-on demos
 Presenters: Don Whitman, Corey Duzan, Ken Albert, facilitators
 Room: Salon D

Presentation Title: **Innovation Portal One Day Workshop (continued from Session 4)**
 Description:
 Room: Elmhurst 3

Presentation Title: **NGSS Connections to PLTW Launch**
 Description: An in-depth look at the Next Generation Science Standards associated with K-5 Launch Modules.
 Presenters: Launch Master Teachers Kathy Feser and Emily Schaefer
 Room: Elmhurst 4

	11:10-12:00 Session 1	12:45 - 1:35 Session 2	1:45 - 2:35 Session 3	2:45 - 3:35 Session 4	3:35 - 3:55 Reception and Roundtables	3:55 - 4:45 Session 5
Salon BC	Gateway	Maker Space	Documentation	3D Adv Top- ics	Roundtables	Roundtables
Salon D	POE	VEX/RobotC	VEX/Robot C	VEX "Budget"	PR make/take VEX Robot C	PR make/take VEX Robot C
Salon E	DE	Green	Gateway EE/MD/ME/GA ST/FS	Gateway EE/MD/ME/ GA/ST/FS		
Salon F	Biomed	EoC Assessment	EoC Assessment	CS		
Salon G	CS	CS	Assessment Tools	Assessment Tools		
Elmhurst 1/2	IED	Inventor	Inventor	Sweet Success	Sweet Success	
Elmhurst 3	Launch VEX IQ	Launch 24	Launch Apps	Launch HB/CS	Launch HB/CS	Launch NGSS
Elmhurst 4	Innovation Portal	Innovation Portal	Innovation Portal	Innovation Portal	Innovation Portal	Innovation Portal
Wheaton	CEA/Revit	LMS/Premier	LMS/Premier	Materials		