

2025 AdvanceKentucky Fall Forum (register [here](#))

Presenter and Session Information:

AP English Language & Composition



John Williamson has more than 25 years’ experience as an AP teacher, reader, and consultant. He is well versed in designing and developing curriculum using the UbD® model; implementing competency-based and evidence-centered assessments; as well as effective strategies to develop critical reading and evidence-based argumentation skills.

John is the lead author of *Ideas In Argument* and *Ideas In Literature*, two skills-driven groundbreaking textbooks for AP English Courses, published by Bedford/Macmillan.

A Kentucky educator and native, John Williamson is currently the Dean of P-12 Programs at Eastern Kentucky University and Superintendent at Model Laboratory School where he also continues to teach AP English.

John’s professional career in education has afforded him many opportunities, including Vice President of Curriculum, Instruction, and Assessment for the College Board’s AP Program; superintendent, curriculum director, and AP teacher in a variety of school districts—large and small as well as rural and suburban; and ELA curriculum specialist for the Kentucky Department of Education.

John holds a PhD in Curriculum, Assessment, and Evaluation from Ecole Superieure Robert de Sorbon (Fr) and earned Master’s degrees in Educational Administration and English from Columbia University (NY) and Morehead State University (KY) respectively and an undergraduate major in English teaching from Eastern Kentucky University.

Session Title	Session Description
Idea-Driven Arguments <i>Friday - 12:00-1:30p</i>	We'll discover how the best, most defensible arguments are unified around a claim established by a single idea and perspective about that idea. We will examine effective thesis

	statements across all three FRQs: rhetorical analysis, argument, and synthesis.
Establishing a Line of Reasoning Based on a Writer's Purpose <i>Friday - 1:45-3:15p</i>	After learning the fundamentals of claim and thesis development, we will focus on ways to help students build a line of reasoning that justifies their claim that is driven by their purpose.
Finding and Generating Evidence <i>Friday - 3:30-5:00p</i>	One of the most challenging aspects of teaching AP Lang is finding ways to help students intelligently enter a conversation. We will explore practical ways to make connections that build their content knowledge that can be used as evidence.
Complexity and Sophistication <i>Saturday - 8:30-10:00a</i>	We will focus on what is meant by “complexity” and “sophistication” within the context of written arguments in AP Lang. We will analyze examples of student work that demonstrate sophistication and learn ways to help students analyze and develop sophisticated arguments.
Sequencing and Spiraling the Curriculum <i>Saturday - 10:15-11:45a</i>	We will review the Course Framework to better understand the importance of helping students develop skills over time as a way to build confidence. In addition, we will plan how you can incorporate developmentally appropriate practice with feedback.
Fun and Games <i>Saturday - 12:45-2:15p</i>	In this last session, we will engage in some interactive instructional activities that help students build understanding about skills and concepts within the AP Lang course. You'll leave with a few practical ideas and activities to use in your classroom.

AP English Literature & Composition



Melissa Alter Smith is a College Board AP[®]

Consultant and a National Board Certified high school English teacher in Charlotte, NC. She is the founder of

#TeachLivingPoets and co-author of *The Norton Guide to AP Literature: Writing & Skills* (W.W. Norton, 2022) and *Teach Living Poets* (NCTE, 2021).

She is featured on LitHub.com, in *The New York Times*, MindShift KQED, ASCD's Education Update, and more. Her work

is focused on complicating the canon, supporting teachers, and empowering students through poetry.

Session Title	Session Description
#TeachLivingPoets: Complicating the Canon <i>Friday - 12:00-1:30p</i>	This session will offer collaborative activities and classroom-tested strategies that build community and foster student discovery. Through interacting with sample lessons, mentor texts, and poetry analysis strategies, participants will be provided with fresh ideas and resources they can take back to their classrooms and implement tomorrow.
Close-Reading and Writing for Q1 & Q2 Essays <i>Friday - 1:45-3:15p</i>	Choosing to take an AP English course is an opportunity for students to show that they respond to literature with their thinking and in their voice. This session will provide practical, easy-to-replicate strategies for teaching close-reading and writing for Q1 and Q2 essays.
Preparing Students for the Digital AP Exam <i>Friday - 3:30-5:00p</i>	This session will cover how to transition assignments and classroom activities from paper to digital in order to offer students the opportunity to practice using digital tools. This session will also review the format of the digital AP exam and what the exam experience looks like in the Bluebook testing app.
Reimagining Whole-Class Texts	Traditionally, whole-class texts are novels or plays, while single-volume poetry collections rarely get taught. This session will illuminate the value of teaching poetry

with Poetry Collections <i>Saturday - 8:30-10:00a</i>	collections as whole-class reads, share strategies, and provide instructional unit plans for various collections.
Teaching the Q3 Essay <i>Saturday - 10:15-11:45a</i>	A different beast than the Q1 and Q2 essays, the Q3 essay stands alone as an essay offering students choice and open literary argument; this type of freedom is exciting but may also feel daunting. This session will break down a clear path to teach the Q3 essay in a way that students will be able to easily follow.
Engaging Skills-based Activities for Analysis <i>Saturday - 12:45-2:15p</i>	CHR, SET, STR, NAR, & FIG. Teach the skills but make it fun.

AP Seminar



Jessica Kreger is a nationally recognized educator and College Board Consultant with extensive experience in the Advanced Placement (AP) Capstone Program. She currently serves as Social Studies Department Chair at St. Petersburg Catholic High School in Florida, where she teaches AP Seminar and AP U.S. History.

Since piloting AP Seminar in 2014 as part of the College Board’s inaugural cohort, Jessica has played a central role in shaping teacher preparation and student learning in AP Capstone. As a member of the AP Capstone Curriculum and Instruction Team, she has contributed original curriculum materials—including pacing guides and model lessons—to the official AP Seminar workshop handbook. She is an experienced AP Summer Institute Consultant and workshop leader, regularly delivering professional development programs for new and experienced AP Seminar teachers across the country. In 2021, Jessica joined an elite group of educators and the College Board curriculum team to design and record AP Daily instructional videos, now widely used by AP Seminar teachers and students around the world through the AP Classroom platform.

Jessica has also served as an AP Seminar Reader since 2016 and has held multiple leadership roles at the AP Reading, including Table Leader, Question Leader, and most recently Exam Leader (2023–2025). In 2022, she presented at Professional Night during the AP Seminar Reading in Salt Lake City, sharing strategies for preparing students for the End-of-Course Exam. She has also presented at the College Board’s AP Annual Conference and Southern Regional Forum on topics related to performance tasks, instructional practices, and AP Capstone Program Development.

Session Title	Session Description
Demystifying the Performance Tasks <i>Friday - 12:00-1:30p</i>	This session will provide an overview of both Performance Task 1 and Performance Task 2, with attention to the individual components (IRR, TMP, IWA, and IMP). Participants will examine common pinch points and pitfalls, building confidence in how to guide students through each step.
End of Course Exam Readiness <i>Friday - 1:45-3:15p</i>	This session will review the structure of the AP Seminar exam, including Part A (analysis) and Part B

	(argument). Participants will explore practical tips and tricks for preparing students and learn how to use anchor papers effectively to set expectations.
Organizing Inquiry: Strategies for a Strong PT1 Start <i>Friday - 3:30-5:00p</i>	Getting started on the Team Project and Presentation can be daunting for students. In this session, we'll explore how to help them identify meaningful perspectives, engage in focused exploratory research (including appropriate uses of AI tools), and set research goals. Teachers will also practice strategies for brainstorming and peer feedback to support a strong start to this collaborative task.
Facilitating Student Success During the Performance Tasks <i>Saturday - 8:30-10:00a</i>	Performance tasks are demanding for both teachers and students. This session will highlight strategies for breaking tasks into manageable checkpoints, creating student-friendly calendars, and embedding structured reflection and peer review. The focus will be on building systems that keep students on track without overwhelming them.
Stimulus-Inspired Inquiry: Strategies for a Strong PT2 Start <i>Saturday - 10:15-11:45a</i>	The College Board stimulus materials are the foundation for PT2, but students often struggle to make authentic connections. This session will provide strategies for working through the stimulus packet, visualizing connections among sources, and developing well-grounded research questions.
Surviving Your First Year as a Seminar Teacher <i>Saturday - 12:45-2:15p</i>	The first year of teaching Seminar can feel overwhelming, but you don't have to do it alone. In this session, teachers will engage in small-group reflection and collaborative problem-solving based on their experiences from August through November. Together, we'll identify challenges and create plans for implementing what we've learned.

AP Precalculus



Becky Barnes has been a math teacher in Fairfax County at West Springfield High School since 2014. Six of those years have been spent teaching AP AB and BC Calculus, and ten have been spent teaching different levels of precalculus including AP Precalculus for the past three years.

Becky has been recognized for her exceptional instructional skills and strong relationship with students by being named Fairfax County's Outstanding Secondary New Teacher of the Year in 2017 and West Springfield High School's Teacher of the Year in 2018. Becky graduated with both her Bachelors degree in Mathematics and her Masters in Teaching from the University of Virginia in 2013.

In addition to being an endorsed AP Precalculus Consultant for College Board, Becky is the moderator for the AP Precalculus Online Teacher Community and is also an AP Reader and AP Daily Instructor. Becky has also presented at a number of AP related events, including the AP Annual Conference in 2024, AdvanceKentucky's Master Series, and Mass Insight's Fall Workshop. In her free time, Becky enjoys traveling to National Parks (Zion National Park is her favorite so far), playing board games and poker, and curling up on a couch to read.



Nicole Jones is a veteran educator with 17 years of experience at Bowling Green High School in Bowling Green, Kentucky, where she teaches mathematics with a focus on student engagement and academic rigor. For the past 10 years, she has worked as a trainer with Advance Kentucky, supporting teachers statewide in implementing effective strategies for AP and college-preparatory instruction.

Nicole also serves as an AP Precalculus Reader for the College Board, contributing to the national scoring process and gaining valuable insight into trends in student performance. In addition to her professional roles, she is a wife, mother, and business owner, bringing a well-rounded perspective to her work with educators and students alike. Nicole is passionate about empowering teachers, promoting equity in advanced coursework, and sharing practical, classroom-tested strategies to improve student outcomes.

Session Title	Session Description
Mastering Transformations and Modeling: Deep Dive into Trigonometric Functions and FRQ3 in AP Precalculus <i>with N. Jones Friday - 12:00-1:30p</i>	This interactive professional development session will focus on strengthening teacher understanding and instructional strategies related to transformations of trigonometric functions within the AP Precalculus framework. Participants will explore how amplitude, period, phase shift, and vertical shift connect to real-world modeling and representation standards emphasized in the Course and Exam Description (CED). We will also unpack Free Response Question 3 (FRQ 3), which assesses students' ability to model and interpret trigonometric situations using transformations and parameter changes. Teachers will analyze sample student responses, identify common misconceptions, and discuss effective scaffolding techniques that promote conceptual understanding. By the end of the session, participants will leave with classroom-ready tasks, discussion prompts, and formative assessment ideas to help students confidently approach trigonometric modeling on the AP Exam.
Mastering Trigonometric Identities and Equations: Strategies for FRQ4 in AP Precalculus <i>with N. Jones Friday - 1:45-3:15p</i>	This session focuses on helping teachers strengthen student understanding of trigonometric identities and solving trigonometric equations within the AP Precalculus framework. Participants will explore strategies to simplify expressions, verify identities, and solve equations while connecting symbolic manipulation to graphical interpretation. The session will also unpack Free Response Question 4 (FRQ 4), analyzing sample responses and scoring guidelines to identify common student misconceptions and effective instructional approaches. Teachers will leave with classroom-ready activities, scaffolding strategies, and formative assessment ideas to support students in mastering both conceptual reasoning and procedural fluency required for success on the AP Exam.
Rates of Change and Secant Lines <i>with B. Barnes Friday - 3:30-5:00p</i>	A strong introduction to rates of change and secant lines can help set you and your students up for success on the AP Exam. We will look at ways to introduce and teach rates of change and then will connect our learning to FRQ #2. This will include exam reflections on FRQ #2 from the first two AP exam administrations.

Polar Functions <i>with B. Barnes Saturday - 8:30-10:00a</i>	In this session we will start with polar coordinates and play a fun game to test our understanding (my kids loved it and wanted to play more!). Then we will transition to making connections between sinusoidal functions graphed in the rectangular coordinate system and graphed in the polar coordinate system. With any extra time we will connect to rates of change of polar functions.
Telling a Story with Function Model Selection and Validation <i>with B. Barnes Saturday - 10:15-11:45a</i>	AP Precalculus weaves so many themes together to create a cohesive, well thought out course, but you may not have considered how some seemingly distinct topics such as residual plots and semi-log plots could be part of the same story. We will look at topics 1.13-1.14 (Polynomial and Rational Function Modeling), 2.5-2.6 (Exponential Function Modeling and Residual Plots), and 2.15 (Semi-Log Plots) in the AP Precalculus CED and how they fit together into one big picture, and look at resources to help you teach those topics.
Creating Activities <i>with B. Barnes Saturday - 12:45-2:15p</i>	In my classroom I love to utilize a variety of resources such as Mixed Sixes, Big 10s and Circuits. We'll try one of each of these activities to solidify our learning from the weekend, we will talk about different ways you can use these activities in your classroom, and then we will wrap up by creating our own!

AP Calculus AB



Jessica Stillman is a mathematics enthusiast from Weston, FL. She attended Nova High School and upon graduation she earned her Bachelor's degree in Mathematics Education from Florida State University. Go Noles! She later earned a Master's in Education from Florida Atlantic University.

Jessica began her teaching career at Cypress Bay High School in 2007 and has taught a multitude of subjects in mathematics including Algebra 1, Algebra 2, Precalculus and AP Calculus AB and BC. Through vertical and horizontal teaming, Jessica and her mathematics team at Cypress Bay have developed a top-notch curriculum and are proud to promote their successful AP Calculus program!

Jessica has held many leadership roles in her school and in the Broward County Council of Teachers of Mathematics (BCCTM); she is also an active member of the Florida Council of Teachers of Mathematics (FCTM). Over her career in education, she has received many awards such as BCCTM's Teacher of the Year and Mu Alpha Theta's Coach of the Year.

Jessica has taught AP Calculus (AB and BC) since 2007 and has been an AP reader since 2013. Jessica is a seasoned consultant for the College Board and loves presenting to teachers. She very much looks forward to meeting you, in-person or online!

In Jessica's free time she enjoys traveling, cooking/eating and running after her two young kiddos, Ari (5 years) and Ava (3 years)!



Melanie Gray is a dedicated and highly accomplished mathematics educator with over 25 years of classroom experience. A recognized leader in math education, Melanie serves as a mentor with AdvanceKentucky helping educators across the state elevate their instructional practices.

She is also an experienced AP Calculus Exam Reader for the College Board bringing valuable insight into national standards and assessment expectations. In addition, she is a Laying the Foundation Trainer providing professional development to fellow teachers on effective

strategies for rigorous, college-level instruction. In 2023, Melanie was named the Ignite Greatness Teacher of the Year, recognizing her outstanding impact on students and fellow educators.

Session Title	Session Description
Mastering Integration: Techniques for the AP Calculus Classroom <i>with M. Gray</i> <i>Friday - 12:00-1:30p</i>	This session explores effective strategies for teaching integration in AP Calculus. Learn how to help students choose the right technique, build conceptual understanding, and tackle AP-style problems with confidence. We'll also address common misconceptions and share engaging, classroom-ready activities to deepen learning.
Revolving Around Understanding: Teaching Volumes in AP Calculus <i>with M. Gray</i> <i>Friday - 1:45-3:15p</i>	Explore effective ways to teach the disk and washer methods for solids of revolution. This session offers visual strategies, hands-on activities, and AP-style problems to help students set up and solve volume integrals with clarity and confidence.
Connecting Representations in AP Calculus <i>with J. Stillman</i> <i>Friday - 3:30-5:00p</i>	This engaging and practical session focuses on Mathematical Practice 2 (MPAC 2): Connecting Representations in AP Calculus. Explore how to help students make meaningful connections between graphical, numerical, analytical, and verbal representations. Learn effective strategies to incorporate MPAC 2 into your daily instruction, enhance student reasoning, and prepare them for success on both AP multiple choice and free response questions. Participants will engage in hands-on activities, collaborate with peers, and leave with ready-to-use resources and ideas to enrich their AP Calculus classrooms.
Analysis of f' Graphs on the AP Exam <i>with J. Stillman</i> <i>Saturday - 8:30-10:00a</i>	Master the analysis of f' graphs, a key skill for the AP Calculus exam, in this interactive session. Participants will learn to identify and justify critical points, intervals of increasing and decreasing, and concavity using f' graphs. The workshop features hands-on practice with released AP questions, visual charts that connect f, f', and f'' and digital resources for further exploration. Teachers will discuss effective strategies for justifying answers and addressing common student misconceptions. This session blends collaborative discussion with practical activities to strengthen

	calculus instruction and exam readiness.
Slope Fields and Differential Equations <i>with J. Stillman</i> <i>Saturday - 10:15-11:45a</i>	This session highlights the fundamentals of slope fields and their importance in visualizing solutions to differential equations. Participants will learn to sketch and interpret slope fields, connect graphical patterns to specific equations, and analyze solution curves through given points. Teachers will also explore separation of variables and particular solutions in context. Engaging activities using Wikki Stix will bring slope fields to life, and participants will practice scoring real student samples. The workshop blends hands-on practice with collaborative discussion, equipping teachers with resources and strategies for the AP Calculus classroom.
Using Data to Drive Instruction - 2025 FRQ Takeaways and IPR Deep Dive <i>with J. Stillman</i> <i>Saturday - 12:45-2:15p</i>	This session focuses on using data to drive instruction, with a deep dive into the 2025 AP Calculus Free Response questions. Participants will analyze student "glows and grows" from the 2025 exam to identify strengths and areas for growth. Teachers will learn how to dissect their 2025 Instructional Planning Report (IPR) and interpret key data points. The session emphasizes practical strategies for reflecting on teaching practices and leveraging data to improve student outcomes. Attendees will leave equipped with actionable tools to enhance instruction and support student achievement.

AP Statistics



Jared Derksen lives with his family in sunny Southern California. He has taught mathematics students from 7th grade through college since 1991.

Beginning in 1998, he has focused on teaching AP Statistics. He became an AP Reader in 2004. As a content creator, he has written material for CollegeBoard/AP Central and for Casio Education. He also contributes to the Bock and Velleman series of statistics textbooks writing and updating exercises and the teacher resources.

Most recently he joined DeAnna McDonald as the co-author of *5 Steps to a 5*. In his free time he enjoys his family, the Dodgers, good food, and great books.



Kellie Lee is the Mathematics Department Lead Teacher at Glasgow High School in Kentucky, where she teaches AP Statistics and Honors Geometry. With more than 25 years of experience, she began her career as an Exceptional Education teacher before moving into secondary mathematics.

Kellie believes that all students can learn at high levels when they are engaged, and she champions open enrollment for AP Statistics, emphasizing that the value lies not only in earning a passing score but in discovering the ability to take on difficult challenges with resilience. She incorporates Kagan Cooperative

Learning Structures into her teaching and is passionate about sharing these strategies with fellow educators.

Session Title	Session Description
Probability Made Simple with Laying the Foundation	Probability can be a challenging topic for AP Statistics students, but the right activities make all the difference. In this session, we'll explore <i>Laying the Foundation</i> activities that help students build a solid understanding of key probability concepts and how to apply

<i>with K. Lee</i> <i>Friday - 12:00-1:30p</i>	them in real-world contexts. You'll leave with engaging, classroom-tested strategies that make probability clear, interactive, and easier for students to master.
Activities Gone Wild! Narrowing Down the Best for AP Statistics <i>with K. Lee</i> <i>Friday - 1:45-3:15p</i>	Too many activities, not enough time! This session highlights AP Statistics lessons that give you the most bang for your buck. They are easy to implement, packed with learning, and proven to get students thinking. Come for the ideas, stay for the laughs, and leave with activities you'll actually use.
Exploring Data <i>with J. Derksen</i> <i>Friday - 3:30-5:00p</i>	Let's look at the first FRQ from last year. Rubric discussion as well as card matching activities to make this topic accessible.
Regression <i>with J. Derksen</i> <i>Saturday - 8:30-10:00a</i>	Explore first, explain later. We'll use a dataset of over 5,000 movies to introduce regression. And while we're at it, we'll discuss how to teach inference for slope in a very short amount of time.
Inference <i>with J. Derksen</i> <i>Saturday - 10:15-11:45a</i>	Let's look at both inference questions from 2025, including the chief reader's commentary.
Experiments in Stats: Edible Data Anyone? <i>with J. Derksen</i> <i>Saturday - 12:45-2:15p</i>	In class experiments that enhance student learning while making class fun. We will also examine the IPR and help students write well.

AP Computer Science Principles



Eric Baez is the Director of The Academy of Gaming and Mobile Apps at Loften High School in Gainesville, Florida. He teaches a range of subjects including AP® Computer Science Principles, AP® 2D Art & Design, and Career Technical Education courses in Game and Simulation design spanning 2D, 3D, VR, and Augmented Reality.

Since transitioning from the private sector to education in 2018, Eric has been awarded the 2022 Catalyst for Change Grant by The Education Foundation of Alachua County for his pioneering work as the Principal Investigator on research in VR Curriculum Development with The State of Florida's Social Studies High School curriculum.

In 2023, Eric joined the Program Team for Urban Arts' National Science Foundation Grant, "Game On: Teaching The AP® CSP Through Game Design". The curriculum aims to enhance student engagement in AP® Computer Science Principles using the professional game engine, Unity and C# programming language.

In his role as a College Board consultant for AP® Computer Science Principles, Eric is dedicated to expanding his wealth of knowledge in educating teachers on creating engaging ways in teaching computer technology and job skills. In particular for students from low socio-economic and under-represented backgrounds.

Beyond his professional endeavors, Eric enjoys spending time with his twin children, who share his love for soccer, baseball, tennis, and swimming. The Baez family also delights in camping trips, exploring new destinations, and experiencing diverse cuisines.



Drew Fulkerson has been a high school educator since 2007, teaching Mathematics, Information Technology, Cybersecurity, and Computer Science. Since 2012, he has specialized in computer science education and currently teaches at Greenwood High School in Bowling Green, Kentucky.

Drew's work as an AP Computer Science Principles Reader since 2016 reflects his commitment to advancing computer science education and supporting its growth at both the local and national level. In Fall 2026, he will step into the role of Department Head at the new IMPACT Center for Leadership & Innovation, where he will oversee pathways in Artificial Intelligence, Cybersecurity, Data Science, Networking, and Digital Design/Game Development, while building partnerships with leading institutions such as IBM and Georgia Tech.

Session Title	Session Description
Algorithmic Thinking <i>with D. Fulkerson</i> <i>Friday - 12:00-1:30p</i>	Through interactive examples and classroom-ready activities, participants will explore how to help students design and analyze algorithms. Emphasis will be placed on reasoning, efficiency, and creativity in problem-solving.
TODO: Mock Create PTs <i>with E. Baez</i> <i>Friday - 1:45-3:15p</i>	Data + Algorithms = Programs and in this workshop you will be the student and be guided in successful techniques that will introduce critical thinking skills to foster understanding of the requirements of the Create Performance Task. Upon completion, we will collaborate and create lesson plans for mini create performance tasks that you'll be able to take back to the classroom. In this modeled classroom, collaboration is key and you'll experience being a student with the autonomy of their learning environment.
Engaging Students in Coding Through Art and Game Design Projects <i>with E. Baez</i>	Step outside the cookie-cutter curriculum and watch your students "wow" you day after day as they explore creative ways to code throughout the year. In this session, we'll dive into versatile tools such as MakeCode Arcade for beginner-friendly game creation, p5.js to bring art and interactivity to the web, and the Unity Engine for building full-fledged 2D, 3D, and VR experiences.

Friday - 3:30-5:00p	Come ready to create and leave ready to inspire.
Vocabulary Drives the FRQ <i>with E. Baez Saturday - 8:30-10:00a</i>	"Vocabulary is a matter of word-building as well as words-using." -David Crystal. We will create lesson plans that will drive long-term vocabulary development of the APCSP course from recalling concepts to creating documentation for a program developed. Leave confident that your students will not only regurgitate facts, but be better prepared to develop higher order composite vocabulary skills that will prepare them for success in college and beyond.
Spiraled Easy to Grade Assessments <i>with E. Baez Saturday - 10:15-11:45a</i>	We will review the IPR/2025 Exam Reflections and begin to devise our own multiple choice and free response questions. Guided by data driven from the newly revamped AP Classroom. This workshop will guide you how to confidently develop assessments, teaching and grading techniques that will allow you to respect your contract hours. The best part, you will walk away with ready to go formative assessments created by Kentucky' brightest minds
Chief Reader Reports <i>with D. Fulkerson Saturday - 12:45-2:15p</i>	This session focuses on improving student performance on the AP CSP Create Performance Task through insights from Chief Reader Reports, highlighting common challenges, scoring trends, and strategies for clearer, higher-quality submissions.

AP Biology



Colten Collings currently teaches Honors Biology and AP Biology at Bowling Green High School (BGHS), though he has taught many other courses including, Forensics, Genetics, Anatomy & Physiology, and Environmental Science. Colten also serves as an AdvanceKentucky Mentor, a reader for the AP Biology Exam, an instructor for Genetics for VAMPY at WKU, Varsity Academic Team Coach at BGHS, and CLS Staff through LifeSkills.

He is a current graduate student (M.A.E.) at Western Kentucky University, having previously completed a B.S. and M.S. in Biological Sciences and a B.S. in Science and Math Education at WKU. He enjoys all things biology and education, as well as, all things in the magical world of Harry Potter!



Brenda Royal is a native of Murfreesboro, Tennessee, where she attended Middle Tennessee State University. She received her B.S. with a double major in chemistry and biology, and her Ed. S. in curriculum and instruction. She has 38 years of classroom experience, having taught AP Biology for over twenty-five years. She has been a Tennessee Teacher of the Year Finalist, an NABT Outstanding Biology Teacher for Tennessee, and a Metro Nashville Teacher of the Year Finalist. She received the Siemens Award for

AP Instruction in 2006.

She is an AP Biology consultant for College Board and consults for Kentucky Science and Technology Corporation and the National Math and Science Initiative. She served as the southeast regional coordinator and on the board of directors for the National Association of Biology Teachers, and she chartered the Tennessee Affiliate of NABT serving as founding president. Her passions are ecotourism and her five grandchildren. She's a dog person who was adopted by two farm cats, Thelma and Louise.

Session Title	Session Description
Handily Covering Experimental Design and	Is the width of the male palm statistically different from the width of the female palm? This activity focuses on experimental design in research, removing as many systemic errors as possible, and incorporates the use of

Standard Error <i>with B. Royal</i> <i>Friday - 12:00-1:30p</i>	standard error calculation to acquaint learners with the construction and significance of error bars.
All Things Unit 7 <i>with C. Collings</i> <i>Friday - 1:45-3:15p</i>	This session explores practical strategies for teaching Unit 7, with activities that reinforce both new and spiraled content. Colten Collings will share his personal approach to structuring the unit, offering insights into effective planning and classroom implementation.
The Great Clade Race, An Evolution Activity <i>with B. Royal</i> <i>Friday - 3:30-5:00p</i>	Take the confusion out of building evolutionary trees with a race that simplifies the foundational concepts of building phylogenetic trees. This activity clarifies the diversification of organisms through time helping students understand the 3D nature of cladograms
Instruction Without Lecture <i>with B. Royal</i> <i>Saturday - 8:30-10:00a</i>	Learning occurs when students interact with information in the most efficient and meaningful ways. But what are those ways? And will they work for all classrooms? Active learning presents a unique set of challenges for traditional teaching settings, but the evidence is overwhelming that active learning provides the best results in assessments.
Write Away <i>with B. Royal</i> <i>Saturday - 10:15-11:45a</i>	Find and use FRQ's from past exams to help students master the writing component of the AP Exam. Participants will learn how to locate old FRQ's to assess understanding and help students improve writing for the AP Exam. We'll discuss how to find unit-focused exam questions and increase student writing time and efficacy without overloading teacher assessment time while helping students improve their FRQ writing skills.
Sickle Cell as a Teaching Phenomenon <i>with B. Royal</i> <i>Saturday - 12:45-2:15p</i>	Using HHMI Biointeractive resources, sickle cell disease is used as a phenomenon for teaching a wide variety of biological concepts, crossing multiple units of the AP curriculum and all of the science practices.

AP Chemistry



Lew Acampora is retired/emeritus from AdvanceKentucky, where he acted as science guru for seventeen years. In his classroom life, he taught AP Chemistry, Physics, and Calculus at independent schools in North Carolina, California, and Kentucky, before settling in Louisville.

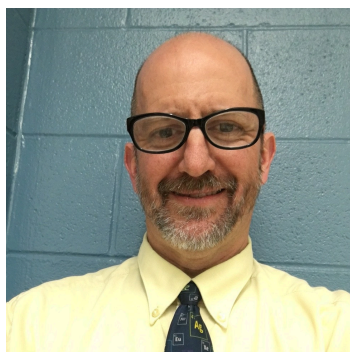
He has been a part of the AP Chemistry reading for too-many-to-mention years, first as a reader, table leader, exam leader, the Assistant Chief Reader. A newly retired College Board consultant, he has written questions for the AP Chemistry exam, and has served on the PRAXIS test development committee.

Lew graduated with a B.A. in Chemistry from Harvard University, and has done graduate work in chemistry at Brandeis University and the University of North Carolina at Charlotte. He continues to live, row, and play the piano (with enthusiasm if not proficiency), and for fun he is taking graduate physics classes at UofL.



Jon Edwards graduated with a degree in Soil Science from the University of Kentucky and obtained an MA in Education from Asbury College and taught chemistry and general science at West Jessamine HS until 2016. Since then, he has taught Freshman Science and AP Chemistry at Madison Southern HS.

Jon was an active AP Chemistry teacher with AdvanceKentucky through 2022 and remains committed to helping students and teachers. Jon lives in Richmond with his family and, outside of school, he enjoys coaching an interscholastic mountain bike team.



Michael Farabaugh has been teaching high school chemistry since 1998. He teaches at Albemarle High School in Charlottesville, VA. He has served as a reader and a table leader for AP Chemistry, and has also been an outside item writer for the AP Chemistry Exam. He enjoys using a variety of instructional strategies to help students stay actively engaged while learning chemistry.

When he is not teaching, he enjoys spending time with his family, cooking, watching movies, listening to music, and running.

Session Title	Session Description
RedOx Reactions of Copper and Zinc <i>with L. Acampora</i> <i>Friday - 12:00-1:30p</i>	Chemical reactivity of metallic copper and zinc illustrates the importance of identifying oxidizing agents and the use of oxidation numbers in balancing redox reactions. Participants will draw conclusions from differential reactivity experiments.
Spectrophotometric Analysis of a Copper/Zinc Mixture <i>with J. Edwards</i> <i>Friday - 1:45-3:15p</i>	Piggy-backing on the differential reactivity of metallic copper and zinc and the spectrophotometric properties of their ions, Participants will determine the composition of a copper/zinc mixture via spectrophotometry. Important lab skills such as preparation of a standard solution and measurement of absorbance will be covered.
From RedOx to E'Chem <i>with L. Acampora</i> <i>Friday - 3:30-5:00p</i>	Extending a simple redox reaction to a galvanic cell illustrates the construction of a galvanic cell. Participants will construct a Daniell cell and use it to measure potential difference and current. The relationship among stoichiometric quantities (current, time, moles, mass) will be covered. Thermodynamic quantities (E_{cell} , ΔG_{rxn}) will be related
Mistakes/Misconceptions Observed at the AP Reading and How to Avoid Them <i>with M. Farabaugh</i> <i>Saturday - 8:30-10:00a</i>	This session will provide a summary of information that has been shared in recent Chief Reader Reports. Examples of student responses that did (or did not) earn the point will be presented in order to assist teachers with both instructional strategies and formative assessment items.
Thermochemistry and Calorimetry <i>with M. Farabaugh</i> <i>Saturday - 10:15-11:45a</i>	This session will include a calorimetry experiment to help students understand the difference between heat (q) and the change in enthalpy (ΔH). Connections will be made between observations at the macroscopic level and particle-level events that occur during the dissolution of an ionic compound in water.
Structure of Matter	This session will focus on the polarity of covalent bonds and

**(Bonding, Polarity,
IMF's)**

with M. Farabaugh
Saturday - 12:45-2:15p

the polarity of molecules. Examples of questions from recent AP exams will be presented. It is important for students to understand and explain the relationship between the type of bonding and the properties of a substance.

AP Environmental Science



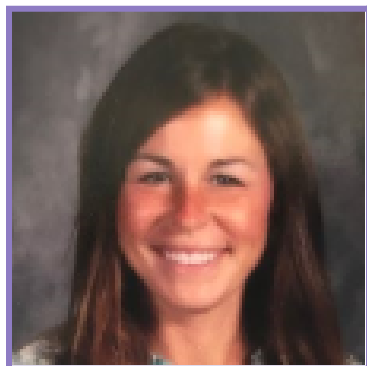
Tresine Logsdon is the Energy & Sustainability Curriculum Coordinator for Fayette County Public Schools (FCPS), where she spearheads student-driven sustainability initiatives. In this role, Tresine works closely with students, teachers, principals and community partners to foster a culture of sustainability throughout the district. She facilitates school-community partnerships and mentors the Bluegrass Youth Sustainability Council, a coalition of over 50 student leaders from 11 Lexington high schools who design and implement sustainability improvements on campuses and throughout Lexington.

Tresine plays a key role in the implementation of FCPS's 5-year Sustainability Action Plan. Prior to her current role, she dedicated 11 years to the classroom as an AP Environmental Science and Biology teacher at Henry Clay High School.

FCPS has received national recognition for its sustainability efforts, including the 2020 U.S. Department of Education National Green Ribbon District Award and the 2016 National Best School District Award from the U.S. Green Building Council's Center for Green Schools.

Beyond her professional work, Tresine is an active community leader. She has served as Board Chair for Bluegrass Greensource, Board President for the Northside Neighborhood Association, and as a Board member for organizations such as CivicLex, Bluegrass Tomorrow, America in Bloom Lexington, RadioLex and Leadership Lexington as well as serving on Lexington Fayette Urban County Government Empowered Lexington Steering Committee.

Tresine is married to Matthew Logsdon, a Language Arts teacher at Henry Clay High School, and they are the proud parents of two daughters.



Sara Nolen teaches at Henderson County High School in western Kentucky where she has taught Biology for 22 years and has had the opportunity to teach AP Environmental Science for 17 years. Her involvement with AdvanceKentucky dates back to being a participating teacher at one of the first cohort schools to work with AdvanceKentucky in the beginning phases of the program. Since then, she has been a regular study session

presenter for schools across the state, and in the past several years she has served as a mentor for new teachers in the program.

Outside of her responsibilities of school, you'll usually find her staying very busy keeping up with four kids' sports schedules and cheering them on from the sidelines.



Debbie Wheeler has a background in research at the University of Kentucky and has taught Biology and Environmental Science in public and private schools for over 20 years.

She has served as a mentor, presenter, and mock exam leader for AdvanceKY, as well as a College Board reader, a consultant for the National Math and Science Initiative (NMSI), and a test question writer for the Educational Testing Service (ETS).

She enjoys designing and participating in experiential learning experiences for students and has taken student groups to several locations, including Japan, New Zealand, Iceland, and the Galápagos Islands.

Session Title	Session Description
Field Trip - Water Treatment and Waste Water Treatment Plants <i>with T. Logsdon</i> <i>Friday - 12:00-3:15p</i>	Experience hands-on fieldwork as we explore environmental systems across multiple sites. Participants will practice data collection and analysis while gaining classroom-ready strategies for engaging AP Environmental Science students in authentic, place-based learning.
Water Testing <i>with S. Nolen</i> <i>Friday - 3:30-5:00p</i>	Participants will explore water testing labs that can be conducted with students to help them better understand the CED water pollution topics. These labs can be used in

	field studies or classroom laboratory setting
Teaching Math for APES - Building Quantitative Confidence <i>with D. Wheeler</i> <i>Saturday - 8:30-10:00a</i>	Participants will explore strategies to teach and reinforce the mathematical skills students need to succeed on the AP Exam and to think critically about environmental data.
Earth's Atmosphere - the Basics from Unit 4, including El Niño and La Niña <i>with D. Wheeler</i> <i>Saturday - 10:15-11:45a</i>	The session will provide a comprehensive overview of atmospheric structure and composition, including El Niño and La Niña events, their global impacts, and how to effectively integrate these complex topics into the APES curriculum.
Atmospheric Pollution <i>with S. Nolen</i> <i>Saturday - 12:45-2:15p</i>	Participants will explore atmospheric quality labs that can be conducted with students to help them better understand the CED atmosphere quality topics. These labs can be used in field studies or classroom laboratory settings.

AP Physics 1 - Chris Lacy, Kyle Curry, Lew Acampora



Lew Acampora is retired/emeritus from AdvanceKentucky, where he acted as science guru for seventeen years. In his classroom life, he taught AP Chemistry, Physics, and Calculus at independent schools in North Carolina, California, and Kentucky, before settling in Louisville.

He has been a part of the AP Chemistry reading for too-many-to-mention years, first as a reader, table leader, exam leader, the Assistant Chief Reader. A newly retired College Board consultant, he has written questions for the AP Chemistry exam, and has served on the PRAXIS test development committee.

Lew graduated with a B.A. in Chemistry from Harvard University, and has done graduate work in chemistry at Brandeis University and the University of North Carolina at Charlotte. He continues to live, row, and play the piano (with enthusiasm if not proficiency), and for fun he is taking graduate physics classes at UofL.



Kyle Curry joined the College Board in October 2024 and serves as course director for AP Physics 2. He came from ETS, where he spent nearly seven years as an assessment specialist/test developer. At ETS he led work across all AP Physics titles (primarily AP Physics 2 and AP Physics C: Electricity and Magnetism) and contributed to the GRE Physics Subject Test, the Praxis Physics assessments, the SAT Physics Subject Test, and state K–12 assessments aligned to the Next Generation Science Standards in California, Maryland, and Tennessee.

Kyle remains active as an AP Physics consultant with AdvanceKentucky and the National Math and Science Initiative. He holds Bachelor of Science degrees in Physics and in Science/Mathematics Education from Western Kentucky University and a Master of Science in STEM Education from the University of Kentucky (UK).

Before graduate school, Kyle returned to his hometown to teach at his alma mater, where over more than five years he taught AP Physics, general physics, integrated science, and an experimental science course. He launched the school's first AP Physics program and, supported

by AdvanceKentucky, increased participation from approximately 30 students to more than 180. At UK, his research focused on students' visuospatial reasoning in physics contexts, and he taught pre-service K–12 science teachers.

Outside of work, Kyle is a daily cyclist and runner and enjoys organizing board-game gatherings with friends and family.



Chris Lacy has 19 years of experience in education, including 15 years teaching Physics and AP Physics at a Title I high school. He is an AP Physics Reader and a College Board AP Physics 1 Question Writer.

At AdvanceKentucky, Chris supports AP Physics, Chemistry, Biology, and Environmental Science teachers statewide through mentoring, professional development, classroom visits, and exam prep sessions.

He holds degrees in Physics, Teaching, and Educational Technology from Morehead State University and was 2006's Time Magazine Person of the year.

Session Title	Session Description
Bar Charts and Systems of Energy and Momentum <i>with C. Lacy</i> <i>Friday - 12:00-1:30p</i>	Learn how to use bar charts to represent energy and momentum in systems, helping students visualize conservation principles and problem solving.
Getting Things Turning: Engaging Strategies for Teaching Rotational Motion in AP Physics <i>with C. Lacy</i> <i>Friday - 1:45-3:15p</i>	Rotational motion is one of the most conceptually challenging units in AP Physics 1, but it doesn't have to spin students out. In this session, participants will explore hands-on, low-cost activities and inquiry-based strategies that connect linear and rotational concepts through modeling, experimentation, and discussion. Attendees will leave with ready-to-use lessons, formative assessments, and practical tools to help students master torque, angular momentum, and rotational energy with confidence
Experimental	Explore approaches to experimental design and

Design, Linearization, and Science Notebooks <i>with K. Curry and C. Lacy Friday - 3:30-5:00p</i>	linearization while incorporating science notebooks as tools for reasoning and communication.
Unit 8: Fluids <i>with K. Curry Saturday - 8:30-10:00a</i>	Review the essential content and problem-solving strategies for fluid statics and dynamics, with classroom-ready examples and activities.
Dimensional Analysis and Buckingham Pi Theorem <i>with L. Acampora Saturday - 10:15-11:45a</i>	Practice using dimensional analysis and the Buckingham Pi Theorem to simplify complex problems and strengthen students' quantitative reasoning.
Classroom Instruction through the CED <i>with K. Curry Saturday - 12:45-2:15p</i>	Unpack the AP Physics CED to align instruction, assessments, and pacing with course expectations and exam requirements.