Science Department Program of Study

February 17, 2020

Knox County Schools District Learning Day @Bearden High

Science Department District Learning Day

@Bearden High School

Site Lead: Andrea Berry

Schedule At-A-Glance	
7:45-8:20	**Light Breakfast & Sign-in** Commons/ Cafeteria
8:30-9:00	**General Session** Auditorium
9:05-10:15	**Session 1 (Sign up on MLP)**
10:20-11:30	**Session 2 (Sign up on MLP)**

Special Lecture Session for Biology (AP, Honors, and CP). These teachers will sign up **one time on My Learning Plan.

Science District Learning Day – February 17, 2020

Breakfast 7:45-8:20 (Cafeteria/Commons Area)
General Session/ Sign-in 8:30-8:55 (Auditorium)

All Biology (Honors, CP and AP) 9:05-11:30

Title	Audience	Location
The Fascinating and Controversial New Science of CRISPR *Presenter: Dr. David Wollert, Associate Professor of Biology, Chattanooga State* CRISPR is a powerful biotechnology tool giving scientists unprecedented access to the genetic makeup of all living organisms, including humans. It originally evolved as an adaptive immune system in bacteria to defend against viruses. When artificially harnessed in the laboratory, it allows scientists to accurately and precisely edit genes, almost as if using a word processor. This presentation will provide a broad and up-to-date overview of CRISPR, including its discovery, application, and bioethical challenges. The presentation will also offer some options for teaching CRISPR in the classroom and laboratory.	**HIGHLY RECOMMENDED FOR:** All Biology (AP, Honors and CP) d Also open to 7th grade science **with the understanding this goes beyond the scope of 7th grade standards.	Auditorium

Session 1 9:05-10:15

Title	Audience	Location
Teacher Clarity through the lens of the TEAM Rubric *Presenter: Don Madgett* With shifts in the science standards, it is increasingly important to stay grounded in strategies which research shows work. In this session, teachers learn about the connections between strategies that make thinking visible and the best practices we know in the TEAM rubric. Also unpack what indicators really mean, like Teacher Content Knowledge. Don Madgett has been TAP trained, an evaluator, and mentor teacher for nine years.	6th-12th grades	321
Authentic Science in the Classroom with MEGA:BITESS *Presenters: Becky Trout Fryxell and Joshua Rosenberg, University of Tennessee* In this session, teachers will learn how to incorporate student-collected data in your science curriculum as part of the MEGA:BITESS academy. This USDA funded program is hosted by UT faculty and will introduce you (and your students) to medical entomology, geospatial analyses, science communication, student data analysis, and how they relate to science education. We will be recruiting for our next cohort of MEGA:BITESS participants. Learn more about MEGA:BITESS eligibility, stipends, and academy dates at their website (www.megabitess.org).	6th- 12th	323
Rocketbooks in the Classroom *Presenter: Matthew Davidson* Are you tired of having your students do the same thing every day? Are your students saying, "No, not that activity again!" Maybe you're tired of making copies after copies of worksheets just to find them on the floor or in the trash can? This session is for you! Rocketbook is a digital tool that allows students and teachers to interact with content written with paper and pen in a digital manner. This session will discuss an overview of the Rocketbook platform, practical ways to integrate it into daily instruction, and how to best streamline the digital tool into your teacher workflow. Rocketbook has sent some swag to give away during this session! Please install the Rocketbook app on tour phone/tablet prior to this session. ***BYOD: Bring Your Own Device***	6th-12th grades	330
Engaging High Needs Students Using Visual Supports *Presenter: Michelle Johnson*	6th- 12th grades	322

Experience Strategies and structures designed to boost achievement in high needs populations. Teachers will receive resources that can be immediately implemented in current modules.		
Incorporating Test Data and PLE strategies using Edulastic *Presenters: John Steinke* In this session, we will look at utilizing test data to inform instruction by examining a remediation unit. We will examine: how to build tests to gather data on student growth, what to do with the data once we've gathered it, and specific PLE strategies to guide students as they strive to improve their academic deficiencies. (This is a repeat session from the November DLD.) **BYOD: Bring Your Own Device**	6th-12th grades	334
Back to the Basics with Canvas 101 *Presenters: Brian Jones and Danielle Harrison* If you have not used canvas or you need to brush up your basic canvas knowledge, join this session. The session will focus on the basic need-to-know tools and features of Canvas in an effort to begin building your class course. You will need a device to participate in this session.	6th-12th grades	338
Engaging Escape Game with WAVES *Presenters: Ashley Fiorella and Jessica Smith* You won't want to escape this session. You will participate in an engaging escape room design idea that requires one time prep and is done through Google. Students can show what they know and be engaged as they review content. The escape game we will highlight will be directly related to the waves standards in PS and 8th grade. **BYOD: Bring Your Own Device**	8th grade & Physical Science	335
Argument Driven Inquiry *Presenter: Glenn Arnold* Argument Driven Inquiry is based on the idea that students should become proficient in science by being able to generate and evaluate scientific explanations and arguments. This is done through a process of writing, presenting, and peer reviewing each other's work. Having done 4 ADI week-long experiences for my Chemistry I classes over the past couple of years, here are some do's and don'ts for implementing this i- depth approach to teaching science in a high school classroom setting.	9th-12th	331
Climbing the Behavior Management Mountain *Presenter: Kristy Hutson* Are you looking for more classroom behavior management ideas? Are you just interested in how other teachers manage their classroom behavior? This is a crash course designed to provide practical and research-based methods for the behavior management of secondary students in both classroom and laboratory settings. You will leave the training with a few foundational behavior management tools to take to your own classroom that stem directly from the training's content and guided discussions among attendees.	6th-12th	328
Using Games in the Classroom *Presenting: Joel Meservy* This session will discuss several games/structures and some basic strategies to encourage participation in the science classroom. The games strategy will focus on simplicity (easy to set-up and use with little cost or preparation).	6th -12th	327
Need New Test Review Ideas? *Presenter: Nicole Resmondo* Investigate new ways to review for quizzes, module tests. And end of the year assessments. Explore short assessment task that will reveal thinking and misconceptions.	6th -8th	325

Session 2 10:20-11:30 Teacher Choice

Title	Audience	Location
Teacher Clarity through the lens of the TEAM Rubric *Presenter: Don Madgett* With shifts in the science standards it is increasingly important to stay grounded in strategies which research shows work. In this session, teachers learn about the connections between strategies that make thinking visible and the best practices we know in the TEAM rubric. **Also unpack what indicators really mean, like Teacher Content Knowledge.** Don Madgett has been TAP trained, an evaluator, and mentor teacher for nine years.	6th- 12th	321
Engaging High Needs Students Using Visual Supports *Presenter: Michelle Johnson* Experience strategies and structures designed to boost achievement in high needs populations. Teachers will receive resources that can be immediately implemented in current modules.	6th- 12th	322
Speed Dating Science Strategies *Facilitator: Andrea Berry* This session will present research-based strategies and give you opportunity to speed share through several rounds to give and take input about each strategy with other science teachers.	6th-12th	Library
Rocketbooks in the Classroom *Presenter: Matthew Davidson* Are you tired of having your students do the same thing every day? Are your students saying, "No, not that activity again!" Maybe you're tired of making copies after copies of worksheets just to find them on the floor or in the trash can? This session is for you! Rocketbook is a digital tool that allows students and teachers to interact with content written with paper and pen in a digital manner. This session will discuss an overview of the Rocketbook platform, practical ways to integrate it into daily instruction, and how to best streamline the digital tool into your teacher workflow. Rocketbook has sent some swag to give away during this session! Please install the Rocketbook app on tour phone/tablet prior to this session. ***BYOD: Bring Your Own Device***	6th-12th grades	330
Next-Level Phenomenon Based Instruction: Driving Question Boards *Presenter: Trudy Rogers* Take phenomenon-based instruction to the next level by capturing and maintaining student curiosity in the classroom. Learn the ins and outs of Driving Question Boards and how they can lead your students to figure out the science behind the phenomena all while guiding the planning of instruction.	6th-12th grades	331
Authentic Science in the Classroom with MEGA:BITESS *Presenters: Becky Trout Fryxell and Joshua Rosenberg, University of Tennessee* In this session teachers will learn how to incorporate student collected data in your science curriculum as part of the MEGA:BITESS academy. This USDA funded program is hosted by UT faculty and will introduce you (and your students) to medical entomology, geospatial analyses, science communication, student data analysis, and how they relate to science education. We will be recruiting for our next cohort of MEGA:BITESS participants. Learn more about MEGA:BITESS eligibility, stipends, and academy dates at their website (www.megabitess.org).	6th-12th grades	323
AP Networking *Facilitator: Travis Quick* This is a time for AP Networking, planning and discussing AP Central resources. Please **bring device** to access AP Central.	Any AP Teachers	335
Canvas Development Time with Support *Presenters: Brian Jones and Danielle Harrison* This session is for teachers already familiar with the basics of Canvas who want to expand their application of its features. This is a work session with two facilitators on hand to help you develop your lessons in Canvas. You will need a device to participate in this session as well as any questions you have or ideas you would like to implement.	6th-12th	338

Elevate your ELL Students' Science Understanding *Presenter: Tami Russell* Spend time engaging in supports for ELL students which are strong teaching strategies for many types of learners. We will dig into the free Ellevation program, that teachers with ELL students can access. Features within your Pearson online textbooks and other resources will be highlighted to support ELL in science learning. (Repeat session from November DLD) **BYOD: Bring Your Own Device**	6^{th}-12^{th}	340
Putting the "Why" before the What" *Presenters: Bethany Saunders, Julianne Brandt, Cory Hackworth* In this session, you will see the value of using Inquiry tasks to introduce science phenomena and vocabulary before direct instruction. You will learn how to break down a standard, find the cross-cutting concept to focus on, and create a task using the cross-cutting concept that allows students to learn the meanings of concept vocabulary as they work. This strategy provides engaging activities and makes subsequent note-taking a quicker process for everyone. Examples will be 7^{th} grade content.	6^{th}-8^{th} grade	334
Costa's Three Levels of Questioning *Presenters: Brandon Clowers and Brant Gerhardt* This session is on Costa's three levels of questioning and how to integrate it with interactive notebooking. This is an AVID strategy that can be used in any classroom to strengthen questioning. (**Repeat session from November DLD**)	6^{th}-12^{th} grades	324
Phenomenon-based learning in the Chemistry Classroom *Presenter: Chris Milojevich* This session will involve discussions and tactics to use in the Chemistry classroom to engage students in phenomenon-based learning. Bring ideas to share or just an open mind for new ways to involve Chemistry students in the next generation science standards!	Chemistry, Physical Science	325