



# **Science Department Program of Study**

**November 7, 2017**



**Knox County Schools  
District Learning Day**

# November 7, 2017 District Learning Day

## West Valley Middle School

Andrea Berry, Science Supervisor

<b>Session 1</b> <b>8:30-9:25</b>	<b>Session 2</b> <b>9:30-10:25</b>	<b>Session 3</b> <b>10:30-11:30</b>
<p><b>STEM in Your Day</b> Lori Moss 3<sup>rd</sup>-5<sup>th</sup> teachers</p> <p><i>Sharing experiences with how to implement STEM in the classroom, how to manage student behavior, and other strategies for STEM in your day.</i></p>	<p><b>6<sup>th</sup> grade Science Instruction</b> Nicole Resmondo Sixth Grade Teachers</p> <p><i>Sensational 6<sup>th</sup> grade science tools, assessments, and strategies to engage your students in upcoming standards and content.</i></p>	<p><b>Fifth Grade Science Ideas</b> Lynne Burney, Conni Durfee 5<sup>th</sup> grade teachers</p> <p><i>This session will be full of 5<sup>th</sup> grade science strategies and content. Come join these two experienced science teachers to learn more to add to your lessons.</i></p>
<p><b>Modeling and Scientific Inquiry Using Bottle Ecosystems</b> Neely Tonos, Jennifer Krouse, Karen Lynn 3<sup>rd</sup> -12<sup>th</sup> grades Life Science <i>Learn how to make a bottle ecosystem out of 2-Liter soda bottles in order to teach many life science objectives such as Experimental Design, Scientific Inquiry, and Biogeochemical Cycles. Students will be engaged in long term inquiry based learning by creating this model system.</i></p>	<p><b>Modeling and Scientific Inquiry Using Bottle Ecosystems</b> Neely Tonos, Jennifer Krouse, Karen Lynn 3<sup>rd</sup>-12<sup>th</sup> grades Life Science <i>Learn how to make a bottle ecosystem out of 2-Liter soda bottles in order to teach many life science objectives such as Experimental Design, Scientific Inquiry, and Biogeochemical Cycles. Students will be engaged in long term inquiry based learning by creating this model system.</i></p>	<p><b>Fourth Grade Science Ideas</b> Lori Moss Fourth Grade Teachers</p> <p><i>This session will be full of 4<sup>th</sup> grade science strategies and content. Come join Lori, a STEM lab teacher at Blue Grass with strong lessons and resources to share. You will learn more and have resources to add to your lessons.</i></p>
<p><b>Taking Science Lab Notebooks Digital with Google and Canvas</b> Kerri Kissinger, Rudy Furman and Michael Hartman Audience: Lab Based Science Classes (9-12) <b>Bring Device</b> <i>Reduce the paper, reduce the grading, and learn how to prepare our students for online lab notebook submissions with Google and Canvas integration. Great for preparing our students for college based science classes that require online submissions.</i></p>	<p><b>Three-Dimensional NEW Science Standards</b> Secondary Teachers Tami Russell</p> <p><i>Teachers will learn the first steps to understanding three dimensions of science standards. Learn how to engage students in the science practices of developing and using models, engaging in argument from evidence, and constructing explanations to make sense of phenomenon. Science Practices can be implemented with today's standards. New Standards will be reviewed and resources shared.</i></p>	<p><b>Third Grade Science</b> April Lamb Third Grade Teachers</p> <p><i>This session will be full of 3<sup>rd</sup> grade science strategies and content. Come join April, a STEM lab teacher at Shannondale with amazing ideas. You will learn more and have resources to add to your lessons.</i></p>
<p><b>FREE and Fabulous...Science Articles at Your Fingertips</b> Sarah Ramsey 6<sup>th</sup>-12<sup>th</sup> <b>Bring Device</b></p> <p><i>This session will show you many resources for science content articles. Save time and find specific reading</i></p>	<p><b>FREE and Fabulous...Science Articles at Your Fingertips</b> Sarah Ramsey 6<sup>th</sup>-12<sup>th</sup> <b>Bring Device</b></p> <p><i>This session will show you many resources for science content articles. Save time and find specific reading</i></p>	<p><b>Manage Students in Your Lessons: NearPOD</b> <b>Bring Device</b> Shawn Walker All grade levels</p> <p><i>NearPod is an engaging and interactive way to use devices teaching content. Lessons can be differentiated and</i></p>

<p>leveled and aligned articles to your standards. Don't spend your time digging through the internet when you have access to high quality data bases on opposing viewpoints and science content and more!</p>	<p>leveled and aligned articles to your standards. Don't spend your time digging through the internet when you have access to high quality data bases on opposing viewpoints and science content and more!</p>	<p>students can do whole group or self-paced lessons. This is an intro course to Nearpod Student Management System and how to use it in the science classroom. Three full access licenses will be awarded.</p>
<p><b>Engaging Special Needs Learners in Science</b> Rhonda Kerr 6<sup>th</sup>-12<sup>th</sup> Session participants will leave with new tools for engaging and challenging special needs learners in the science classroom. Participants should bring their own ideas of what works in their classrooms to share!</p>	<p><b>Engaging Special Needs Learners in Science</b> Rhonda Kerr 6<sup>th</sup>-12<sup>th</sup> Session participants will leave with new tools for engaging and challenging special needs learners in the science classroom. Participants should bring their own ideas of what works in their classrooms to share!</p>	<p><b>8<sup>th</sup> grade Standards Based Content</b> Amy Lyttle 8<sup>th</sup> grade teachers  Sensational 8<sup>th</sup> grade science tools, assessments, and strategies to engage your students in upcoming standards and content.</p>
<p><b>Zap! Engaged Students</b> Rhonda Minnis 3<sup>rd</sup>-12<sup>th</sup> grades This session focuses on fun and creative ways to engage students in the review process. Various games and strategies will be explored as well as an opportunity to create your own game board to use in your classroom.</p>	<p><b>Digital Interactive Notebooks</b> Rachel Evans and Grace Reed All grades <b>Bring Device</b>  This session focuses on using Google Slides to convert traditional interactive notebooks into a digital resource for students to continually develop their learning. Accessible technology is needed at your school to implement this strategy.</p>	<p><b>Digital Interactive Notebooks</b> Rachel Evans and Grace Reed All grades <b>Bring Device</b>  This session focuses on using Google Slides to convert traditional interactive notebooks into a digital resource for students to continually develop their learning. Accessible technology is needed at your school to implement this strategy.</p>
<p><b>Using Canvas for Assessment</b> Ryan Milani and Jill Shinlever All Grades <b>Bring Device</b>  This session will show you how to use canvas to build assessment and innovative and practical ideas for digital integration with assessment.</p>	<p><b>Using Canvas for Assessment</b> Ryan Milani and Jill Shinlever All Grades <b>Bring Device</b>  This session will show you how to use canvas to build assessment and innovative and practical ideas for digital integration with assessment.</p>	<p><b>Biology Standards Table Talk</b> Biology Teachers Location: Cafeteria  Join colleagues and rotate through the room in standards discussions specific to upcoming Biology standards.</p>
<p><b>Virtual Reality in the Classroom</b> Sandy Morris and Rich McKinney 3<sup>rd</sup>-12<sup>th</sup> grades Imagine being able to take your students on unlimited field trips around the world without the worry of cost and time away from the classroom. Join us as we share with you how we are able to "give our students the world" through the use of Virtual Reality (VR) technology and Google Expeditions. The integration of this technology at our schools has allowed us to take our students to virtually anywhere! Participants will experience VR technology, learn how to tie standards to expeditions, and ideate on how to acquire the technology for their classroom.</p>	<p><b>Virtual Reality in the Classroom</b> Sandy Morris and Rich McKinney 3<sup>rd</sup>-12<sup>th</sup> grades Imagine being able to take your students on unlimited field trips around the world without the worry of cost and time away from the classroom. Join us as we share with you how we are able to "give our students the world" through the use of Virtual Reality (VR) technology and Google Expeditions. The integration of this technology at our schools has allowed us to take our students to virtually anywhere! Participants will experience VR technology, learn how to tie standards to expeditions, and ideate on how to acquire the technology for their classroom.</p>	<p><b>High School EOC Review Physics, Physical Science and Ecology Library</b> This session is for anyone that is currently teaching or going to teach one of these high school courses this school year. And a time to review the items on the EOC.</p>
<p><b>Secondary: Teach Science Using Wildlife Observation</b></p>	<p><b>Elementary: Teach Science Using Wildlife Observation</b></p>	<p><b>Oh, The Places You Will Go! Exploring Science through GIS</b></p>

<p>Zoo of Knoxville 6<sup>th</sup> -12<sup>th</sup> grade teachers <i>Tap in to your students' interest in wildlife to teach science concepts using observation skills. We will challenge you to investigate adaptations, observe with greater curiosity, and use real world science to engage students in learning.</i></p>	<p>Zoo of Knoxville 3<sup>rd</sup>-5<sup>th</sup> grade <i>Tap in to your students' interest in wildlife to teach science concepts using observation skills. We will challenge you to investigate adaptations, observe with greater curiosity, and use real world science to engage students in learning.</i></p>	<p>Jessica Everitt 3<sup>rd</sup>-5<sup>th</sup> grades <i>Interested in engaging students in context embedded science? Wanting to help students understand how science impacts locations? Through this session, participants will learn about digital tools to help students interact with GIS (geographic information systems) through a scientific lens. Participants will walk away with a list of resources along with integration ideas.</i></p>
<p><b>Strategies to Increase Student Engagement, Motivation, and Achievement</b> Bryan Shultz 6<sup>th</sup>-12<sup>th</sup>  <i>Come and learn about strategies to increase student engagement, motivation, and achievement. These will include lab- and application-based methods, tools to support data analysis and interpretation, structure and pacing considerations, and PLE strategies.</i></p>	<p><b>Science Geek: When You Don't Want to Grade Anything Else</b> Andi Hevrdeys Chemistry and Biology Teachers Bring Your Own Device  <i>Science Geek is an online tool used for formative assessments and student practice without the use of worksheets that a teacher must grade. This website is for chemistry and biology interactive practice. Please be prepared to create or generate an assessment to use the next week in class.</i></p>	<p><b>Strategies to Increase Student Engagement, Motivation, and Achievement</b> Bryan Shultz 6<sup>th</sup>-12<sup>th</sup>  <i>Come and learn about strategies to increase student engagement, motivation, and achievement. These will include lab- and application-based methods, tools to support data analysis and interpretation, structure and pacing considerations, and PLE strategies.</i></p>
<p><b>Effective Grouping in the Science Classroom</b> Trudy Rodgers 6<sup>th</sup>-12<sup>th</sup> grades <i>This session you will learn how grouping can increase student engagement and mastery all while making your life easier. This session is a repeat and back by popular survey scores.</i></p>	<p><b>Effective Grouping in the Science Classroom</b> Trudy Rodgers 6<sup>th</sup>-12<sup>th</sup> grades <i>This session you will learn how grouping can increase student engagement and mastery all while making your life easier. This session is a repeat and back by popular survey scores.</i></p>	<p><b>Textbook Committee Meeting</b> Andrea Berry  This meeting is for board approved textbook committee members only.</p>
<p><b>Applying Universal Design for Learning in Your Classroom</b> Rebecca Bitner, Michelle Pitman, Matt Meade  <i>This session is for general and special educators. Participants will explore Universal Design for Learning to plan lessons for students of all ability levels. Working samples of modified lessons will be provided and modeled. Participants will increase understanding of the key components of the Least Restrictive Environment for students with disabilities as they are outlined in the TN Special Education Framework.</i></p>	<p><b>Applying Universal Design for Learning in Your Classroom</b> Rebecca Bitner, Michelle Pitman, Matt Meade  <i>This session is for general and special educators. Participants will explore Universal Design for Learning to plan lessons for students of all ability levels. Working samples of modified lessons will be provided and modeled. Participants will increase understanding of the key components of the Least Restrictive Environment for students with disabilities as they are outlined in the TN Special Education Framework</i></p>	<p><b>Revamp Your Rubrics: Using Rubrics as Powerful Teaching Tools</b> Melody Hawkins and Sherry Fischbach 6<sup>th</sup>-12<sup>th</sup> <i>Join two of our PLE classroom teachers as they share how they have revamped their rubrics and increased student expectations in their classrooms. Teachers will think differently about setting student rubric expectations when you see how they have implemented work. Get tips and even have time to revamp your rubrics</i></p>
<p><b>Executive Functioning, The Teenage Brain, and Stress in Schools</b></p>	<p><b>Executive Functioning, The Teenage Brain, and Stress in Schools</b></p>	<p><b>Executive Functioning, The Teenage Brain, and Stress in Schools</b></p>

<p>Eileen Catlin 6<sup>th</sup>-12<sup>th</sup> teachers <i>This session is for general and special educators. Participants will develop a better understanding of the developing brain with emphasis on the teen years and learn how executive function skills and stress affect learning and social interactions for students.</i></p>	<p>Eileen Catlin 6<sup>th</sup>-12<sup>th</sup> teachers <i>This session is for general and special educators. Participants will develop a better understanding of the developing brain with emphasis on the teen years and learn how executive function skills and stress affect learning and social interactions for students.</i></p>	<p>Eileen Catlin 6<sup>th</sup>-12<sup>th</sup> teachers <i>This session is for general and special educators. Participants will develop a better understanding of the developing brain with emphasis on the teen years and learn how executive function skills and stress affect learning and social interactions for students.</i></p>
<p><b>Close Reading in the Science Classroom</b> August Askins 6<sup>th</sup>-12<sup>th</sup> Bring Device <i>Do you provide students with the opportunity to read meaningful, informative text in your science classroom? Learn about literacy strategies for close reading, &amp; explore sites that offer engaging text.</i></p>	<p><b>CER- Channeling Students' Love of Argument to Foster Rich Content/Evidence Based Discussions</b> Cheri Reznicek 6<sup>th</sup>-12<sup>th</sup> <i>This session will begin by providing a brief description of the Claim, Evidence, Reasoning format for constructing scientific explanations. Specific examples of the use of this format will be shared by having attendees formulate and share their own CER arguments based on provided content. Attendees will begin to develop their own lessons that incorporate the use of CER and discussion.</i></p>	<p><b>Using Articles to Teach Research Based Thinking</b> Bethany Saunders 5<sup>th</sup>- 12<sup>th</sup> grades <i>Challenge your students to "think beyond" an article. Instead of having students simply read an article and answer questions, students will learn to use articles to drive their research to develop a deeper understanding about science content.</i></p>
<p><b>Elementary Science: Solid Science Instruction</b> Andrea Berry 3<sup>rd</sup>-5<sup>th</sup> Teachers <i>This session participants will get familiar with the science and engineering practices and shifts with the coming standards. Participants will learn strategies to help them with instruction today and new standards to come. This session will also highlight what effective science instruction should look like in your classroom.</i></p>	<p><b>Tennessee Innovative Network: MakerMinded</b> Evan Curran 6-12 <i>This is a repeat session. If you are associated with STEM or STEM in your school be sure to attend MakerMinded. MakerMinded is a statewide campaign designed to encourage schools to engage in high-quality STEM competitions and activities and provides opportunities for students to develop the skills necessary for a career in manufacturing or engineering. This session will explore that.</i></p>	<p><b>Tennessee Innovative Network: MakerMinded</b> Evan Curran 6-12 <i>This is a repeat session. If you are associated with STEM or STEM in your school be sure to attend MakerMinded. MakerMinded is a statewide campaign designed to encourage schools to engage in high-quality STEM competitions and activities and provides opportunities for students to develop the skills necessary for a career in manufacturing or engineering. This session will explore that</i></p>
<p><b>Aligning Instruction to the Evolving Biology and Chemistry EOCs</b> Biology and Chemistry Tami Russell <i>Learn how to align content and establish the relationship between the EOC and current standards. Learn a process to close the gap between student learning and expectations of assignments. We will take an in-depth look at standards and a new way of evaluating the activities we use to teach them.</i></p>	<p><b>Robotics Meet Up</b> For <u>Current</u> High School First Robotics Coaches-Only Jane Skinner, Facilitator <i>This is a time set aside for current First Robotics Team Coaches to meet together and discuss planning mentor meetings for the season and discuss collaborating in regards to practice spaces, equipment, and build space needs</i></p>	<p><b>7<sup>th</sup> grade Science Instruction</b> Julianne Brandt <i>Sensational 7<sup>th</sup> grade science tools and strategies to engage your students in standards and content.</i></p>

<p><b>Sixth Grade and Seventh Grade Mid-Term Test Review</b> Cafeteria Melissa Wells, Shelia Cole, and Patrick Davis</p> <p><i>Review time for teachers to review items on midterm exam.</i></p>	<p><b>Eighth Grade and MS Physical Science Midterm Review</b> Location: Cafeteria</p> <p><i>Review time for teachers to review items on midterm exam.</i></p>	<p><b>Making it Honors- How to Plan for Middle School Honors</b> Susan Feliu 6<sup>th</sup>- 8<sup>th</sup> grades</p> <p><i>Learn to take your on-level lesson plan and make it suitable for your honors class. In this session, you will learn strategies to increase the rigor of any lesson. Bring your device and an objective for a future lesson plan to work on.</i></p>
<p><b>AP Biology</b> Beth Mooney and Julie Liford</p> <p><i>Content strategies, sketch notes, and a look at the TVA Plant Camp experience along with other resources shared in this session.</i></p>	<p><b>Particle Physics and QuarNek Teacher Program for Physics</b> Dr. Sowjanya Gollapinni Audience: Physics, Astronomy</p> <p><i>Particle Physics research aims to understand what the Universe is made of at the most fundamental level. In other words, particle physicists study the behavior of nature at a scale that is a million times smaller than that of an atom. Particle physics experiments are gigantic in size, unique and powerful enough to probe into the sub-atomic world of particles and are built to study particle interactions with matter. Dr. Sowjanya Gollapinni is an assistant professor in the Department of Physics and Astronomy at the University of Tennessee, Knoxville (UTK) and currently leads a high school teacher/student summer internship program along with Department's outreach and education coordinator Mr. Kranti Gunthoti.</i></p>	

**Special Field Trip Choice: Elementary Teachers ONLY Elementary Engineering at the MUSE: Learn how to use the Engineering Design Process. Teachers will report to MUSE for the entire morning.**