

### **July 27-29: Thinking Mathematically**

Contact Teresa Stevenson for registration [tellisst@uark.edu](mailto:tellisst@uark.edu)

Registration Fee \$350; 7-day or 42 hours PD. Participants will engage in a comprehensive research-based approach to mathematics instruction based on how students think about math. Story problems and number sentences will be analyzed to determine the mathematical demands and recognize student responses in terms of cognitive development. Participants will assess students' thinking and design problems that will develop students' understanding of the important concepts and skills. Discussions about student work will provide a window into students' thinking, strengthen students' computational fluency and build their capacity for algebraic reasoning. Must have administration approval before registration. Contact Teresa Ellis-Stevenson at [tellisst@uark.edu](mailto:tellisst@uark.edu) or 575-3875 for registration information.

### **August 2: What I Wish I Knew My First Years: Classroom Management through Engagement for K-12 Science and Math Teachers**

ESC 280443 Fee \$35; 6 hours PD

With the implementation of TESS, CCSS Math and new Arkansas K-12 Science Standards, it is ever so more important that math & science teachers are effective at managing their classroom and fostering a positive environment. We are expected to lead by facilitation instead of lecture, use technology for assessment, keep students engaged at all times and still teach our content. How can you manage this and still have time to sleep? This one day engaging workshop will explore and practice what some of the greats in classroom management have been writing about for years while practicing content. Strategies used will include those by Kagan, Harry Wong, Fred Jones, Danielson, and Jim Knight.

### **August 2: Science Notebooking the NGSS Way (using the Science & Engineering Practices)**

ESC 280448 Fee \$35; 6 hours PD

Students need to be reflective and ask questions about learning. How can prompts be created to elicit student thinking? This PD will focus on student examples and learning how to create structures and prompts to ensure students not only gather data, but make sense of the data and show their true thinking. The Science & Engineering Practices of the new Arkansas K-12 Science Standards will be incorporated into this PD.

#### ***Other New Science Standards Training located at NWAESC Register through escWorks***

June 9-10: Grasping Phenomenal Science for Grades 9-12: Navigating from Standards to Instruction

July 26-28: Grasping Phenomenal Science for Grades K-4: Navigating from Standards to Instruction



## **STEM Center for Math and Science Education**

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### **Summer 2016 Professional Development:**

**To register access escWorks:  
University of Arkansas Center for Math and Science Education**

**All Sessions are from 9:00-3:30pm unless otherwise noted  
Registration fee includes PD hours, lunch, snacks and workshop materials**

**Payment by check or PO only - made out to University of Arkansas  
(in memo line: CMASE)**

## **CMASE Summer 2016 PD Offerings**

### **June 27: Sorting Out Ideas about Function (9-12)**

ESC 280452 Registration Fee \$35; 6 hours PD

Have you ever wondered how to spike student conversations about functions that encompass below level, on level, and above level students simultaneously? Is it possible to design a task that will extend students' understanding of functions and functional relationships? A card-sorting task will allow students to describe features that make a relationship a function and make connections amongst representations. Teachers will explore and discuss methods to answer these questions using multiple card-sorting tasks as well as design a set/sets of cards.

### **June 28-29: Grasping Phenomenal Science for Grades 5-8: Navigating from Standards to Instruction**

ESC 280435 Fee \$50; 12 hours PD

Educators will engage in grade-specific lessons to make sense of science phenomena and reflect on instructional strategies designed to engage students in science instruction consistent with the new Arkansas science standards. Both days are required.

### **July 18: 10 Frames (K-1)**

ESC 280451 Fee \$20; 3 hours PD

Wow! Where does the time really go? Are you a teacher that really wants to do hands on activities with your students but you don't have time to develop them during the school year? This PD will review methods that utilize Ten Frames to cover strands in kindergarten, first, and second grade. Participants will receive a bag full of goodies and have the opportunity to make additional sets of activities utilizing die cuts. Be sure to bring your own paper if you plan to make additional sets!

### **July 18: Algebra Tiles (8-9)**

ESC 280455 Fee \$10; 3 hours PD

Solving multi-step equations and factoring are two topics that students tend to struggle with in math. Students are in need of a concrete model that introduces these concepts. This PD will utilize Algebra Tiles to solve multistep Equations, to multiply binomials, and to factor trinomials.

### **July 19: ACT Aspire Science 3rd-5th grade**

ESC 280430 Fee \$35; 6 hours PD

Get your science instruction ready to meet the demands of the ACT Aspire and keep the focus on your Arkansas K-12 Science Standards. This one day training will provide current information, examples, and practice science problems in science reasoning for students in grades 3-5, as well as classroom and curriculum changes you may need for fostering high student achievement in science. The morning will focus on learning more about ACT Aspire; and, the afternoon will focus on creating ACT Aspire-like questions for your math standards. You will have the opportunity to work with other teachers in your grade level, to share newly created questions and to walk away with a bank of questions for your students.

### **July 19: ACT Aspire Math 3rd-5th grade**

ESC 280436 Fee \$35; 6 hours PD

Get your math instruction ready to meet the demands of the ACT Aspire and keep the focus on Arkansas K-12 Math Standards. This one day training will provide current information, examples, and practice math problems in math reasoning for students in grades 3-5, as well as classroom and curriculum changes you may need for fostering high student achievement in math. The morning will focus on learning more about ACT Aspire; and, the afternoon will focus on creating ACT Aspire-like questions for your math standards. You will have the opportunity to work with other teachers in your grade level, to share newly created questions and to walk away with a bank of questions for your students.

### **July 20: ACT Aspire Science 6th-10th grade**

ESC 280461 Fee \$35; 6 hours PD

Get your science instruction ready to meet the demands of the ACT Aspire and keep the focus on your Arkansas K-12 Science Standards. This one day training will provide current information, examples, and practice science problems in science reasoning for students in grades 6-10, as well as classroom and curriculum changes you may need for fostering high student achievement in science. The morning will focus on learning more about ACT Aspire; and, the afternoon will focus on creating ACT Aspire-like questions for your math standards. You will have the opportunity to work with other teachers in your grade level, to share newly created questions and to walk away with a bank of questions for your students. \$35.00

### **July 19: ACT Aspire Math 6th-10th grade**

ESC 2804369 Fee \$35; 6 hours PD

Get your math instruction ready to meet the demands of the ACT Aspire and keep the focus on Arkansas K-12 Math Standards. This one day training will provide current information, examples, and practice math problems in math reasoning for students in grades 6-10, as well as classroom and curriculum changes you may need for fostering high student achievement in math. The morning will focus on learning more about ACT Aspire; and, the afternoon will focus on creating ACT Aspire-like questions for your math standards. You will have the opportunity to work with other teachers in your grade level, to share newly created questions and to walk away with a bank of questions for your students.

### **July 25: WeDo Lego's 7+ and Mindstorms 10+**

ESC 280442 Fee \$50; 6 hours PD

Get a jump start on learning new ideas for engaging students in the Computer Science Standards that will be implemented in 2017-18. Learn how to build LEGO robotic models featuring working motors and sensors; program models; and explore a series of cross-curricular, theme-based activities that relate to science, technology, engineering, and mathematics, as well as language and literacy. Participants completing this workshop will be able to borrow construction sets with printed building instructions for 12 models.