

Summer 2017 Professional Development Offerings

Arkansas State University Rural STEM Education Center

If you have any questions, please contact Dr. Julie Grady by email: jgrady@astate.edu, or by phone: 870-680-8100

Date(s)/Times	Location	Title/Instructor(s)	Subject/Grade	Description	Registration	Cost
June 2, 2017 8:30 am - 3:30 pm <i>Registration</i> <i>Deadline: 5-24-17</i>	Arkansas State University Education Leadership Building Room 308	How to use Vernier Sensors for Data Collection and Analysis Instructors: Adele Barnett, Tahnya Price	Math/Science 4-8	Teachers will experience math and science lessons that directly support Arkansas Science or Mathematics Standards using Vernier equipment to collect and analyze data. Various sensors and probes will be used with LabQuest hand-held devices or computer software. Included sensors will be: temperature, motion, heart-rate, pressure, colorimeter, pH, and others as requested by participants.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
June 5-6, 2017 8:30 am - 3:30 pm	Northeast Arkansas Education Cooperative Walnut Ridge, AR	Building Connections: From Algebra to Calculus (9-12) Instructors: Tiffani Fugate, Tahnya Price	Mathematics 9-12	There are big ideas in the study of mathematics that connect Algebra I through Calculus. Student understanding of these ideas can be supported by the following progression: 1)Analyze functions of different types using multiple representations. 2) Determine and justify the selection of a function type to model a situation. 3)Compare and interpret functions in terms of the situation they model. 4)Construct models to represent situations and make predictions. In this session we will present Formative Assessment Lessons (FALS), tasks, and problems for Algebra 2 and beyond to foster this progression. Session directly supports that Arkansas Mathematics Standards.	Register through escworks session # 314635	see escworks
June 6-8, 2017 8:30 am - 3:30 pm	Arkansas State University Reng Student Union Centennial Hall	Grasping Phenomenal Science (GPS) for Grades 5-8: Navigating from Standards to Instruction Instructors: Nancy Hornor, Linda Kellim, Sandra Lamberson, Tammy Winslow, Nanette Nichols, Ben Carrigan, Adele Barnett	Science 5-8	During this three-day professional development, educators will explore science phenomena, reflect on instructional strategies, and make connections to the new Arkansas K-12 Science Standards. Student-focused learning through the application of science, math, and literacy skills will be highlighted. An introduction to the optional Accelerated Science Course Pathway will be included. Two follow-up days will be offered (September 14 and November 9 at Northeast Arkansas Education Cooperative in Walnut Ridge) along with opportunities for classroom-level support. Connections to TESS: 1a, 1d, 1e, 3a-e, 4a, 4e Note: Participation in all three days of this session meets the ADE requirement for Pre-Advanced Placement Science (Pre-AP) teacher certification or recertification. This session DOES NOT fulfill the ADE licensure requirements to teach high school Physical Science-Integrated for high school credit at the 8th grade level.	Register through escworks session # 312293	see escworks
June 12-15, 2017 & June 19-22, 2017 8:30 am - 3:30 pm <i>Registration</i> <i>Deadline: 4-15-17</i>	Ozarka College Ash Flat, AR	Inspiring Early Mathematics Learning in Northcentral and Northeast Arkansas Instructors: Dr. Amanda Lambertus, Tahnya Price, Dr. Lisa Rice	Mathematics K-3	The goals of the institute are to promote teacher and student mathematics learning about operations and algebraic thinking, measurement and data, and geometry concepts, based on the Arkansas Math Standards for grades K-3. The institute will emphasize hands-on, minds-on experiences that promote teacher and student math learning. Teachers will receive a stipend up to \$1,500 for attending the professional development sessions (8 summer days, 2 fall Saturdays, and 2 classroom observations/conferences) and completing additional grant requirements. Schools will receive books and materials (estimated value of \$300-\$500 per teacher) supporting their math teaching and lessons. Participation preference will be given to teams of teachers from the same school or feeder schools.	register by emailing Dr. Julie Grady: jgrady@astate.edu	\$200
June 13, 2017 9:00 am - 4:00 pm	Arkansas State University Education Building Room 108	Code.org K-5 Computer Science Professional Development	K-5 educators, GT, media and technology specialists	Code.org is a one-day workshops for K-5 educators, GT, media and technology specialists interested in learning the basics of coding and computer science. Workshops will cover the pedagogy and resources used to teach Code.org's CS Fundamentals K-5 courses, as well as an in-depth look at the new Arkansas Computer Science Standards. Each participant will receive swag bag and complete curriculum guide. PARTICIPANTS MUST REGISTER AT BOTH LINKS FOR THIS WORKSHOP.	https://studio.code.org/pd/workshops/1599/enroll http://tinyurl.com/RuralSTEMRegistration2017	\$0
June 15, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative, Melbourne, AR	Grasping Phenomenal Science (GPS) for Grades 9-12 (Biology): Navigating from Standards to Instruction Instructors: Lynn Maguffee, Adele Barnett	Science 9-12	Educators will engage in phenomenon-based investigations aligned to the new <i>Biology-Integrated</i> course. Student-focused learning through the application of science, math, and literacy skills will be highlighted. Two follow-up PD days will be offered along with opportunities for classroom-level support. Connections to TESS: 1a, 1d, 1e, 3a-e, 4a, 4e	Register through escworks session # 311579	see escworks

June 20-21, 2017 8:30 am - 3:30 pm	Northeast Arkansas Education Cooperative, Walnut Ridge, AR	Grasping Phenomenal Science (GPS) for Grades K-4: Navigating from Standards to Instruction Instructors: Sandra Lamberson, Adele Barnett	Science K-4	During this two-day opportunity, educators will explore the Arkansas K-4 Science Standards by engaging in grade-specific investigations. Student-focused learning through the integration of science, math, and literacy skills will be highlighted. Two follow-up PD days will be offered (September 12 and November 7 at the Northeast Arkansas Education Cooperative in Walnut Ridge) along with opportunities for classroom-level support. Connections to TESS: 1a, 1d, 1e, 3a-e, 4a, 4e	Register through escworks session # 315641	see escworks
June 23, 2017 8:30 am - 3:30 pm <i>Registration Deadline: 6-14-17</i>	Arkansas State University Education Leadership Building room 308	Thermal Energy Instructor: Adele Barnett	Science 5-8	5E lesson for middle school science dealing with heat, temperature, and conduction. This lesson aligns with the new Arkansas K-12 Science Standards and includes an engineering component.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
June 27-28, 2017 8:30 am - 3:30 pm	Arkansas State University Education Leadership Building room 322	Grasping Phenomenal Science (GPS) for Grades 9-12 (Biology): Navigating from Standards to Instruction Instructors: Sandra Lamberson, Adele Barnett	Biology 9-12	During this two-day professional development, educators will engage in phenomenon-based investigations aligned to the new <i>Biology-Integrated</i> course. Student-focused learning through the application of science, math, and literacy skills will be highlighted. Two follow-up PD days will be offered (September 19 and November 14 at the Northeast Arkansas Education Cooperative in Walnut Ridge) along with opportunities for classroom-level support. Connections to TESS: 1a, 1d, 1e, 3a-e, 4a, 4e	Register through escworks session # 315658	see escworks
June 28, 2017 8:30 am - 3:30 pm <i>Registration Deadline: 6-19-17</i>	Arkansas State University Education Leadership Building Room 308	Nspiring Mathematics Learning Using Current Technologies Instructor: Tahnya Price	Mathematics 8-12	Technology provides a visual approach to learning which can build a stronger understanding of math concepts. Participants will learn how to use the TI-Nspire app for the iPad while engaging in classroom activities that promote grades 8-12 mathematics learning. Participants will have access to six iPads with the TI-Nspire app installed to check out for use in their classrooms. Participants can bring their own iPads with the app pre-loaded or use iPads provided during the session. The iPads with the app available for classroom check-out are provided by an ASU ERZ Special PD grant. Professional development directly supports Arkansas Mathematics Standards.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
June 29, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative, Melbourne, AR	Grasping Phenomenal Science (GPS) for Grades 5-8: Navigating from Standards to Instruction Instructors: Lynn Maguffee, Adele Barnett	Science 5-8	Educators will explore science phenomena, reflect on instructional strategies, and make connections to the new Arkansas K-12 Science Standards. Student-focused learning through the application of science, math, and literacy skills will be highlighted. Two follow-up PD days will be offered along with opportunities for classroom-level support. Connections to TESS: 1a, 1d, 1e, 3a-e, 4a, 4e	Register through escworks session #311089	see escworks
July 6, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative, Melbourne, AR	Grasping Phenomenal Science (GPS) for Grades 9-12 (Physical Science): Navigating from Standards to Instruction Instructors: Lynn Maguffee, Adele Barnett	Physical Science 9-12	Educators will engage in phenomenon-based investigations aligned to the new Physical Science-Integrated course. Student-focused learning through the application of science, math, and literacy skills will be highlighted. Follow-up PD days will be offered (November 2) along with opportunities for classroom-level support. Connections to TESS: 1a, 1d, 1e, 3a-e, 4a, 4e	Register through escworks session # 313373	see escworks
July 6, 2017 8:30 am - 3:30 pm <i>Registration Deadline: 6-27-17</i>	Arkansas State University Education Leadership Building Room 308	Expressions, Equations, and Functions for grades 6-8 Instructor: Tahnya Price	Mathematics 6-8	For this course, teachers will use a required book Developing Essential Understanding of Expressions, Equations and Functions: Grades 6-8 from NCTM. The sessions will explore the five big ideas from the text: Expressions, Variables, Equality, Representing and Analyzing Functions, Solving Equations. Each participant will receive a copy of the required text. The professional development directly supports the grades 6-8 Arkansas Mathematics Standards.	http://tinyurl.com/RuralSTEMRegistration2017	\$100
July 7, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative Melbourne, AR Math/Science Room	Expressions, Equations, and Functions for grades 6-8 Instructor: Tahnya Price	Mathematics 6-8	For this course, teachers will use a required book Developing Essential Understanding of Expressions, Equations and Functions: Grades 6-8 from NCTM. The sessions will explore the five big ideas from the text: Expressions, Variables, Equality, Representing and Analyzing Functions, Solving Equations. Each participant will receive a copy of the required text. The professional development directly supports the grades 6-8 Arkansas Mathematics Standards.	Register through escworks session # 316809	see escworks
July 10-11, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative Melbourne, AR Math/Science Room	Multiplication & Division of Integers: Not Your Normal Set of Rules Instructor: Tahnya Price	Mathematics 5-8	This course will focus on building conceptual understanding of integers using the operations of multiplication and division. How can integers be viewed from four different perspectives? Course participants will examine how students build rules for integer multiplication and division through patterning and a formative assessment lesson with the understanding that our end goal is to build procedural fluency. This professional development directly supports the grades 5-8 Arkansas Mathematics Standards.	Register through escworks session # 315592	see escworks

July 11-14, 2017 & July 18-21, 2017 8:30 am - 3:30 pm <i>Registration</i> <i>Deadline: 4-15-17</i>	Arkansas State University Education Building Room 108	Enhancing Grades 5-8 Science Learning in Northeast Arkansas Instructors: Dr. Julie Grady, Adele Barnett, Christina Campbell	Science 5-8	The major goals of the institute are to promote teacher and student learning about science content learning about Physical Science, Life Science, and Earth and Space Science based on the NEW ARKANSAS SCIENCE STANDARDS. The institute will emphasize hands-on, minds-on experiences that promote teacher and student science learning. Teachers will receive a stipend up to \$1,500 for attending the professional development sessions (8 summer, 2 fall Saturdays, and 2 classroom observations/conferences) and completing additional grant requirements such as implementing an institute lesson in their classes during September-November, helping with classroom observations, and participating in all grant evaluation activities. Schools will receive books and materials (estimated value of \$300-\$400 per teacher) supporting their science teaching and lessons.	register by emailing Dr. Julie Grady: jgrady@astate.edu	\$200
July 13, 2017 8:30 am - 3:30 pm <i>Registration</i> <i>Deadline: 7-5-17</i>	Arkansas State University Education Leadership Building Room 322	Modeling DNA Instructor: Adele Barnett	Science 5-8	Teachers will engage in a 5E lesson for modeling DNA including DNA extraction, DNA body modeling activity, creating a chenille stem model, and creating a bracelet that carries a specific genetic code. The lesson directly supports the new Arkansas Science Standards.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
July 13-14, 2017 8:30 am - 3:30 pm <i>Registration</i> <i>Deadline: 7-3-17</i>	Arkansas State University Education Leadership Building Room 308	Multiplication & Division of Integers: Not Your Normal Set of Rules Instructor: Tahnya Price	Mathematics 5-8	This course will focus on building conceptual understanding of integers using the operations of multiplication and division. How can integers be viewed from four different perspectives? Course participants will examine how students build rules for integer multiplication and division through patterning and a formative assessment lesson with the understanding that our end goal is to build procedural fluency. This professional development directly supports the grades 5-8 Arkansas Mathematics Standards.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
July 17-18, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative Melbourne, AR Math/Science Room	Building Connections from Algebra to Calculus (9-12) Instructor: Tahnya Price	Mathematics 9-12	There are big ideas in the study of mathematics that connect Algebra I through Calculus. Student understanding of these ideas can be supported by the following progression: 1)analyze functions of different types using multiple representations, 2) determine and justify the selection of a function type to model a situation, 3)compare and interpret functions in terms of the situation they model, 4)construct models to represent situations and make predictions. In this session we will present Formative Assessment Lessons (FALs), tasks, and problems for use in Algebra 2 and beyond to foster this progression. A few of the topics will be: Arithmetic and geometric sequences and their relation to linear and exponential functions; Exponential, logarithmic, and logistic relationships; Conic Sections; Rational Functions. All topics will be addressed from a conceptual point of view with a major emphasis placed on vertical alignment, and directly support the Arkansas Mathematics Standards.	Register through escworks session # 315588	see escworks
July 19-20, 2017 8:30 am - 3:30 pm <i>Registration</i> <i>Deadline: 7-10-17</i>	Arkansas State University Education Leadership Building Room 308	Building Connections from Algebra to Calculus (9-12) Instructor: Tahnya Price	Mathematics 9-12	There are big ideas in the study of mathematics that connect Algebra I through Calculus. Student understanding of these ideas can be supported by the following progression: 1)analyze functions of different types using multiple representations, 2) determine and justify the selection of a function type to model a situation, 3)compare and interpret functions in terms of the situation they model, 4)construct models to represent situations and make predictions. In this session we will present Formative Assessment Lessons (FALs), tasks, and problems for use in Algebra 2 and beyond to foster this progression. A few of the topics will be: Arithmetic and geometric sequences and their relation to linear and exponential functions; Exponential, logarithmic, and logistic relationships; Conic Sections; Rational Functions. All topics will be addressed from a conceptual point of view with a major emphasis placed on vertical alignment, and directly support the Arkansas Mathematics Standards.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
July 24, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative Melbourne, AR Math/Science Room	Nspiring Mathematics Learning Using Current Technologies Instructor: Tahnya Price	Mathematics 8-12	Technology provides a visual approach to learning which can build a stronger understanding of math concepts. Participants will learn how to use the TI-Nspire app for the iPad while engaging in classroom activities that promote grades 8-12 mathematics learning. Participants will have access to six iPads with the TI-Nspire app installed to check out for use in their classrooms. Participants can bring their own iPads with the app pre-loaded or use iPads provided during the session. The iPads with the app available for classroom check-out are provided by an ASU ERZ Special PD grant.	Register through escworks session # 314886	see escworks

July 25-26, 2017 8:30 am - 3:30 pm	Northeast Arkansas Education Cooperative, Walnut Ridge, AR	Grasping Phenomenal Science (GPS) for Grades 9-12 (Physical Science): Navigating from Standards to Instruction Instructors: Saundra Lamberson, Adele Barnett	Physical Science 9-12	During this two-day opportunity, educators will engage in phenomenon-based investigations aligned to the new <i>Physical Science-Integrated</i> course. Student-focused learning through the application of science, math, and literacy skills will be highlighted. Two follow-up PD days will be offered (September 18 and November 16 at the Northeast Arkansas Education Cooperative in Walnut Ridge) along with opportunities for classroom-level support. Connections to TESS: 1a, 1d, 1e, 3a-e, 4a, 4e	Register through escworks session # 316099	see escworks
July 26, 2017 8:30 am - 3:30 pm	Crowley's Ridge Educational Cooperative Harrisburg, AR	Nspiring Mathematics Learning Using Current Technologies Instructor: Tahnya Price	Mathematics 8-12	Technology provides a visual approach to learning which can build a stronger understanding of math concepts. Participants will learn how to use the TI-Nspire app for the iPad while engaging in classroom activities that promote grades 8-12 mathematics learning. Participants will have access to six iPads with the TI-Nspire app installed to check out for use in their classrooms. Participants can bring their own iPads with the app pre-loaded or use iPads provided during the session. The iPads with the app available for classroom check-out are provided by an ASU ERZ Special PD grant. Professional development is directly aligned with the Arkansas Mathematics Standards.	Register through escworks session # 314632	see escworks
July 27, 2017 8:30 am - 3:30 pm	Northeast Arkansas Education Cooperative Walnut Ridge, AR	Nspiring Mathematics Learning Using Current Technologies Instructor: Tahnya Price	Mathematics 8-12	Technology provides a visual approach to learning which can build a stronger understanding of math concepts. Participants will learn how to use the TI-Nspire app for the iPad while engaging in classroom activities that promote grades 8-12 mathematics learning. Participants will have access to six iPads with the TI-Nspire app installed to check out for use in their classrooms. Participants can bring their own iPads with the app pre-loaded or use iPads provided during the session. The iPads with the app available for classroom check-out are provided by an ASU ERZ Special PD grant. Professional development directly supports Arkansas Mathematics Standards.	Register through escworks session # 314151	see escworks
July 28, 2017 8:30 am - 3:30 pm <i>Registration Deadline: 7-14-17</i>	Arkansas State University Education Leadership Building Room 308	How to use Vernier Sensors for Data Collection and Analysis Instructors: Adele Barnett, Tahnya Price	Math/Science 9-12	Teachers will experience math and science lessons that directly support Arkansas Science or Mathematics Standards using Vernier equipment to collect and analyze data. Various sensors and probes will be used with LabQuest hand-held devices or computer software. Included sensors will be: temperature, motion, heart-rate, pressure, colorimeter, pH, and others as requested by participants.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
July 31, 2017 8:30 am - 3:30 pm <i>Registration Deadline: 7-19-17</i>	Arkansas State University Education Leadership Building Room 308	Cognitive Rigor and Depth of Knowledge for Mathematics 3-10 Instructor: Tahnya Price	Mathematics 3-10	How can we help prepare our students for standardized tests, without spending valuable instruction time on test preparation? One way to improve mathematics teaching and learning is through effective questioning. This professional learning experience will focus on using Webb's Depth of Knowledge to empower educators to identify and create questions that give students opportunities to learn at the highest levels, which will help them be more successful on any exam/test they encounter.	http://tinyurl.com/RuralSTEMRegistration2017	\$50
August 1, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative Melbourne, AR Math/Science Room	Cognitive Rigor and Depth of Knowledge for Mathematics 3-10 Instructors: Cindy Merritt, Tahnya Price	Mathematics 3-10	How can we help prepare our students for standardized tests, without spending valuable instruction time on test preparation? One way to improve mathematics teaching and learning is through effective questioning. This professional learning experience will focus on using Webb's Depth of Knowledge to empower educators to identify and create questions that give students the opportunity to learn at the highest levels, which will help them be successful on any exam/test they encounter.	Register through escworks session # 315594	see escworks
August 2, 2017 8:30 am - 3:30 pm	Northcentral Arkansas Education Cooperative Melbourne, AR Math/Science Room	ACT Aspire Data Analysis for Math 3-10 Instructors: Cindy Merritt, Tahnya Price	Mathematics 3-10	During this day, educators will take 2016-17 summative data from ACT Aspire, analyze the data by scoring category, and use it to create a plan where the data drives instruction. The day will also include time to look at resources, time for participants to share what they've been using in their classrooms, and time to research grade level resources and strategies.	Register through escworks session # 315599	see escworks