Play Outside NC CEU Session Outline for Review

Session Title: Play Outside NC: Early Science and Math Concepts are Everywhere…Even in Your Backyard!

Date of Training: Saturday, February 6, 2016. Snow Date February 20, 2016

Time/Location: 9:30 am to 2:30 pm at Goose Creek State Park, Washington, NC

Developer(s): Carroll Worrell-Barnes, Christine Somerville & Jackie Boyd, Beaufort-Hyde Partnership for Children, Pamela Hines Orr & Angela Wilson, UNC-TV, Debra Torrence, NC Institute for Child Development Professionals

Descriptor: This continuing education workshop for 5 hours of CEU credit will provide meaningful activities designed to promote early math and science skill development in outdoor environments in the community, child care setting and back yards. The training combines best practices, widely held expectations, research and evidence, position statements and materials from the field of early childhood, from the content areas of math and science as well as outdoor play and learning. The training will seek to engage early educators working with preschool age children early care and education settings in an interactive, in-person training session that will increase their knowledge about how to leverage a young child's natural curiosity to learn and new knowledge and skills to support their learning in these key content areas.

During the training session, evidence-based and relevant activities will be provided to address the personal anxiety many early educators display when faced with teaching math and science concepts by de-mystifying what math and science is in concrete ways and demonstrating through hands-on activities how early educators can use simple activities in both structured and unstructured outdoor to support young children concretely understand foundational concepts in these content areas. To support relevancy and application of the information, shared strategies and materials in early childhood settings, the training is purposefully aligned with early care and education classroom program and classroom assessment tools used for regulatory compliance, quality improvement efforts and to support the use of developmentally appropriate practices.

The in-person group training for up to 60 early educators working in early care and education settings in Beaufort County will be supplemented by a training toolkit with print and web-based materials, 3 TV broadcast segments, PBS and PNC Foundation's Grow Up Great tools, and access to an online library resources to use back home.

Overall Learning Outcome(s) for CEU Session:

Participants will:

- Increase participants' knowledge about the "what & why" of early math and science and outdoor learning.
- Build the capacity of participants to be able to identify outdoor learning strategies, techniques, and resources to increase the use of the outdoors to support young children's development.
- Grow participants' access to multi-sensory science and math activities in natural outdoor environments that will promote 21st Century skill development in all developmental domains.
- Build participant's understanding of the scientific process and use of common terms to describe it such as: observing, classifying, experimenting, predicting, drawing conclusions, and communicating ideas.
- Grow participants' ability to find and use resources and references to support the use best practices and hands-on activities with young children in the classroom.
- Enhance participants' capacity to comply with child care facility regulatory requirements.

Pre-assessment Strategy: Application/pre-training assessment – see attached.

Standards, Guidelines and Curriculum Addressed:

- NC Division of Child Development & Early Education training Topic Areas: (1) Planning a safe, healthy learning environment, (2) Children's physical and intellectual development, (3) Productive relationships with families, (9) Inclusion of children with special needs
- NC Foundations for Early Learning and Development. http://ncchildcare.dhhs.state.nc.us/PDF_forms/NC_Foundations.pdf
    - APL 1, 6, HPD 8, LDC 1, 3, 5, 7, ESD 5, HPD 1, 2, 4, 5, 7, 8, LDC 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, CD 1, 2, 3, 7, 9, 10, 11, 12, 13, 14, 15,
- NC PreK
- Creative Curriculum Research Basis
    - Child Outcomes. http://teachingstrategies.com/content/pageDocs/TS-Comparing-Child-Outcomes-2013.pdf
    - Early Math. http://teachingstrategies.com/content/pageDocs/TS-CC-Research-Foundation-Math_11-2013.pdf
- NC PreK Requirements. Based on National Education Goals Panel's premise adopted by NC PreK. http://ncchildcare.dhhs.state.nc.us/pdf_forms/NCPre-K_Program_Requirements_Guidance.pdf, sections 5 & 6
- National Head Start Early Learning Outcomes Framework: From Birth to Five. https://eclkc.ohs.acf.hhs.gov/hslc/hs/sr/approach/pdf/ohs-framework.pdf

- NAEYC Position Statements:
    1. NAEYC Personnel Prep Standards & Supportive Skills (http://www.naeyc.org/positionstatements/ppp):
        a. Core Standard 1. Promoting Child Development and Learning
        b. Core Standard 4. Using Developmentally Effective Approaches to Connect with Children and Families
        c. Core Standard 5: Using Content Knowledge to Build Meaningful Curriculum
    2. Where We Stand Summaries, https://www.naeyc.org/files/naeyc/file/positions/earlyLearningStandards.pdf
    3. School Readiness, https://www.naeyc.org/files/naeyc/file/positions/Readiness.pdf
    4. Early Learning Standards, https://www.naeyc.org/files/naeyc/file/positions/position_statement.pdf]
    5. Math. http://www.naeyc.org/files/naeyc/file/positions/psmath.pdf
    6. Science. https://www.naeyc.org/files/naeyc/Early%20Childhood%20FINAL%20FINAL%201-30-14%20(1).pdf

Supplemental Materials & Resources for Training Session

- Beaufort Hyde Partnership for Children Resources – Staff, Technical Assistance & Story Exploring Read Aloud Strategies and Lending Library
- Be Active Kids NC materials & experts, www.beactivekids.org
- BMH Library Resources – Read Aloud Demonstration by Director, Book Supply List
- The Creative Curriculum (Study Starters, Teaching Guides, Other Resources)
- Downeast Partnership for Children - staff and outdoor learning and healthy child strategies and data
- Highlights / High Five Magazines
- Goose Creek State Park - indoor classroom and outside grounds
- Growing Up Wild, http://www.projectwild.org/growingupwild/sendmail/order.htm
- NC Division of Child Development Regional Consultant – Child Care Facility Regulations for math, science & outdoor learning
- NC Museum of Natural Sciences' materials, experts, & Whiteville, NC outdoor learning spaces, www.naturalsciences.org
- NC Science and Mathematics Alliance – PreK Science and Math Activities
- PBS / UNC-TV Resources – Ready to Learn Transmedia Services and STEAM focused activities found on PBS KIDS Lab http://pbskids.org/lab, and PBS Parents http://www.pbs.org/parents/, and UNC-TV PBS LearningMedia - http://www.unctv.pbslearningmedia.org/ , and UNC-TV's Read-a-roo's fabulous Edible Garden - https://itunes.apple.com/us/app/id516395967, UNC-TV and PBS KIDS Special Guest Star Appearances, and more
- PNC Grow Up Great Adventure Cards and Nature Explorer's Journals
- Play Outside NC Connection Cards
- ShapeNC materials and experts, www.smartstart.org/tag/shape-nc/
- Training supplies and technology - LCD screen, TV/DVD, computers, flip chart, markers, note stickers

Additional References:

- Environmental Rating Scale, www.fpg.unc.edu/about-environment-rating-scales
- POEMS, www.cyfernetsearch.org/resource/poems
- FPG Child Development Institute materials & experts, www.fpg.unc.edu
- Go NAPSACC materials & experts, https://gonapsacc.org/
- Natural Learning Initiative materials & experts, www.naturalearning.org/
- NC Community College Common Course Curriculum competencies, *www.nccommunitycolleges www.nccommunitycolleges*
- Smart Start Performance-Based Incentive System. http://www.smartstart.org/
- U-Stars Plus Curriculum, www.fpg.unc.edu
- USDOE Teaching Young Children Math, What Works Clearing House – http://ies.ed.gov/ncee/wwc/pdf/practice_guides/early_math_pg_111313.pdf

Standards/Guidelines addressed (see CEU-T): CEU-T Categories 1- 5

Play Outside NC CEU Session Outline

Module #1	Learning Outcomes	Instructional Methods and Take Homes	Engagement Strategies	Assessment Strategies
Session Overview **Registration (KWL chart) & Breakfast 9 – 9:30 AM** **Module #1 - 9:30-9:45 AM** • Welcome – Park Superintendent • Introduce session trainers, local and state partners and funders • Share how the training will be supported after today • Provide overview of session and participant expectations including lesson planning strategies • Share housekeeping comments • Introduce tools • Provide session • Conduct icebreaker – team up by nature symbols	• Increase awareness of available local, state and national resources about early math and science and outdoor learning	<u>Instructional Methods</u> • Lecture • Interactive Learning • Interactive Learning Display Stations • Large Group <u>Take Homes</u> • Play Outside NC Toolkit • Smart Phones	• Know, Want to Learn and Learned chart • Large Group Icebreaker – nametag match	• Participant session evaluation form • Participant post-assessment

Module #2	Learning Outcomes	Instructional Methods and Take Homes	Engagement Strategies	Assessment Strategies
Why it Matters & Take It Outside **9:45 – 11:15 AM - 75 minutes** • What is math and science for young children? Why is it important for young children? For early educators? • What is outdoor learning and why it is important for young children? For early educators? • How can adults support early math and science learning? • Show the pinecone activity TV segment and demonstrate • Show PBSKids Dinosaur Train-Conifers • What does NC require and what does Beaufort County use to support programs meeting the requirements?	• Increase awareness of what early math and science are. • Increase awareness of what outdoor learning is and its benefits. • Increase understanding of adult's role in supporting early math and science concepts. • Increase awareness of how to use outdoor learning with young children.	<u>Instructional Methods</u> • Lecture • TV segment • Adult engagement activities (PPT, senses) and PEEP & Big Wide World Family Science Toolkit • Nature photo shoot - observation, documentation <u>Take Homes</u> • Standards and Research summary • Play Outside NC Toolkit • Resource list to learn more about early math and science and outdoor learning • Local resource connections	• Reflection	• Post-session assessment • Reflections chart review

Module #3	Learning Outcomes	Instructional Methods and Take Homes	Engagement Strategies	Assessment Strategies
Explore, Observe, Record, Organize & Describe **11:15 AM - Noon** • BREAK (10 minutes) • Introduce lesson plan with Sid the Science Kid • Apple sorting/ observation/eating/ compositing & graphing activity • Reflect on how the apple activity aligns with Creative Curriculum objectives (checklist) • Transition to exploring math and science outside and engage in hands-on activities outdoors 12:15 PM - Lunch Break and upload photos and share from nature walk in ppt slide show in background	• Increase access to topical learning materials for use in their classroom settings as part of a lesson plan as easy, fun additions to supporting child outcomes and/or to share in trainings and/or family engagement activities. • Gain capacity to document and engage with young children to grow early science and math knowledge and skills. • Increase awareness of how teaching these topics to young children support standards and curriculum use. • Grow participant's observation and documentation skills. • Increase capacity to transition from activity and observation to lesson plan to learning and teaching activities.	<u>Instructional Methods</u> • Hands-on activities – apple sorting/ documentation, finding patterns, sound garden, measure and estimate with a pinecone, asking questions, sorting/classifying in outdoor classroom, observation (3 pictures of things you have not seen before), estimating (no. of steps back on boardwalk), mapping of what they did. • Group discussion • Play Outside NC Video Clips <u>Take Homes</u> • Science glossary • Play Outside NC Toolkit	• Lecture • Demonstrations • Observation • Scientific Inquiry • Reflection	• Post-session assessment • Reflections chart review

Module #4	Learning Outcomes	Instructional Methods and Take Homes	Engagement Strategies	Assessment Strategies
Say it in Words! 12:15 – 1:15 PM • Visit by Read-a-roo from UNC-TV • Introduce how you integrate early math and science concepts into literacy activities with young children. • Reading demonstration and active engagement of an applicable children's book that the participants will have in hand as part of their toolkit. • Reflection on activity and how you take concepts outdoors by using "Going on a bear hunt" as movement activity.	• Increase their capacity to use literacy strategies to teach early math and science concepts.	<u>Instructional Methods</u> • Literacy demonstration • Hands-on engagement <u>Take Homes</u> • Children's book • Library book list and card applications	• Interactive engagement in teams • Demonstration of use of learning media in classroom settings • Individual sharing with large group	• Post-session assessment

Module #5	Learning Outcomes	Instructional Methods and Take Homes	Engagement Strategies	Assessment Strategies
Reflect & Wrap Up 1:15 PM – 2:30 PM • Review entire toolkit. • Draw one thing that impacted you most today. • Complete post-training assessment. • Give Aways! • Wrap up comments and thoughts from participants.	• Increase their capacity to build engaging learning activities for young children. • Reduce the apprehension in relation to teaching math and science concepts. • Increase participants' interest in using the outdoors as a learning environment.	<u>Instructional Methods</u> • Lecture • Art drawing • Displays of art in room • Assessment <u>Take Homes</u> • Play Outside NC Toolkit	• Lecture • Small group work • Group discussion • Documentation • Reflection	• Participant drawings • Post-session assessment

Total Time (min 5 hours): 5 hours = .5 CEUs