The School For Young Children at the University of Saint Joseph presents

The 14th Annual Keefe-Bruyette Symposium
Monday, March 14, 2016

The Keefe-Bruyette Symposium will be held on the University of Saint Joseph campus, 1678 Asylum Avenue, West Hartford, Connecticut.

Investigations and Inquiry in Math and Science for Young Children (Infant/Toddler and Pre-K)

featuring Melissa Russell, M.Ed.
Preschool Director
The Hundred Acre School at Heritage Museums & Gardens
Mathematical Investigations

“The research is clear. A child’s exposure to math in pre-Kindergarten is indicative of later school success. Preschool-age children are natural learners and capable of understanding much more than we often give them credit for. Integrating math and science into the daily routine gives young children a solid academic base from which to grow as students. Inviting young children to become scientists – exploring, hypothesizing, measuring, and experimenting – sets them up not only to understand their physical world, but to continue to be fascinated by their own ability to learn and discover throughout their school years.”

– Juanita Copely, Ph.D.
University of Houston

Scientific Inquiry

“Children learn when questions and reasoning are encouraged as they explore the world around them. By providing these opportunities, teachers help children to hone their thinking skills and clarify their informal ideas about science.”

– National Institute for Early Learning Research
Preschool Policy Brief

About the Symposium

The Keefe-Bruyette Symposium promises to be an inspiring day of learning about investigations in mathematics and science inquiry in early childhood. National education experts, as well as experienced classroom teachers, will offer hands-on workshops about math and science teaching for infant/toddler and preschool children.

Workshops are designed with practicing teachers in mind. Our presenters bring a wide range of experience to the workshops, including those who work with children in a classroom setting or conduct research and program development. They come with concrete examples and ideas that can be used in your classroom.

Schedule

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<td>8:15 a.m. - 8:45 a.m.</td>
<td>Registration Check In - The Bruyette Athenaeum at the University of Saint Joseph, 1678 Asylum Avenue, West Hartford</td>
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<tr>
<td>9:00 a.m. - 10:00 a.m.</td>
<td>Keynote Address: “Creating a STEM Preschool: An Inspiring Story” by Melissa Russell, M.Ed. (See page 3)</td>
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<td>10:15 a.m. - 11:45 a.m.</td>
<td>Morning Workshops (See pages 4-9)</td>
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<td>12:00 p.m. - 1:00 p.m.</td>
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<td>3:30 p.m. - 4:00 p.m.</td>
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How to Register: Please use the registration form on page 17 or visit www.usj.edu/KB2016 to register online.
Imagine creating a school: What would you dream to include and why? Would you consider educational research, early childhood teaching philosophies, published curriculum, state standards, or developmental assessments?

With a passion for teaching math and science, the opportunity to create a STEM preschool was a once-in-a-lifetime opportunity. Melissa will share her journey with Heritage Museums & Gardens and the development of The Hundred Acre School, a STEM-focused preschool.

In thinking about STEM, which seems to be the buzzword in education, is it really new or have we had components of STEM present in educational settings all along? Early childhood environments are filled with curious children who ask questions and problem solve daily. A preschooler may ask, “Why is the moon not the same shape at night?” When toddlers are building a block tower, they may laugh as they knock it over. Feeling the vibration and hearing the banging of a spoon is exciting for an infant who is eating. Each of these examples demonstrates a potential STEM teachable moment. As educators shift from everyday interactions to intentionally exploring STEM in daily activities, they help children develop 21st century skills: critical thinking and reasoning, information literacy, creativity, collaboration, and self-direction. Making the shift is easier than you might think and the rewards are amazing!

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Melissa Russell, M.Ed.
Preschool Director
The Hundred Acre School at Heritage Museums & Gardens

Melissa Russell is a dedicated educator with a passion for teaching math and science to young children. She has extensive experience with STEM education and is an expert curriculum developer, a seasoned and award-winning elementary school teacher, and a proven leader in museum education.

Russell served for six years as a fourth grade teacher in the Middleborough and North Attleboro public schools, where she taught math and science and honed her expertise in inquiry-based education and STEM-related curriculum development. Her work in the schools earned her the Rookie Teacher of the Year Award in Plymouth County in 2004.

Russell has worked as a teaching mentor in various college settings, including Bridgewater University, Antioch University New England, and UMass Dartmouth. In the STEM arena, she has coordinated science fairs and served on science and math curriculum committees. Russell was also invited to present at the National Education Research Association, an honor in the teaching field.

Since 2010, Russell has led numerous education initiatives for Heritage Museums & Gardens that have built its reputation as a prominent outdoor education center. She served as head of curriculum development for children ages 2-10 for the Hidden Hollow nature discovery area, developed numerous museum-wide programs for families, and helped design and lead teachers’ workshops emphasizing STEM and nature education at an early age. In 2013, Russell was named manager of visitor services, a role in which she trained and supervised 25 museum educators.

Russell presented at the Massachusetts STEM Summit in October 2014, where she was selected to lead a workshop entitled, “Creating Intentional Learning Opportunities: Infusing STEM into your Preschool Classroom.”

She holds a master of Education degree from Lesley University and an undergraduate degree from Mount Holyoke College, where she graduated with honors.

Russell is licensed by the Massachusetts Department of Early Education and Care as a Preschool Lead Teacher, Director I and Director II. She holds an additional professional license with the Massachusetts Department of Education in Elementary Education 1-6.
1. Creating Intentional Teaching and Learning Opportunities: Infusing STEM into your Preschool Learning Environment

Melissa Russell, Preschool Director,
The Hundred Acre School at Heritage Museums & Gardens

This preschool-focused workshop will explore how to incorporate STEM concepts into daily learning activities that encourage children to be curious, wonder, think, play, question, and connect with the world around them. A series of STEM activities will be introduced as a springboard to developing curriculum that participants can replicate in their programs. We will explore ways to use STEM activities and concepts to help children develop their social and emotional, language, and cognitive skills while capturing their desire to explore, experiment, and engage in play.

Recommended audience: Pre-K

2. Creating Intentional Teaching and Learning Opportunities: Infusing STEM into your Infant/Toddler Learning Environment

Kori Bardige, Early Childhood Special Education Consultant,
Learning Circle Consulting

This workshop will discuss ways infants and toddlers are already learning STEM concepts in their daily explorations. We will discuss ways educators can enhance their knowledge by intentionally incorporating STEM concepts into daily learning activities that encourage children to be curious, wonder, think, play, question, and connect with the world around them. A series of STEM activities will be introduced as a springboard to developing curriculum that participants can replicate in their programs. We will explore ways to use STEM activities and concepts to help children develop their social and emotional, language, and cognitive skills while capturing their desire to explore, experiment, and engage in play.

Recommended audience: Infant/Toddler

3. The Montessori Approach to Zoology & Botany for the Child Aged 3 to 6

Orla Black, Director of Programs,
Montessori School of Greater Hartford

The Montessori approach to zoology and botany spans a three-year cycle beginning with concrete representations of animals and plants. Children are later exposed to more abstract representations of zoology with botany. Come to this workshop to learn how classification systems such as living/non-living, plant/animal and vertebrate/invertebrate are taught in the Montessori classroom. Participants will gain a deeper understanding and a broader view of how children can acquire knowledge of botany and zoology over a three-year span.

Recommended audience: Pre-K

4. Science With Toddlers, The Montessori Approach; Bringing The World to The Child

Tomiko Odorczuk, Toddler Teacher
15 months-3 years, Montessori School of Greater Hartford

Toddlers are sensorial explorers, understanding and classifying their world through their exploration with a stimulating environment. The more senses involved in an activity, the more solidified the concept is in the mind of the young learner. This workshop will focus on the ways in which the Montessori teacher brings the outside world into the classroom for discovery and the classification of objects.

Recommended audience: Infant/Toddler
5. Caring for Critters in a Classroom Community
Rebecca Cole, Special Education Teacher, Wintonbury Early Childhood Magnet School

Learn how to welcome a class pet or pets into the classroom and make them part of the daily curriculum. This workshop will provide you with ideas for choosing the right pet for your class, making the pet part of your science and inquiry, caring for the pet, funding the purchase of a pet, and how caring for an animal helps children self-regulate. Ideas for off-site pets, short-term pets, life cycles of a frog or butterfly, sponsoring an animal, and pet sharing will also be discussed.

Recommended audience: ALL

6. “Creating and Using Documentation Panels to Support Children’s Scientific Thinking”
Cindy Hoisington, Early Childhood Science Educator, Education Development Center, Inc.

The importance of assessing children’s learning in order to plan responsive curriculum is well known. In this workshop we will explore the idea of using data from children’s science explorations (photos, observations, and children’s work samples) to create displays or documentation panels that can be used to uncover children’s scientific thinking.

Recommended audience: Pre-K

7. Clap and Stomp through Developing Number Concepts
Diana L. Labich, K-5 Math Department Chairperson, Enfield Public Schools

Is your day spread too thin trying to implement the entirety of the CT ELD Standards? Join me in integrating gross and fine motor skill development to build an understanding of numbers. Together, we will look at engaging students’ bodies and minds to maximize engagement in these developmentally appropriate activities that address the mathematics standards.

Recommended audience: Pre-K

8. Exploring Nature with the Senses
Lynn Kochiss, Volunteer Educator, Retired Elementary Teacher, Connecticut Forest & Park Association (CFPA)

Ready to stimulate eyes, noses, ears, and fingers with natural objects and learn to facilitate meaningful learning? In this introduction to Project Learning Tree, enjoy trying hands-on activities such as dancing with leaves, searching for colors and shapes, or making your own forest concert. Receive an activity guidebook and music & movement CD.

Recommended audience: Pre-K
9. **Nature Everyday**  
*Margaret Schuster, Naturalist*

The purpose of this workshop is to create an appreciation for nature in children and adults. Through activities, games, and even snacks, there are ways to incorporate nature into your classroom and outdoor area. Weather permitting, we will explore outside. Leave this workshop with materials to bring back to your classroom and get started right away!

*Recommended audience: Pre-K*

10. **Exploring the Natural World with the Seasons**  
*Kim Read, Director of Education, 4-H Education Center at Auerfarm*

*Michelle Rozek, Farm Educator, 4-H Education Center at Auerfarm*

Auerfarm believes that the best way for early childhood students to experience the natural world is through year-round exploration. This workshop will provide tested ideas for nature exploration that can be done in a variety of settings, both indoors and out, throughout the year. These explorations are designed to develop children’s sense of wonder, cultivate their appreciation for beauty and mystery in the natural world, provide opportunities to experience the joy of being close to nature, and foster their respect for all living things. From leaves in the fall to seeds in the spring, we’ll follow the cycle of seasons to guide exploration and create connections with the natural world through scientific exploration. Connections will be made to the Connecticut Early Learning Development Standards.

*Recommended audience: Pre-K*

11. **Little Farmers: Using Agriculture to Teach Social and Scientific Skills**  
*Christy Page, Assistant Park Naturalist, Westmoor Park*

Come explore the connections between farming and education! Learn how agricultural topics can help incorporate social and scientific learning in young children. This workshop will include a live animal demonstration and interactive activities for educators to use in their own programs.

*Recommended audience: Pre-K*

12. **ABCs and 123s: Supporting Math and Literacy Through Song**  
*Jona Jeffcoat, Director of Services, Infinity Music Therapy Services*

Come learn new ways to connect music with children’s literature to support math and literacy development. This workshop will include hands-on experiential activities and participants will leave with ideas for new and innovative lesson plans.

*Recommended audience: Toddler & Pre-K*
13. **Branching Out! Integrating STEM Curriculum throughout your Environment**  
*Melissa Russell, Preschool Director, The Hundred Acre School at Heritage Museums & Gardens*

STEM takes place across the entire learning environment, not strictly in the math center or during a science project. Participants will explore ways to infuse a STEM concept in all areas of the classroom resulting in a learning environment that supports making connections and deepening student learning. The presenter will share lesson plans, photographs, and stories from The Hundred Acre School to demonstrate the intentionality behind a fully integrated STEM approach. Participants will discover ways to transform areas within their own environments and will begin to create a curriculum map that they can implement in their programs.

*Recommended audience: Pre-K*

14. **Science Takes Flight**  
*Stephanie Kadam, Family Programs Manager, Stepping Stones Museum for Children*  
*Manirah Agans, School Programs Manager, Stepping Stones Museum for Children*

3,2,1, blastoff! Join us for a hands-on launch into the scientific world of planning, constructing, and investigating things that fly with even the youngest students! Create planes, parachutes, hot air balloons, and rockets, and rediscover all the possibilities of inquiry-based learning and play.

*Recommended audience: Pre-K*

15. **STEM in the Infant and Toddler Classroom**  
*Keira Durrett, Director, The Williston Northampton Children’s Center*

This training is geared toward teachers who are looking to expand their current STEM offerings, as well as those who are interested in starting to bring STEM concepts to their younger children. The key concepts to be addressed are: what does STEM encompass? What does it look like with infants and toddlers? How do you make it meaningful? Participants will also examine children’s literature to discover key STEM concepts within the story and ways to transform those concepts into investigations. Participants will have opportunities to view videos and photos of infants and toddlers engaging in STEM.

*Recommended audience: Infant/Toddler*

16. **Supporting the Language Development of Dual Language Learners through Science**  
*Cindy Hoisington, Early Childhood Science Educator, Education Development Center, Inc.*

Science is an excellent context for language development for ALL children, especially for dual language learners (DLLs). In this workshop we will explore some approaches and strategies for engaging young DLLs in science explorations and conversations, and for using books and representations to support their science inquiry and language development. Videos from real classrooms will promote discussion.

*Recommended audience: Pre-K*
17. **ABCs and 123s: Supporting Math and Literacy Through Song**

Jona Jeffcoat, Director of Services, Infinity Music Therapy Services

Come learn new ways to connect music with children’s literature to support math and literacy development. This workshop will include hands-on experiential activities and participants will leave with ideas for new and innovative lesson plans.

*Recommended audience: Toddler & Pre-K*

18. **Hidden In Plain Sight: Children Discovering the Great Outdoors in their Own Backyards**

David K. Leff, Essayist, Poet, Former Deputy Commissioner of the Connecticut Department of Environmental Protection

We will focus on stimulating children’s curiosity about the natural world, which will lead to a sense of self-discovery. Looking, noticing, and questioning will be emphasized. We will start with a classroom overview, spend significant time outdoors rain or shine (dress appropriately), and then return to the classroom for discussion.

*Recommended audience: Pre-K*

19. **Teaching Pre-K Math with the CT ELDS**

Gail Mishler, Project Site Director, New Haven Public Schools, School Readiness

This workshop will use hands-on math activities to explore and learn about the Connecticut Early Learning & Development Standards (CT ELDS) for Mathematics. We will play, discuss, share, and conquer any math phobia, allowing you to walk away with at least one intentional math activity per strand to incorporate in your classroom. You’ll also be given resources and suggestions for ways to use Bloom’s taxonomy for higher order thinking through questioning during math activities.

*Recommended audience: Pre-K*

20. **Singing and Swinging into Science!**

Colleen Sprague-Bretthauer, PreK-2nd Grade Music Teacher, Colchester Elementary School

Susie Sandall, Math/Science Specialist, Eastbury School

To boldly go where no man (woman, or child) has gone: The Next Generation Science Standards! Come sing, swing, and blast into the newly adopted Connecticut Early Learning Standards. Ease into the standards with developmentally appropriate songs, movement experiences, and a little Mother Goose! All participants will receive a packet of standards and aligned activities, a bibliography, and discography.

*Recommended audience: All*

21. **“Weaving Math and Science Concepts into Preschool Group Time Experiences”**

Sharon Greenwood, Preschool Teacher, University of Rhode Island, Child Development Center

Story trays, felt boards, songs, and games are wonderful and engaging ways to weave a variety of math and science concepts into group time experiences with young children! During this workshop, we will explore an array of innovative, hands-on, and developmentally appropriate group time activities that can be implemented with preschool children to support their understanding of many math and science concepts. Bring your imagination and discover how open-ended props and materials in your own classroom can be used to create meaningful math and science group time activities with your preschoolers!

*Recommended audience: Pre-K*
Looking for new ideas to add to your curriculum?

Visit the School for Young Children for an evening Open House.

Individuals and groups have the opportunity to:
- Use teacher resource materials
- View documentation panels and teacher display shelves
- View classroom environments
- Gather new curriculum ideas to use in the classroom

For dates, visit the Professional Development section of our website at www.usj.edu/syc

Follow us on Facebook at www.facebook.com/schoolforyoungchildren

“... It is our fervent hope that this Keefe–Bruyette Symposium will assist you in doing your work more effectively. And if through your participation it enhances your personal passion for your calling, it will indeed be a huge success.”

— Gene F. Bruyette H’04, First Symposium, Fall 2002
Keefe-Bruyette Symposium Registration

March 14, 2016

Name: ____________________________________________

School/Organization: ____________________________________________

Address: ______________________________________________________

City: ________________________________  State: _________  Zip: ______________

Day Time Telephone: (       ) ____________  E-mail: ______________________________

Please indicate your choice from the following registration options:

- Full Day: Keynote Address, Morning Workshop, Lunch, Afternoon Workshop, Tour the School for Young Children - $80
- 1/2 Day a.m.: Keynote Address, Morning Workshop, Lunch - $65
- 1/2 Day p.m.: Lunch, Afternoon Workshop, Tour the School for Young Children - $65
- Student Fee: $50 (full-time student)

Morning Workshop Selection (Workshops 1-12)

1st Choice: ____________________________________________

2nd Choice: ____________________________________________

3rd Choice: ____________________________________________

Afternoon Workshop Selection (Workshops 13-21)

1st Choice: ____________________________________________

2nd Choice: ____________________________________________

3rd Choice: ____________________________________________

Please make checks payable to: University of Saint Joseph

Send registration forms with payment or purchase order to:
The School for Young Children, 238 Steele Rd., West Hartford, CT 06117-2791
Fax: 860.231.5581 OR visit us at www.usj.edu/KB2016 to register online.
Keefe-Bruyette Symposium, March 14, 2016

Hands-on Workshops on Math and Science Teaching for Infant/Toddler and Pre-K