



THE SCHOOL FOR YOUNG CHILDREN
AT SAINT JOSEPH COLLEGE

presents

The Fifth Annual Keefe-Bruyette Symposium

Investigation and Inquiry in Math and Science for Young Children

March 19, 2007



featuring
Mary Rivkin, Ph.D.



Scientific Inquiry

“Effective science teaching holistically engages children emotionally, as well as intellectually, physically, and socially. It strengthens children’s need for active involvement in knowledge building, with clear conceptual goals and appropriate adult guidance to yield valid learning. Current psychological, educational and brain research demonstrates the relevance of specific concept-building activities to AAAS Benchmark Standards for science education.”

Science Experiences for the Early Childhood Years: An Integrated Approach
by Jean Durgin Harlan, Ph.D and Mary S. Rivkin, Ph.D.



Mathematics Investigations

“The word mathematics makes many adults think of rote procedures for getting correct answers, a holdover from our own school days. But mathematics is essentially the search for sense and meaning, patterns and relationships, order and predictability.”

The Young Child and Mathematics
by Juanita V. Copley, Ph.D

Schedule

Registration takes place in
The Bruyette Athenaeum at Saint Joseph College

8:15 a.m. – 8:45 a.m. Registration
9:00 a.m. – 10:00 a.m. Keynote: Mary Rivkin, Ph.D.

Dr. Mary Rivkin is an associate professor at the University of Maryland, Baltimore County (UMBC), where she serves as chair of the Department of Education. Previously, she was the coordinator of the Early Childhood Education program. She is a co-principal investigator for a \$10.5 million National Science Foundation (NSF) grant that educates beginning and practicing teachers in Science, Technology, Engineering, and Math (STEM) disciplines in the Baltimore County Public School System.

A key feature of the NSF grant is the transformation of eight high-needs schools into STEM Academies. Dr. Rivkin is particularly interested in the outdoor environment of the schools as sites for learning STEM. To that end, several of the schools are developing schoolyard habitats, with gardens, weather stations, water features, and other areas relevant to the curriculum. These schoolyard projects serve several purposes: to teach STEM concepts in an integrated, real-world way; to encourage cooperative problem solving for the school community; and to get children reconnected with the outdoors, both from spending time there and actively enhancing and understanding the natural environment.

Dr. Rivkin has taught early childhood math and science methods since 1988 at UMBC. As part of her work, she co-authored (with Jean Harlan) four editions of the widely-used text *Science Experiences for the Early Childhood Years: An Integrated, Affective Approach*, which emphasizes the emotional underpinnings of cognition and learning, and provides a comprehensive hand book for science teaching by new teachers. It has been translated into Korean, Portuguese, and Japanese.

Her most intense interest is represented by her 1995 National Association for the Education of Young Children (NAEYC) book, *The Great Outdoors: Restoring Children’s Right to Play Outside*. She also writes for *Early Childhood Today*, focusing on science, outdoor play, and healthy living.

10:15 a.m. – 11:45 a.m. Morning Workshops
12:00 a.m. – 1:00 a.m. Lunch
1:15 p.m. – 3:15 p.m. Afternoon Workshops
3:15 p.m. – 4:00 p.m. Tour The School for Young Children

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

Workshops have been designed with practicing teachers in mind. Presenters all work with children in a classroom setting, providing real examples and ideas that can be put to use in your classroom tomorrow.

Using the enclosed registration form, please sign up for your first, second, and third choice for both the morning and extended afternoon workshops.



Keynote Address

Why Outdoor Play Matters for Young Children

Mary Rivkin, Ph.D.

A historical look at children in the outdoors and review of recent research supporting early childhood educators in providing children with abundant and varied outdoor experiences.

Morning Workshops 90-minute blocks

1. Planning a Great Outdoor Space for Exploring STEM-G with Young Children.

Mary Rivkin, Ph.D., Chair and Associate Professor, Department of Education at the University of Maryland, Baltimore County (UMBC)

STEM-G is the current National Science Foundation acronym for Science, Technology, Engineering, Mathematics and Geography education. It suggests an integration of these disciplines — which is what early childhood education has long practiced and preached. Connecticut's Preschool Curriculum Framework will be considered for its STEM-G aspects.

Weather permitting, we will tour The School for Young Children playground -- including the Nature Trail -- to analyze key features for STEM-G education. If weather does not allow for this, we will enjoy and analyze images of playspaces elsewhere. Finally, participants will analyze their own center and school playspaces, inventory their resources, and make a plan for improving STEM-G opportunities at their home sites.

Participants are welcome to bring images of their own spaces for consideration by other participants. We can post images or show electronically (a laptop will be available).



2. Critical and Creative Thinking in the Mathematics Classroom

Jill Adelson, University of Connecticut, Research Associate & Lecturer

Come explore a rich variety of problems and activities that promote critical and creative thinking. Discover how to engage students in problem-solving activities that stimulate student discussion, interest, and deep thinking about mathematics. Participants will have the opportunity to try the activities for themselves and will leave with a packet of problems and activities they can use in their classroom.

Recommended audience: Grades 2-3

3. Children In the Outdoors

Tracy Bennett, Elementary Science Program Consultant

Join us as we look at the wonders of nature through a variety of engaging, hands-on activities. Participants will also discuss techniques for managing students in an outdoor setting, and examine resources that will increase their knowledge of nature. This course takes place outside, so please dress accordingly.

Recommended audience: Grades K-1

4. Is that a Fact? Using Nonfiction Text to Teach Science

Cheri Burke, Charter Oak School, West Hartford, Literacy Specialist, Pre-K-5

Would you like to incorporate more nonfiction text into your science instruction? Learn how to teach the conventions of nonfiction text to your second and third grade readers. The presenter will demonstrate how to use the cognitive thinking strategies and current best practices in reading instruction to skillfully weave together science instruction and nonfiction text. Practical ideas will be shared that you can use in your classroom the very next day!

Recommended audience: Grades 2-3



5. Small Group Math Activities for Preschool Children

Janine Chapdelaine, University of Hartford, Magnet School, Early Childhood Education Program

Using some of the State of Connecticut Preschool Performance Standards and National Council for Teachers of Mathematics (NCTM) Standards, participants will learn about and try out small group logical mathematic activities focusing on patterning and relating number to quantity. We will also focus on how assessment of activities is used to drive further lesson planning.

Recommended audience: Grade Pre-K

6. Math and Science Go Hand in Hand

• *Mary Claffey, The School for Young Children at Saint Joseph College, Teacher*

• *Patricia Sward, University of Hartford, Magnet School, Early Childhood Education Program*

Through PowerPoint presentation and hands-on experiences, learn how to enrich your classroom practice while being mindful of the Connecticut Preschool Benchmarks and the National Council of Teachers of Mathematics (NCTM) Standards.

Recommended audience: Grade Pre-K



7. Logical Reasoning for Little Minds

- *Christine Newman, District Math-Science Curriculum Specialist, K-5*
- *Meredith Clark, Aiken School, West Hartford, Grade 2, Teacher*

Use hands-on materials to explore, develop and strengthen spatial relations, geometry and logical reasoning with K-2 students. Links will be made to online resources for classroom use.

Recommended audience: Grades K-2



8. Wildlife in Connecticut

Todd Russo, Connecticut Audubon Society, Naturalist

Nature is all around us; there is no reason to be afraid of it. There are so many fun ways to discover and teach about the natural world while incorporating other curricula such as Math, English and our own senses. This hands-on program is half indoors and half outdoors. Dress for the weather since the outdoor part of the program still runs with a light precipitation.

Recommended audience: Grades Pre-K through 3

9. Making Masterpieces of Trash – The Importance of Recycling with Young Children

Dana Skidmore, Red Barn Children's Center, Clinton, CT, Teacher of 4 and 5 year olds and science coordinator

Using, recycled everyday household materials, we will construct masterpieces! Whether it is a pair of binoculars or a homemade box of crayons, you will learn the importance of reusing a product to create something new. Through puppetry, books and games this concept of recycling will come alive! Also, learn about nature's way of recycling outdoors.

Recommended audience: Grade Pre-K

10. Conducting Scientific Inquiries with Young Children

Sudha Swaminathan, Eastern Connecticut State University, Associate Professor

This workshop will guide participants through the process of conducting learner-centered scientific inquiry. Special emphasis will be placed on enhancing children's scientific processing skills. Participants will engage in a hands-on inquiry process and reflect on and critique several examples of classroom-based inquiries.

Recommended audience: Grades 2-3

11. Mathematical and Scientific Explorations

Diane Morton, The School for Young Children at Saint Joseph College, Director

Take a virtual tour of The School for Young Children and experience mathematical and scientific explorations. Make connections between these experiences and the Connecticut State Department of Education Preschool Curricular Goals and Benchmarks. Learn how to communicate this important information to parents and other visitors.

Recommended audience: Grade Pre-K





12. Everyday Math and Science

Luis Rodriguez, The School for Young Children on Asylum Hill, Teacher

Do you need to re-energize your math and science curriculum? Use everyday materials to create engaging activities which encourage mathematical and scientific thinking in young children.

Recommended audience: Grade Pre-K

13. Start with the Sky

Elizabeth Rotblatt, The Master's School Early Childhood Center, Director

Sky observations offer many opportunities to expand your science curriculum. Learn how to incorporate observations into math, literacy, music and art activities. Ideas will be provided to use “sky awareness” to help children deal with stress.

Recommended audience: Grade Pre-K

Afternoon Extended Workshops 2-hour blocks

14. Affective Education in the Outdoors

Mary Rivkin, Ph.D., Chair and Associate Professor, Department of Education at the University of Maryland, Baltimore County (UMBC)

How do you feel about the outdoors? What have been your experiences, positive and negative? How do your experiences influence you when using the outdoors to educate young children? We will take time for individual reflection and writing.

For inspiration, we will look at some of the writings from early childhood educators: Froebel, Montessori, Steiner (Waldorf Schools), and Malaguzzi (Reggio Emilia schools). We will also consider the environmentalist perspectives of Mahatma Gandhi, Rachel Carson and Robin Moore.

We will complement these writing and reading activities with a drawing activity which will illuminate our personal connections to nature. Finally, we will evaluate our inner work by creating an “idea for action” in our classrooms.

15. Engaging Children In Inquiry-Based Science

Tracy Bennett, Elementary Science Program Consultant

Explore the use of inquiry-based science activities in the classroom. Join us as we discuss and try out fun and engaging science activities that highlight different types of inquiry. Participants will use toys and other everyday objects in activities designed as stepping-stones for teachers to feel more comfortable utilizing inquiry-based lessons in their classroom.

Recommended audience: Grades K-1



16. Hatching “Egg-citement” in Kindergarten

• *Thomas Myler, Elizabeth Green School, Kindergarten Teacher*

• *Verne-Marie Kozak, Newington Public Schools, Gifted Specialist*

Hatching eggs, examining growth, and observing a beating heart provide the excitement necessary to capture children’s curiosity. Using the Project Approach, involve young children in a real-world learning experience. Strategies will be shared for increasing the depth and value of project work leading to greater growth of children’s knowledge, skills and dispositions.

Recommended audience: Grades K-1

17. Documenting Math and Science Experiences

Sue O’Donnell, The School for Young Children at Saint Joseph College, Teacher/Model Lab School Coordinator

Documenting math and science experiences allows children to reflect upon their work and observations. Through hands-on activities, learn how to extend experiences with different types of representational panels.

Recommended audience: Grade Pre-K



Keefe - Bruyette Symposium Registration

March 19, 2007*

Name: _____

Home Address: _____

Telephone: () _____

School: _____

Position & age group you teach: _____

Please indicate your choice from the following registration options:

- Full Day: Keynote Address, Morning Workshop, Lunch, Afternoon Workshop, Tour of The School for Young Children (SYC)-\$75
- ½ day a.m.: Keynote Address, Morning Workshop, Lunch- \$60
- ½ day p.m.: Lunch, Afternoon Workshop, Tour SYC- \$60
- Student Fee: \$50 (full-time student)

Morning Workshop Selection:

1st Choice: _____

2nd Choice: _____

3rd Choice: _____

Afternoon Extended Workshop Selection:

1st Choice: _____

2nd Choice: _____

3rd Choice: _____

Please make checks payable to: Saint Joseph College

Send registration forms with payment to:
The School for Young Children
238 Steele Rd., West Hartford, CT 06117-2791

Directions to Saint Joseph College are available at: www.sjc.edu

Special needs or questions? Call Diane Morton at 860.231.5565
or Sue O’Donnell at 860.231.5561

*Event will occur regardless of the weather



THIS SYMPOSIUM is made possible by the generous support of Gene Bruyette and the late Harry Keefe, two long-time education philanthropists.

“... 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 Bruyette H'04,
First Annual Keefe-Bruyette Symposium, Fall 2002

Call The School for Young Children with questions at 860.231.5560 or e-mail Diane Morton, Director of The School for Young Children, at dmorton@sjc.edu.

Directions to Saint Joseph College are available on our Website at www.sjc.edu.



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