

Program
**Conference on Standards for Preschool and Kindergarten
Mathematics Education**

Monday, May 15, 2000

- 5:00 pm **Registration** Lobby
Lounge
- 6:00 pm **Reception** Gallery II
Hors d'oeuvres, Drinks, and Buffet Dinner—Hosted by the
ExxonMobil Foundation
- Introductions and Welcome**
Douglas H. Clements, SUNY Buffalo, Project Director
George Bright, National Science Foundation
Jean Moon, ExxonMobil Foundation
Joan Ferrini-Mundy, MSU, PSSM Leader

Tuesday, May 16, 2000

Breakfast on your own

Notes on the Sessions

- All plenary sessions are in the Masters Ballroom
- For some panels, a brief presentation by one speaker who introduces the topic and the research in the area and its implications for ECE math standards (i.e., addressing the questions for each topic). This person then joins the panel discussion.
- Panel discussion. The panel members will discuss the questions from their own perspective and knowledge base (i.e., they are not primarily reacting to the introduction). There will be a moderator for each session.
- Working groups. 5 groups of all participants (at least one panel member in each group): A, B, and C groups in Masters Ballroom; D in 324, E in 524.

Standards for Preschool and Kindergarten Math Education

- 8:30 am **Introductions** Masters
Ballroom
- 8:45 Douglas H. Clements, State University of New York at Buffalo
Naomi Karp, National Institute On Early Childhood Development And Education
Research, Policies, and Practices that Support the 3 Rs of Early
Childhood: Relationships, Resilience, and Readiness
- 9:00 **Panel**
Sue Bredekamp, Council For Early Childhood Professional Recognition. Paper:
Standards for Preschool and Kindergarten Mathematics Education
Skip Fennell, Western Maryland College
Carol Midgett, Southport Elementary School
Maggie Myers, University of Texas at Austin
Cheryl Tibbals, Council of Chief State School Officers

Questions

- What are the advantages and disadvantages to having specific mastery goals for young children?
- How do standards take into consideration the wide range of children's developmental needs?
- How should we balance or integrate what we know of quality early childhood education (e.g., developmentally appropriate programs, the value of play, etc.) with the emphasis on "more math" for young children?
- How do we implement such standards considering such a wide range of adults who care for children, especially preschool children?
- Should we have standards for children or standards for programs, or both?
- How do NCTM's, States', and local standards relate?

9:50

Break—Refreshments

Master
Foyer

Initial Number and Quantitative Concepts

10:05

Introduction: Young Children's Interest in Math and Its Representational Tools: Providing Guided Learning Opportunities
Rochel Gelman, UCLA

Masters
Ballroom

10:25

Panel

Max Bell, University of Chicago
Greta Fein, University of Maryland
Herbert Ginsburg, Teachers College, Columbia University
Catherine Sophian, University of Hawaii Paper: A Prospective Developmental Perspective on Early Mathematics Instruction

Questions

The content-oriented sessions share the same set of questions, reacting to the PSSM's vision (and available state standards) of the foundations of mathematics:

- Are the focus areas appropriate?
- Are the specific statements of objectives comprehensive and coherent, targeting essential mathematics without being sidetracked by nonessential items?
- Are specific topics emphasized and de-emphasized appropriately?
- Are they consistent with what is known about learning and teaching the various areas of mathematics in early childhood?
- How might these objectives be elaborated and specified in more detail?
- What assessment issues must be confronted?

11:15

Break and reconvene in Working Groups

11:30

Working Groups 1

Assigned

12:30

Box Lunches—Convene outside the Masters Ballroom

Masters
Foyer

Number and Operation

1:20	Reconvene	Masters Ballroom
1:30	Introduction: Key Transitions in the Numerical and Arithmetic Development of Typical and Special Children Between the Ages of 2 and 6 Years Art Barody, University of Illinois at Urbana-Champaign	
1:50	Panel Karen Fuson, Northwestern University Paper: Pre-K to Grade 2 Goals and Standards: Achieving 21 st Century Master for All Robert P. Hunting, East Carolina University Connie Kamii, University of Alabama Ken Millet, University of California Santa Barbara	

2:40	Break—Refreshments	Master Foyer
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Geometry and Measurement

2:55	Reconvene	Masters Ballroom
3:00	Introduction: Geometric and Spatial Thinking in Early Childhood Education Douglas H. Clements, State University of New York at Buffalo	
3:20	Panel Susan Addington, California State University, San Bernardino Angela Andrews, Scott School, Naperville, IL Richard Lehrer, University of Wisconsin-Madison Kevin Miller, University of Illinois	

4:10 **Break and reconvene in Working Groups**

4:30 **Working Groups 2** Assigned

5:30 **Break until dinner** On your own

6:00 **Dinner** Gallery II
Dinner hosted by the NSF (cash bar)
Special guest speaker: Janice Jackson, Boston College

Wednesday, May 17, 2000

Breakfast on your own

	The Role of Other Topics: Algebra; Data Analysis, Statistics, and Probability	
8:30 am	Overview of Wednesday Douglas H. Clements, State University of New York at Buffalo	Masters Ballroom
	Moderator Ann-Marie DiBiase, State Univ. of New York at Buffalo, Conference Coordinator	
	Panel Debra Borkovitz, Wheelock College Alice Klein, University of California at Berkeley Tony Ralston, Imperial College Chuck Thompson, University of Louisville Carrie Valentine, Instructional Resource Centre- Algebra Gateway	
9:30	Break—Refreshments	Master Foyer
	Mathematics Curricula for Young Children	
9:45	Moderator Douglas H. Clements, State University of New York at Buffalo	Masters Ballroom
	Panel Beth Casey, Boston College Paper: Mathematics Problem-solving Adventure Stories Carol Greenes, Boston University Carol Copple, NAEYC Sharon Griffin, Clark University Julie Sarama, State University of New York at Buffalo. Technology in Early Childhood Mathematics: <i>Building Blocks</i> as an Innovative Technology-based Curriculum	
10:45	Break and reconvene in Working Groups	
11:00	Working Groups 3	Assigned
12:00	Box Lunches—Convene outside the Masters Ballroom	Masters Foyer

Problem Solving, Reasoning, Communication, Connections, and Representation: The Process Standards

12:50 **Reconvene** Masters
Ballroom

1:00 **Introduction**
Roger Howe, Yale University

1:20 **Panel**
Rachelle Feiler, Vanderbilt University
Lilian Katz, University of Illinois
Kathy Richardson, Mathematical Perspectives
Paul Trafton, University of Northern Iowa

2:10 **Break—Refreshments** Master
Foyer

Implementation and Communication Masters

2:25 **Moderator**
Julie Sarama, State University of New York at Buffalo

Panel
Bob Balfanz, Johns Hopkins University
Juanita Copley, University of Houston. Paper: The Early Childhood
Collaborative: A Professional Development Model to Communicate
and Implement the Standards
Jeane Joyner, North Carolina State Department of Public Instruction
Mary Lindquist, Columbus College
Prentice Starkey, University of California-Berkeley

Questions

Communication:

- How do we promote a shared vision of learning and teaching that is clear yet not restrictive or limited to a single perspective?
- How can we convey effective educational practice and policy relevant to preschool mathematics education. What constitutes sufficient guidance provided for parents, practitioners, and policy makers (i.e., how do we “explain it to people back home”)?

Implementation:

- How do we implement such standards considering such a wide range of adults who care for children, especially preschool children?
 - What role should technology play?
 - How can we plan for high-quality assessment?
 - What are the implications for professional development?
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3:15 **Retrospective**

3:45 **Reports and the Future**

4:15-4:30 **Thank You and Finale**