Early Mathematics Content, Curriculum, and Pedagogy: Creating Coherence and Excellence

Why Early Math?

• Early math is a strong predictor for later school success.

- Into high school
- Later reading skills
- Oral language
- Vocabulary
- Mathematics is foundational and achievable for young children.



What Is Appropriate Content?

- Number and Relationships
 - Counting
 - Comparing
 - Composition / Decomposition of Numbers
 - Data Relationships
 - Measurement
- Geometry and Spatial Relationships
 - Thinking and reasoning





What Do Teachers Need to Know?

- How children learn math learning paths and/or trajectories
- Math Content Expanded
- Connection to Standards
- How to teach math to young children



How Do You Intentionally Teach Math?

- Provide opportunities for exploration, thinking, and meaningful connecting to other skills.
- Implement a planned, sequenced curriculum that uses learning paths
- Integrated with "intellectual integrity"
- Appropriately connected to physical and emotional development



How Do You Assess Mathematical Understanding?

I	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Math Talk



What Can Be Done to Increase Quality Mathematics?

- All early childhood programs should provide high-qualiy mathematics curricula and instruction.
- States should develop or revise their early childhood learning standards or guidelines to reflect teaching-learning paths.
- Professional development (both inservice and preservice) for teachers should involve a) an understanding of mathematics,
 b) crucial teaching-learning paths, c) principles of intentional teaching and curriculum, and d) how to implement a curriculum.

"You always have lots of problems teacher! Come by any time and we will help!"

