



Math Experiences in Everyday Interaction with Infants and Toddlers

Early Math Symposium

June 23, 2023

10:15-11:00 am

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Program for Infant Toddler Care (PITC) Regional Support Network



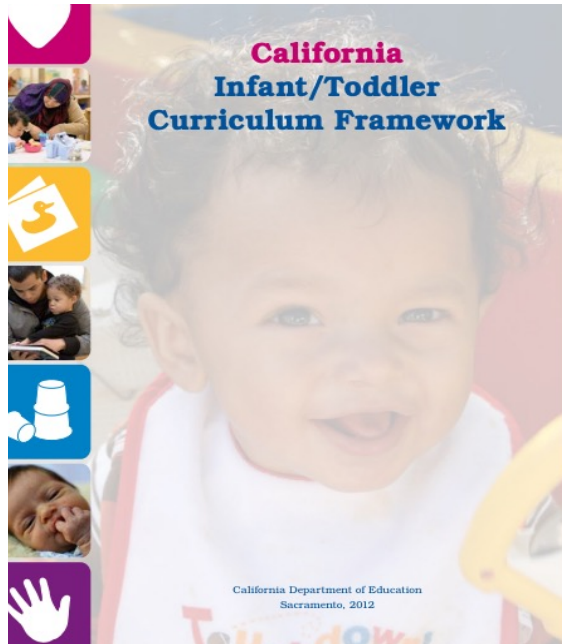
The PITC Regional Support Network is a collaboration between the California Department of Social Services and WestEd.

Agenda

- Math skills are connected to all other learning domains
- Math is everywhere!
- Infants and toddlers build an early foundation for math during play and daily routines



Resources For Our Work



Five Insights: How Infants and Toddlers Engage the World

Insight 1: Infants and toddlers experience rapid brain development

Insight 2: Infants and toddlers learn and develop in the context of important relationships.

Insight 3: Infants and toddlers are competent.

Insight 4: Infants and toddlers are vulnerable.

Insight 5: Infants and toddlers are a dynamic blend of biological predispositions and experiences.



Infant/Toddler Learning and Development Program Guidelines 2nd Edition,
California Department of Education, 2019

Cognitive Development

“Cognitive Development refers to the process of growth and change in intellectual/mental abilities such as thinking, reasoning, and understanding. It includes the acquisition and consolidation of knowledge.”

California Infant/Toddler Learning & Development Foundations, pg. 59



California Infant/Toddler Learning & Development Foundations: Cognitive Domain



- Cause-and-Effect
- Spatial Relationships
- Problem Solving
- Imitation
- Memory
- **Number Sense**
- **Classification**
- Symbolic Play
- Attention Maintenance
- Understanding of Personal Care Routines

Number Sense

“Number sense refers to children’s concepts of numbers and the relationships among number concepts”.

California Infant/Toddler Learning and Development Foundations, pg. 62

"You have two eyes like your bear."

"How many are there?
Let's count. 1, 2...."

"You have more crackers than me"

"That's the third time you threw the ball to me."

Number Sense Recap



Classification

“The developing ability to group, sort, categorize, connect, and have expectations of objects and people according to their attributes.”

Hesitant to be feed a bottle from a new caregiver (8 months)

Bangs two different toys on the ground (8 months)

Pretends to pour from a pitcher into the cup (18 months)

Puts all the ball in one basket

California Infant/Toddler Learning & Development Foundations, pg. 62

Classification highlights: 8 - 18 Months

Distinguish between familiar and unfamiliar people, places and objects, and explore the differences between them

Shows awareness that objects are connected (18 months)

Matches 2 objects that are the same



Classification highlights: 36 Months

- Group objects into multiple piles based on one attribute at a time
- Similar but not the same in a group





Math is Everywhere!



In our daily routine interactions



In our language and communication

Math words to use often in your everyday language with young children?

All

Some

Lots

Most

Small

Many

Same

Empty

Different

Full

Next

More

First

Big

Round

Few

Square

Tiny

Share

Last

Infants and toddlers build an early foundation for math during daily routines



Active participation during routines build an early foundation for math



Infants and toddlers build an early foundation for math during self-initiated play



Guiding Principles

- Relate to the child as an active meaning maker
- Provide opportunities for exploration
- Respect the child's initiative and choices
- Allow ample time for children to make sense of experiences
- Appreciate the child's creativity
- Describe the child's actions and the effects of actions
- Support self-initiated repetition and practice
- Give appropriate encouragement for problem solving and mastery

Resources



The Program for Infant Toddler Care
Regional Support Network:
www.pitc.org

CA Infant Toddler Learning and
Development Foundations
[www.cde.ca.gov/sp/cd/re/documents/
itfoundations2009.pdf](http://www.cde.ca.gov/sp/cd/re/documents/itfoundations2009.pdf)

*All About Young Children:
Information for Families on
Children's Early Development.*
California Department of
Education, 2021.
<http://allaboutyoungchildren.org/>

Thank you for your
participation!

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