Introduction to Family Child Care at Its Best: Building Numeracy Skills and Beyond

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Providing home-based child care providers with high-quality learning opportunities

Family child care and family, friend, and neighbor providers are a critical source of support for working families. The Family Child Care at Its Best program delivers **high-quality, research-based workshops that help home-based caregivers** improve their knowledge, skills, and quality of care for working with mixed-age groups of children.

Facilitator Training

Direct-Service Workshops

Building Numeracy Skills and Beyond

Family Child Care at Its Best

Funded by: California Department of Social Services
Administered by: WestEd| Early Childhood Learning and Development

CDSS CALIFORNIA DEPARTMENT OF SOCIAL SERVICES

WestEd WestEd.org

Workshop Agreements

We promote an atmosphere for learning

We treat each other with respect

We take care of ourselves and offer special accommodations

We are present

We actively listen

Our personal experiences stay here

Learning Objectives

- Understand children's mathematical achievement, competencies, and practices in early childhood education
- Identify principles of curriculum planning, instructions, and assessment for early childhood mathematics
- Plan integrated learning environments that develop children's mathematical knowledge
- Consider child-guided learning experiences and adult-guided teaching strategies that support mathematical exploration
- Extend children's mathematical learning to parents

Activity: What Do You See?

1. Select one picture
2. Make note of the materials children are using
3. List math conversation that may be taking place
4. List items you currently have in your programs that could be used in similar ways

Happy Toddler Playtime

Key Points

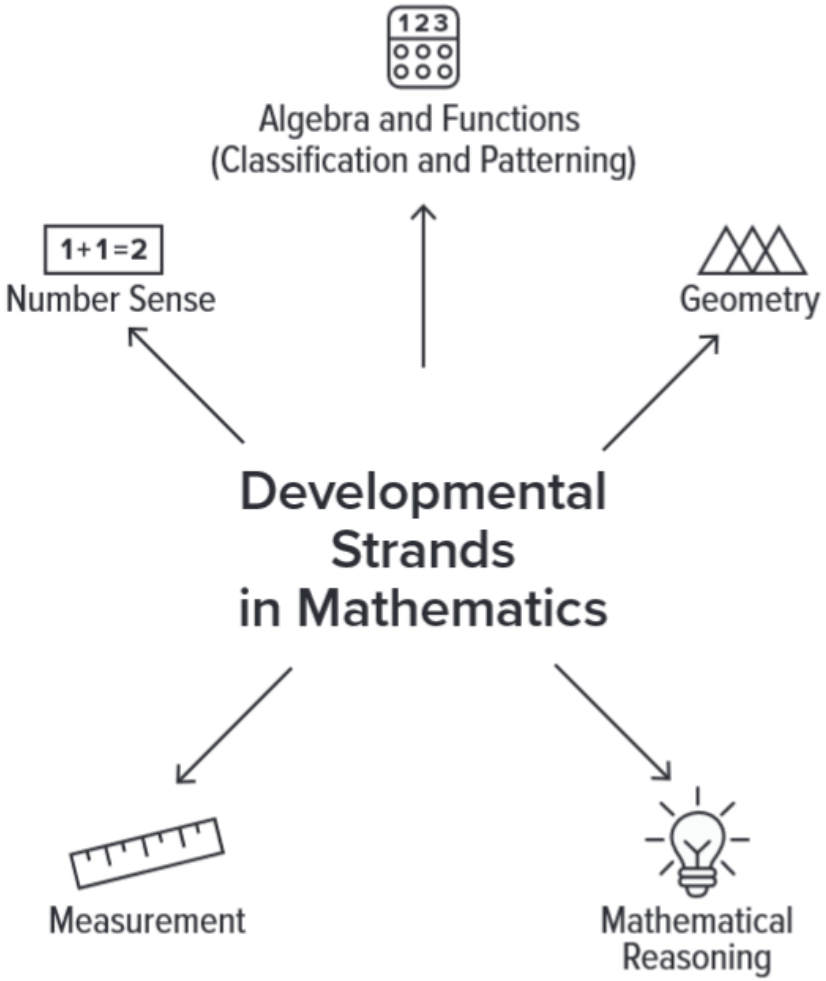
- Mathematics has many real-world applications, and it is used frequently in our day-to-day lives
- Young children have an intuitive understanding of mathematics that develops through play experiences, interactions, and observations
- Adults underestimate children's math abilities
- Research show that high-quality mathematics education can and should begin early
- Caregivers can help children learn more than just numbers; they can help children develop an understanding of other mathematical concepts such as measurement and geometry

Preschool Learning Foundations in Math

Why Focus on Foundations?

- Support children's abilities and offer guidance on developmentally appropriate learning
- Provides insight into appropriate expectations for children's learning
- Can be used as a tool to share with parents and promote home learning experiences
- Promotes math learning is part of the whole child development

The Five Developmental Strands



1. Number Sense

- Numbers can be used to tell us **how many**, describe **order**, and **measure**.

- They involve numerous **relations** and can be represented in various ways.

- Operations with numbers can be used to model a variety of real-world situations and to **solve** problems; they can be carried out in various ways.

2. Algebra and Functions (Classification and Patterning)

- Patterns can be used to recognize relationships and can be extended to generalize.

- Classification involves sorting or categorizing objects. It is a foundation for algebraic thinking.

3. Geometry

- Geometry can be used to understand and to represent the objects, **directions**, and **locations** in our world, and the relationships between them.

- Geometric shapes can be **described**, **analyzed**, **transformed**, and **composed** and **decomposed** into other shapes.

4. Measurement

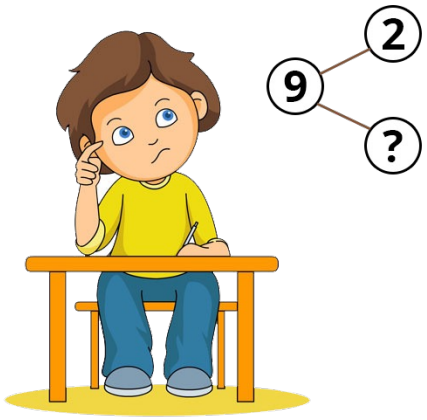
- Measurement, comparing and measuring, can be used to specify **how much** of an **attribute** (e.g., length) objects possess.

- Measures can be determined by repeating a unit or using a **tool**.

5. Mathematical Reasoning

- Children use mathematical reasoning to solve **problems**.

- Their reasoning tends to be **intuitive**, but with experience, they develop clarity in their **thinking**.



Reflective Activity: Checking-In

Geometry and Spatial Sense

Algebra and Functions

Measurement

Tangram pieces

Number Sense

Mathematical Reasoning

Integrated Mathematics Environments

Video: Classification, Seriation, and Number

Activity: Planning for Mathematically Rich Play

Resource: The California Early Math Project

https://www.earlymathca.org/

Considerations for Infants and Toddlers

Child-guided versus Adult-Guided Learning Experiences

From workbook page 56: Number Sense

- How many more are in this group?
- Is there any other way to show…?
- Can you show me another way to make…?
- What number comes after…? Before…?
- How is this number different from…?
- What would happen if I put 10 more with this number? Ten less?
- What if I cover some of these…? How many are hidden?
- You have told me that 5 and 6 are parts of 11. Are there different numbers that are parts of 11?
- Do you think there are more than 10 in this set, less than 10, or about 10?
- Do you think there are more than 100 in this set or less than 100?
- How many are there in…?
- Can you count backwards from…? Can you count forward from…?
- How many different ways can I make the number…?
- About how many beans are in my hand?

Reflective Activity: Checking-in

What are some strategies you already use to prompt mathematical thinking?

What are some new strategies you might try?

Partnering with Parents

Empowering Parents

- Share the importance of math
- Connect with real world experiences
- Communicate methods to teach
- Listen to families to learn more
- Introduce games to play at home
- Share with families their child's understanding of math

Conclusion

For Consideration

"Find the sweetness in the math itself – in a problem that inspires you to work and struggle, until you finally get it, just for your own satisfaction."

~ Sue VanHattum

Thank You!

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