NUMBER RECOGNITION AND SUBITIZING PRESENTER NOTES - OPTIONAL

OPTIONAL SLIDES FOR ALL SETTINGS

HSPPS Supports Math

Subpart C - Education and Child Development Program Services

1302.30 Purpose

All programs must provide high-quality early education and child development services, including for children with disabilities, that promote children's cognitive, social, and emotional growth for later success in school....

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OPTIONAL SLIDE 1:

Programs must provide high-quality early education and child development services to all children, including for children with disabilities, that promote children's cognitive, social, and emotional growth for later success in school.

Children's success in math-related skills is linked with school readiness goals, therefore it is important to provide a high-quality math-rich environment for young children. Using math language such as "Please pick up 2 blocks" or "You have 4 carrots on your plate" will help children develop a sense of number and quantity and eventually perceptual subitizing—recognizing the number of objects without counting. Additionally, playing games with dice will help promote conceptual subitizing—putting together the parts of multiple sets.

HSPPS Supports Math

15-Minute In-Service Suites

Subpart C - Education and Child Development Program Services

1302.31 Teaching and the Learning Environment

A center-based and family child care program must ensure teachers and other relevant staff provide responsive care, effective teaching, and an organized learning environment that promotes healthy development and children's skill growth aligned with the Head Start Early Learning Outcomes Framework: Ages Birth to Five, including for children with disabilities....

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OPTIONAL SLIDE 2:

Teaching practices should not only support all the developmental domains in the ELOF, such as math and cognitive development, but also create a supportive environment that builds upon children's individual development and learning patterns.

Number recognition and subitizing are in the Cognition domain of the ELOF. Children develop a sense of number and quantity during the infant and toddler years and begin to recognize the number of small objects in groups without counting! These are ELOF goals across the developmental continuum for infants, toddlers, and preschoolers.

Sub-domain: Emergent Mathematical Thinking slide — Cognition, Infant/Toddler. Goal IT-C 8. Child develops sense of number and quantity.

OPTIONAL SLIDE 3:

For each ELOF slide, start by briefly discussing the boxed text. Then move to the presenter notes, *in synchrony with* clicks to prompt each note. That is—one click/one note on screen/one paragraph to present.

Goal IT-C 8 describes how children develop a sense of number and quantity.

[Click]

Children are sensitive to numbers and can intuitively compare numbers both small and large (if one group is a lot larger than the other) in their first year of life.

[Click]

Some children learn their first number words by 18 months. They usually learn "two" first. They can also recognize very small numbers without counting.

SUB-DOMAIN: EMERGENT MATHEMATICAL THINKING

15-Minute In-Service Suites

COGNITION
• PRESCHOOL

• **Goal P-MATH 2.** Child recognizes the number of objects in a small set.

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	**48 to 60 Months**	**By 60 Months**
Develops an understanding of what whole numbers mean. Begins to recognize the number of small objects in groups without counting (referred to as "subitizing").	Quickly recognizes the number of objects in a small set (referred to as "subitizing").	• Instantly recognizes, without counting, small quantities of up to 5 objects and says or signs the number.

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OPTIONAL SLIDE 4:

Here is where the ELOF first presents number recognition and subitizing. However, the foundations for this ability begin much earlier.

It is important that we distinguish between a developmental progression and a learning trajectory—the latter includes a developmental progression at its core, but also includes the goal and links to educational activities.

Let's look at number recognition and subitizing through the lens of a developmental progression. Then through the lens of the complete learning trajectory.

LT²: Foundation

- LearningTrajectories.org

- Example...click here.

- Use the link in the 2nd bullet point to see a video example. When the website loads, read the text below the video, watch the video, and discuss the video with participants.

- If there is time, show other videos of children at that level at LearningTrajectories.org (click on LearningTrajectories.org).

- Important note: Do not show the actual URL in the link in the second bullet or share it with anyone. The video should not be downloaded or disseminated in any form to maintain privacy agreements.

LT²: Small Collection Namer

- LearningTrajectories.org

- Example...click here.

OPTIONAL SLIDE 6:

- Use the link in the 2nd bullet point to see a video example. When the website loads, read the text below the video, watch the video, and discuss the video with participants.

- If there is time, show other videos of children at that level at LearningTrajectories.org (click on LearningTrajectories.org).

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LT²: Maker of Small Collections

- LearningTrajectories.org

- Example...click here.

LT²

- Use the link in the 2ⁿᵈ bullet point to see a video example. When the website loads, read the text below the video, watch the video, and discuss the video with participants.

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LT²: Perceptual Subitizer to 4

- LearningTrajectories.org

- Example...click here.

LT²

- Use the link in the 2nd bullet point to see a video example. When the website loads, read the text below the video, watch the video, and discuss the video with participants.

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LT²: Perceptual Subitizer to 5

- LearningTrajectories.org

- Example...click here.

LT²

- Use the link in the 2nd bullet point to see a video example. When the website loads, read the text below the video, watch the video, and discuss the video with participants.

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LT²: Conceptual Subitizer to 5

- LearningTrajectories.org

- Example...click here.

- Use the link in the 2nd bullet point to see a video example. When the website loads, read the text below the video, watch the video, and discuss the video with participants.

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LT²: Conceptual Subitizer to 10

- LearningTrajectories.org

- Example...click here.

LT²

OPTIONAL SLIDE 11:

- Use the link in the 2nd bullet point to see a video example. When the website loads, read the text below the video, watch the video, and discuss the video with participants.

- If there is time, show other videos of children at that level at LearningTrajectories.org (click on LearningTrajectories.org).

- Important note: Do not show the actual URL in the link in the second bullet or share it with anyone. The video should not be downloaded or disseminated in any form to maintain privacy agreements.

Learning and Teaching with Learning Trajectories (LT²)

15-Minute In-Service Suites

- See the Learning and Teaching with Learning Trajectories website for more trajectories, videos, and instructional math activities!

- www.LearningTrajectories.org

LT²

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OPTIONAL SLIDE 12:

This website includes over 1000 videos, instructional activities, and computer games to across multiple math categories. Registration is free!

LT² is a web-based tool for early childhood educators to learn about how children think and learn about mathematics and how to teach mathematics to young children (birth to age 8). Teachers can also review short video clips of children's thinking along the math learning trajectories. Users can access hundreds of classroom activity ideas to support children's development along the math trajectories.