

# Play. Connect. Grow.

NC DOWN SYNDROME ALLIANCE CONFERENCE

APRIL 27<sup>TH</sup> 3:00- 4:15PM

ALAMANCE COMMUNITY COLLEGE – GRAHAM, NC

# About us

**ANNABETH KNIGHT, OTD, OTR/L, ATP**  
(SHE/HER/HERS)  
ASSISTANT PROFESSOR  
ACADEMIC CAPSTONE COORDINATOR  
METHODIST UNIVERSITY



# About us

**MEREDITH GRONSKI, OTD, OTR/L, FAOTA**

(She/Her/Hers)

Dean – College Of Health Sciences & Human Services

Occupational Therapy Department Chair

Associate Professor

Methodist University



# Disclosures

# Outline

**Occupational Therapy**

**Overview of developmental stages  
& milestones**

**Intentional and Incidental Play**

**Routines-based play to promote  
development**

**Case Application Discussion**

# Occupational Therapy

**Scope of practice**

**Intervention systems**

**Coaching and routines-based models**

# Occupational Therapy

- **Your life is made up of occupations—meaningful everyday activities.**
- **Occupational therapy enables people of all ages to participate in daily living.**

**Occupational therapy practitioners work with babies, toddlers, and their caregivers to help them:**

- **Play and explore**
- **Develop nap and bedtime routines**
- **Learn how to eat new foods**
- **Develop thinking and movement skills**
- **Communicate with caregivers and other children**
- **Learn when and how to use the toilet**
- **Go to the store and other community places with caregivers**
- **Use assistive technology and mobility devices**
- **Transition to school**

# Early Intervention

**Birth through age 3**

**Program to  
maintain or  
enhance child's  
development *in the  
natural environment***

**Family-centered**



# Legislative Intent: Why we do Early Intervention

<b>Minimize</b>	<b>Minimize potential of developmental delay</b>
<b>Reduce</b>	<b>Reduce educational costs to society</b>
<b>Maximize</b>	<b>Maximize potential of living independently</b>
<b>Enhance</b>	<b>Enhance family's capacity</b>
<b>Enhance</b>	<b>Enhance capacity to represent underrepresented populations</b>

# Part C – Eligibility

## Who Can Get Services

### Established risk

- **Medical diagnosis associated with developmental delay, like Down Syndrome**

### Developmental delay

- **Appropriate diagnostic instrument indicated delay in cognition, motor, communication, social-emotional, adaptive behavior**

### At risk

- **Environmental or biological risk factors**
- ***State-to-state variations***

# Natural Environment

- **Using toys and materials found in the natural environment that will remain available to the family.**
- **Planned and unplanned, structured and unstructured, intentional and incidental**
  - **Petting a puppy in the park**
  - **Getting dressed in the morning**
  - **Falling into a pile of Autumn leaves**
  - **Doing puzzles at the kitchen table while dad cooks**



# Routines-based Intervention

- **Intervention occurring in the child's natural environment**
- **Activities driven by the family routine at the moment of intervention**
- **Therapist provides:**
  - **Clinical observation**
  - **Parent coaching**
  - **Feedback and suggestions for carry-over**

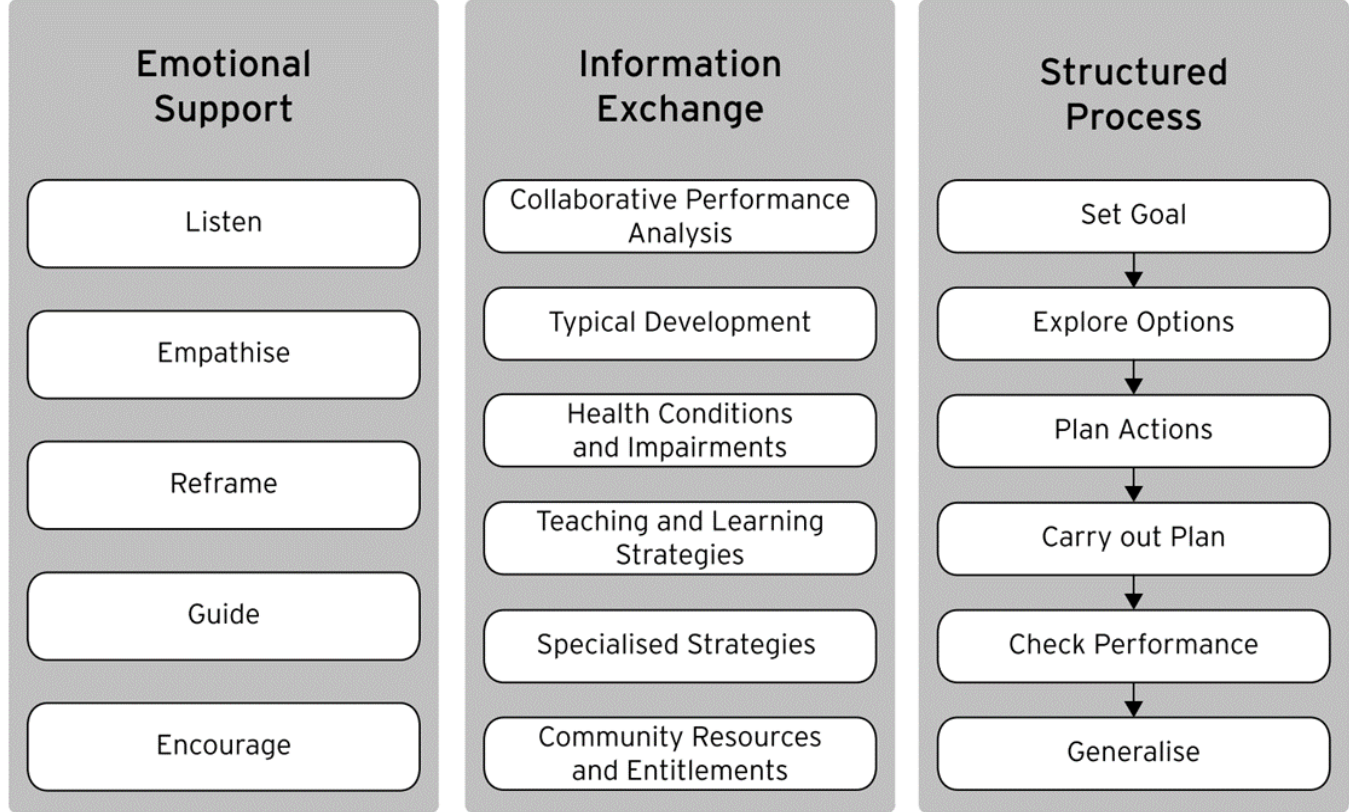




# Setting the Stage

- **Flexibility in the how, when and where the session will occur**
  - **Some prefer more structured and predictable**
  - **Some benefit from spontaneous**
  - ***Never* pre-planned and directed by the therapist!**





# Coaching Model



# Development

- **Play & Development**
- **Motor ~ Cognitive ~ Sensory**
- **Challenges Unique to Down Syndrome**

# Play & development

- **Play is the primary occupation of children**
- **Engagement in play impacts...**
  - **Physical and motor development**
  - **Cognitive and language development**
  - **Social and emotional development**
  - **Creativity and imagination!**
- **Through skilled observation and connection with the child, occupational therapists can capitalize on moments of natural play to encourage development of targeted skills**





# Play

- **Play reveals information about:**
  - **Physical capacity**
  - **Cognition**
  - **Social participation**
  - **Imagination & creativity**
  - **Independence**
  - **Social-emotional coping**

"Play is often talked about as if it were a relief from serious learning. But for children, play is serious learning."

—Mr. Rogers

# Down Syndrome & Development

## Physical & Motor:

- **Low muscle tone (hypotonia)**
- **Delayed gross motor skills (sitting, crawling, walking)**
- **Delayed fine motor skills (play, self-feeding, dressing)**

## Cognitive & Language:

- **Problem-solving, attention, and memory skills**
- **Articulation challenges related to muscle tone**
- **Expressive and receptive language skills**

## Social & Emotional:

- **Understanding social cues**
- **Interpreting emotions of self and others**
- **Forming peer relationships**

## Sensory Processing & Behavioral:

- **Sensitivity to light, sound touch, and textures are common**
- **Impulsivity and stubbornness are common**

# Infant Development: 0 – 1 year



## Motor

- Lifts head – Rolls – Sits up
- Crawls – Stands – 1st Steps
- Bring hands to mouth
- Reaches for and grabs objects
- Begins to use objects purposefully
  - (Toys, finger foods, etc.)

## Cognitive

- Responds to sounds and voices
- Explores objects with hands and mouth
- Imitates simple actions
- Cause and effect
- Simple problem-solving
- Shows interest in books and pictures
- Understands simple instructions

## Sensory

- Prefers faces and high-contrast
- Responds to gentle touch/cuddling
- Explores objects to learn properties
- Food tastes/textures preferences
- Displays discomfort in response to unpleasant sensations
- Responds to changes in sensory input

(CDC, 2023)

# Toddler Development: 1 – 3 years



## Motor

- Throws objects
- Scribbles with crayons
- Builds towers with blocks
- Feeds self with spoon
- Runs - Climbs – Kicks a ball
- Begins to turn pages in a book
- Rides a tricycle
- Climbs playground equipment
- Draws simple shapes

(CDC, 2023)

## Cognitive

- Symbolic play – Pretend play
- Recognizes familiar objects and body parts
- Begins to sort objects by category
- Simple puzzles and games
- Creates pretend play scenarios
- Begins to ask simple questions
- Understands size, color, and shape
- Sorts objects

## Sensory

- Increasing awareness of body sensations
- Discriminates between different textures, temperatures, and surfaces
- Prefers certain colors and patterns
- Explores through messy play
- Begins to identify and name familiar scents and smells
- Enjoys exploring sensory-rich environments
- Discriminates between food textures
- Prefers certain sensory activities

# Preschool Development: 3 – 5 years



## Motor

- Hops on one foot
- Catches a bounced ball
- Copies complex shapes and letters
- Builds complex block structures
- Skips
- Dresses independently
- Cuts along a straight line

## Cognitive

- Understands concepts of time
- Engages in simple counting
- Begins to identify letters & letter sounds
- Interest in storytelling & imaginative play
- Demonstrates a longer attention span
- Begins to understand basic mathematical concepts
- Interested in more complex games

## Sensory

- Sensory discrimination skills
- Increased awareness of preferences
- Shows ability to regulate sensory input
- Explores sensory experiences through more complex and challenging activities

(CDC, 2023)

# Intentional vs Incidental Play

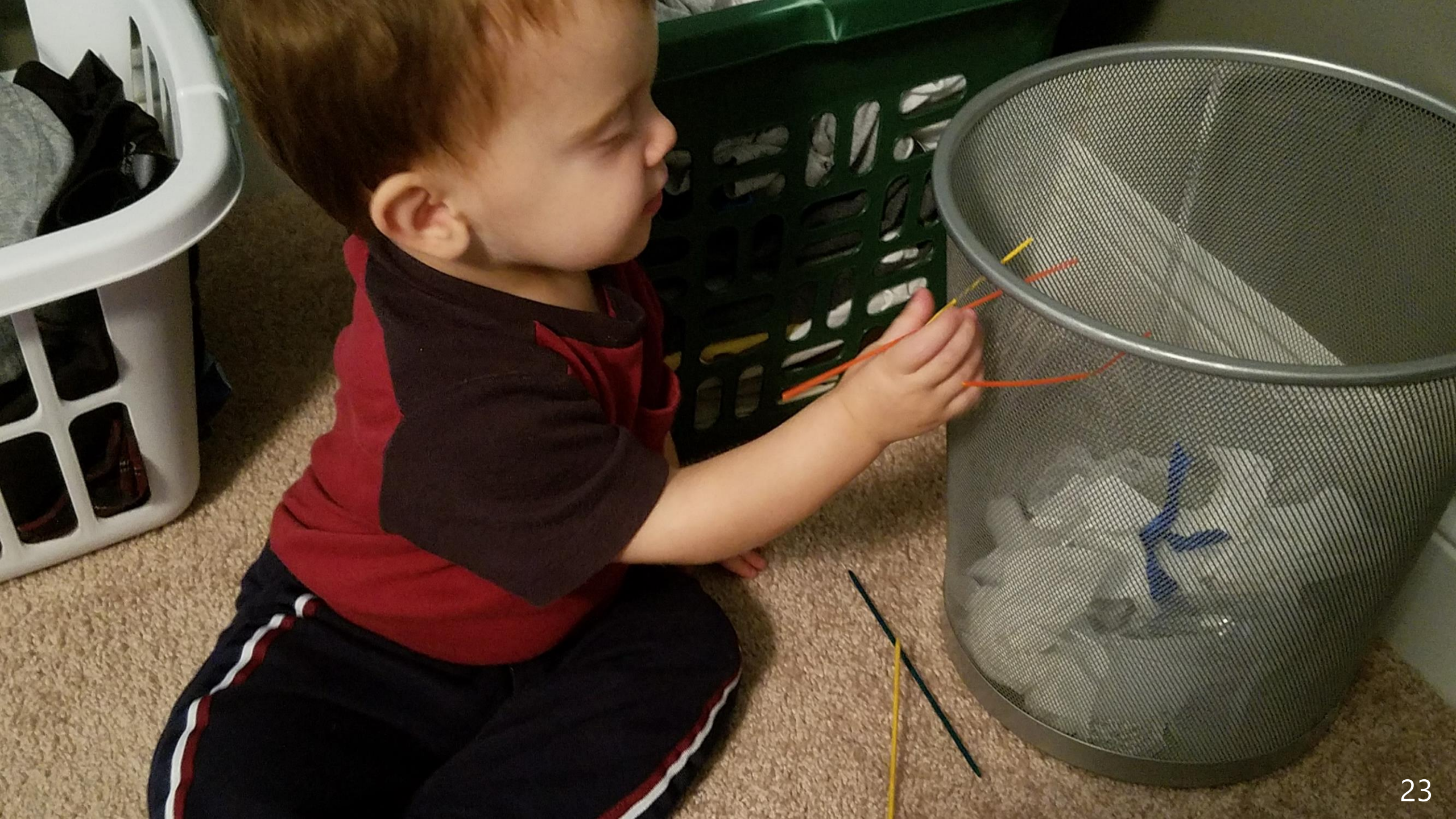
## **INTENTIONAL PLAY**

- **Pre-planned activities**
- **Scheduled into routine**
- **Sometimes high cost or level of materials**
- **Adult led**

## **INCIDENTAL PLAY**

- **Naturally occurring**
- **No planning**
- **May or may not involve required materials**
- **Child led**







# Routines-Based Play Opportunities



# Mealtime

- **Infant**
  - **Mimicking sounds and facial expressions**
  - **Food preparation sensory exploration**
- **Toddler**
  - **Building at the table with foods**
  - **Pretend play (shopping/cooking/serving) during meal prep with caregiver**
  - **I-spy plate game**
- **Preschooler**
  - **Grocery/meal ingredient sorting**
  - **Table setting relay race**
  - **Story telling at the table**



# Bathing and Dressing

- **Infant**
  - **Peek-a-boo with towel/clothing/diaper**
  - **Incorporating singing & nursery rhymes**
  - **Cause-and-effect bath toys**
- **Toddler**
  - **Drawing in bubbles or bathtub crayons**
  - **Dressing obstacle course**
- **Preschooler**
  - **Bathtime science experiments**
  - **Open ended toys to encourage pretend play in the tub**



# Bedtime

- **Infant**
  - **Create a calming, sensory-rich routine**
  - **Singing, scented lotion, story time, rocking**
- **Toddler**
  - **Pretend play with stuffed animals that mimics routine**
  - **Incorporate story telling into bedtime**
- **Preschooler**
  - **Calm down obstacle course with stretching and deep breathing**
  - **Pajama scavenger hunt**





# Outdoors + On the Go!

- **Infant**
  - Show them everyday objects as you use them (keys, snack bag, wipes)
  - Sing songs; mimic facial expressions
- **Toddler**
  - Collect objects from nature
  - Turn an errand into an adventure and incorporate pretend play
- **Preschooler**
  - Play I-spy during a long car ride or at the grocery store
  - Do a 5-senses nature walk
  - Discover a natural obstacle course



# Case Discussions

**Mateo (5  
months)**

**Anna (18  
months)**

**Davion (30  
months)**

*Thank  
you*



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**If you have any questions or want to  
learn more about OT, please contact us!**

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