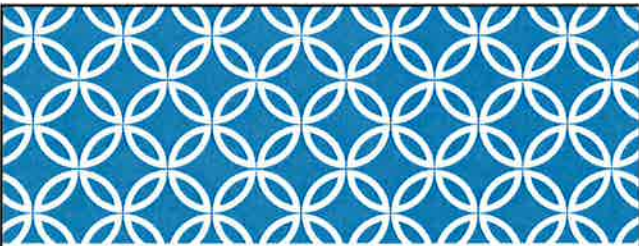


**MUNCH BUNCH: A TRANSDISCIPLINARY
APPROACH TO MEALTIME**

Jane Lamb
Mary Laura Day
Ashley Rosa
Mary Beth Moses
Kameron Curden

OBJECTIVES

- Describe the body's sensory and postural needs as it applies to feeding.
- Examine how cognition and language can be infused into snack and meal-time activities.
- Design a lesson for a toddler with feeding challenges using a transdisciplinary approach.



**THE BELL CENTER FOR EARLY
INTERVENTION PROGRAMS**

Kameron Curden, MA, CCC/SLP,
LSLS Cert. AVEEd.

OUR MISSION

The Bell Center is dedicated to maximizing the potential of children from birth to three years of age who are at risk for developmental delay.

The professional staff of The Bell Center begins the work of maximizing a child's potential as soon as the child is evaluated using the Hawaii Early Learning Profile 0-3. This evaluation assesses a child's strengths and weaknesses across five developmental domains - gross motor, fine motor, expressive and receptive language, cognition and emotional/social. And from this assessment, each member of the child's professional transdisciplinary team develops goals in each area specific to that individual child.



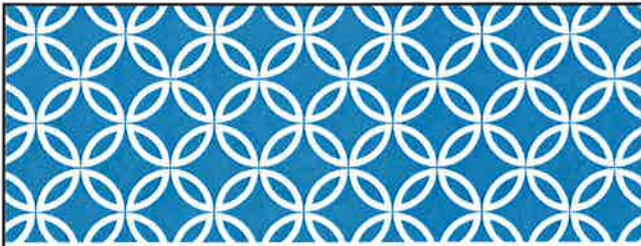
OUR MODEL

Transdisciplinary Team:

- Physical Therapist
- Occupational Therapist
- Speech-Language Pathologist
- Early Childhood Special Education Teacher

Programs:

- Bright Beginnings
- Little Leaps
- All About Me
- My Friends
- Listen and Learn
- Explore Every Day
- Munch Bunch



THE SENSORY SYSTEM

Mary Laura Day, MS, OTR/L



"Eating is the most difficult sensory task that children do."

(For Feeding, PhD, 2018)

"A meal is a complex sensory experience."

(Pillay, C., Wilson, S. E., Zuck, W., & Oski, F. (2011))

"The ability to perceive, process and interpret sensory stimuli, as it pertains to feeding, is the very foundation of a successful feeding program."

(Mundy & Cavell, 1999)

OVERVIEW

- ❖ Sensory system
- ❖ Sensory processing
- ❖ Sensory regulation
- ❖ Sensory strategies



OUR SENSES ARE NECESSARY TO INFORM US ABOUT OUR ENVIRONMENT AND THE INTERNAL STATE OF OUR BODIES. (GURPREY & CARLITO PG. 111)

OUR SUPER 8 SENSORY SYSTEMS



1. Sense of smell (olfactory system)
2. Sense sight (visual system)
3. Sense of touch (tactile system)
4. Sense of taste (gustatory system)
5. Sense of hearing (auditory system)
6. Sense of movement (vestibular system)
7. Sense of body awareness and position (proprioception system)
8. Sense of internal body signals (interoception system)

SENSE OF SMELL- OLFACTORY SYSTEM

- ❖ Why first?
- ❖ Receptor location
- ❖ Processing location
- ❖ Other connections
- ❖ Examples



SENSE OF SIGHT- VISUAL SYSTEM

- ❖ Receptor location
- ❖ Processing location
- ❖ Examples



**SENSE OF TOUCH -
TACTILE SYSTEM**

- ❖ Receptor location
- ❖ Processing location
- ❖ Concentrated
- ❖ Examples



**SENSE OF TASTE
GUSTATORY SYSTEM**

- ❖ Receptor location
- ❖ Processing location
- ❖ Innate preferences
- ❖ Examples



**SENSE OF HEARING -
AUDITORY SYSTEM**

- ❖ Receptor location
- ❖ Processing location
- ❖ Examples



**SENSE OF MOVEMENT –
VESTIBULAR SYSTEM**

- ❖ Receptor location
- ❖ Processing location
- ❖ Crowd participation



**SENSE OF BODY AWARENESS -
PROPRIOCEPTIVE SYSTEM**

- ❖ Receptor location
- ❖ Processing location
- ❖ Crowd participation
- ❖ Examples



**SENSE OF INTERNAL SIGNALS
– INTEROCEPTION SYSTEM**

- ❖ Receptor location
- ❖ Emotional involvement
- ❖ Is it pain or hunger?
- ❖ Examples

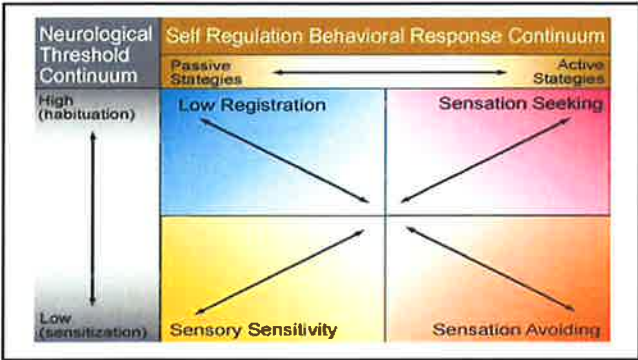


SENSORY PROCESSING

◆ "the neurological process that organizes sensation from one's own body and from the environment and makes it possible to use the body effectively within the environment."
Dr. Jean Ayres on sensory integration

- ◆ Sensory-motor feedback loop
- ◆ Winnie Dunn, PhD, OTR, FAOTA
- ◆ Sensory Profile





SENSORY REGULATION AND FEEDING

◆ "Flight or Flight" or "Rest and Digest"



ACHIEVING SENSORY REGULATION FOR THE FEEDING ROUTINE

Vestibular system Proprioceptive system

❖ **Calming Strategies:**

- Linear movement on swing or sheet
- Trampoline (can be alerting)
- Jump like a bunny to table

❖ **Calming and Alerting Strategies:**

- Gentle deep touch and pressure(push/pull to muscles)
- Pillow or beanbag sandwiches
- Steamroller
- Wheelbarrow walking
- Heavy work(work for the muscles = calming)
- Weighted or fitted clothing
- Scrub the table

❖ **Alerting Strategies:**

- Rotational and unpredictable movement
- "Ride the Horse to Town"



Gustatory System

❖ **Calming:** preferred tastes first, bland

- ❖ **Alerting:** add seasoning to bland foods (cinnamon in carrots), strong flavors such as foods with a little spice or sour taste, zesty dips

Olfactory System

❖ **Calming:** Mild scents and containers

- ❖ **Alerting:** Strong scents and smelling game

VISION AND HEARING

Visual System

- ❖ **Calming:** lower lighting, one piece of food at a time, same color or shape of food as the child usually prefers, processing time, cover the food with a napkin, use partitions as necessary

- ❖ **Alerting:** offer food on a high contrast surface, offer food with bright colors and unique shapes

Auditory System

- ❖ **Calming:** play soft music, give one direction at a time and add a visual cue

- ❖ **Alerting:** provide more tempo music or sing fast and silly songs

Tactile System

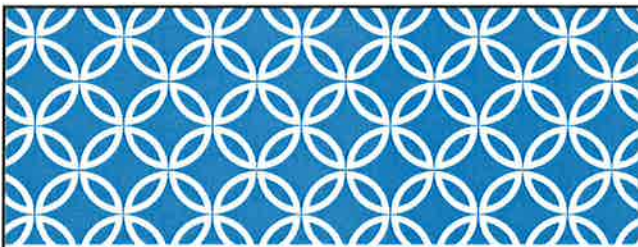
❖ **Calming:**

- Warm
- Dry
- Predictable texture
- Distal to proximal
- Non-food play
- Food play



❖ **Alerting:**

- Cold
- Wet
- Wash cloth
- Add texture



POSTURAL SUPPORTS AT THE TABLE

Mary Beth Moses, PT, MS, PCS

WHAT IS THE PHYSICAL THERAPIST'S ROLE IN ADDRESSING FEEDING CONCERNS?

Preparation for Eating

* PLAY

Positioning for Feeding

***Stability = Security**

- *Children with feeding challenges are often fearful of meal time and fearful of coming to the table.
- *The more secure and predictable the environment at the table, the more you set the child up for success.
- *If muscle tone, stiffness or weakness are a part of the feeding challenge, a supportive and stable chair, provide a safe and comfortable space for the child to eat.

PREPARATION FOR EATING

Motor Play to burn calories/ expend energy/ promote hunger.

- Obstacle course to expend energy and increase heart rate.
- Slide; balance beam; trampoline; tunnel; bolster's or peanut balls to roll over and then do it again.
- Jump over hoola hoops; Climb on/ off ride toys or tricycles and maneuver them.
- Pretend to be food -- "Go Bananas Chant" jumping up and down; Peanut butter/jelly chant; Make sandwich with children and pillows.

Heavy Play for proprioceptive input.

- Bolster's or peanut balls to climb over;
- Kid grocery carts weighted down with weights or can goods to push
- Large buckets with weights to push and climb in/out

Motor Play to engage children and put them at ease.

- Build on the child's strengths
- Make the play fun and motivating
- Time spent at the table may cause anxiety -- decrease this by making the play before and after FUN!

PREPARATION FOR EATING



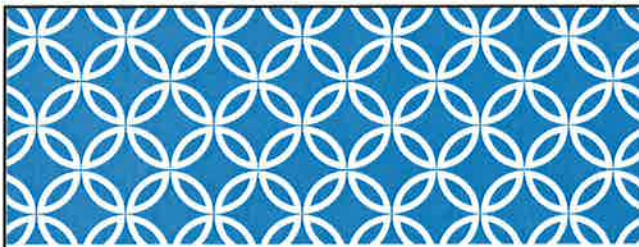
POSITIONING FOR FEEDING

• Stability = Security

- Feet on the floor or on a foot rest
- Hips and knees positioned at 90/90 - upright positioning to promote good posture. (Seat belt if needed, due to muscle tone or weakness)
- Head and neck and trunk alignment for optimal swallowing
- Chairs with armrests or sides provide boundaries that seem to give a sense of security to many children.

POSITIONING FOR FEEDING





COGNITIVE COMPONENTS

Ashley Ross, MA, ECSE

COGNITION: I AM READY TO LEARN

- Thought, experiences and senses
- Constant change and adaptation to new information
- Environmental factors
- Body posture
- Supports for seating if needed
- Behavior and distractors



SOCIAL SKILLS

- Sharing a pleasurable activity with a peer.
- Sense of accomplishment and confidence in an activity builds self confidence.
- Ensured sense of security.
- Observing peers or caregivers.
- Therapist, teachers, parents and peers are critically important in modeling healthy eating behaviors by sitting at the table with and eating the same foods as the child.



IMITATION SKILLS

- Newborn infants can show basic imitation of face and mouth movements from birth.
- Around 6 months of age infants begin to show motor movements in response to other people's actions that gradually become more like the movements they are trying to copy.
- It takes many repetitions for infants to achieve good memory. (17 reps. To commit to memory)
- Good imitation of adult behavior develops through the second year of life.
- Typical 14 month old toddlers imitate eating behavior and will try a new food if an adult likes it first.
- Toddlers start imitating other toddlers from around 24 months.
- Typical children at three to four years of age will modify their food choices to be like those of other children with whom they are eating.



ATTENTION

- Active Experience: learning through doing.
- Sustained attention
- 8-12 months =2-3 minutes
- Toddler=3-6 minutes
- Intentional goal directed actions



ANXIETY/ATTENTION

oHealthy State of alertness Vs Unhealthy state of alertness

(Infants and toddlers who are cautious or fearful (known as an inhibited temperament) are less willing to try out new things, get easily distracted or distressed, request help as soon as a task is challenging. What about those that do not possess the skills to request help?)

oPoor emotion regulation

oHighly reactive behaviors

oReadily upset and sometimes difficult to comfort.

oMay not be ready to learn.



ATTENTION PLAY AND OUR SENSES

oInfants learn through exploration and play.

oDesire feedback from their entire body.

oFocused learning/unfocused learning

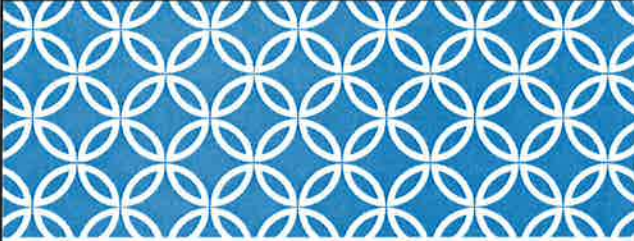
oInfants and toddlers learn through all of their senses by touching, smelling, hearing, seeing and tasting the items in their environment.

oRepeated exposure to positive interactions and experiences builds stronger connections that can be maintained through life. Vs. The negative experiences.



ATTENTION AND ENGAGEMENT





LANGUAGE | Jane Lamb, MS, CCC/SLP

POPULATIONS AT RISK

- Down Syndrome
- Prematurity
- Cerebral Palsy
- Autism
- Developmental Delays
- Drug/alcohol exposure in utero
- Congenital Heart Defects
- Hearing Loss
- So many more...



ORAL MOTOR CONSIDERATIONS

- ❖Before birth-sucking reflex begins
- ❖Birth-opens mouth to suck If hungry and gag response present, begins moving tongue in and out and up and down
- ❖2 weeks to 9 months- can open mouth for a spoon in preparation for spoon feeding at 4-6 months
- ❖6-12 months-teeth
- ❖7-12 months clears a spoon
- ❖8-12 Bites harder food
- ❖12 months-advances in textures and tastes

SPEECH/LANGUAGE CONSIDERATIONS

Expressive

- ❖ Eye contact
- ❖ Verbal
- ❖ Gestures
- ❖ Signs
- ❖ Body movements
- ❖ Assistive technology-low or high tech

Receptive

- ❖ Understanding of words and phrases
- ❖ Following directions
- ❖ Answering questions
- ❖ Regard for peers
- ❖ Attention to task

SPEECH AND LANGUAGE GOALS IN FOOD RELATED ACTIVITY

Expressive

- Vocabulary
- Signing
- Encourage use of device/pictures
- Asking questions
- Requesting
- Protesting

Receptive

- Following directions
- Showing understanding of action words
- Understanding words from a variety of categories

MAKING PUDDING

- Vocabulary-nouns and verbs
- Following directions
- Non verbal vocab-body language related to feeding
- Turn taking
- Requesting
- Refusing
- More...



PEELING A BANANA

Goals to target

- Speech
- Sensory
- Cognitive
- Feeding

Motor-fine motor and gross motor



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ORANGE JUICE

Goals to target

- Speech
- Sensory
- Cognitive
- Feeding

Motor-fine motor and gross motor



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EXPERIENCE BOOKS — MAKING GRITS



Annabelle wanted to smell the grits.



Oliver scooped the grits.

EXPERIENCE BOOKS – MAKING GRITS



Khloe licked the grits but didn't like them.



Addy tasted the grits but didn't like them.

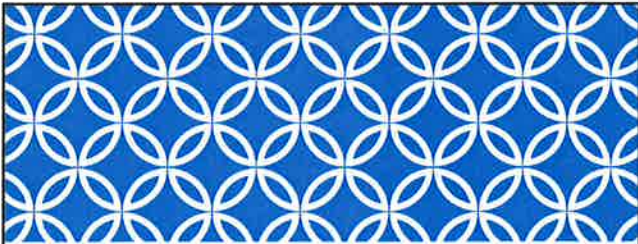
EXPERIENCE BOOKS – MAKING GRITS



Opal licked the grits off her finger.



Kathryn peeled her orange all by herself!



SAMPLE THEMATIC LESSON PLANS

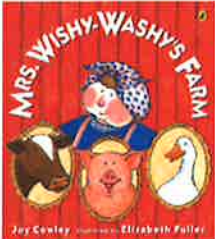
PETE'S A PIZZA

Activity	Materials
Table Time/Sensory Activity	Pizza dough, rollers
Circle	Book - "Pete's a Pizza" Mollie and Doug pizza puzzle Song "I Like to Eat Pepperoni Pizza"
Movement	Building a pizza-two big pillows, bean bags, wadded paper Rolling on a large wedge mat
Food exploration at table	Making a pizza with English muffins, sauce, pepperoni, cheese



MS. WISHY WASHY'S FARM

Activity	Materials
Table Time/Sensory Activity	Knead and play in gym Table Activity: paint line drawings of farm animals with chocolate pudding (brushes if needed) or Put animals in pudding then wash animals in soapy water!
Circle	Book - Ms. Wishy Washy's Farm Songs - "Wishy Washy" and "Old Mac Donald"
Movement	Burlesk Play
Food exploration at table	Eat pudding with cracker crumbs or dip cracker in pudding





SNACK TIME LESSON PLANNING

THE VERY HUNGRY CATERPILLAR

Activity	Materials
Table Time/Sensory Activity	
Circle	
Movement	
Food explanation of table	



THE VERY HUNGRY CATERPILLAR

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