

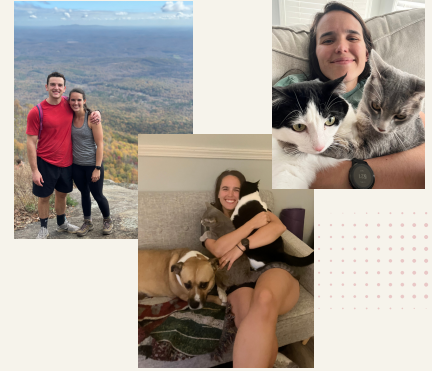
PLAY-BASED RECEPTIVE LANGUAGE THERAPY: MORE TEACHING, LESS TESTING

By : Tara Shingleton, MS, CCC-SLP

SCSHA | 2024

HI I'M TARA!

- Florida --> Alabama
- We have lived in Greenville for 3.5 years
- Married to Will
- We have 2 cats and a dog
- My favorite ways to play: reading, weightlifting, doing things outside



HI I'M TARA!

- Pediatric SLP at AID-L for 2+ years
- Special interests: PFD, DIR/Floortime, child-led / play-based language therapy
- Passionate about providing integrative therapy
- SOS Trained Feeding Therapist
- SOFFI® Trained Professional
- Basic DIRFloortime® Provider



FINANCIAL AND NON-FINANCIAL DISCLOSURES

- Financial: Tara is an employee at the Advanced Institute for Development and Learning (AID-L) and receives a salary there.
- Non-financial: n/a

LEARNING OBJECTIVES

By the end of this presentation you should be able to ...

- Explain the difference between teaching and testing in regard to receptive language therapy
- Identify and describe three strategies for teaching receptive language
- Describe three play-based strategies to implement into therapy sessions for receptive language

OUTLINE

Overview of language development and the difference between teaching and testing

Different developmental frameworks and why they are important to consider when working with kids

The importance of play and how it can be used to support development

Evidence-based receptive language strategies and how to implement into play

Goal examples and carryover considerations

WHAT IS LANGUAGE?

Language is a rule-governed system which includes the comprehension and use of:

- Spoken symbols (listening and speaking)
- Written symbols (reading and writing)
- Other communication symbols (e.g., ASL, AAC)

These symbols have receptive and expressive components

This can be broken into 5 language domains:

- Phonology, morphology, syntax, semantics, pragmatics

Reference: <https://www.asha.org/practice-portal/clinical-topics/spoken-language-disorders/language-in-brief/>

WHAT IS LANGUAGE?

"Language learning and use are determined by the interaction of biological, cognitive, psychosocial, and environmental factors" (ASHA, 1993)

Reference: <https://www.asha.org/practice-portal/clinical-topics/spoken-language-disorders/language-in-brief/>

RECEPTIVE VS EXPRESSIVE LANGUAGE

Receptive Language

- Listening and understanding
- Typically precedes expressive language

Expressive Language

- Communicating with others

WHAT IS THE PURPOSE OF LANGUAGE?

- Meet wants/needs
- Connect with others
- Understand the world

WHY IS IT IMPORTANT TO THINK ABOUT RECEPTIVE LANGUAGE?

- Understanding allows for authentic communication and connection
- What are we teaching kids to do?
 - Are we teaching them to respond to a stimulus in a certain way ...
 - Or are we supporting them to feel safe, experience their world in an authentic and fulfilling way, and giving them tools to understand their experiences and share them with others

TEACHING VS TESTING

Testing

- "A set of questions, problems, or the like, used as a means of evaluating the abilities, aptitudes, skills, or performance of an individual or group; examination"
- Example: show me the boy who is running
- Goal data ...

Teaching

- "To impart knowledge of or skill in; give instruction in"
- Example: commenting, demonstrating, explaining

Reference: <https://www.dictionary.com/browse/test>; <https://www.dictionary.com/browse/teach>

LANGUAGE DEVELOPMENT

Birth to 3 months:

- Alerts to sound
- Coos, makes sounds like ooooo, ahhh, and mmmmm
- Recognizes loved ones and some common objects

4 to 6 months:

- Giggles and laughs
- Vocalizes different vowel sounds—sometimes combined with a consonant—like uuuuummm, aaaaaagoo, or daaaaaaaaa

Reference: <https://www.asha.org/public/developmental-milestones/communication-milestones/>

LANGUAGE DEVELOPMENT

7 to 9 months:

- Looks at you when you call their name
- Babbles long strings of sounds, like mamamama, upup, or babababa
- Raises arms to be picked up

10 to 12 months:

- Points, waves, and shows or gives objects
- Tries to copy sounds that you make
- Says one or two words—like mama, dada, hi, and bye

Reference: <https://www.asha.org/public/developmental-milestones/communication-milestones/>

LANGUAGE DEVELOPMENT

13 to 18 months:

- Follows directions—like "Give me the ball"
- Shakes head for "no" and nods head for "yes."
- Understands and uses words for common objects, some actions, and people in their lives

19 to 24 months:

- Uses and understands at least 50 different words (nouns)
- Puts two or more words together—like more water or go outside
- Follows two-step directions—like "Get the spoon, and put it on the table."

Reference: <https://www.asha.org/public/developmental-milestones/communication-milestones/>

LANGUAGE DEVELOPMENT

2 to 3 years:

- Uses word combinations often
- Tries to get your attention by saying, Look at me!
- Uses some plural words like birds or toys
- Uses -ing verbs

3 to 4 years:

- Compares things, with words like bigger or shorter
- Tells you a story from a book or a video
- Understands and uses more location words, like inside, on, and under

Reference: <https://www.asha.org/public/developmental-milestones/communication-milestones/>

LANGUAGE DEVELOPMENT

4 to 5 years:

- Produces grammatically correct sentences. Sentences are longer and more complex
- Includes main characters, settings, and words like and to connect information and ideas to tell stories
- Understands and uses location words, like behind, beside, and between

Reference: <https://www.asha.org/public/developmental-milestones/communication-milestones/>

LANGUAGE DEVELOPMENT

Language development does not happen in isolation!!

- When considering how a child learns, we should consider all of the areas that they are developing in, and how these systems interact with each other

OUTLINE

Overview of language development and the difference between teaching and testing

Different developmental frameworks and why they are important to consider when working with kids

The importance of play and how it can be used to support development

Evidence-based receptive language strategies and how to implement into play

Goal examples and carryover considerations

SOME DEVELOPMENTAL FRAMEWORKS

Pyramid of Learning

DIR/Floortime

Motor Development

PYRAMID OF LEARNING

"The Pyramid of Learning is an illustration that depicts a general idea of our children's foundational skills, and what other skills build upon those"

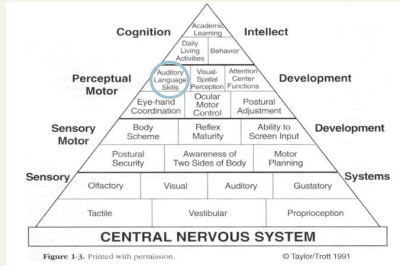


Figure 1-3. Printed with permission. © Taylor/Trott 1991

Reference: <https://otplan.com/pyramid-of-learning/>

PYRAMID OF LEARNING

Central Nervous System

- Physiological stability is the basis for learning and interaction with the world
- If kids do not feel safe in their environment and/or in their body, they will not be able to learn

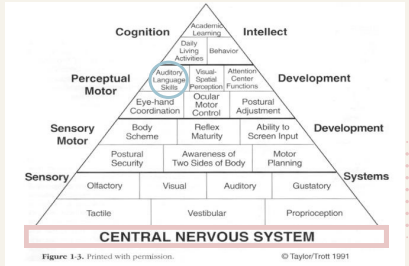


Figure 1-3. Printed with permission. © Taylor/Trott 1991

Reference: <https://otplan.com/pyramid-of-learning/>

PYRAMID OF LEARNING

Sensory systems

- Sensory processing and interaction with the world builds the foundation for all of these skills
- Sensory is how we interact with and learn about the world

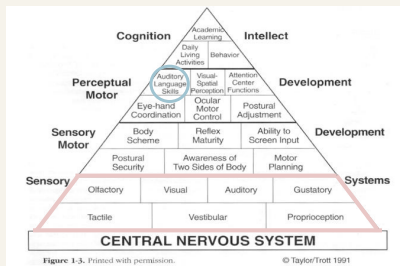


Figure 1-3. Printed with permission. © Taylor/Trott 1991

Reference: <https://otplan.com/pyramid-of-learning/>

PYRAMID OF LEARNING

Sensory Motor Development

- Consider how development of these areas builds the foundation for language development
- How can we support receptive language in kids developing in these areas?

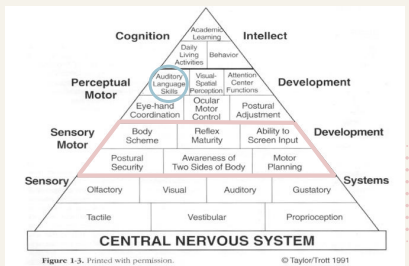


Figure 1-3. Printed with permission. © Taylor/Trott 1991

Reference: <https://otplan.com/pyramid-of-learning/>

PYRAMID OF LEARNING

- Perceptual Motor Development**
- Growth in perception and motor skills again increase kid's abilities to engage with the world - which allows for language growth

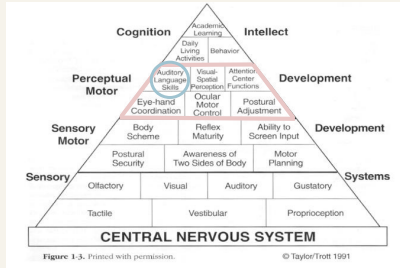


Figure 1-3. Printed with permission. © Taylor/Trott 1991

Reference: <https://otplan.com/pyramid-of-learning/>

PYRAMID OF LEARNING

- Cognition / Intellect**
- The ability to engage and learn depends on development of skills in the lower tiers

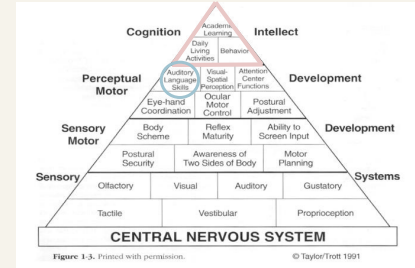


Figure 1-3. Printed with permission. © Taylor/Trott 1991

Reference: <https://otplan.com/pyramid-of-learning/>

SOME DEVELOPMENTAL FRAMEWORKS

Pyramid of Learning

DIR/Floortime

Motor Development

Maslow's Hierarchy of Needs

DIR/FLOORTIME

- DIR**
- Developmental
 - Individual
 - Relationship

- FEDCs**
- Functional Emotional Developmental Capacities

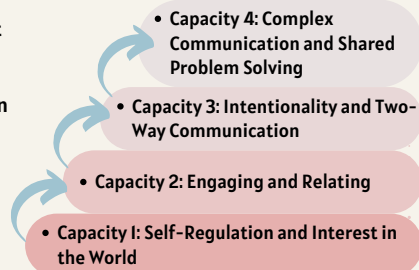
- Capacity 4: Complex Communication and Shared Problem Solving
- Capacity 3: Intentionality and Two-Way Communication
- Capacity 2: Engaging and Relating
- Capacity 1: Self-Regulation and Interest in the World

Reference: <https://www.icdl.com/dir/fedcs>

DIR/FLOORTIME

1) Self-Regulation and Interest in the World

- Where a child feels calm, attentive, and interested in the world around them



Reference: <https://www.icdl.com/dir/fedcs/capacity-1>

DIR/FLOORTIME

2) Engaging and Relating

- This is the milestone of 'falling in love'

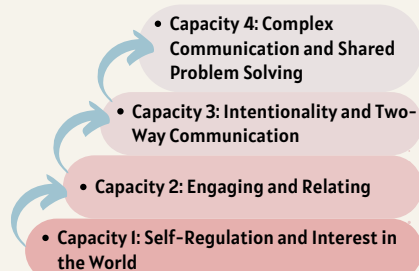


Reference: <https://www.icdl.com/dir/fedcs/capacity-2>

DIR/FLOORTIME

3) Intentionality and Two-Way Communication

- Circles of communication emerge

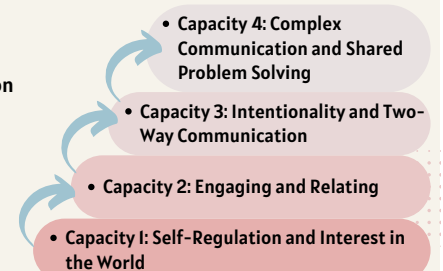


Reference: <https://www.icdl.com/dir/fedcs/capacity-3>

DIR/FLOORTIME

4) Complex Communication and Shared Problem Solving

- Combining communication to share more complex thoughts and ideas

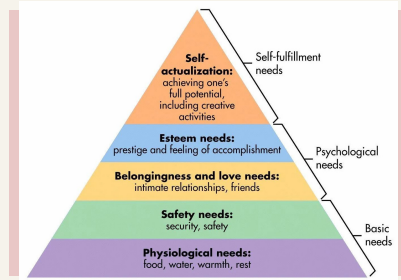


Reference: <https://www.icdl.com/dir/fedcs/capacity-4>

MASLOW'S HIERARCHY OF NEEDS

This is a psychological framework for understanding human needs

- Lower level needs must be met prior to fulfilling higher needs



Reference: <https://www.simplypsychology.org/maslow.html>

SOME DEVELOPMENTAL FRAMEWORKS

Pyramid of Learning

DIR/Floortime

Motor Development

MOTOR DEVELOPMENT

2 months:

- Holds head up while on tummy
- Moves arms/legs

4 months:

- Holds a toy when you put it in his hand
- Brings hands to mouth
- Pushes up onto elbows/forearms when on tummy

Reference: <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

MOTOR DEVELOPMENT

6 months:

- Rolls from tummy to back
- Leans on hands to support himself when sitting

9 months:

- Uses fingers to "rake" food towards himself
- Sits without support

Reference: <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

MOTOR DEVELOPMENT

12 months:

- Walks, holding on to furniture
- Picks things up between thumb and pointer finger, like small bits of food

15 months:

- Takes a few steps on his own
- Uses fingers to feed herself some food

Reference: <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

MOTOR DEVELOPMENT

18 months:

- Walks without holding on to anyone or anything
- Climbs on and off a couch or chair without help

2 years:

- Kicks a ball
- Runs
- Walks (not climbs) up a few stairs with or without help

Reference: <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

MOTOR DEVELOPMENT

2.5 years:

- Uses hands to twist things, like turning doorknobs or unscrewing lids
- Jumps off the ground with both feet

3 years:

- Strings items together, like large beads or macaroni
- Puts on some clothes by himself, like loose pants or a jacket

Reference: <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

MOTOR DEVELOPMENT

4 years:

- Catches a large ball most of the time
- Serves himself food or pours water, with adult supervision
- Unbuttons some buttons

5 years:

- Buttons some buttons
- Hops on one foot

Reference: <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

THE RELATIONSHIP BETWEEN LANGUAGE & MOTOR DEVELOPMENT

LANGUAGE & MOTOR DEVELOPMENT

Developing Language in a developing body: the relationship between motor development and language development—
Iverson (2010)

- Looks at language and motor development in the first 18 months of life
- The author argues that motor development allows infants to have new experiences and build new skills which in turn supports their communication and language development

Reference: Iverson (2010), doi: [10.1017/S0305000909990432](https://doi.org/10.1017/S0305000909990432)

IVERSON (2010)

"My defense of this proposal proceeds in the following way. [...] I argue from developmental evidence that the acquisition of motor skills provides infants with an opportunity to practice skills relevant to language acquisition before they are needed for that purpose. I then show that the emergence of new motor skills changes infants' experience with objects and people in ways that are relevant for both general communicative development and the acquisition of language."

Reference: Iverson (2010), doi: [10.1017/S0305000909990432](https://doi.org/10.1017/S0305000909990432)

IVERSON (2010)

- 1) Rhythmic arm movement and reduplicated babble
 - Peak in rhythmic arm movements at 28 weeks (about 6-6.5 months)
 - Infants typically begin reduplicated babbling around 2-3 weeks after this (about about 7-9 months of age according to ASHA developmental milestones)

References: Iverson (2010), doi: [10.1017/S0305000909990432](https://doi.org/10.1017/S0305000909990432); <https://www.asha.org/public/developmental-milestones/communication-milestones-birth-to-1-year/>

IVERSON (2010)

2) Object displacement in play and first words / vocabulary spurt

- Pre-speech: object displacement mainly consisted of taking things apart (simple motor action)
- Advent of first words: infants putting things together more frequently, and in new ways (understanding the purpose and classification of objects- i.e., a cup is a container)
- During vocabulary spurt: constructions of objects begin to make use of specific object features (give additional meaning to familiar objects)

Reference: Iverson (2010), doi: [10.1017/S0305000909990432](https://doi.org/10.1017/S0305000909990432)

IVERSON (2010)

3) The emergence of naming in action and language

- Recognitory gestures and first words emerge around the same time
- Decontextualization of recognitory gestures and first words happen in a similar sequence

Reference: Iverson (2010), doi: [10.1017/S0305000909990432](https://doi.org/10.1017/S0305000909990432)

IVERSON (2010)

Motor development is an organizer for communicative and language development

- "Motor development over the first eighteen months [...] radically alters the child's experience with the world; and this has significant implications for the development of communication in general and language in particular."

Reference: Iverson (2010), doi: [10.1017/S0305000909990432](https://doi.org/10.1017/S0305000909990432)

IVERSON (2010)

4) Motor development and communication

- Crawling and eye gaze / pointing
 - As infants move to interact with their world, they begin to experience interacting with distally located objects and people

Reference: Iverson (2010), doi: [10.1017/S0305000909990432](https://doi.org/10.1017/S0305000909990432)

IVERSON (2010)

4) Motor development and communication

- Walking and communicative object sharing
 - Now that kids can walk, they can bring an object to a caregiver to share interest and attention to it
 - This is joint attention!
 - The infant can now play a more active role in interaction
 - Infants are more likely to learn words when their attention is already on something

Reference: Iverson (2010), doi: [10.1017/S0305000909890432](https://doi.org/10.1017/S0305000909890432)

IVERSON (2010)

5) Motor development and language

- Unsupported sitting and changes in babbling
 - Unsupported sitting leads to changes in respiration and the position of articulators (more consistent production of CV sounds)
- Mouthing objects and vocalization changes
 - Vocalizing during mouthing objects can cause different consonant sounds. Infants can benefit from the proprioceptive and auditory feedback and learn how to produce novel sounds
- Object features and vocalization characteristics
 - Mouthing larger objects can lead to larger mouth openings which produces different sounds

Reference: Iverson (2010), doi: [10.1017/S0305000909890432](https://doi.org/10.1017/S0305000909890432)

IVERSON (2010)

CONCLUSION: The developing motor system contributes to the development of language in at least two significant ways:

1. "the acquisition of motor skills provides infants with opportunities to practice skills relevant to language acquisition before they are recruited for that purpose"
2. "the emergence of new motor skills changes infants' experiences with objects, people and their own bodies in ways that are relevant for both general communicative development and the acquisition of language"

Reference: Iverson (2010), doi: [10.1017/S0305000909890432](https://doi.org/10.1017/S0305000909890432)

OUTLINE

Overview of language development and the difference between teaching and testing

Different developmental frameworks and why they are important to consider when working with kids

The importance of play and how it can be used to support development

Evidence-based receptive language strategies and how to implement into play

Goal examples and carryover considerations

PLAY

"Play is the stick that stirs the drink. It is the basis of all art, games, books, sports, movies, fashion, fun, and wonder- in short, the basis of what we think of as civilization. Play is the vital essence of life. It is what makes life lively."

-Dr. Stuart Brown

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

WHAT IS PLAY?

We need to be careful in defining play

- **Play means different things to different people**
- **Play is preconscious and preverbal- it can happen without a conscious decision**
- **Play is primal and does not require a complex intellectual framework**

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

WHAT IS PLAY?

Properties of play:

- **Apparently purposeless**
- **Voluntary**
- **Inherent attraction**
- **Freedom from time**
- **Diminished consciousness of self**
- **Improvisational potential**
- **Continuation desire**

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

IS PLAY TRULY PURPOSELESS?

"One of the hallmarks of play is that it appears purposeless. But the pervasiveness of play throughout nature argues that the activity must have some purpose after all."

- **If there were no purpose, this behavior would have been eliminated through natural selection- however it is pervasive in the animal kingdom**
- **After 15 years of studying bears, the Fagans found that those who played the most survived the best**

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

IS PLAY TRULY PURPOSELESS?

Animals learn through play

- Fagan points out that play fighting can help bears learn when to trust other bears, when to defend themselves, and when to flee
- He mentions that play allows 'pretend' rehearsal for life, but in a scenario where there is no threat of life or death

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AND BRAIN SIZE

Neuroscientists Sergio Pellis and Andrew Iwaniuk along with biologist John Nelson have discovered the following:

- There is a strong positive correlation between brain size and playfulness in mammals

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AND NEURAL DEVELOPMENT

Animal play scholar John Byers has discovered the following:

- The amount of play is correlated to the development of the brain's frontal cortex
- The period of maximum play in each species is tied to the rate and size of growth of the cerebellum
- He speculates that during play, the brain is making sense of itself through stimulation and testing- we are able to try things out in a safe way (no threat to our well-being)

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AND NEURAL DEVELOPMENT

Neuroscientist Marian Diamond researched play in the 1960s with the following findings:

- Rats that were exposed to more toys and socialization developed larger and more complex brains compared to their control counterparts

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AND NEURAL DEVELOPMENT

"The truth is that play seems to be one of the most advanced methods nature has invented to allow a complex brain to develop itself."

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY IS IMPORTANT!!

"When we stop playing, we stop developing, and when that happens, the laws of entropy take over-- things fall apart. [...] When we stop playing, we start dying."

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AT THE BEGINNING OF LIFE

Attunement

- Begins around 3-4 months of age
- Attunement occurs when child and parent lock eyes, the child smiles, and the parent automatically smiles back
- This can be considered the most basic form of play

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AT THE BEGINNING OF LIFE

Body and Movement Play

- Increases around 3 to 9 months as infants get up on their knees to rock and crawl

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AT THE BEGINNING OF LIFE

Object Play

- We learned from the motor and language development article that as object play develops, so does language

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AT THE BEGINNING OF LIFE

Imaginative Play

- Begins at around age 2 at the earliest
- Imaginative play allows us to create and explore simulated realities while still remaining in the real world
- Imagination is the key to emotional resilience and creativity
 - It helps us to develop empathy, understanding, trust, and personal coping skills

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AT THE BEGINNING OF LIFE

Social Play

- This helps to develop social frameworks and understanding
- Social play such as peek-a-boo also helps to develop back and forth communication

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

PLAY AT THE BEGINNING OF LIFE

Storytelling and Narrative Play

- This helps kids to integrate information from various sources and learn novel language

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

STRUCTURE IN PLAY

"Part of the license to play freely comes from being in an environment that is structured enough to provide a feeling of safety, so that the child is confident that nothing bad is going to happen."

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

LEARNING AND PLAY

"Play isn't the enemy of learning, it's learning's partner. Play is like fertilizer for brain growth. It's crazy not to use it."

"The opposite of play is not work– the opposite of play is depression."

Reference: "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul" -Stuart Brown, M.D., with Christopher Vaughan

OUTLINE

Overview of language development and the difference between teaching and testing

Different developmental frameworks and why they are important to consider when working with kids

The importance of play and how it can be used to support development

Evidence-based receptive language strategies and how to implement into play

Goal examples and carryover considerations

EVIDENCE-BASED STRATEGIES

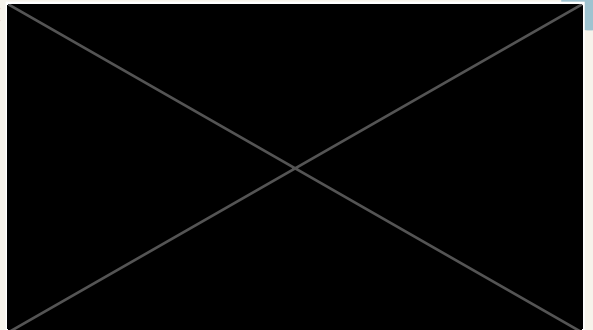
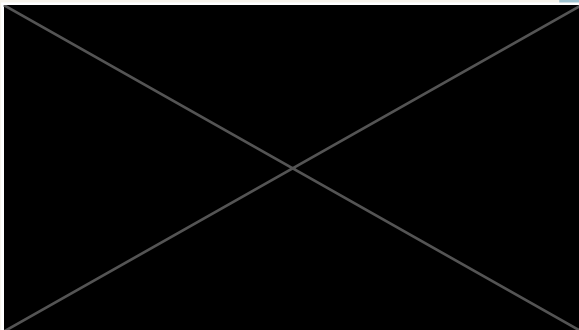
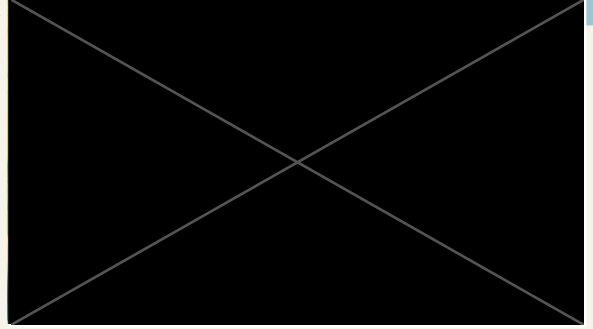
Receptive language strategies

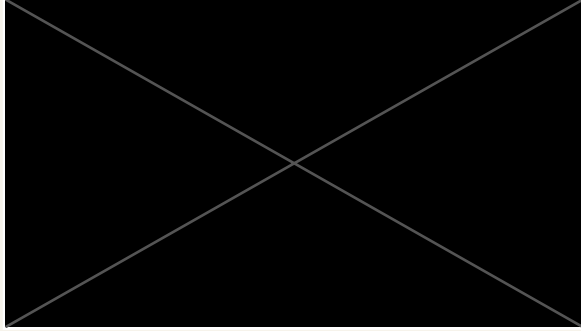
- Parallel talk
 - Narrate what the child is doing
- Recasting
 - Expansions
 - Repeat what the child said, add in missing words to support grammaticality
 - Extensions
 - Respond to child's utterance in a conversational way, add in new information

Reference: https://pubs.asha.org/doi/10.1044/2015_A_JSLP-14-0105

VIDEO EXAMPLES

The following videos were recorded at AID-L and are being used with parent permission for the purpose of this presentation. Please refrain from taking pictures or videos to protect patient privacy.





OUTLINE

Overview of language development and the difference between teaching and testing

Different developmental frameworks and why they are important to consider when working with kids

The importance of play and how it can be used to support development

Evidence-based receptive language strategies and how to implement into play

Goal examples and carryover considerations

GOAL EXAMPLES

SLP will model using abstract symbols (single words) to refuse at least 5x during a session across 10 sessions

While pt shows engagement, SLP will model making choices at least 5x during a session across 10 sessions

While pt remains engaged, SLP will model greeting people at least 5x during a session across 10 sessions

CARRYOVER

Caregiver coaching is KEY for supporting learning and carryover

- Invite parents into sessions
- Coach parents during sessions
- Provide one new strategy to implement per week

PLAY-BASED RECEPTIVE LANGUAGE THERAPY: MORE TEACHING, LESS TESTING

Play-based

- There are so many benefits to integrating play into our sessions- a child's primary job is to play
- Play allows us to MOVE, which helps expose us to new experiences, which helps with language growth

Receptive language therapy

- Focusing on child regulation/enjoyment will increase language learning
- We can implement specific language strategies to support learning- MODEL, MODEL, MODEL, MODEL

More teaching, less testing

- Leaning into play, authentic connection, and teaching language will lead to learning and increased expressive language

REFERENCES

American Speech-Language-Hearing Association. (n.d.-a). Augmentative and alternative communication (AAC). American Speech-Language-Hearing Association. <https://www.asha.org/practice-portal/professional-issues/augmentative-and-alternative-communication/>

American Speech-Language-Hearing Association. (n.d.-b). Early intervention. American Speech-Language-Hearing Association. <https://www.asha.org/practice-portal/professional-issues/early-intervention/>

American Speech-Language-Hearing Association. (n.d.-c). Language in brief. American Speech-Language-Hearing Association. <https://www.asha.org/practice-portal/clinical-topics/spoken-language-disorders/language-in-brief/>

American Speech-Language-Hearing Association. (n.d.-d). Spoken language disorders. American Speech-Language-Hearing Association. <https://www.asha.org/practice-portal/clinical-topics/spoken-language-disorders/>

REFERENCES

Blanc, M., Blackwell, A., & Elias, P. (2023). Using the Natural Language Acquisition Protocol to support Gestalt Language Development. *Perspectives of the ASHA Special Interest Groups*, 8(6), 1279–1286. https://doi.org/10.1044/2023_persp-23-00098

Bloom, L., Tinker, E., & Scholnick, E. K. (2001). The Intentionality Model and Language Acquisition: Engagement, Effort, and the Essential Tension in Development. *Monographs of the Society for Research in Child Development*, 66(4), i–101. <http://www.jstor.org/stable/3181577>

Brown, S., & Vaughan, C. C. (2009). *Play: How it shapes the brain, opens the imagination, and invigorates the soul*. Penguin Group.

Capacity 1: Self regulation & interest in the world. Home of DIRFloortime® (Floortime). (n.d.-a). <https://www.icdl.com/dir/fedcs/capacity-1>

Capacity 2: Engaging & relating. Home of DIRFloortime® (Floortime). (n.d.-b). <https://www.icdl.com/dir/fedcs/capacity-2>

REFERENCES

Capacity 3: Purposeful two-way communication. Home of DIRFloortime® (Floortime) - Capacity 3: Purposeful Two-way Communication. (n.d.). <https://www.icdl.com/dir/fedcs/capacity-3>

Capacity 4: Complex Communication & Shared Problem Solving. Home of DIRFloortime® (Floortime). (n.d.-c). <https://www.icdl.com/dir/fedcs/capacity-4>

Centers for Disease Control and Prevention. (2023, June 6). CDC's Developmental Milestones. Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/actearly/milestones/index.html>

Cleave, P. L., Becker, S. D., Curran, M. K., Van Horne, A. J., & Fey, M. E. (2015). The efficacy of recasts in Language intervention: A systematic review and meta-analysis. *American Journal of Speech-Language Pathology*, 24(2), 237–255. https://doi.org/10.1044/2015_ajslp-14-0105

Dictionary.com. (n.d.-a). Teach definition & usage examples. Dictionary.com. <https://www.dictionary.com/browse/teach>

REFERENCES

Dictionary.com. (n.d.-b). Test definition & usage examples. Dictionary.com.
<https://www.dictionary.com/browse/test>

Home of dirfloortime® (Floortime) - child development. Home of DIRFloortime® (Floortime) - Child Development. (n.d.). <https://www.icdl.com/dir/fedcs>

IVERSON, J. M. (2010). Developing language in a developing body: The relationship between Motor Development and Language Development. *Journal of Child Language*, 37(2), 229–261.
<https://doi.org/10.1017/s0305000909990432>

Maslow's hierarchy of needs. Simply Psychology. (2024, January 17).
<https://www.simplypsychology.org/maslow.html>

OTPlan. (2020, November 11). Pyramid of Learning and children's foundational skills - otplan article.
<https://otplan.com/pyramid-of-learning/>

THANK YOU!!

Contact information: tshingletonslp@gmail.com