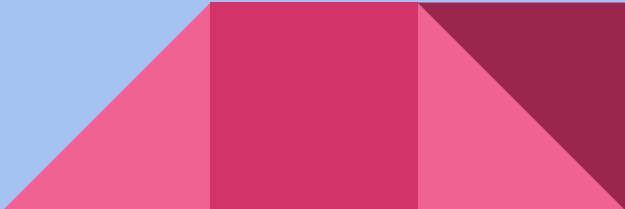




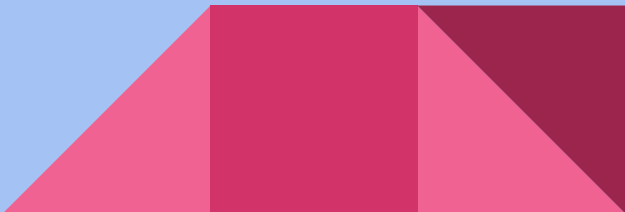
Language Development

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Financial/Non-Financial Disclosures

- I work as a contractor with BMR Health inc. in a local school district
 - I am an independent contractor with iTalk Therapies, Inc.
 - I PRN at Northbay Post Acute and EmPower Me Wellness
 - I am being compensated for my time today by Special Care Services
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Course Objectives

- Define common terms
 - Determine the differences in language development
 - Gestalt versus analytical processing
 - Different ways people communicate
 - Know when to refer for services
 - Where the services are available
 - Ways to support language development at home
 - Current trends in neurodiversity affirming practices
- 

Definitions

- Receptive Language: what a person understands
- Expressive Language: how a person uses language to express themselves
- Articulation: specific speech sounds
- Phonology: the sound patterns of speech for a specific language
- Semantics: words (vocabulary)
- Morphology: word patterns
- Syntax: sentence structure
- Pragmatics: social uses of language



Language Development: Analytic Language Development

1. Coos
2. Babbles
3. Single Words
4. Word Combos
5. Phrases
6. Sentences

Stage 1 –V Grammatical Structures

Brown's Stage	Age in months	MLU-M	MLU-M range	Morphological Structure	Examples
Stage I	15-30	1.75	1.5 – 2.0	combine basic words	that car more juice give it
Stage II	28 – 36	2.25	2.0 – 2.5	Present progressive (-ing endings on verbs)	it going falling off
				in	in box
				on	on tree
				-s plurals (regular plurals)	my cars
Stage III	36-42	2.75	2.5 – 3.0	irregular past tense	me fell down you sat on
				-s possessives	doggie's bone
				uncontractible copula (the full form of the verb "to be" when it is the only verb in a sentence)	Are they there? Is she coming?
Stage IV	40 – 46	3.5	3.0 – 3.7	articles	a book the book
				regular past tense (-ed endings on verbs)	she jumped he laughed
				third person regular present tense	he swims she goes
Stage V	42-52+	4.0	3.7 – 4.5	third person irregular	she has he does
				uncontractible auxiliary (the full form of the verb "to be" when it is an auxiliary verb in a sentence)	Are they swimming. Is she going?
				contractible copula (the shortened form of the verb "to be" when it is the only verb in a sentence)	She's ready. They' re here. I'm here.
				contractible auxiliary (the shortened form of the verb "to be" when it is an auxiliary verb in a sentence)	They' re coming. He's going. I'm done.

Brown's Stages of Language Development

Bowen, C. (2016, February)

LANGUAGE MILESTONES

0-3 MONTHS

- Alerts to sounds/people talking/familiar voices
- Different sounds for happy/sad
- Cooes (mainly vowel sounds)
- Recognizes loved ones/everyday objects



4-6 MONTHS

- Vocalizes different vowel sounds sometimes with consonants
- Giggles/laughs/responds to facial expressions
- Vocalizes during play
- Looks at and follows objects with their eyes



7-9 MONTHS

- Strings sounds together
- Looks at you when you say their name/no
- Recognizes the name of some people/objects
- Lifts arms to be picked up
- Pushes away unwanted items



10-12 MONTHS

- Reaches for objects
- Points, waves, shows/gives objects
- Tries to copy sounds that you make
- Responds to simple words and phrases
- Says 1-2 words (mama, dada, bye-bye)



13-18 MONTHS

- Looks around when asked "where" it's
- Follows directions (give me the ball, come here)
- Points to make requests, someone, get it
- Shake head for "no" and nods for "yes"
- Understands and uses words for common objects, some actions, and people in their lives



19-24 MONTHS

- Understands and uses at least 50 different words (may not always be clear)
- Puts 2 words together
- Follows 2-step directions
- Uses words like me, mine, and you
- Uses words to ask for help



2-3 YEARS OLD

- Uses word combos often but may occasionally repeat some words/phrases
- Says their name when asked
- Uses plural words like "birds" or "toys"
- Uses -ing verbs like eating and running adds -ed to the end of words to talk about past actions



2-3 YEARS CON'T

- Gives reasons for things and events
- Asks why and how
- Answers questions like "what do you do when you are sleepy?"
- Speech is becoming clearer but may not be understandable to unfamiliar listeners



talktherapies.com
Information from asha.org

Speech Sound Development
by Age
From: asha.org
By: iTalktherapies.com

1

AGE 2
H, P, N, D,
B, W, N

2

AGE 3
T, F, Y, NG,
K, G

3

AGE 4
CH, S, Z, DZ, SH
V, L

4

AGE 5
TH I(the), ZH, R

5

AGE 6
TH (thumb)

ASHA (2024)

Language Development: Analytic Continued

Typical Speech and Language Development: A Checklist for School Nurses

Donna D. Merritt, Ph.D., CCC

Preschoolers	Kindergarteners	Students in Grades 1 & 2	Students in Grades 3, 4 & 5
<ul style="list-style-type: none"> <input type="checkbox"/> Comprehend approximately 1200 to 2000 words; <input type="checkbox"/> Can be understood about 80% (or more) of the time; <input type="checkbox"/> Produce short sentences (4-5 words) that often have grammar and/or word order errors; <input type="checkbox"/> Talk about the "here and now" (what they are seeing, hearing and feeling in the present); <input type="checkbox"/> Cannot accurately describe what happened during an event (e.g., a fall on the playscape); their descriptions have a story-like quality; <input type="checkbox"/> May resort to 1-2 word phrases when hurt or confused; <input type="checkbox"/> Produce rapid topic shifts in their conversations, making it difficult at times to follow their train of thought; <input type="checkbox"/> Interrupt frequently (or yell) to capture a turn in the conversation; <input type="checkbox"/> Enjoy "playing" with language (e.g., singing, rhyming, etc.); <input type="checkbox"/> Use language to take roles during play; use play to reenact a troubling event (e.g., peer conflict, a bee sting). 	<ul style="list-style-type: none"> <input type="checkbox"/> Comprehend approximately 2500-2800 words; <input type="checkbox"/> Use about 1500 to 2000 words; <input type="checkbox"/> Can be understood about 90% (or more) of the time; <input type="checkbox"/> Engage in extended conversations using multi-word sentences (5 to 8 words); a few grammar errors persist (e.g., "I brokek it."); <input type="checkbox"/> Can talk about what happened yesterday or what may occur tomorrow; <input type="checkbox"/> Can handle conversations involving two partners, but struggle with three-party interactions; <input type="checkbox"/> Relate simple stories about their personal experiences from the recent past (e.g., an illness); however, their stories lack detail and do not take into account the listener's need for background information; <input type="checkbox"/> Use subtle and various ways of requesting (e.g., "I just love orange juice."); <input type="checkbox"/> Use highly imaginative language and frequently take on the role of a fictional character during play. 	<ul style="list-style-type: none"> <input type="checkbox"/> Comprehend approximately 13,000 words; <input type="checkbox"/> Can be understood 95-100% of the time; <input type="checkbox"/> Use adult-like grammar and word order in their oral language; <input type="checkbox"/> Have learned the "rules" of conversational etiquette (e.g., "Excuse me," etc.); <input type="checkbox"/> Can initiate and sustain conversations over multiple turns (5 or more) with two or more partners (e.g., recess or cooperative group exchanges); <input type="checkbox"/> Produce stories that "center" around a theme and contain a logical "chain" of events; <input type="checkbox"/> Become more explicit in their language when they perceive that the listener is not understanding; <input type="checkbox"/> Follow spoken and unspoken rules about communication and behavior in school, including when to talk, when not to talk and how to speak to adults vs. peers; <input type="checkbox"/> Use language to learn about the world (e.g., "Why can I hear my voice when I put my hands over my ears?"). 	<ul style="list-style-type: none"> <input type="checkbox"/> Comprehend approximately 20,000 to 40,000 words; <input type="checkbox"/> Formulate descriptions of events that are increasingly more precise; <input type="checkbox"/> Understand and produce simple figurative language, including similes, metaphors and idioms (e.g., "It's raining cats and dogs." "She eats like a bird." "We'll play it by ear."); <input type="checkbox"/> Appreciate the humor in jokes that rely on words with multiple meanings; <input type="checkbox"/> Are conversationally competent; can use language to manipulate the behaviors, feelings and attitudes of other people; can transition from one topic to a related or new topic with ease; <input type="checkbox"/> Can adjust vocabulary and modify language style (e.g., the rate of speech or the complexity of the message) to accommodate listeners of varying ages, backgrounds and genders; <input type="checkbox"/> Can discuss abstract concepts and ideas that are not within their personal experience (e.g., how blood circulates through the chambers of the heart; what Eskimo children eat and how they travel to school, etc.).

SERC <http://www.ctserc.org>

Merritt, D. D. (2016, February)

Language Development: Gestalt Language Processing

Stage	Examples	
Stage 1: Echolalia Strings of language repeated verbatim from other sources. These utterances range in their nature and may include intonational contours, songs, sentences, or long scripts.	"Let's get out of here!" "Want some more?"	These utterances are communicative in nature, but should not be taken literally. Provide language models with developmentally appropriate grammar that can be easily mitigated. Consider which language forms may be immediately useful and emphasize those (e.g. "Let's...", "It's a...", "I'm...".)
Stage 2: Mitigated Echolalia Strings from Stage 1 are first broken down into smaller chunks, then recombined into other utterances	"Let's get" + "Out of here!" "Want" + "Some more?" ----- "Let's get" + "Some more?" "Want" + "Out of here!"	At this stage, your child is figuring out how to 'mix and match' language, so provide models that lend themselves to this process. Continue to provide developmentally appropriate language models that can be mitigated and recombined.
Stage 3: Isolation & Recombination of Single Words Echolalia is further mitigated and into single words that are used to generate two-word phrases	"Get... more!" "Want... out?"	While these two-word combinations may seem less sophisticated than the utterances at Stage 2, they are actually the emergence of self-generated language, so help your child understand that this is progress. Model ways – and create situations – for you and your child to play with them together.
Stage 4: Self-Generated Grammar Original sentences are simple at first, but increase in complexity	"I get." "Get more no." "I wanna get some more." "I gotted none but he did."	Incorrect grammar is an indication of self-generation! Your child is experimenting with grammar and increasingly complex sentences. Provide a wide variety of models to support this journey!

Language Development: Natural Language Acquisition

	Natural Language Acquisition Stage
1	Language gestalts (wholes, scripts, songs, episodes)
2	Mitigations (mitigated gestalts, partial scripts) Mix and match combinations of partial scripts
3	Isolated single words Two-word combinations of referential single words
4	Original phrases and beginning sentences
5	Original sentences with more complex grammar
6	Original sentences leading to a complete grammar system

Identifying Language Learning Styles

- Are they scripting from TV shows or movies?
- Do they repeat what they hear either immediately or delayed?
- Do they struggle with imitation skills?
- Some kiddos are a mix of both analytical and gestalt language processing, which can make it difficult to figure out what they are trying to say
- Sometimes they have concomitant motor speech disorders, such as Childhood Apraxia of Speech which further complicates things

Building Blocks for Language

How do I support Gestalt Language processors?

- Record their scripts/echoics throughout the day and environments to figure out what they are using and in what contexts
 - Maybe they are using “I want recess” everytime they need to go outside
- Try to figure out the pattern
 - What scripts are seeming to be used to protest, request, or comment?
- Figure out what stage of gestalt processing they are in
- Model expanded scripts, more contextually appropriate scripts, and recast what they are saying in a more grammatically complex way

Different Types of Communication

ALL COMMUNICATION IS VALID AND SHOULD BE HONORED!

- Pre-intentional (not under the control of the individual)- reflects states such as hungry, thirsty
 - Up to the caregiver to interpret
- Intentional behavior (under the control of the individual)- Caregivers interpret the individual's needs and wants from behaviors such as body movements, facial expressions, vocalizations, and eye contact/gaze

Different Types of Communication

- Unconventional Communication (used intentionally to communicate)- pre-symbolic because they do not involve any sort of symbol; they are unconventional because they are not socially acceptable as the individual grows older
 - Includes body movements, vocalizations, facial expressions, and simple gestures (such as tugging on people)
- Conventional Communication (Pre-symbolic behaviors used intentionally to communicate)- they are more socially acceptable than unconventional communication methods
 - Includes pointing, nodding or shaking the head, waving, hugging, and looking from a person to a desired object.

Different Types of Communication

- Concrete Symbols (physically resembles what they represent)- look like, feel like, and move like or sound like what they represent
 - Includes pictures, objects (such as shoelace represents shoe), iconic gestures (such as patting a chair to say sit down) and sounds (such as making a buzzing sound to mean bee)
- Abstract Symbols (speech, manual sign, braille, written words)- used to communicate, but not similar to what they represent
 - Used one at a time
- Language (combined symbols according to grammatical rules)- two to three word combinations
 - The meaning of symbol combinations may differ depending upon how the symbols are ordered

Different Types of Communication

- Speaking
 - Voiced speech
- Sign language
 - Manual signs
- Non-Speaking
 - non-oral/non-vocal/minimally-speaking
 - Encompasses non-verbal speech and alternative and augmentative communication options
- The term “non-verbal” is going out as it means “without words” and no child is truly ever without words
 - Also there are many forms of non-verbal communication that everyone engages in daily besides words



When to Refer

- **6-9 months**
 - Lack of gestures or attending to the speech of others
 - No repetitive babbling
- **12 months**
 - Difficulty understanding speech and following simple directions
- **16-18 months**
 - No words or a limited vocabulary
 - Use of vowels primarily with few or no consonant sounds
- **24-26 months**
 - Lack of combining words
- **3 years**
 - Echoes words/phrases, many errors in sentences
 - Leaving out consonants or unclear speech

When to Refer

- **Fluency Concerns**

- Involuntary repetitions, hesitations, prolongations, blocks or disruptions during speech
- Tension during speech or abnormal movements such as jerking or forceful eye blinking
- Fear and embarrassment about speaking

- **Voice/Resonance Concerns**

- Chronically hoarse, harsh, breathy or raspy voice quality
- Speaks really softly or in an unnatural pitch
- Increased hypo-hyper nasality when speaking

- **Feeding/Swallowing Concerns**

- Difficulty swallowing solids/liquids
- Difficulty with drinking from a cup or chewing foods
- Avoidance of certain food types and/or textures
- Choking, coughing, and gagging when feeding

When to Refer: Social Skills

- **Trouble with using language for different functions**
 - Greeting, informing, demanding, promising, and requesting
- **Difficulty with changing language to match the listener or situation**
 - Communicating with a baby differently than an adult
 - Communicating at home different than in public
 - Not providing enough information about a topic or too much information about a topic
- **Struggles with following the rules for conversations and story telling**
 - Taking turns both talking and listening
 - Letting others know the topic when you start talking
 - Staying on topic
 - Using communication repair strategies when not understood
 - Using non-verbal cues appropriately such as body language and eye contact
 - Knowing how close to stand to someone when talking

Where Services are Available

- Birth-3
 - Early Start (Regional Center)
 - Department of Developmental Services
- 3-6
 - Child-find
 - School Districts and SELPA
- 6+
 - School Districts



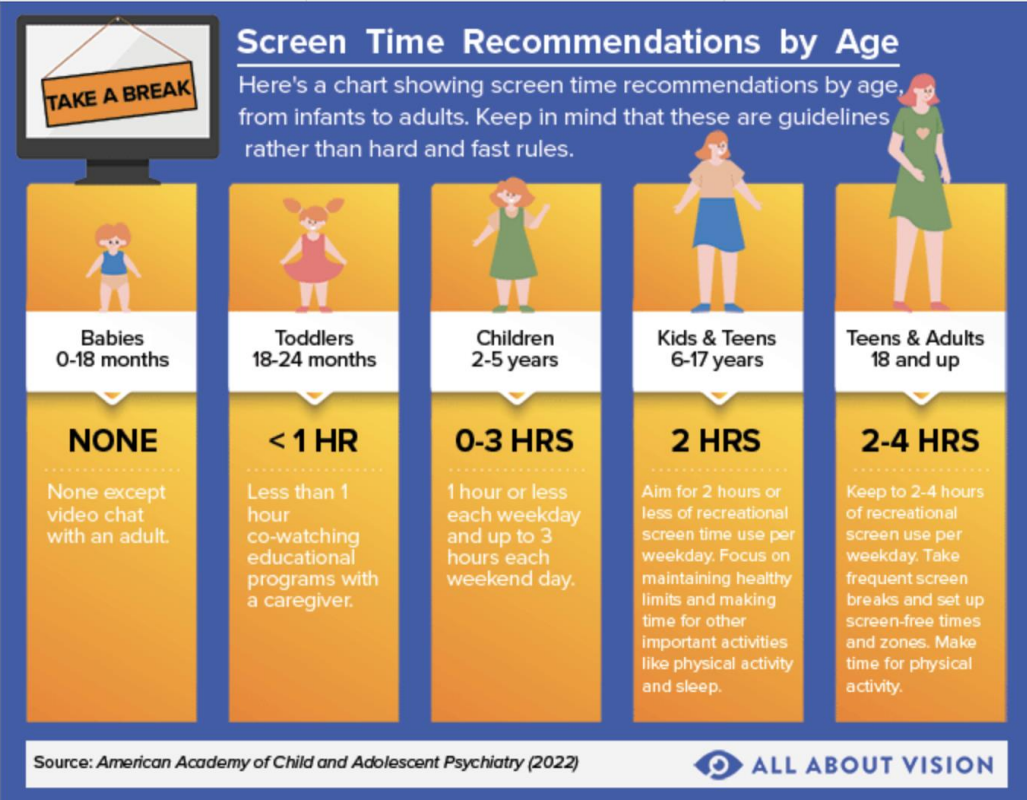
*Private Practice and Insurance options available at all ages depending on the insurance plan and criteria for coverage

Ways to Promote Language at Home

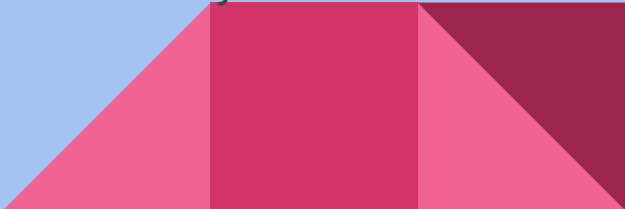
- Reading
 - Ask open ended questions
 - Use voices for different characters and feelings
- Music
 - Sing songs throughout the day that match the activity or make them up
- Modeling
 - Narrate what you are doing as you are doing it
 - Model appropriate phrases in the appropriate contexts
- Set up your environment for success
 - Put things up high
 - Make things harder to open



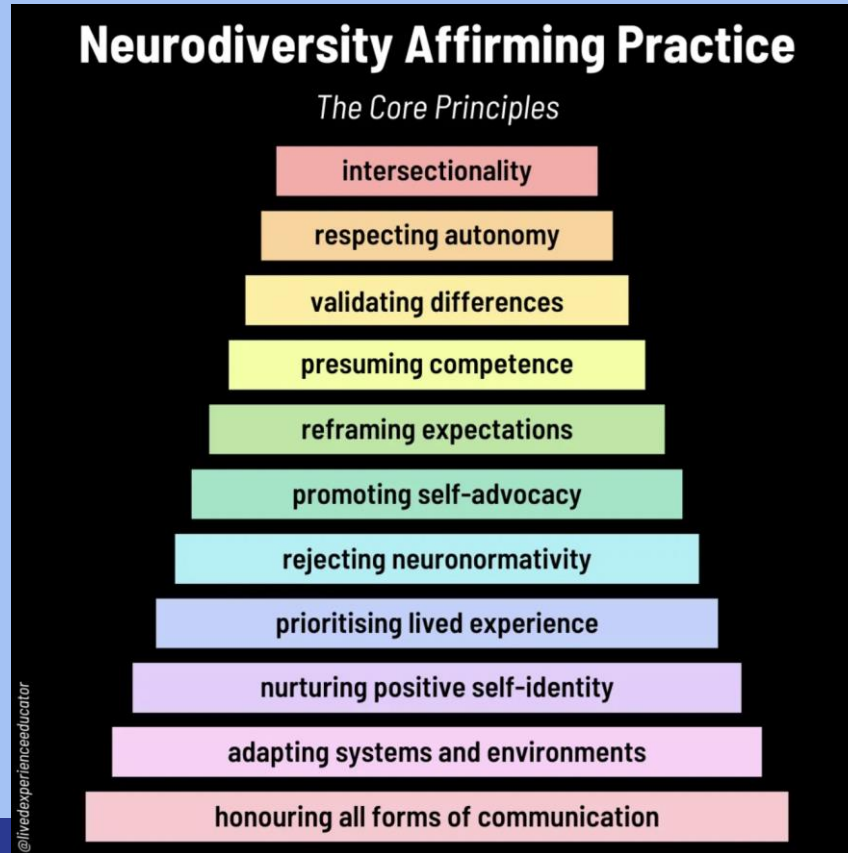
Screen Time: Recommendations by Age



Make Screen Time Count

- Children need an average of 40 conversational turns per hour for optimal brain development (Gilkerson, J., et. al, 2018)
 - Engage with you child during screen time (active versus passive)
 - Talk to them about what they are watching
 - Put them on a “digital diet” if necessary (Neal, A., 2023)
 - Reduce screen time if needed
 - Showing anger when screens are turned off
 - Preferring screens over people
 - Make sure an AAC device is being used for communication only to reduce device abandonment (Criscuola, M., 2019)
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Current Trends in Neurodiversity Affirming Practices



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