

Communication Milestones

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Financial Disclosure Statement

- Lynn K. Flahive is employed by Texas Christian University
 - Financial—Lynn Flahive is LinguSystems author and receives royalties for products and was paid a stipend for this course
 - Nonfinancial—Lynn Flahive has no relevant nonfinancial relationships to disclose
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About the Authors

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Lynn is a board recognized specialist in child language. She is an ASHA fellow, past president of the Texas Speech-Language-Hearing Association (TSHA), and past executive director of the National Student Speech Language Hearing Association (NSSLHA).

About the Authors, continued

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Lynn and Janet have co-authored numerous products for LinguiSystems. They also present workshops nationally and in Canada on the topics of practical and motivational speech and language therapy for young children.

Course Description

- This course presents information on developmental milestones for feeding, speech-sound acquisition, pronouns, morphology, mean length utterance, pragmatics, literacy, phonological awareness, concepts, vocabulary, asking and answering questions, and listening. In addition, the course includes a section on red flags in communication development.

Learning Outcomes

- Participants who successfully complete this course will be able to:
 - identify communication milestones for the major areas of childhood speech and language development.
 - discuss the predictable progression for childhood speech and language development.
 - provide research-based information to client families in regards to progression of childhood speech and language.

Introduction

When should I expect my child to say two-word phrases, produce consonant clusters, or follow two-step directions? Does this client have the speech and language skills that are expected at his age? These questions are often asked of us as speech-language pathologists (SLPs) or that we ask ourselves as we work with children with communication disorders.

Introduction, continued

Thanks to researchers and clinicians who have provided us with invaluable information over many years, we know that typical speech and language development follows a predictable progression. SLPs must familiarize themselves with the steps in this progression to provide the most effective therapy for clients and to give honest, research-based information to their families. This course will provide the information that you need at your fingertips.

Introduction, continued

There are many different sources for communication milestones. Most sources agree with each other; some vary a bit. We drew from numerous resources to provide a snapshot of milestones for the major areas of childhood speech and language. As in all listings of milestones, the information represents an average age, at which most monolingual, English-speaking children will acquire a skill. If a child has not mastered a certain skill by a suggested age, that does not indicate a disorder.

Introduction, continued

However, if most of the items in an age range have not been achieved, parents and professionals who work with the child should consider further investigation in that area.

Introduction, continued

- This course contains developmental milestones for the following areas:
 - feeding
 - speech-sound acquisition
 - prelinguistic speech development
 - phoneme development
 - phonological patterns
 - speech intelligibility expectations
 - pronouns
 - morphology
 - mean length of utterance

Introduction, continued

- pragmatics
- literacy
- phonological awareness
- concepts
- vocabulary
- questions
 - answering questions
 - asking questions
- listening
- In addition, the course includes a section on red flags in communication development

FEEDING

Feeding

- The American Speech-Language-Hearing Association (ASHA) states that “speech-language pathologists play a primary role in the evaluation and treatment of infants, children, and adults with swallowing and feeding disorders” (ASHA, 2002).
- SLPs are knowledgeable about normal and abnormal anatomy and physiology with respect to respiration, swallowing, and speech. Thus, it is appropriate for SLPs to play a role in feeding.

Feeding Milestones

Age	Milestones
Birth–4 months	<ul style="list-style-type: none">● Sucks fingers when near mouth● Places hands on bottle during feeding● Recognizes a nipple or bottle● Pats a bottle with one or both hands
5–6 months	<ul style="list-style-type: none">● Holds a bottle independently with one or both hands● Mouths and gums solid food● Opens mouth when a spoon is presented

Feeding Milestones, continued

Age	Milestones
6–9 months	<ul style="list-style-type: none">● Feeds self crackers● Drinks from a cup when held by an adult—some loss of liquid● Reaches for a spoon when presented/bangs a spoon● Prefers for a parent to feed
9–12 months	<ul style="list-style-type: none">● Holds a soft cookie in mouth (9 months) and bites through it (12 months)● Imitates stirring with a spoon● Eats lumpy, mashed potatoes● Chews using rotary jaw action (emerging)

Feeding Milestones, continued

Age	Milestones
12–18 months	<ul style="list-style-type: none">● Grasps spoon with a full hand● Brings a full spoon to mouth, turning spoon over en route● Begins to drink through a straw● Holds a cup with two hands● Drinks with four or five consecutive swallows
18–24 months	<ul style="list-style-type: none">● Gives up the bottle● Scoops food with a spoon and brings to mouth with spillage● Drinks from a cup with limited spillage

Feeding Milestones, continued

Age	Milestones
18–24 months, continued	<ul style="list-style-type: none">● Swallows with lip closure● Self-feeds frequently● Chews a broad range of food● Has precise up/down tongue movement
24–36 months	<ul style="list-style-type: none">● Bites through a variety of food thicknesses● Brings a spoon/fork to mouth, palm up, self-feeds with limited spillage● Holds a small, open cup in one hand with limited spillage

Feeding Milestones, continued

Age	Milestones
24–36 months, continued	<ul style="list-style-type: none">● Chews with lips closed● Chews using stable rotary jaw action

(ASHA, 2002; Nicolosi, Harryman, & Kresheck, 2006)

SPEECH-SOUND ACQUISITION

Prelinguistic Speech Development

Phoneme Development

Phonological Patterns

Speech Intelligibility Expectations

Prelinguistic Speech Development

- Oller's study (1980) is widely referenced when looking at the stages children go through in the acquisition of articulation and phonological skills.
- Though each stage has a designated time frame, there is overlap between stages.
- Each new stage features characteristics not observed in prior stages.

Prelinguistic Speech Development Milestones

Stage	Age	Milestones
1—Phonation	Birth—1 month	<ul style="list-style-type: none">● Demonstrates reflexive vocalizations such as crying, burping, coughing, and sneezing● Demonstrates nonreflexive sounds that are similar to syllabic nasals

Prelinguistic Speech Development Milestones, continued

Stage	Age	Milestones
2—Cooing and Gooing	2–3 months	<ul style="list-style-type: none">• Uses sounds that are acoustically similar to<ul style="list-style-type: none">• back vowels• consonant-vowel (CV) and vowel-consonant (VC) productions containing back vowels (/u, ʊ, o, ɔ, a/) and back consonants (velars /k, g, ŋ/)

Prelinguistic Speech Development Milestones, continued

Stage	Age	Milestones
3—Exploration/ Expansion	4–6 months	<ul style="list-style-type: none">● Gains better control of laryngeal and articulatory mechanisms during this period by engaging in vocal play● Squeals, growls, yells, produces “raspberries” (bilabial /p, b, m/ and lingualabial trills)

Prelinguistic Speech Development Milestones, continued

Stage	Age	Milestones
3—Exploration/ Expansion, continued	4–6 months	<ul style="list-style-type: none">● Produces vocalizations that vary daily and weekly● Produces vowels with better oral resonance● Begins marginal babbling with CV and VC syllable sequences

Prelinguistic Speech Development Milestones, continued

Stage	Age	Milestones
4—Canonical Babbling	7–9 months	<ul style="list-style-type: none">• Continues to use CV syllables with more adult-like timing• Uses some reduplicated syllables such as /bɔbɔ/ and /mama/• Consonant phonetic inventory may have stops, glides, nasals

Prelinguistic Speech Development Milestones, continued

Stage	Age	Milestones
4—Canonical Babbling, continued	7–9 months	<ul style="list-style-type: none">• Vowel phonetic inventory may have lax vowels /ɛ, ɪ, ʌ/• Uses fewer velars (back sounds); increases use of alveolars and bilabials (front sounds)

Prelinguistic Speech Development Milestones, continued

Stage	Age	Milestones
5—Variegated Babbling	10–12 months	<ul style="list-style-type: none">• Continues to use CV syllables• Begins variegated babbling; uses different CV syllables that result in verbalizations such as /bɑmægΛ/ and /tikɑti/• Produces adult-like intonation and prosody, resulting in utterances that sound like a real question or exclamation

Prelinguistic Speech Development Milestones, continued

Stage	Age	Milestones
5—Variegated Babbling, continued	10–12 months	<ul style="list-style-type: none">• Most commonly used vowels at this time are /ε, Λ, α, υ/ (Bauman-Wangler, 1994)• Most frequently used consonants at this time are /h, d, b, m, t, g, s, w, n, k, j, p/ (Locke, 1983)

Phoneme Development

- Researchers use two different methodologies to determine the age of speech-sound acquisition.
- In cross-sectional studies, children of different ages are tested on their abilities to produce speech sounds at a given point in time.
- Longitudinal studies involve testing the same children's productions over time.
- Comparing the results of the various studies can be difficult because researchers have used a variety of mastery levels and means of eliciting responses.

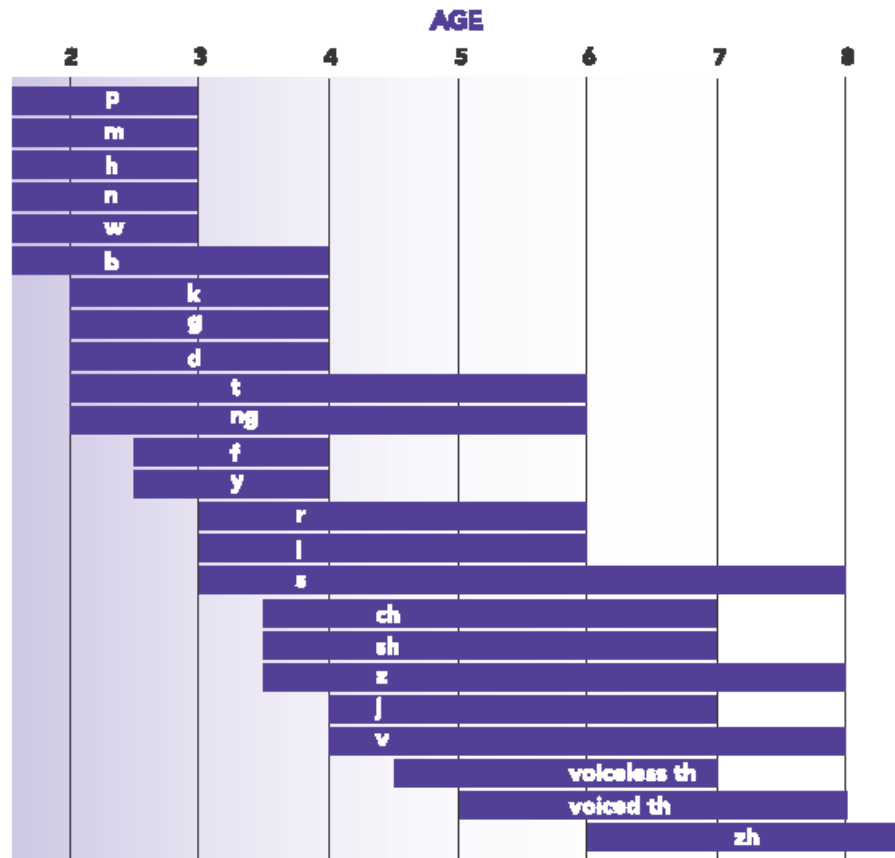
Phoneme Development, continued

- In some studies, sounds produced correctly 100% of the time were considered mastered, but for others, the criterion was 75% of the time.
- Words were produced spontaneously in some studies but were imitated in others.
- Some researchers required the mastery level to be met in all word positions, whereas others were concerned only with the initial and final word positions (Flahive & Hodson, in press).

Phoneme Development, continued

- Despite the variability in criteria, some general agreement yields a few overall conclusions about the acquisition of individual sounds.
- Nasals “m, n, ng,” stops “p, b, t, k, g,” and glides “w, y,” are acquired earliest, followed by fricatives “f, v, s, z, sh, zh,” voiced and voiceless “th,” affricatives “ch, j,” and then liquids “l, r.” (Sander, 1972)
- Sander’s analysis of previous studies also noted that voiced and voiceless “th” were generally the last phonemes to be acquired.

Phoneme Development, continued



(Sander, 1972)

Phonological Patterns

Processes Disappearing by 3 Years	Description	Example
Unstressed syllable deletion	omitting a weak syllable	banana → /nænə/
Final consonant deletion	omitting a singleton consonant at the end of a word	cat → /kæ/
Diminutization	adding /i/ at the end of nouns	dog → /dɑgi/

Phonological Patterns, continued

Processes Disappearing by 3 Years	Description	Example
Velar fronting	substituting a front sound for a back sound	can → /tæn/
Consonant assimilation	changing a phoneme so it takes on a characteristic of another sound in the word	cat → /tæt/
Reduplication	repeating phonemes or syllables	bottle → /bɔbɔ/
Prevocalic voicing	substituting a voiced consonant for a voiceless consonant before a vowel	sun → /zʌn/

Phonological Patterns, continued

Processes Persisting After 3 Years	Description	Example
Cluster reduction	omitting one or more consonants in a sequence of consonants	clean → /kin/
Epenthesis	adding a sound, typically /ʌ/, between two consonants	black → /bʌlæk/
Gliding	substituting /w/ or /j/ for another consonant	run → /wʌn/

Phonological Patterns, continued

Processes Persisting After 3 Years	Description	Example
Vocalizations/ Vowelization	substituting a vowel for a consonant	car → /kə/
Stopping	substituting a stop consonant for a fricative, liquid, nasal, or glide	sun → /dʌn/

Phonological Patterns, continued

Processes Persisting After 3 Years	Description	Example
Depalatalization	substituting a nonpalatal consonant for a palatal consonant	shy → /sɑɪ/
Final consonant devoicing	substituting a voiceless final consonant for a voiced consonant	bag → /bæk/

Phonological Patterns, *continued*

- We reviewed several studies to determine the age by which at least 75% of children no longer use a given process.

Phonological Patterns, continued

Individual Process	Description	Example	Likely Age of Disappearance
Denasalization	changing a nasal consonant to a nonnasal	mat → /bæt/	2.6
Assimilation	changing a phoneme so it takes on a characteristic of another sound in the word	cat → /tæt/	3

Phonological Patterns, continued

Individual Process	Description	Example	Likely Age of Disappearance
Affrication	substituting an affricative for a nonaffricative	sheep → /tʃip/	3
Final consonant deletion	omitting a singleton consonant at the end of a word	cat → /kæ/	3
Fronting of initial velar singles	substituting a front sound for a back sound	can → /tæn/	4

Phonological Patterns, continued

Individual Process	Description	Example	Likely Age of Disappearance
Deaffrication	replacing an affricate with a continuant or stop	chip → /sɪp/	4
Cluster reduction (without /s/)	omitting one or more consonants in a sequence of consonants	grape → /gep/	4

Phonological Patterns, continued

Individual Process	Description	Example	Likely Age of Disappearance
Depalatalization of final singles	substituting a nonpalatal for a palatal sound at the end of a word	dish → /dɪt/	4.6
Depalatalization of initial singles	substituting a nonpalatal for a palatal sound at the beginning of a word	shy → /tʰaɪ/	5

Phonological Patterns, continued

Individual Process	Description	Example	Likely Age of Disappearance
Alveolarization	substituting an alveolar for a nonveolar sound	chew → /tu/	5
Final consonant devoicing	substituting a voiceless final consonant for a voiced consonant	bag → /bæk/	5

Phonological Patterns, continued

Individual Process	Description	Example	Likely Age of Disappearance
Cluster reduction (with /s/)	omitting /s/ in the initial position of a cluster	step → /tɛp/	5
Labialization	replacing a nonlabial sound with a labial sound	tan → /pæn/	6
Initial voicing	substituting a voiced consonant for a voiceless consonant before a vowel	sun → /zʌn/	6

Phonological Patterns, continued

Individual Process	Description	Example	Likely Age of Disappearance
Gliding of initial liquids	substituting a /w/ or /j/ for another consonant	run → /wʌn/	7
Epenthesis	adding a sound, typically /ʌ/, between two consonants	black → /bʌlæk/	8

(Peña-Brooks & Hegde, 2007)

Speech Intelligibility Expectations

Age	Intelligibility Level
19–24 months	25%–50%
2–3 years	50%–75%
4–5 years	75%–90%
5+ years	90%–100%

(Peña-Brooks & Hegde, 2007)

(Bauman-Wangler, 1994; Bowen, 1998; Flahive & Hodson, in press; Locke, 1983; Oller, 1990; Peña-Brooks & Hegde, 2007; Sander 1972)

PRONOUNS

Pronouns

- There is no clear-cut progression for the acquisition of pronouns. However, most linguists agree that *I* and *it* are the first pronouns to emerge, followed by *you*.
- Research also indicates that children use most subjective and objective pronouns by three years of age and possessive pronouns by age five.

Pronouns, continued

Approximate Age	Pronouns
12–26 months	I, it (subjective and objective)
27–30 months	my, me, mine, you
31–34 months	your, she, he, yours, we
35–40 months	they, us, hers, his, them, her
41–46 months	its, our, him, myself, yourself, ours, their, theirs
47+ months	herself, himself, itself, ourselves, yourselves, themselves

(Owen, 1996)

MORPHOLOGY

Morphology

- Morphology is the study of how morphemes are put together.
- A morpheme is the smallest meaningful unit of language.
- Grammatical morphemes apply inflection that signals meaning to nouns, verbs, and adjectives.

Morphology, continued

Age	Grammatical Morphemes	Example
19–28 months	<ul style="list-style-type: none">● Present progressive –ing	crying
29–38 months	<ul style="list-style-type: none">● Regular plurals –s● Present progressive –ing without auxiliary● Semiauxiliaries● Overgeneralization of past tense –ed● Possessive –s● Present tense auxiliary	socks baby crying gonna, gotta, wanna I runned. girl's hat can, will, be, do

Morphology, continued

Age	Grammatical Morphemes	Example
39–42 months	<ul style="list-style-type: none">● Past tense modals● “Be” verb + present progressive -ing	could, would, should, must, might The baby is crying .
43–46 months	<ul style="list-style-type: none">● Regular past tense -ed● Irregular past tense● Regular third-person-singular, present tense● Articles	He kicked. She ate . He drinks. a boy, the tree

Morphology, continued

Age	Grammatical Morphemes	Example
47–50 months	<ul style="list-style-type: none">● Contractible auxiliary● Uncontractible copula● Uncontractible auxiliary● Irregular third person single● Past tense “be” verb	The boy’s talking. It is big. He is swimming. She has it. She was dancing.

(Bowen, 1998; Brown, 1973; Haskill, Tyler, & Tolbert, 2001; Retherford, 2000)

MEAN LENGTH OF UTTERANCE

Mean Length of Utterance

Based on Brown's Stages of Language Development

- For English-speaking children, the mean length of utterance (MLU) is a fairly reliable predictor of the complexity of their language.
- MLU typically increases 1.2 morphemes per year from 18 months to five years of age (Owens, 1996).

(Bowen, 1998; Brown, 1973; Nicolosi, Harryman, & Kresheck, 2006; Owens, 1996)

Mean Length of Utterance,

continued

Brown's Stages of Language Development	Age	MLU	Milestones
I	12–26 months	1.0–2.0	<ul style="list-style-type: none">• Uses one-, two-, and three-word utterances• Uses intonation to ask yes/no questions• Uses limited <i>wh</i>- questions

Mean Length of Utterance,

continued

Brown's Stages of Language Development	Age	MLU	Milestones
II	27–30 months	2.0–2.5	<ul style="list-style-type: none"> ● Begins to use grammatical morphemes ● Uses <i>in</i> and <i>on</i>
III	31–34 months	2.5–3.0	<ul style="list-style-type: none"> ● Increases in length due to use of auxiliaries ● Increases use of <i>wh</i>-questions ● Uses interrogative reversals

Mean Length of Utterance,

continued

Brown's Stages of Language Development	Age	MLU	Milestones
IV	35–40 months	3.0–3.75	<ul style="list-style-type: none">● Uses object-noun-phrase complements● Uses indirect or embedded <i>wh</i>- questions
V	41–46 months	3.75–4.5	<ul style="list-style-type: none">● Coordinates simple sentences● Uses locatives (e.g., <i>up</i>, <i>down</i>)● Uses <i>and</i> as main conjunctive

Mean Length of Utterance,

continued

Brown's Stages of Language Development	Age	MLU	Milestones
V+	47+ months	4.5+	<ul style="list-style-type: none">● Adds negative interrogatives● Adds indefinite forms, such as <i>nobody, no one</i>● Has some difficulty with double negatives

PRAGMATICS

Pragmatics

- Pragmatics is the study of speaker-listener interactions, and all elements in the environment surrounding the message.
- It is often referred to as *social language skills*.

Pragmatics, continued

Age	Milestones
Birth–6 months	<ul style="list-style-type: none">● Startles to loud sounds● Responds to voice and sound● Turns head toward sound source● Watches speaker's face when spoken to● Discriminates between strangers and familiar people● Stops crying when spoken to● Varies responses to different family members● Smiles when spoken to

Pragmatics, continued

Age	Milestones
Birth–6 months, continued	<ul style="list-style-type: none">● Has a social smile● Uses babbling for gaining attention and expressing demand● Establishes eye contact

Pragmatics, continued

Age	Milestones
6–12 months	<ul style="list-style-type: none">● Responds to “no”● Responds to name and pats image of self in mirror● Points to learn new vocabulary● Tries to “talk” to listener● Coos and squeals for attention● Laughs when playing with objects● Tries to communicate by actions and gestures● Smiles at self in mirror

Pragmatics, continued

Age	Milestones
6–12 months, continued	<ul style="list-style-type: none">● Plays pat-a-cake and peek-a-boo games● Copies simple actions of others● Shouts to attract attention

Pragmatics, continued

Age	Milestones
1–2 years	<ul style="list-style-type: none">● Follows simple directions, especially with a gestural cue● Waves bye-bye● Indicates wet pants● Repeats actions that made someone laugh● Engages in parallel play● Pairs gestures with words to make wants known (e.g., “more” and “up”)● Imitates adult behaviors in play

Pragmatics, continued

Age	Milestones
1–2 years, continued	<ul style="list-style-type: none">● Refers to self by name● Exhibits verbal turn-taking● Protests by vocalizing “no”● Engages in simple pretend play, such as talking on a telephone● Says “bye” and other social words, such as “hi,” “thank you,” and “please”● Talks to self during play● Practices intonation, sometimes imitating an adult

Pragmatics, continued

Age	Milestones
2–3 years	<ul style="list-style-type: none">● Watches other children and briefly joins in play● Participates in associative play● Requests permission for items and activities● Begins to use language for fantasies, jokes, and teasing● Makes conversational repairs when listener does not understand● Engages in longer dialogues● Begins to play house● Participates in simple group activities

Pragmatics, continued

Age	Milestones
2–3 years, continued	<ul style="list-style-type: none">● Defends own possessions● Carries on “conversations” with self and dolls● Engages in simple, make-believe activities● Begins to control behavior verbally rather than just physically● Holds up fingers to tell age● Looks for missing toys● Helps put things away

Pragmatics, continued

Age	Milestones
3–4 years	<ul style="list-style-type: none">● Follows two-step directions without cues● Takes turns and plays cooperatively● Relates personal experiences through verbalization● Separates from primary caregiver easily● Frequently practices conversation skills by talking to self● Begins dramatic play, acting out whole scenes● Shows frustration if not understood● Expresses ideas and feelings

Pragmatics, continued

Age	Milestones
4–5 years	<ul style="list-style-type: none">● Follows three-step directions without cues● Uses requests with justification (e.g., “Stop that. You’re hurting me.”)● Uses words to invite others to play● Uses language to resolve disputes with peers● Plays competitive exercise games● Has good control of elements of conversation● Speaks of imaginary conditions, such as “What if . . .” or “I hope . . .”

Pragmatics, continued

Age	Milestones
5–6 years	<ul style="list-style-type: none">● Begins to use word play● Uses threats and promises● Asks meanings of words● Likes to complete projects● Makes purchases at stores● Asks questions for information● Chooses own friends● Takes more care in communicating with unfamiliar people

Pragmatics, continued

Age	Milestones
5–6 years, continued	<ul style="list-style-type: none"><li data-bbox="604 581 1864 695">● Engages in cooperative play, such as making group decisions, assigning roles, and playing fairly<li data-bbox="604 719 1178 768">● Announces topic shifts

(AutismInfo, n.d.; Brooks & Engmann-Hartung, 1987; Child Development Institute, n.d.; Communication Works, n.d.; KidTalk, n.d.; National Institute on Deafness and Other Communication Disorders, 2000; Nicolosi, Harryman, & Kresheck, 2006; Shulman, 1991)

LITERACY

Literacy

- SLPs' knowledge of normal and disordered language acquisition, and their clinical experience in developing individualized programs for children and adolescents, prepare them to assume a variety of roles related to the development of reading and writing.

Literacy, continued

- Appropriate roles and responsibilities for SLPs include, but are not limited to (a) preventing written language problems by fostering language acquisition and emergent literacy; (b) identifying children at risk for reading and writing problems; (c) assessing reading and writing; (d) providing intervention and documenting outcomes for reading and writing; and (e) assuming other roles, such as providing assistance to general education teachers, parents, and students; advocating for literacy practices; and advancing the knowledge base (ASHA, 2001).

Literacy, continued

- This table lists reasonable expectations of literacy skills in children from infancy through seven years of age.

Age	Milestones
3–12 months	<ul style="list-style-type: none">● Likes to chew and pat books● Can focus on large and bright pictures in a book● Shares books with an adult as routine part of life

Literacy, continued

Age	Milestones
1–2 years	<ul style="list-style-type: none">● Recognizes certain books by their covers● Listens to simple stories, songs, and rhymes● Likes to turn pages● Attends to a book or a toy for two minutes● Points to and labels pictures independently● Pretends to read books

Literacy, continued

Age	Milestones
2–3 years	<ul style="list-style-type: none">● Likes to listen to books/stories for longer periods of time● Holds a book correctly● Begins to recognize logos (e.g., McDonald's Golden Arches)● Begins to show a difference in writing versus drawing
3–4 years	<ul style="list-style-type: none">● Begins to pay attention to specific print, such as the first letter of his name● Recognizes logos and other environmental print and understands that print carries a message● Identifies some letters and makes letter/sound matches

Literacy, continued

Age	Milestones
3–4 years, continued	<ul style="list-style-type: none">● Participates in rhyming games● Talks about characters in a book● Likes to “read” stories to herself and others● Protests if an adult changes the story● Produces some letter-like forms in scribbles that resemble letters

Literacy, continued

Age	Milestones
4–5 years	<ul style="list-style-type: none">● Understands story sequence● Understands the purpose and function of print● Knows many letter names● Uses more letter-like forms than scribbles
Kindergarten	<ul style="list-style-type: none">● Recognizes letters and letter-sound matches● Understands that print is read left to right and top to bottom● Retells simple stories● Begins to write simple letters and some words heard often

Literacy, continued

Age	Milestones
Kindergarten, continued	<ul style="list-style-type: none">● Begins to write stories with some readable parts with assistance● Tries to spell words when writing
End of kindergarten	<ul style="list-style-type: none">● Understands that spoken words are made up of sounds● Recognizes some words by sight● Identifies and writes uppercase and lowercase letters● “Reads” a few picture books from memory● Prints own first and last name

Literacy, continued

Age	Milestones
Beginning of first grade	<ul style="list-style-type: none">● Identifies an increasing number of words by sight● Begins to decode new words independently● Uses a variety of reading strategies such as rereading, predicting what will happen, asking questions, or using visual cues or pictures● Reads and retells familiar stories● Reads aloud with ease● Decides independently to use reading and writing for different purposes

Literacy, continued

Age	Milestones
Beginning of first grade, continued	<ul style="list-style-type: none"><li data-bbox="577 592 1795 706">● Sounds out and represents major sounds in words when trying to spell<li data-bbox="577 730 1606 787">● Tries to use punctuation and capitalization

Literacy, continued

Age	Milestones
End of first grade	<ul style="list-style-type: none">● Identifies letters, words, and sentences● Has a sight vocabulary of 100 words● Understands what is read● Creates rhyming words● Reads grade-level material fluently● Expresses ideas through writing● Prints clearly● Spells frequently used words correctly

Literacy, continued

Age	Milestones
End of first grade, continued	<ul style="list-style-type: none"><li data-bbox="590 591 1871 704">● Begins sentences with capital letters and attempts to use punctuation<li data-bbox="590 721 1808 786">● Writes a variety of stories, journal entries, or notes

(ASHA, n.d.; United States Department of Education, 2003; University of North Carolina at Chapel Hill, n.d.)

PHONOLOGICAL AWARENESS

Phonological Awareness

- Phonological awareness is the ability to manipulate the structure of an utterance independently from its meaning.
- It is an auditory task that requires an individual to manipulate the utterance of a word, syllable, or sound level.
- According to the National Center on Education and the Economy, “Children who readily develop phonemic awareness in kindergarten will probably learn to read easily” (Goldsworthy, 2001, p. 3).

Phonological Awareness, continued

- Phonological awareness skills develop from syllable, to onset-rime, to phoneme.
- These skills begin at age three and continue through the development of early reading skills at ages six and seven.

Phonological Awareness, continued

Skill	Definition	Sample Task
Syllable segmentation	counts the number of syllables in a word	How many syllables do you hear in <i>butterfly</i> ?
Syllable blending	blends syllables into a word after they are given separately	What word do you hear when I say <i>cow boy</i> ?
Rhyming	identifies words that sound alike or rhyme	Which word rhymes with <i>mat</i> ; <i>star</i> or <i>hat</i> ?

Phonological Awareness, continued

Skill	Definition	Sample Task
Phoneme isolation	identifies whether a given sound occurs at the beginning, middle, or end of a word	In the word <i>sun</i> , is the /s/ at the beginning, middle, or end of the word?
Initial alliteration	identifies the beginning sound in a word	Which word begins with /t/; <i>toad</i> or <i>boat</i> ?
Final alliteration	identifies the last sound in a word	Which word ends with /b/; <i>dog</i> or <i>tub</i> ?

Phonological Awareness, continued

Skill	Definition	Sample Task
Sound blending	blends sounds into a word after they are given separately	What do you hear when I say /b/ ... /a/ ... /t/?
Sound deletion	deletes a given sound from a word and says a new word	Say <i>cup</i> without the /k/.
Sound substitution	replaces a specific sound in a word and says the new word or syllable	Say <i>top</i> ; now change /t/ to /h/.

Phonological Awareness, continued

Skill	Definition	Sample Task
Sound grapheme matching	identifies grapheme(s) associated with individual sounds	What letters say /k/?

(Gillon, 2004; Goldsworthy, 2001; Flahive & Lanza, 2004)

CONCEPTS

Concepts

- Knowledge of basic concepts is an essential component of language development.
- Basic concepts include terms that describe position, time, equality, quantity, and comparisons.
- These terms are commonly included in directions at home and especially in educational settings.

Concepts, continued

Age	Milestones
1–2 years	<ul style="list-style-type: none">● Follows simple spatial directions● Understands <i>another</i>● Uses simple directional terms, such as <i>up</i> and <i>down</i>● Uses two and three prepositions, such as <i>on</i>, <i>in</i>, or <i>under</i>

Concepts, continued

Age	Milestones
2–3 years	<ul style="list-style-type: none">● Distinguishes between <i>in</i> and <i>under</i>, <i>one</i> and <i>many</i>● Understands number concepts of <i>one</i> and <i>two</i>● Understands size differences, such as <i>big/little</i>● Understands <i>in</i>, <i>off</i>, <i>on</i>, <i>under</i>, <i>out of</i>, <i>together</i>, <i>away from</i>● Begins to understand time concepts of <i>soon</i>, <i>later</i>, <i>wait</i>● Selects three that are <i>the same</i> from a set of four objects

Concepts, continued

Age	Milestones
2–3 years, continued	<ul style="list-style-type: none">● Selects the object that is <i>not the same</i> from four objects with three of them identical● Begins to use adjectives for color and size
3–4 years	<ul style="list-style-type: none">● Follows quantity directions <i>empty, a lot</i>● Follows equality directions <i>same, both</i>● Understands <i>next to, besides, between</i>● Identifies colors● Matches one-to-one● Points to object that is <i>different</i> from others● Uses position concepts <i>behind, in front, around</i>

Concepts, continued

Age	Milestones
4–5 years	<ul style="list-style-type: none">● Understands comparative and superlative adjectives, such as <i>big, bigger, biggest</i>● Understands time concepts <i>yesterday, today, tomorrow, first, then, next, days of the week, last week, next week</i>● Understands <i>different, nearest, through, thin, whole</i>● Identifies positional concepts <i>first, middle, last</i>

Concepts, continued

Age	Milestones
5–6 years	<ul style="list-style-type: none">● Understands opposite concepts such as <i>big/little, over/under</i>● Understands <i>left/right</i>● Understands number concepts up to 20● Answers “<i>How are things the same/different?</i>”● Uses adjectives for describing● Uses comparative adjectives such as <i>loud, louder</i>

k

Concepts, continued

Age	Milestones
5–6 years, continued	<ul style="list-style-type: none">● Uses <i>yesterday</i> and <i>tomorrow</i>● Uses adverb concepts <i>backward</i> and <i>forward</i>● Uses prepositions <i>through</i>, <i>nearest</i>, <i>corner</i>, <i>middle</i>● Names ordinal numbers, such as <i>first</i>, <i>second</i>, <i>third</i>

(AutismInfo, n.d.; Child Development institute, n.d.; Nicolosi, Harryman, & Kresheck, 2006; Touhy, Brown, & Mercer-Moseley, 2001)

VOCABULARY

Vocabulary

- A child's expressive vocabulary grows rapidly from the time of his first word at approximately 12 months, through first grade. Vocabulary increases throughout an individual's lifetime due to education, reading, and life experiences.

Vocabulary, continued

Age	Approximate Words in Expressive Vocabulary
12 months (1 year)	2 to 6 words other than <i>mama</i> and <i>dada</i>
15 months	10
18 months	50
24 months (2 years)	200-300
30 months	450
36 months (3 years)	1,000

Vocabulary, continued

Age	Approximate Words in Expressive Vocabulary
42 months	1,200
48 months (4 years)	1,600
54 months	1,900
60 months (5 years)	2,200-2,500
6 years	2,600-2,700
12 years	50,000

(Child Development Institute, n.d.; Nicolosi, Harryman, & Krescheck, 2006; Owens, 1996)

QUESTIONS

Answering Questions

Asking Questions

Questions

- In language development, a child must be able to ask and answer questions in order to navigate a conversation and to seek and relay information.
- When assessing a child's ability to ask and answer questions, it is important to separate her content knowledge from her ability to ask or answer questions.

Answering Questions

Age	Milestones
1–2 years	<ul style="list-style-type: none">● Looks in the appropriate place when asked a simple question, such as “Where is Daddy?”● Chooses an object with intentionality when asked about a choice of two, such as “ Do you want milk or juice?”● Answers “where” questions such as “Where’s the ball?” by pointing to the pictured item in a book● Answers “What’s this?” questions about familiar objects or pictures such as <i>cookie</i> or <i>baby</i>● Answers “yes/no” questions, possibly with a head nod or shake

Answering Questions, continued

Age	Milestones
2–3 years	<ul style="list-style-type: none">● Points to objects when described, such as “What do you wear on your head?”● Answers simple <i>wh</i>- questions logically● Answers critical thinking questions, such as, “What do you do when you are cold?”● Answers questions such as “Where . . .?,” “What’s that?,” “What’s . . . doing?,” “Who is . . .?”● Answers or understands “Can you . . .? questions

Answering Questions, continued

Age	Milestones
3–4 years	<ul style="list-style-type: none">● Answers more complex questions logically, such as “who,” “why,” “where,” and “how”● Answers “If . . . what?” questions, such as “If it starts raining, what would you do?”● Answers questions about functions of objects, such as “What are spoons for?” “Why do we have shoes?”

Answering Questions, continued

Age	Milestones
4 years	<ul style="list-style-type: none">● Answers “when” questions● Answers “how many” questions (in which the answer does not exceed four)

Asking Questions

Age	Milestones
1–2 years	<ul style="list-style-type: none">● Starts to use question forms, beginning with “What’s that?”● Uses rising intonation.
2–3 years	<ul style="list-style-type: none">● Asks simple egocentric questions, such as “Where cookie?”● Asks “Where . . .?,” “What . . .?,” “What . . . doing?” questions.
3–4 years	<ul style="list-style-type: none">● Asks one-word “why” questions.● Uses “what,” “where,” “when,” “how,” and “whose” when asking questions.

Asking Questions, continued

Age	Milestones
3–4 years, continued	<ul style="list-style-type: none">● Asks “is” questions● Inverts auxiliary and subject in <i>wh</i>- questions, such as “Where is dad going?”
4 years	<ul style="list-style-type: none">● Asks the following types of questions using correct grammatical structure:<ul style="list-style-type: none">● Early Infinitive: “Do you want to . . . ?”● Future: “Are we going to . . . ?”● Modal can/may: “Can you . . . ?”

(AutismInfo, n.d.; Child Development Institute, n.d.; Nicolosi, Harryman, & Kresheck, 2006; Touhy, Brown, & Mercer-Moseley, 2001)

LISTENING

Listening

- Listening to something is not the same as *hearing* it.
- Listening skills involve a child's ability to attend to and process what he hears.
- These skills are integral components to a child's speech and language, social, and academic development.

Listening, continued

Age	Milestones
Birth–3 months	<ul style="list-style-type: none">● Discriminates speech from non-speech sounds● Startles to loud sounds● Quiets or excites in response to novel sounds● Recognizes a primary caregiver's voice● Smiles or quiets when spoken to● Decreases or increases sucking behavior in response to sounds

Listening, continued

Age	Milestones
3–6 months	<ul style="list-style-type: none">● Moves eyes in direction of sounds● Discriminates friendly and angry voices● Reacts to change in tone of voice● Attends to music and toys that make sounds● Listens to a speaker and watches a speaker's face when spoken to

Listening, continued

Age	Milestones
6–12 months	<ul style="list-style-type: none">● Responds to a sound when a source is not visible● Responds physically to music● Stops an activity when name is called● Recognizes words for common items● Listens with increased interest to new words● Begins to respond to simple requests, such as “sit here”

Listening, continued

Age	Milestones
1–2 years	<ul style="list-style-type: none">● Follows one-step directions with cues● Understands simple questions, such as “Where’s Daddy?”● Points to named pictures in a book● Follows directions to find two similar objects● Listens to simple stories

Listening, continued

Age	Milestones
2–3 years	<ul style="list-style-type: none">● Responds to commands involving body parts, such as “Show me your foot.”● Follows two-step directions, such as “Get your cup and bring it to me.”● Follows directions that include action + adverb or action + adjective, such as “Walk slowly” or “Give me the red ball.”● Demonstrates understanding of several verbs by selecting corresponding pictures.● Recognizes family labels such as <i>baby</i>, <i>grandpa</i>.

Listening, continued

Age	Milestones
3–4 years	<ul style="list-style-type: none">● Attends to name being called from another room● Understands simple <i>wh</i>- questions● Understands most simple questions pertaining to her activities and environment● Improves listening skills and begins to learn from listening

Listening, continued

Age	Milestones
4–5 years	<ul style="list-style-type: none">● Attends to a short story and answers simple questions about it● Hears and understands most of what is said at home and in school● Repeats four digits when they are given slowly● Readily follows simple commands involving remote objects

Listening, continued

Age	Milestones
5–6 years	<ul style="list-style-type: none">● Repeats sentences up to nine words in length● Follows three-step directions● Responds correctly to more types of sentences but still may be confused at times by more complex sentences

(AutismInfo, n.d.; Child Development Institute, n.d.)

Red Flags in Communication Development

- Parents often ask about warning signs of speech and/or language problems.
- The following table provides some warning signs that parents can refer to when observing their children's speech and language skills.

Red Flags in Communication Development, continued

Age	Red Flags
6 months	<ul style="list-style-type: none">● Does not laugh and squeal● Does not look toward new sounds
9 months	<ul style="list-style-type: none">● Has limited or no babbling● Does not indicate when happy or upset
12 months	<ul style="list-style-type: none">● Does not point to objects● Does not use gestures such as waving or shaking head

Red Flags in Communication Development, continued

Age	Red Flags
15 months	<ul style="list-style-type: none">● Has not used first word● Does not respond to “no” and “bye-bye”
18 months	<ul style="list-style-type: none">● Does not use at least six to ten words consistently● Does not hear well or discriminate between sounds
20 months	<ul style="list-style-type: none">● Does not use at least six consonant sounds● Does not follow simple directions

Red Flags in Communication Development, continued

Age	Red Flags
24 months	<ul style="list-style-type: none">● Has a vocabulary of less than 50 words● Has decreased interest in social interactions
36 months	<ul style="list-style-type: none">● Strangers have difficulty understanding what the child is saying● Does not use simple sentences

Red Flags in Communication Development, continued

- Other concerns
 - Is a very picky eater (willing to eat only four or five foods, gags on certain textures)
 - Has difficulty with transitions
 - Shows no interest in communicating
 - Drools excessively
 - Stutters more consistently and for longer than six months

(BabyCenter, n.d.; KidTalk, n.d.)

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