

A guide to help your child learn to listen and speak

Introduction

Developing spoken language through listening for a child with hearing loss is an exciting process for everyone involved. As a young child with hearing loss learns to listen and talk there is a great sense of anticipation for you, the parent or caregiver, as they embark on the journey to learn to communicate.

Advances in hearing technology, such as hearing aids, bone conduction and cochlear implants, have allowed many babies and children with hearing loss to have access to the sounds of spoken language like never before. As an infant learns from their parents and caregivers through conversation, singing, reading and playing, their brain is forming millions of critical neural connections, greatly increasing brain development. Therefore, early and consistent access to the sounds of speech through all-day use of hearing aids, bone conduction and cochlear implants is critical.

Young children who have hearing loss today can develop these strong listening and spoken language skills with early diagnosis, utilization of appropriately fit hearing technology and caregivers, like you, who embed listening and language opportunities into all aspects of your child's daily life. We encourage you to seek out a high-quality, family-centered Listening and Spoken Language (LSL) program, but most importantly, to be your child's first and strongest language teacher.

According to research, during the early years of a child's life, there is a critical period for developing a language foundation. This leads to future cognitive abilities and school readiness. A child's early exposure to rich interactive language is the key to early brain development and future success.

Forming a partnership with LSL professionals who have expertise in guiding children and families in the development of listening and spoken language skills is highly suggested. Through this partnership you will learn key strategies to include listening and language opportunities throughout each daily routine—as you play, read and sing with your child.

This edition of *Listen*, *Learn and Talk* Parent Manual has been created as a guide to provide you and your family with critical information about using effective strategies to begin the exciting journey in teaching your child to listen and speak. This resource should be used alongside a formal family-centered Listening and Spoken Language Therapy program and should not be considered as a replacement for such.

The Listen, Learn and Talk Parent Manual focuses on the natural bond between you and your child and highlights what comes naturally to your everyday life. This manual is intended to be practical with a hands-on approach, providing a variety of activities and ideas on how to integrate listening into everyday life and for supporting young children diagnosed with hearing loss. The manual is broken down into three categories—Babies Babble, Toddlers Talk and Children Chatter—and highlights auditory skill development of the child from birth until they are ready for school.

This manual may also be utilized for supporting children who are already of school age, but who may have recently been diagnosed with hearing loss. Scale approaches and exercises up or down to accommodate their skill level needs.

Introduction

Acknowledgment

This amended edition of the *Listen, Learn and Talk* Parent Manual is an adaptation of the second edition of the *Listen, Learn and Talk* manual published by Cochlear Limited in 2005.

In an effort to make the content of this piece more user-friendly and relevant to today's clinical care methods, Cochlear Americas sought out the guidance and collaboration of Nanette Thompson, M.S., CCC-SLP, LSLS Cert. AVT Speech-Language Pathologist & Auditory-Verbal Therapist.

Nanette provides diagnostic services and weekly listening and spoken language therapy to families, children, and adults. She conducts functional listening evaluations with children and adults to assist and help guide audiologists and educators to next steps with programming, equipment, adjustments, strategies and placement. She is also a Listen Referral Therapist and works closely with the Listen Foundation to promote listening and spoken language options for families in the state of Colorado.

We extend our sincere thanks to Nanette for her contributions in enhancing and amending this valuable resource for our most precious of recipients.

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Principles of learning to listen

The following is a list of principles that guide today's model for successful listening and language development for children who have hearing loss:

- Early diagnosis and appropriate fitting of hearing aids should be done as early as one month of age. If it is determined that your child is a candidate for a cochlear implant, they can be implanted with the technology as early as nine months of age in the United States.
- Hearing technology must be worn all waking hours. Consistent access to the sounds of spoken language throughout all daily activities is critical.
- Consistent and ongoing high-quality clinical management from your child's hearing care team (this team could include a Speech Language Pathologist, Audiologist and Auditory Verbal Therapist) is critical to ensure optimal access to sound.
- You and your child's hearing care team are partners in this venture. You should feel empowered to be your child's strongest language model in natural child-centered communication.
- Include listening and spoken language in all aspects of your child's daily life.

And remember, learning to listen should be fun!!

Listening and spoken language development

Family-centered therapy and the caregiver-professional partnership

As parents and caregivers, you are the most important people in your child's life. Your child will always learn best from you in their natural environments. The professional guidance and therapy that you receive as a family must be individualized to enhance your family's strengths and to build upon your child's current skill levels. We strongly encourage you to speak to your clinician about building a parent/caregiver-professional partnership with a highly trained Listening and Spoken Language (LSL) specialist or team.

With the team guiding you, you will participate and practice the skills and techniques necessary to teach your child to develop alongside their hearing peers. You will learn to make informed decisions on your child's progress through ongoing education and support in the following areas:

- Audiological management.
- Language, speech and cognitive development.
- Auditory skill development.
- Techniques and strategies to develop listening skills.
- Use of daily routines, play, reading, and singing to develop oral language skills.

As well as observing, participating and learning, you will be asked to share important information about your child and your family with the care team or specialist. This information includes:

- Your child's interests and upcoming family events.
- Your child's early responses and communicative behaviors.
- Your child's development in the home.
- Your family's strengths, priorities and cultural preferences.
- Your weekly successes and challenges in teaching your child to listen and talk.





Strategies for developing listening skills

Many of the strategies used to develop spoken language through listening are outlined below. These techniques and strategies will be your essential tools as you teach your child to listen and speak. The care team or specialist will coach you to use these strategies successfully and you will quickly be able to include them in all aspects of your child's daily activities.

1. Ensure hearing technology/cochlear implants are worn all day, every day

If your child is to develop spoken language, it is vital that her hearing technology be in excellent working order and is worn throughout the day. Remember to practice the "eyes open and hearing technology on" concept. Eyes open and hearing technology on means that when a child's eyes are open, the hearing aids or the cochlear implants should be on and functioning appropriately. This means not only is the device on the child's head, but also that the coil is transmitting speech information to the implant, and all the pieces are in good working order.

To confirm function of the child's device, you can use the Nucleus® Smart App, and review the Device Status Screen for specific details. To learn more about the Nucleus Smart App, visit www.cochlear.us/nucleussmartappassistance.

At home you can use Hearing Tracker, also found in the Nucleus Smart App, for the tracking and recording of the daily listening and speech environment, helping you and your clinician to better understand the amount of exposure your child has had to speech.

In the clinic, your clinician can use Data Logs to provide greater insight into the environment experienced by your child, helping your clinician work with you on customized goals to suit your child's individual needs.

To learn more about Hearing Tracker or Data Logs, visit www.cochlear. us/hearingtrackerdatalogs for more information or speak to your clinician about utilizing these features to monitor how your child is hearing with the sound processor.

Strategies for developing listening skills

Be close to the microphone of the hearing device when speaking

When you start your child's listening practice, remember that a quiet environment without competing sounds is ideal. You should also know that the optimal distance for microphones on a hearing device is three feet or less from the source of the sound. If you are speaking to your child, ensure you are within a three-foot distance or less so that the child receives the maximum auditory input.

When you are not able to be within three feet or less, use an accessory like a remote microphone to improve the listening experience. You may want to consider using the Cochlear Wireless Mini Microphone 2+. To learn more about the Mini Microphone 2+ and how to utilize it, visit www.cochlear.us/minimic2plusassistance. If you are interested in purchasing a Mini Microphone 2+, visit the Cochlear Online Store at www.cochlearstore.com.

Cue into listening

This cue into listening strategy is used to focus your child's attention and alert her to sound. Cue your child into listening by pointing to your ear and saying "Listen" or "I heard that. Did you hear that?" Your child will start to focus on listening and start to understand where she is hearing sounds.

2. Expect your child to respond to the sounds of speech

Ling 6 sounds are the simple sounds that make up the essential pieces required for spoken language development. These sounds are [m], [ah], [oo], [ee], [sh] and [s]. The Ling 6 Sound test is an easy-to-use tool that evaluates how well your child is hearing with their cochlear implant and/or hearing aid.

The test is a behavioral listening check that uses the simple sounds to detect changes in the quality of a child's hearing. To administer this simple test, you will present each speech sound, wait for and reward your child's response. Typically a response is a non-verbal response in the beginning such as stopping what they were doing, looking at you or even facial expression changes.

Children learn that sound has meaning, and it is powerful when we reward them for their responses and help them attach meaning to sound.

You will find a copy of the Ling 6 Sound test and instructions in the Appendix. To purchase a set of your own Ling Toys and Cards, visit the Cochlear Online Store at www.cochlearstore.com. You may also download and print the Ling Cards from Cochlear's School Resource Center at www.cochlear.us/schoolresourcecenter.

Create a quiet environment

In the initial stages of listening, it is important to provide a quiet listening environment and to decrease background noise often caused by the television, dishwashers and other sources. Your child may have specialized device programming to help reduce background noise and keep the speech signal clear. Such programs may be available and enabled by your clinician. As mentioned before, you may also want to use a Mini Microphone 2+ in settings where you cannot maintain a quiet environment, or the source of sound is more than three feet away.

3. Use a sing-song voice, with repetition and shorter phrases

When using a sing-song voice, or parentese as your child's hearing care team might call it, there are greater changes in the accent, pitch, duration and intensity of the spoken message, providing a large variety of sound information. Accent, pitch, duration and intensity are sometimes referred to as the suprasegmentals. Highlighting these features will greatly assist in the development of hearing awareness.

4. Establish eye contact and connected attention

Eye contact connects you with your baby and accentuates the bond between you. Communication and connection are stronger within engaging interactions when eye contact and attention occur. Take time to ensure you have established eye contact and gained the attention of your child prior to communicating.

5. Talk to your child throughout the day and during daily routines

We know that a child's early language experiences have a great impact on the development of their future language and cognitive abilities. It is important to bathe them in language throughout daily activities. You can do this easily by:

- Providing verbal explanation for each of your own actions or your child's actions.
- Think out loud as you move through your day, explaining the "why" behind daily activities.

It is vital to use every opportunity throughout the day to talk to your child about what is happening.

6. Develop turn-taking, back-andforth exchanges with your child

Vocal turn-taking is a prerequisite for spoken conversation. It starts at a very young age. To develop turn-taking, you should vocalize, then wait for your baby to vocalize. Repeat the baby's vocalization, then add a different vocalization or add some appropriate language. By waiting, you are signaling to your baby that it is her turn to *talk*. Vocal turn-taking should be encouraged from the very beginning of the language development process.

7. Use predictable language and related sounds within daily routines

Making language predictable in the early stages of listening helps your child quickly attach meaning to sounds. Adding a sound or auditory cue such as "Mmmm, it's time to eat" can also link a daily routine to an auditory event.

Strategies for developing listening skills

8. Use Learning to Listen Sounds to help your child develop sound-object associations and to begin to imitate early sounds and words

Learning to Listen Sounds are used to help your child learn that each item has a name or sound. They also allow your child to have early success with discrimination and imitation of sounds and words. You can access a list of Learning to Listen sounds in the Appendix or download at www.cochlear.us/ minimic2plusassistance.

9. Provide auditory information first

If the auditory or hearing pathways are not stimulated in the first few years, the ability to develop them may be lost. This is why it is essential to bathe your child in a rich listening environment from the start. Your baby needs to start learning to listen the moment the hearing technology is fitted. Hearing children learn language through hearing it, listening to it and imitating it. Your child can learn in the same way.

10. Use listening alone to strengthen auditory skill development

It is important to increase confidence and to strengthen your child's auditory skills by presenting information through listening only, at times. This means saying something to your child without additional speech reading cues or visual language. Your child will need to comfortably learn new information through listening alone in order to become an effective auditory learner. This can be done by creating an auditory sandwich (defined below) when you speak to your child and you don't think they understand. You can do other things to help reinforce the spoken word such as pointing, gesturing, or another visual cues to help them, then put it back into listening by saying it again without the visual help. This will help your child improve their ability to understand spoken language through listening.

An auditory sandwich is made in three simple steps:

Step 1 - Listen: Use the strategy of Listen First to talk to your child about an object or action. If they need more information to understand, then move to the next step.

Step 2 – Add more: Provide another strategy to give Studies have demonstrated that the number of your baby more information. This could be pointing toward the object to help them understand the phrase; or the acoustic highlighting strategy (defined below) to emphasize a specific sound or word.

Step 3 - Listen: Without any pointing or gesturing, put what you said back into listening by saying the same phrase or word as you would normally say it.

11. Using acoustic highlighting

Acoustic highlighting, or placing emphasis on certain words, involves making the key element of a sentence louder than the other words around it. For example, you might say, "I see a puppy, WOOF-WOOF." This technique is also very useful when introducing new vocabulary or a new language structure. Acoustic highlighting can make it easier to hear, for example, "HE is going to the park."

This is not about making the word you are emphasizing louder; it is more about pausing for a second and making a more deliberate pronunciation of the word.

12. Use repetition

Most young children need to hear language repeated in a variety of contexts before they process, comprehend and use it. Repetition is a natural strategy to use at the very beginning of spoken language development.

You may need to say a new word or phrase many times in meaningful situations and in different contexts before your baby comprehends it. For example, in Thirty Million Words, Building a Child's Brain by Dana Suskind MD, she states that 30 million words are essential* to your child's success.

words a child is exposed to before the age of four is significantly correlated with the child's eventual IQ and academic outcomes.

13. Use phrases and simple sentences

The basic language structure is a sentence and it is important that this be the input from adults rather than single words. For example, before your toddler takes the lid off a bottle say, "take it off" and not simply "off." Using a phrase or short simple sentence rather than single words will make the message more accessible because there is more acoustic or hearing information You can always use acoustic highlighting to emphasize the key word as mentioned above.

14. Use real names for objects

Your child needs to hear new words and phrases repeatedly before she internalizes them and starts to use them. Make sure you use real names of objects. For example, call it a "bottle" and avoid calling it a "ba-ba". If your child struggles to understand the real name of the object, pair the real word with the Learning to Listen sound, for example, "Here is your ba-ba. Look I have your bottle."

15. Create an opportunity for your child to vocalize in all activities

Children learn to strengthen their auditory feedback loop from the very beginning. Provide opportunities for them to use their voice in all activities and engage in vocal play imitation games. You might pause and wait while raising your eyebrows and looking at the child, which lets the child know it is their turn to talk.

Strategies for developing listening skills

16. Use pause time to allow for processing and to give your child a natural cue to respond and take their turn

Good things come to those who wait. Pause time is a powerful tool because it gives your child valuable time to process the information they heard. It is also a natural way to cue your child to take their turn in back-and-forth vocal exchanges.

17. Add a word or concept to expand your child's language skills

When your child says a word or phrase, repeat it back and add to it. Your addition can be a grammatical marker, a new word or a synonym. For example, if your child says, "Look, a doggie," you might say, "I SEE a doggie too" or "Yes, a BIG doggie" or "Yes, a Poodle." It is critical to always input language that is slightly higher in difficulty than your child is using.

18. Keep expanding vocabulary

There are many opportunities in daily routines to provide vocabulary input, for example:

categories: furniture - table/chair/sofa, desk/dresser

quantities: pile/lots/bit/grain/slice/some

opposites: clean/dirty, big/small, up/down, inside/outside

gender: cow/bull, duck/drake, male/female

It is important to introduce new words so that your child's vocabulary increases at a constant rate. For example, if your child is able to use the word big, the opportunity is there to extend his knowledge by starting to use synonyms such as *large*, *huge*, *enormous*, and so on.

19. Make learning fun and meaningful

This is a very important strategy. Children love to have fun. Every learning experience should be enjoyable. When children are actively participating and enjoying themselves, the most learning will occur. Children have a sense of wonder about their world. They love anticipating, predicting and demonstrating. Your child will learn best if given the opportunity to explore her world in this way.



Integrated scales of development

Language enables us to comprehend and express ideas, thoughts, opinions and emotions.

In the language-learning process, understanding the language heard—that is, receptive language—always precedes the development of expressive language. A young baby will turn when her mother calls her, or wave goodbye when asked, long before she can say her own name or say "bye-bye."

As well as learning to understand and express language, the development of logical skills is necessary in order to use language appropriately in different social contexts and for different purposes.

From birth to school age is a time of enormous development in your child's life. A baby grows from a totally dependent being into a competent communicator and an independent thinker and learner by the time she begins school.

The following tables are an integrated scale that outline typical stages of development in the areas of listening, receptive and expressive language, speech, cognition and social communication. They have been adapted from several different sources:

- Cottage Acquisition Scales for Listening, Language and Speech³.
- Preschool Language Scale 4 (PLS 4).
- The Bzoch League Receptive Expressive Emergent Language Scale Second Edition (REEL-2).
- The Early Learning Accomplishment Profile Kit (E-LAP).
- The Learning Accomplishment Profile Revised Edition Kit (LAP-R).
- The Rossetti Infant Toddler Language Scale.
- St. Gabriel's Curriculum.

A child with hearing loss follows these same stages of development. However, she will need greater exposure to spoken language from the earliest possible time. Language, speech, cognition and logical skills should be developed through listening in a planned program that follows the typical stages of development.

However, a child with hearing loss isn't able to hear all the sounds of spoken language until they have the appropriate fitting hearing technology. So, the goals below might be more appropriate for your child's hearing age versus their actual date of birth age.

This is by no means stating that your child will be behind on the developmental scale throughout their life. The goal is to "close the gap" between her birth age and listening age. By dedicating time and attention to listening development, the gap can be closed and your child will be developing appropriately for their birth age, alongside their peers.

Again, it is important to remember that the skills listed on the following pages are based on an average—a child with NO hearing loss average. There is a considerable range between the earliest and latest times children reach the various achievements. These developmental scales are meant as a guide only. They have been included to assist in the creation of a program to suit the individual needs of your child, as well as to provide you with the education around and establishment of developmental goal setting.

0-3 months

LISTENING

- Auditory awareness
- Responds to sound by smiling, head turning, stilling, startling
- Responds to loud sounds
- Recognizes mother's or caregiver's voice

RECEPTIVE LANGUAGE

- Startles to sudden noises
- Responds to speaker's face
- Responds to talking by quietening or smiling
- Quietens with familiar voice

EXPRESSIVE LANGUAGE

- Cries to express hunger and anger
- Begins to vocalize to express pleasure
- Occasionally vocalizes in response to voice-like sounds

SPEECH

- Cries
- Begins vocalizing other than crying, e.g. coos, gurgles
- Awareness of familiar people/situations
- Looks at objects/faces briefly

COGNITION

- Awareness of familiar people/situations
- Looks at objects/faces briefly
- Anticipates certain events,
 e.g. being fed

SOCIAL COMMUNICATIONS

- Appears to listen to speaker
- Has brief eye contact but by 3 months regularly looks directly at speaker's face, localizes speaker with eyes and starts to watch mouth rather than whole face
- Begins book sharing by looking at pictures in a book with adult

4-6 months

LISTENING

- Sound begins to have meaning
- Listens more acutely
- Starts to associate meaning to sound, e.g. responds to own name occasionally
- Responds to changes in vocal inflections
- Starts to localize source of voice with accuracy
- · Listens to own voice

RECEPTIVE LANGUAGE

- Frequently localizes sound source with head or eye turn
- Occasionally responds to own name
- Discriminates between angry and friendly vocal tones, e.g. cries in response to an angry voice
- Usually stops crying in response to voice

EXPRESSIVE LANGUAGE

- Vocalizes for needs and wants
- Vocalizes in response to singing
- Blows raspberries, coos, yells
- Vocalizes in response to speech
- Starts to use a variety of vocalizations to express pleasure and displeasure
- Vocalizes when alone or with others

SPEECH

- Laughs
- Blows raspberries
- Coos
- Yells
- Starts to change duration, pitch and intensity (prosodic features)
- Uses vowel [a] as in car
- Produces sounds with consonant features – friction noises, nasal [m]
- Plays at making sounds

COGNITION

- Looks at objects and reaches for them
- Starts to learn about cause and effect, e.g. plays with rattle
- Recognizes familiar people
- Brings objects to mouth

SOCIAL COMMUNICATIONS

- Maintains eye contact
- Loves games such as round and round the garden
- Produces different vocalizations for different reasons
- Imitates facial expressions
- Takes the initiative in vocalizing and engages adult in interaction
- Starts to understand vocal turn-taking, e.g. vocalizes in response to adult vocal input

10-12 months 7-9 months LISTENING Appears to enjoy listening to new words · Associates meaning to more words **RECEPTIVE** LISTENING • Localizes sound source **RECEPTIVE** • Appears to recognize names of family **LANGUAGE** LANGUAGE with accuracy members in connected speech, even • Monitors own voice and voices • Generally able to listen to speech when person named is not in sight of others without being distracted by other • Discriminates suprasegmental competing sounds aspects of duration, pitch • Responds with appropriate arm • Localizes sound from a distance gestures to such words as up, high, and intensity Occasionally gives toys and objects • Discriminates speaker's voice from bye-bye, etc. to adult on verbal request • Has longer attention span competing stimuli · Enjoys music or singing Occasionally follows simple • Associates meaning to words commands, e.g. Put that down. • Appears to listen to whole • Discriminates vowel and conversation between others · Responds to music with body or hand syllable content movement in approximate time • Regularly stops activity when name is called • Demonstrates understanding of verbal requests with appropriate head and • Appears to recognize the names of body gestures a few common objects by localizing them when they are named • Shows increased attention to speech over prolonged periods of time • More regularly stops activity in response to "no" • Will sustain interest up to a minute **EXPRESSIVE** SPEECH • Uses jargon of 4 or more syllables, • Imitates sounds and number of while looking at pictures or books LANGUAGE short sentence-like structures syllables used by others with adult without true words • Uses suprasegmental features • Starts to use varied jargon patterns • Uses longer strings of repeated syllables Babbles CV CV [pa pa] [ba ba] with adult intonation patterns when **EXPRESSIVE** Repeats CV syllables in babble [pa pa] SPEECH • Vowels and consonants are LANGUAGE playing alone. Initiates speech • Clicks tongue • Starts to respond with vocalizations systematically varied [ba di ba di] gesture games such as round and when called by name • Uses a "singsong" voice • Mostly uses plosives and nasals round the garden • Plays more games, e.g. pat a cake, [p, b d, m] • Imitates patterns of intonation • Talks to toys/objects using longer peek a boo, hand clapping, etc. and Uses low central vowels most verbal patterns vocalizes during games frequently [o] (hot) [ae] (bat) [a] (car) • Frequently responds to songs or • Appears to "sing" • Uses some consonants [p, b, m, d] rhymes by vocalizing • Vocalizes to greet a familiar adult • Imitates action paired with sound Calls to get attention • May use first words. • Uses some gestures and language e.g. bye-bye, mama appropriately, e.g. shakes head for "no" COGNITION SOCIAL • Resists when toy is taken away • Starts to understand question and Vocalizes loudly COMMUNICATIONS answer, e.g. shakes head appropriately • Relates an action to an object, e.g. spoon with stirring, car with pushing COGNITION SOCIAL Imitates physical action Begins to understand that • Understanding of interaction continues • Responds to laughter by COMMUNICATIONS communication is a two-way process • Recognizes familiar objects to develop repeating action • Shows a desire to interact with people Places object in one hand and then • Understands greetings • Takes peg from peg board the other • Becomes more lively to familiar people • Turn-taking skills continue to develop • Matches two identical objects • Demonstrates anticipation of activities • Holds one cube and takes another • Vocalizes in response to mother's call • Attempts to build a two block tower Smiles at self in mirror • Nods, waves and claps • Indicates desire to change activities • Loves hiding and finding games • Calls to get attention • Responds to laughter by • Requests by reaching and pointing • Gives, points, shows repeating action • Pulls rings off peg Enjoys frolic play • Begins directing others by tugging, pushing • Continues to develop turn-taking skills

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 Begins book sharing by looking at pictures in a book with adult • Vocalizes with gesture to protest

• Enjoys games and initiates them

16-18 months 13-15 months LISTENING LISTENING Discriminates between RECEPTIVE Understands more simple questions Identifies more words RECEPTIVE • Understands more new words **LANGUAGE** LANGUAGE more phrases • Begins to understand longer phrases • Processes simple language • Identifies and associates more with key word in middle of sentence • Follows one-step directions during play • Auditory memory of one item at words to related objects, e.g. toys, • Develops category vocabulary • Understands simple where questions, the end of a phrase/sentence body parts, food, clothing e.g. Where's daddy? • Identifies more body parts • Discriminates between • Imitates words heard familiar phrases • Recognizes and demonstrates • Finds familiar object not in sight understanding of many objects • Follows one-step directions that • Understands 50 or more words by pointing are familiar • Identifies some clothing items, • Understands more familiar phrases toys and food • Begins to recognize names of various body parts, e.g. eyes, hands Enjoys rhymes EXPRESSIVE SPEECH Jargon disappears Increases single word approximations LANGUAGE • Increases vocabulary, 10 or more • Most vowels present **EXPRESSIVE** SPEECH meaningful words Uses 7 or more words consistently Imitates alternated vowels • Still mainly producing front consonants LANGUAGE • Decreases use of gesture - relies [p, b, d, m, n, h, w] • Uses voice and gesture to obtain • Approximates single words on talking to communicate desired object • Uses most vowels in vocal play • Imitates words heard • Continues to use jargon with more • Uses more front consonant plosives true words developing • Asks for more [p, b, d], nasals [m,n] • Incorporates pausing and intonation Uses fricative [h] into jargon • Uses semi-vowel [w] • Imitates new words spontaneously COGNITION • Imitates circular scribble SOCIAL • Requests object or help from adult by Sings COMMUNICATIONS gesturing and vocalizing • Places 3 to 6 pegs in pegboard • Initiates vocal interaction • Retrieves desired toy from behind • Prefers to be with familiar people an obstacle COGNITION Sustains interest in desired object SOCIAL Continues to develop eye contact with • Picks up small objects • Shows caution with strangers for two minutes and more COMMUNICATIONS speaker for longer periods • Turns bottle upside down to • Imitates other children • Places circle in shape board • Takes turns as expressive obtain toy language develops • Builds a tower with two cubes • Points to pictures in a book and • Plays fetching game • Begins to make marks on paper begins to turn pages with thick crayon • Involves others by showing things, • Demonstrates object permanence e.g. shoes/clothing during play • Imitates more actions, e.g. patting doll • Begins to understand "wh" questions • Demonstrates functional use of objects • Removes lid of box to find hidden toy

25-30 months **19-24 months** LISTENING Auditory memory of 2 items in RECEPTIVE Begins to understand complex language LISTENING • Auditory memory of 2 items **RECEPTIVE** • Completes two requests with one object LANGUAGE different linguistic contexts LANGUAGE • Comprehends more complex • Chooses two familiar objects • Discriminates songs • Listens to familiar songs on tape action phrases • Comprehends a variety of phrases • Comprehends action phrases • Comprehends longer utterances • Understands functions, e.g. What do • Discriminates descriptive phrases • Points to a range of body parts, we use for drinking? - points to up • Listens from a distance e.g. elbow, cheek • Follows a two-step direction, • Begins to understand size differences, e.g. Get your ball and throw it. • Begins to understand personal e.g. big/little pronouns - my, mine, you • Identifies by category • Begins to understand prepositions, • Recognizes new words daily e.g. in, on, under • Increases comprehension - decodes • Receptive vocabulary increases simple syntax • Begins to understand concept of • By 24 months understands quantity, e.g. one, all 250-300 words • Understands pronouns, e.g. he, she, they, we **EXPRESSIVE** Occasionally imitates SPEECH Approximates words LANGUAGE 2-3 word phrases • Substitutes /w/ for /r/ **EXPRESSIVE** • Uses 2-3 word phrases **SPEECH** • Loves experimenting with • Uses new words regularly • Uses suprasegmental features **LANGUAGE** more consistently prosodic features • Increases expressive vocabulary · Most vowels and diphthongs present • Uses some personal pronouns, · Begins to use stress correctly to 30 words or more • Consonants [k, g, t, ng] emerging e.g. me, you • Repeats words and phrases • Attempts "stories" - longer utterances • Consonants [p, b, m, h, n, d] • Asks for help using two or more • Consonants [f, y] emerging in jargon to get message across established - used in initial position words, e.g. wash hands • Consonants, e.g. [m, p, b] used • Begins to use own name when talking in words • Begins to name primary colors in final position about self · Consonants often omitted in medial • Refers to self by pronoun me • Word/phrases shortened - medial • Uses possessive pronouns - mine and final position • Repeats 2 numbers counting consonants often omitted May ask where questions, • Answers "wh" questions e.g. What's • Tends to over pronounce words e.g. Where car? that?, What's ...doing?, Who? • Different pronunciation of the same • By 24 months may use 2-3 word • Recites nursery rhymes and word occurs frequently phrases with nouns, some verbs and favorite songs some adjectives Whispers • Understands and answers "can you". • Uses negation, e.g. don't, no COGNITION SOCIAL Begins to develop more self-• Imitates symbolic play, COMMUNICATIONS confidence and is happy to be with e.g. household activities other people • Uses one object as symbol for another COGNITION • Continues symbolic play, e.g. talking **SOCIAL** • Enjoys talking, e.g. pretends to have • Initiates pretend play COMMUNICATIONS on the phone a conversation on the phone • Places triangle, circle, square in shape board • Responds to requests from adults • Completes actions, e.g. clap hands • Completes actions, e.g. Give me five and high fives • Imitates vertical strokes • Practices adult-like conversation about • Begins to develop parallel play with familiar themes other children • Uses toys appropriately • Threads three beads • Uses words to interact • Begins to tear paper · Performs related activities at play • Talks more in play • Requests information, e.g. What is this? • Turns one page at a time Shares toys • Imitates ordering of nesting cups • Develops turn-taking in conversation • Imitates vertical, horizontal lines • Asks for help using two or more words • Begins to categorize objects in play and circle • Uses longer utterances • Uses two toys together • Matches identical picture to picture • Stacks blocks/builds tower and shape to shape • Completes simple pull out puzzle · Puts two parts of a whole together • Activates mechanical toy • Understands number concept of one

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and two

Adds two missing body parts to a drawing
Shows interest in how and why things work
Completes 2-3 interlocking puzzle pieces

• Imitates drawing a cross

37-42 months 31-36 months LISTENING Auditory memory increases RECEPTIVE Can listen to a 10-15 minute story LISTENING • Continues to expand auditory memory -**RECEPTIVE** • Understands most common verbs LANGUAGE to 5 items LANGUAGE 3 item auditory memory with different • Comprehends an increasing level of • Understands and responds to more linguistic features • Sequences 3 or more pieces complex language complex language and commands of information in order • Sequences 2 pieces of information • Understands more difficult concepts, • Carries out 2-3 verbal commands in in order • Retells a short story e.g. quality, texture, quantity one sentence • Listens to stories on tape • Understands concept of day/night, e.g. • Follows 3 directions • Understands several prepositions, distinguishes day from night activities • Follows 2-3 directions e.g. in, on, under • Processes complex • Follows directions using concepts sentence structures • Expands concept development of empty/full, same/different • Tracks a 6 word sentence • Identifies parts of an object • Understands locational prepositions, • Understands time concept, e.g. next to e.g. today, yesterday, tomorrow • Begins to understand comparatives, • Understands What is missing?/ e.g. I am taller than you. Which one does not belong? • Understands about 900 words **EXPRESSIVE** SPEECH Makes some substitutions [f] for [th], • Knows gender vocabulary LANGUAGE **EXPRESSIVE** • Holds conversations using many **SPEECH** • Uses some blends, e.g. [mp, pt, br, [w] for [r] • Talks about what has drawn **LANGUAGE** correct grammatical structures dr, gr, sm] • Medial consonants still inconsistent • Gives both first and last name (plurals, possession, pronouns, • Consonants [j, v, th] emerging when asked • Final consonants inserted more regularly prep, adj.) · Some substitutions still made. Relates recent experiences • Consonants [I, r, sh, s, z, ch] emerging • Uses "when" and "how many" e.g. [gw] for [gr] in blends • Vowels and diphthongs established • Converses in 3-4 word simple sentences questions • Pronunciations of words more stable • Begins using more complex language • Omits some unstressed parts of speech • Uses so/because from one production to the next • Uses questions, e.g. who, what, where, why • Pronunciation becomes more correct • Relays a message • Uses pronouns, e.g. he, she, they, we, Whispers frequently • Describes what objects can you, me be used for • Uses some plurals • Starts to answer "what if?" questions Uses possessives • Answers "What is missing?" • Uses more negatives, e.g. not, none, nobody • Identifies which one does not • Begins to use and/because belong and answers "Why?" • Names three or more colors • Attempts to answer problem-solving questions, e.g. "What if?" COGNITION • Shares toys and takes turns more SOCIAL Takes turns and shares • Uses about 500 intelligible words COMMUNICATIONS appropriately • Recites rhymes • Develops parallel play • Acts out songs – sometimes COGNITION SOCIAL • Begins one-to-one correspondence • Takes turns • Begins to develop interest in writing changes endings COMMUNICATIONS • Plays with other children • Follows directions using concepts, and drawing • Engages in make-believe activities e.g empty, full, same, different more appropriately • Begins fantasy play • Begins to ask permission of others • Develops more difficult concepts, • Shows understanding of others' • Matches six color cards Expresses feeling e.g. quality, quantity, texture feelings/needs • Sorts and categorizes, e.g. blocks and pegs • Initiates conversation • Interacts through simple conversation Compares objects • Names object when part of it is shown • Uses questions for a variety of reasons, • Begins simple problem solving • Initiates conversation in a picture e.g. to obtain information, to request

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• Develops imagination

• Enjoys role-plays

43-48 months

LISTENING

- Processes longer and more complex language structures, e.g. "Can you find something that lives in a tree, has feathers and a yellow crest?"
- Follows directions with more difficult concepts, e.g. "Put the thick blue square behind the empty jug"
- Re-tells longer stories in detail –
 5 or more sentences
- Tracks an 8 word sentence

RECEPTIVE LANGUAGE

- Continues to expand vocabulary comprehension
- Understands singular/plural
- Understands difference between past/present/future
- Answers final word analogies
- Identifies objects missing from scene
- Understands day/morning/ afternoon/night
- Makes comparisons of speed/weight
- Understands 1500-2000 words

EXPRESSIVE LANGUAGE

- Uses his/her/their
- More consistent use of plurals irregular and regular
- Talks about pictures and story books
- Uses more sophisticated imaginative play
- Uses negatives and some modals, e.g. shouldn't/won't/can't
- Uses comparisons
- Makes inferences
- Develops colloquial expressions
- Uses How much? How? questions
- Uses 800-1500 words
- Uses more complex language structures
- Spontaneous utterances are mostly grammatically correct

SPEECH

- Reduces omissions and substitutions
- Most consonants established
- More blends emerging in initial and final position
- Rate and rhythm normal
- Uses appropriate loudness level
- Uses appropriate intonation
- For accompanying chart, see Sounds of Speech pg 75

COGNITION

- Draws simple objects
- Understands time concepts, e.g. today/tomorrow/yesterday/morning/ afternoon/night
- Tells how many fingers and toes
- Associates an object with an occupation, e.g. thermometer/doctor
- Continues to develop imagination
- Concentration increases
- Copies simple picture line drawings
- Matches patterns
- Makes inferences

SOCIAL COMMUNICATIONS

- Increases confidence and self-esteem
- Requests made from others, e.g. shop/ retail assistant
- Uses intonation appropriately
- Initiates conversation
- Adapts to changes of topic
- Uses language for different communicative intent, e.g. obtaining information, giving information, expressing needs/feelings, bargaining





Listening and spoken language therapy

The four stages of listening that a child progresses through are very specific, starting with detection, discrimination, identification and comprehension. An overview of this hierarchy of auditory skill development is listed below (Erber, 1982)¹. These four stages define the foundation of auditory skill development and are critical steps for your child to build strong oral language skills.

Detection: At the detection level, your child is aware of the sounds around him.

Discrimination: At the discrimination level, your child is beginning to know that sounds are different. He is listening to differences in intonation, duration and individual sounds. For example, he can hear the difference in the words "mama" and "dada."

Identification: At the identification level, your child is attaching meaning to sound's connections. Your child might look for the dog when he hears his name or point to a picture of a cat when he hears "meow." This is when your child starts to build vocabulary and increase auditory memory.

Comprehension: At the comprehension level, your child demonstrates understanding of spoken language and is starting to follow directions, answer questions, and process longer sentences and paragraphs.

Listening and spoken language therapy

Listening levels checklist

A comprehensive Listening Levels Checklist is provided in the Appendix. It will help you track your child's auditory skill development and will be useful in establishing goals and next steps for your child with their therapist.

Embedding listening and language into all aspects of your child's daily life

As the parent or caregiver of a young child, you are most likely already busy establishing daily routines, playing, singing, and reading to your child. You can use these same activities to teach your child to listen and talk. Through parent coaching you will learn to input rich language and to create opportunities for back-and-forth exchanges with your child consistently throughout the day.

Daily routines

Daily routines are events that a family engages in every day such as diaper changing, getting dressed, mealtime, bathing, brushing teeth and getting to bed. These activities are ideal times to input rich language and to create opportunities for your child to use spoken language. Because these events happen each day, your child will have the repetition and reinforcement needed to learn to listen and speak.

Play

When your child plays, he is exploring the world around him, building confidence and developing language and communication skills. Engaging in play with your child allows you to increase the number and quality of his rich early language and learning experiences. Never underestimate the power of play.

Singing and music

When children participate in singing and musical activities, they are building listening, language, and communication skills as well as increasing social-emotional development. When you are singing with your child you are encouraging eye contact and joint attention, listening to intonation, duration and pitch and facilitating vocal turn-taking. So, sing while engaging in daily routines and reading books. Sing during playtime and sing while you are on the go!

Reading

Reading to your child daily creates an instant opportunity for listening and language development, which leads directly to stronger literacy and vocabulary skills when a child enters school. It also strengthens the parent-child bond as your child snuggles in while listening to your voice describing pictures and reading the words. Reading with your child encourages him to make connections to his own life and to increase curiosity and learning.

On the go

When you and your child are out in the community going to the grocery store or visiting the zoo, your child is always listening and learning. Take advantage of car time and sing together, describe the sights out of the window, and have conversations about recent events of the day. It is important to talk to your child throughout all of his experiences outside of the home and make conversational connections. You may also want to consider using the Cochlear Mini Microphone 2+ to keep all of the sounds of speech clear when background noise and distance become a factor.



Babies Babble

The journey begins

The journey begins from diagnosis and fitting of appropriate hearing technology. Whether your baby has hearing aids, a bone conduction and/or cochlear implant, the principles and strategies are the same. From the very beginning, your baby should wear her hearing technology every waking hour for maximum sound stimulation.

Your baby is likely to move through a period during which she removes her hearing technology as she begins exploring her body parts and reaching for objects.

However, if you consistently put the devices back on immediately, your baby will learn that she must keep them on. You may use the following strategies to help:

Distraction: Place a toy or food in baby's hand to distract her while you put the devices on. Engage your baby with interesting activities and talk to her while she plays.

Retention: Many families find that wearing a thin "pilot cap" can be helpful to deter little hands from removing devices. There are also many types of headbands, clips, and tape that you will want to ask your clinician about. Cochlear has many options for securing your child's device such as headbands, safety lines, Hugfits and Snugfits. Visit the Cochlear Online Store at www.cochlearstore.com for more details and to purchase such accessories.

As she learns to listen, she will not want to remove the device(s), as they increasingly become her link to the world of sound.

If your baby continues to take off her technology, check that her ears are clear of wax and infection and see your audiologist to ensure that your child's technology is set appropriately.

Parent-baby bond

All the things you do naturally such as establishing eye contact, beginning turn-taking and using 'parentese' (a singsong voice) are perfect strategies to both strengthen the parent-child bond and to begin teaching your child to listen and talk. Learning to listen can begin as soon as your child receives and is fitted with their hearing technology.

Using a singsong voice highlights the varied pitch, intonation, loudness and length, making speech sounds easier to hear. Your baby will respond by looking at your face. This is the beginning of eye contact, which is an important step in establishing communication. Talk to your baby about immediate things in her environment and alert her to the sounds around her. She may respond by cooing and gurgling. After constant input, your baby should quiet when you speak and start to look more intently at faces.

There are many opportunities at home to use the strategies of staying close to your baby, establishing eye contact, and using a singsong voice. Diaper changing, for example, is an ideal time as it is one of the most frequent things you do with your baby at this stage. Talk about what is happening using correct language in phrases and real names for objects and parts of the body.

You may play a tickling game with your baby creating anticipation and excitement with your wording and pause for your child to show his joy by vocalizing. You will want to use real names for parts of the body and give your child every opportunity to hear the language. As stated before, language repetition is essential at this early age.

A quiet environment

It is very important in the beginning stages of listening to provide a quiet environment. The ideal listening condition means no background noise such as a TV, radio, washing machine or other loud household sounds.

Creating a quiet environment and being close to your child will make spoken language more audible to your baby.

Sound awareness

After your baby has been appropriately fitted with her hearing technology, it's time to closely observe her reaction to sound. She may startle at sudden noises, get quiet when you begin speaking to her or look toward the sound. She will learn to tune into your voice first. Call her by name and she will learn to respond. Always call her for a reason and praise her when she does turn or vocalize.

You can alert your baby to a variety of environmental sounds so that she begins to learn that sounds have associations and meaning. To do this, turn her toward the sound source, point to the ear, say "Listen" and then name the sound. For example, with an airplane, turn baby to the sound source and label it. Say "Listen, I can hear an airplane. It's up in the sky. Look at the airplane. Can you hear the airplane?" This is an important strategy to develop the skill of localizing sound.

Vocal turn-taking

As your baby begins to hear her own voice, she experiments with her vocalizations. It is a good time to develop vocal turn-taking. Listen to her vocalizations, wait for her to finish, and repeat the sounds back to her. As she begins to turn-take with her vocalizations add some new sounds into the vocal play activity with appropriate

language. Repeat this often to increase turntaking. Turn-taking is another important step in developing communication skills. The foundations of conversation are being established.

Sounds have meaning

Learning to Listen Sounds are sounds that are associated with familiar things in a baby's life. They are used because they cover the speech sounds of language and lay the foundations for learning to listen for speech and language development. These may be sounds that are used naturally within daily routines or with toys. For example, during mealtimes with your child, consistently highlight the sound, "mmm" along with telling your child that it is time to eat. This /mmm/ will become an auditory cue and help your child begin to associate sounds with objects and activities. You can find a list of Early Learning to Listen Sounds in the Appendix.

You will also want to gather appropriate toys to embed into play and to engage in listening activities. You will introduce each sound through listening first, using the listen cue to focus your child. You will repeat the sound several times before showing the toy.

Always present the sound in association with the name of the toy, for example, "the bus goes bu, bu, bu, the airplane goes ahhh," and "the duck goes quack-quack." Say the sound before your baby sees the toy. Once your baby sees the toy, repeat the sounds while she plays with it. Use the waiting strategy after saying the sound so that your baby has the opportunity to imitate it. Use language that comes naturally to the situation, but remember the primary focus is on modeling the Learning to Listen Sounds.

In the early stages, use sounds that contrast in length to help your baby learn to discriminate and set her up for success. For example, the cow goes moooo, versus the duck goes quack quack. Gradually, after many repetitions, your baby will make the association with the toy. Take every opportunity to use these sounds with your baby. Repetition is the key. Use pictures, books, toys, animals and real objects to reinforce the sounds and associated language. Learning these sound associations is fun for the baby and will have more meaning if practiced in her day-to-day world.

It is important to closely observe your child's responses to these sounds and to assess if she is attaching meaning to the sound and associating it with the object or toy. Use the waiting strategy to give her time to show that she is identifying the sound by reaching for the appropriate object or turning to it. If she does this, it means that she is starting to associate meaning with sound. At this stage, she may also start to use the appropriate sound naturally.

Once your baby identifies a toy, the next step is to learn to identify the name of the object without using the sound. Say the word in a sentence and at first use the strategy of acoustic highlighting or word emphasis by saying, "Where's your BUS?" Give your baby time to respond. If she does not understand, repeat the sentence with the familiar sound to assist, for example, "Where's your bus that goes bu bu bu?" As your baby becomes more alert, she begins to understand more of her world. She may also be using her voice more to vocalize for needs and wants. It is an exciting period of early language and auditory skill development.

Simple phrases

As well as using key sounds and early words, introduce simple phrases that are part of the natural language used with babies. For example, "brush brush brush your hair; up up up we go; open the door, open it up; pour pour pour it out; take it off." These phrases incorporate several vocabulary groups such as nouns, verbs and pronouns. Learning to identify, understand and use these phrases is an important step in language development.

This can easily be done while dressing your baby and getting a drink. Remember to stay close to your child and use a singsong voice.

Observe your baby to see if she is starting to understand some familiar phrases. She may reach up to take off her hat when she hears the appropriate phrase. Use the waiting strategy to give her time to respond with the action or to respond vocally. This is the beginning of following simple instructions through listening. Remember to accept your baby's vocal response and then model the correct phrase. Repeat the phrases many times in different contexts. A baby with hearing loss needs to hear new words and phrases repeatedly before she begins to understand them.

Around your baby's first birthday, her vocalizations begin to change from babble to jargon. This means that she continues to babble repeated vowels and consonants but adds some single words. These are more like guesses of words and are often not expressed in clear speech. As a parent or caregiver, you usually understand the words and should model the correct pronunciation.

It is important to continue speaking in simple sentences, not single words. As your baby's understanding develops, be aware of using expanded language. Your baby needs to hear correct, clear models in meaningful situations. Always use the waiting strategy to give your baby time to respond and encourage communication attempts. As your baby identifies more words and phrases through listening alone, start to use a more natural voice with less of a sing-song voice.

Early auditory discrimination

As part of your baby's listening skill development, a structured hearing activity is introduced to ensure that she can detect and discriminate sounds across all the frequencies of speech. To develop listening and speaking skills, it is important to know exactly what sounds your baby can hear.

The Ling 6 sounds are used for this assessment. These sounds cover the speech range from low to high frequency. If your baby can detect and discriminate all these sounds, she has the potential to hear most of the sounds of a language. Again, a list of the Ling 6 Sounds can be found in the Appendix.

For very young children these sounds are stimulated through daily routines, toys, books, and play. For example, always use /m/ at mealtime and feedings and use /sh/ at bedtime and naptime. You might engage in a fun tickle game where you use /s/ as the sound while creating anticipation for the tummy tickle. And of course, you can find age-appropriate toys such as a pretend ice cream cones for /m/ or a mouse for /ee/. Cochlear offers a full set of Ling Toys and Cards in our online store, www.cochlearstore.com.

Closely observe your child's responses to these sounds. Is she detecting them? Does she seem to discriminate them by demonstrating anticipation of an event or reaching for the appropriate toy?

Auditory memory through item selection

Auditory memory is a fun stage for your child as she begins to show you that she is understanding the words you have been busy inputting for months. You might begin by asking your child to select a toy to put away as you are busy cleaning up her room.

Being able to select one item from a small group of items is the beginning of the development of auditory memory. As you begin this development, be sure to state the item you want the child to select at the end of the sentence. For example, "Let us put away the cat."

The next step is to place the word in the middle of the sentence, making item selection a bit more challenging. For example, "The cat wants to be put away." At first, the word "cat" can be acoustically highlighted or emphasized, but this should gradually be decreased to a normal voice as the child begins to understand.

There are many opportunities for developing auditory memory in a fun way. The animals can be put to bed, the vehicles can be put in the garage and the toys can be put in brightly colored boxes.

The development of auditory memory will be further outlined in the *Toddlers Talk* section of this manual.

As your baby matures, her cognitive processes will also develop. She loves participating in activities and begins to imitate routines such as washing her doll. Her play demonstrates the functional use of objects. Her concentration and attention span are increasing. Her vocalizations may include some alternated syllables and some imitated words. She may also copy varied intonation patterns. She is becoming aware of directing conversation at others and her vocal turn-taking is developing. She is processing simple language through listening. For example, she may identify some words and familiar phrases, begin to follow simple directions and have an auditory memory of one item or more. As your baby begins to vocalize with intent, you should respond by expanding language, introducing new vocabulary and modeling correct grammatical structures.

You are your child's first and strongest teacher throughout this remarkable period of her development. The listening journey has begun!

Extended activity examples

Extension activity ideas

The extension activity ideas below show you how your baby's language can be expanded and how you can guide your child through the various steps according to the Integrated Scales of Development highlighted in the previous section. These ideas are only suggestions. You may prefer to use different language that is familiar and relevant to your own family situation. There is no need to implement all of these strategies on a daily basis; aim to try one or two per week. You can also find more suggested activities for babies in the Appendix.

Categories:

Strategies

The strategies are taken from those outlined on pages 43-47.

Skills and concepts

The skills and concepts apply to the stage your baby has reached.

Core language

This is the language that is repeated many times to help your baby access the sounds, words or sentences she is learning at her stage of listening development. As your child learns to listen, she will not need to hear as many repetitions of the new language.

Extended language

Use extended language in addition to the core language. This provides an enriched language environment for your baby.

Related activities

These are suggestions for using the core and extended language in a variety of daily routines and activities.

What next?

This shows the progression to the next few steps of the Integrated Scales of Development in the four areas of listening, language, speech and cognition.

In the kitchen

While making a drink with your child, consider incorporating the strategies and language suggestions below:



Strategies for facilitating listening and language development:

- Be close to your child when speaking.
- Have a quiet environment.
- Use phrases and simple sentences.
- Use repetition.
- Describe what you are doing.
- Capture baby's attention.
- Establish joint attention.
- Establish eye contact.
- Repeat baby's vocalizations.
- Use a singsong voice.
- Follow baby's eye gaze.
- Observe baby's response to sound.

Skills, concepts and language to target within this activity:

- Establishing sound awareness.
- Developing association of meaning to sound.
- Developing understanding of real names of objects.
- Developing understanding of action verbs.
- Developing vocalizations.
- Localizing sound by head turning.
- Beginning turn-taking.
- Developing eye contact.
- Developing joint attention.

Extended activity examples

Core language-suggested parent input within this activity:

- Mmm I'm thirsty.
- I want a drink.
- Open the door. Open it. Open the door.
- Shut the door. Push it. Push it. Push it shut.
- Yummy water, yum yum yum.
- Take the lid off. Take it off.
- Turn it round. Round and round. Round and round.
- Pour the water. Pour pour pour the water. Pour the water.

Extended language-suggested parent input to further expand language during this activity.

- Open the pantry. Open the door.
- Mommy wants a drink. I'm thirsty.
- Daddy do you want a drink? Daddy wants a drink. He's thirsty too.
- Get the cups.
- Open/shut the door.
- Where is the water?
- Oh oh the water's cold.
- It's in the fridge. The water's in the fridge.
- Take out the water.
- Pour the water into the glass.
- Wipe it up, wipe, wipe, wipe.
- Oh! Oh! I spilt it.

Related activities

- Making/getting any drink/food.
- Retelling the activity with photos of your child making the drink.
- Making up a song about making a drink or drinking.
- Getting food out of the fridge or cupboards.
- Putting shopping away.
- Checking the pantry or fridge to see what food is needed.
- Pouring liquids, for example, during bath time, cooking and play time.
- Loading or emptying the dishwasher.
- Watering the flowers.
- Feeding the pets.
- Taking lids off containers.
- Switching on fans/lights/machines.

What's next?

- Encourage longer attention span.
- Introduce new vocabulary for different drinks.
- Introduce other verbs, like shake, stir.
- Use specific phrases in many situations, for example, take the lid off (for drink bottle, canned food, toys in containers).
- Develop concepts like hot/cold, in/out, inside/outside.
- Encourage baby to vocalize before giving drink.
- Encourage baby to respond to own name.
- Speak in simple phrases and sentences.
- Use a greater variety of babble including consonants and vowels.
- Use the Learning to Listen Sounds.
- Develop auditory memory for following simple directions, like wave bye-bye.

Book sharing

Reading books to your baby each day is a wonderful activity to increase her listening and language skills.

Strategies for facilitating listening and language development:

- Be close to your child.
- Use listening first.
- Use a singsong voice.
- Use repetition.
- Wait for baby to respond.
- Ensure a quiet environment.
- Capture baby's attention.
- Follow baby's eye gaze.
- Observe baby's response to sound.
- Skills, concepts and language.
- Developing joint attention.
- Establishing sound awareness.
- Associating meaning with sound.

Core language-adult input

- Turn the page. Turn it over. Turn it.
- Open the book. Open it up. Open it.
- Close the book.
- Close it up. Close it up.
- Look at the...
- The ____ goes ____ (Learning to Listen Sounds), for example, The cow goes moo.
 Look at the cow it goes moo.
- I see a duck. The duck says quack-quack. Hi little duck.

Extended language

- Here's a nice book. Let's look at it together.
- Oh, look it's all about...
- Let's see what's on the next page.
- What a beautiful...
- Look! What's up there? It's a bird. It's blue.
 It goes tweet-tweet. It's flying.
- Look at the goat. The goat is eating the grass. He's hungry.

Related activities

- Sharing photos, magazines, a variety of books.
- Singing songs related to pictures in the book.
- Enacting the pictures in the book with actions.
- Using action rhymes and finger plays.
- Reading books with actions, pop-up pictures or pictures that move.
- Gathering objects that match the book.
 For example, play with farm animals while reading a book about the farm.

What's next?

- Encourage vocalizations.
- Develop vocal turn-taking by repeating baby's vocalizations.
- Use simple descriptions of things in books and around the house.
- Use phrases and simple sentences.
- Introduce questions, like where? and answer with a prepositional phrase, for example, Where's the cat gone? He's on the bed.

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Extended activity examples

Reinforcing learning to Listen Sounds

Playing with Learning to Listen toys and embedding Learning to Listen Sounds into daily routines is a very effective activity for you and your baby. As a reminder, a list of Learning to Listen Sounds is available in the Appendix.



Strategies:

- Use listening first.
- Use repetition.
- Use acoustic highlighting.
- Use listen cue.
- Be close to your child when speaking.
- Make it fun.
- Have a quiet environment.
- Use pause time to encourage a vocal response.

Skills, concepts and language:

- Associating meaning with sound.
- Developing vocabulary of objects and performatives.
- Developing turn-taking.
- Developing early vocal imitation.

Core language-adult Input

- Here's the bird. It goes tweet tweet.
- Listen. Here's the bus. It goes bu bu bu...
- I can hear the car. It goes beep, beep, beep...
- Mmmmm, Yum yum yum it's lunchtime.
- Here's your lunch, yum yum yum.
- Here's the cat. Meow meow meow says the cat.
- Here's the clown, pop up, pop up, pop up.

Extended language-adult input

- Look at the birds. They're flying, tweet tweet tweet.
- Vehicles, for example, look at the bright red fire engine, ee-oo-ee-oo.
- It's going fast. It's going to put a fire out, ee-oo, ee-oo.
- Here's the bus. It's a bus. Look at all the people/men/children in the bus. Sing the song "Wheels on the Bus."
- Listen, there's Daddy's car, beep-beep.
 I heard the horn. Daddy's coming. Here's the car, beep, beep.
- Farm animals, such as Here's the cow. It lives on the farm, moo moo. It eats grass, yum yum. The cow gives us milk, moo moo. Sing the song "Old MacDonald Had a Farm."

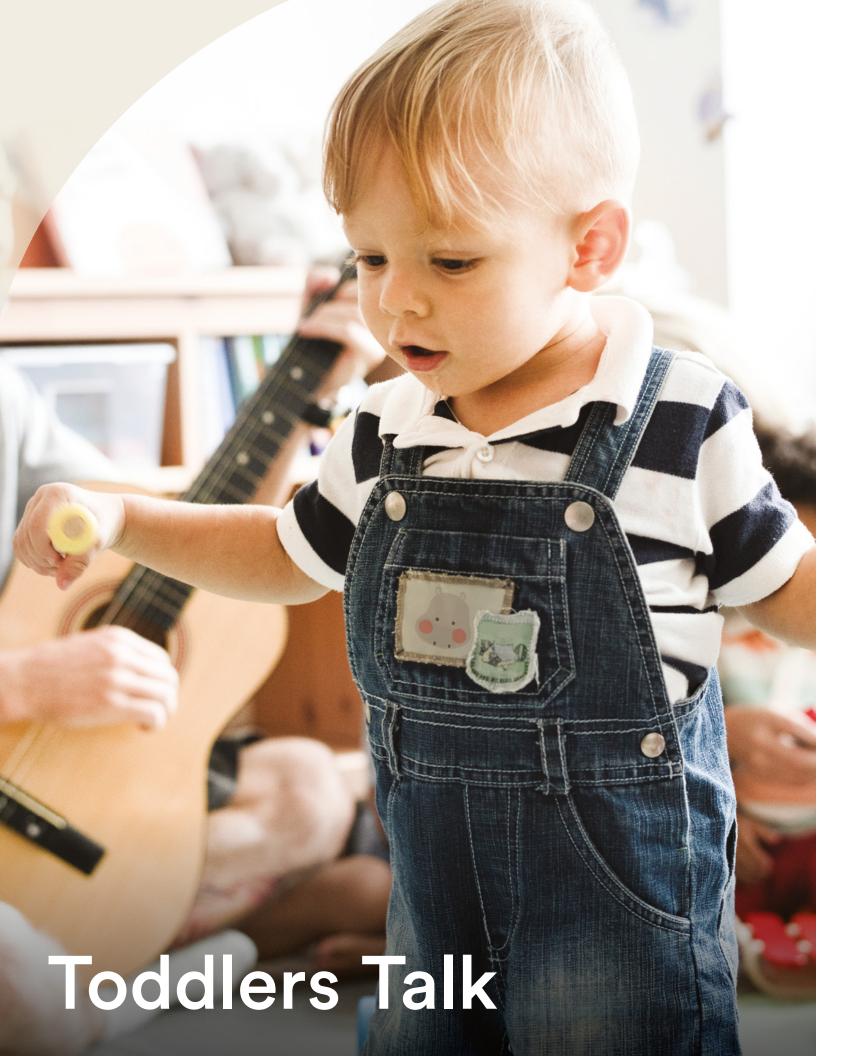
Related activities

Give baby as many experiences as you can with the Learning to Listen Sounds:

- Highlight the sounds while enjoying the outdoors. Listen for birds in the trees and dogs barking.
- Add singing and music to sounds. For example, while playing with the a boat also sing "Row Row Row Your Boat." You can always make up your own song to pair with toys.
- Leave toys in key places around the home to encourage play such as the kitchen, in the car, or in the bathroom.
- Have fun blowing bubbles with your child and popping them quickly.
- Engage in water play, washing the family animals and vehicles.

What's next?

- Encourage your child to choose a toy from a small set of three toys. Gradually increase the number of toys in the set.
- Place the sound or word in varying positions in the sentence. For example, Where's the cat that says, meow? or meow says the cat. Can you find it?
- Describe object function and parts of the whole. For example, The bus has wheels and they go round and round.
- Match objects to pictures with your child.



Toddlers Talk

This is such a fun age: your toddler is understanding more and more and you are providing a language-rich environment and clear, correct models through listening. Now is the ideal time to listen to your toddler, talk to her and give her many varied experiences. Follow the progressive guidance below in supporting your toddler through the next developmental stages.

Playtime

Playing with your toddler can be one of the best ways to provide meaningful spoken language. Most learning will occur when your toddler is interested in the activity. At this age, your toddler's attention span is increasing, and he is able to sustain interest for longer periods.

This is the time to comment on what he is doing and saying. If he does not have the language for what he wants to say, model the phrases or simple sentences. Repeat the language many times so he learns to listen and associate the activity with the phrase. Later, he will begin to use approximate guesses of the phrase. For example, when having a tea party, repeat the action phrase "Pour out the tea" many times as other family members or all the dolls have a cup of tea. Incorporate the word pour into other phrases in a variety of situations, such as pouring milk at breakfast, pouring water into the bath or when cooking. In this way, your toddler not only learns to listen to the word but also learns to generalize it in other contexts.

You may highlight action words and phrases while bathing a doll with your child. Be sure to provide correct clear language in simple sentences about what you are doing throughout the activity and use real names for objects and actions. This can also be a nice opportunity to use descriptive words like dirty, wet and sticky to expand your child's concept development.

Your toddler needs to hear the same language structures over and over in different contexts so he can process the information. As he develops, these frequent words and phrases will become part of his first expressive communication attempts. You will want to use the waiting strategy with your child to give him time to process the information and to respond verbally.

Remember to always extend your toddler's vocabulary. Once he is understanding and using a word or phrase, it is time to introduce a new one. For example, if he knows big, introduce huge or enormous; if he knows It goes round and round, introduce "It's spinning."

Use playtime to maximize your toddler's language-learning experiences and to develop cognitive skills. It can lead to a world of fantasy and imagination. Your toddler is at the stage of exploring his world. He is eager to learn. Don't miss a single opportunity.

Simple directions

As your toddler's listening knowledge of language develops, she will understand more simple directions. At this stage, she will follow only one direction at a time, but as she matures, she should be able to process more than one. In the third section of the manual, Children Chatter, there are examples of children following more complex directions.

Following directions can be incorporated into many play situations and into daily routines. For example, she might enjoy having a tea party with her dolls or stuffed animals and giving each one a snack and a drink. She may help you put laundry on each family member's bed or put away your groceries. This is all great practice in following simple directions and increases auditory processing and auditory memory. Remember to use familiar language and only give the directions once.

Daily routines

Daily routines such as dressing, eating and cooking create a natural opportunity to model expanded language, develop listening skills and introduce new concepts. You can provide core language that is repeated, but also use extended language to expand the toddler's vocabulary and structures. By doing this, you provide an enriched language-learning environment. As toddlers process more through listening, they will more readily tune in to this naturally occurring language.

You should use a normal rate and rhythm when speaking and still expect that your child will listen and understand. Only change the pace or use acoustic highlighting when your toddler does not understand or if there are new words, new or difficult concepts or a specific speech sound to be reinforced.

Mealtime

Mealtime can be an opportunity for rich language building experience. You can help your child develop conversational skills by responding to her utterances with simple sentences and then adding new information. For example, you might expand your child's comprehension by using a variety of language structures such as adjectives (warm lumpy/oatmeal) negation (It's not empty.) and 'wh' questions (Where is your napkin?).

Mealtime is also a nice time to use silly sabotage to create opportunities for your toddler to initiate conversation. You might deliberately drop some oatmeal on the tray of the highchair or give your child a huge mixing bowl for his cereal. In each instance, you are engaged and waiting for your child to communicate about the problem. You may even give your child an empty sippy cup when he asks for juice or forget to pour milk on his cereal. These are great opportunities to create instances for him to use expressive language.

Dressing

The strategy of giving choices to your toddler helps with developing independence and is a way to introduce either/or questions and structures. When dressing, playing or reading a book, your toddler's interest is more likely to be maintained if she has chosen what she wants.

Try offering your child a choice of two shirts to wear and describe each of them for her. Use pause time and an expectant look for your child to vocalize and tell you which one she wants. Then talk to her about the one she has chosen. Create opportunities for your child to use her voice throughout daily routines. Use the correct name for each item of clothing and use appropriate phrases for actions, for example, "Put your legs in your jeans. Put your arms up."

Loading the dishwasher

A simple activity such as loading the dishwasher can incorporate a variety of language structures and introduce new vocabulary that your toddler needs to hear at this stage. Many other daily routines offer similar opportunities for language learning. Remember to make the most of every opportunity throughout the day.

Watering the plants

You can also maximize daily routines that occur outside such as watering the flowers and plants. This is the perfect opportunity to introduce new vocabulary by discussing the difference between flowers and using expanded language to describe the watering process.

Baking

Cooking and baking are also routine activities that can promote listening and language development. In this setting, you create opportunities for your child to listen, follow directions and comment on the actions. You will guide your child through the sequence of pouring, stirring and baking. You will want to use the language of sequencing to introduce each step through words, such as, next, after, and then. At each stage, explain what you are doing, use expanded language, and respond to your child's utterances. Build vocabulary throughout the activity, for example, using stirring rather than round and round and using language for concepts of quantity, "That's enough" and modifiers "too big."

Toddlers Talk

Auditory memory through item selection

Once your toddler is able to process single words when given directions, move on to processing two words. Remember that your toddler's expressive ability will not be at the level of her understanding. She may not be able to repeat your item selection directions at this stage but should respond with the appropriate actions.

To further develop auditory memory, start with two or three toys your child can choose from. Give directions that will require her to choose one of the toys. For example, ask, "Can you show me which one of these toys is the bus?" As you see that your child is quicker to respond, increase the number of toys or choices.

There are various combinations and word classes that can be incorporated into item selection and following directions at this stage. These include the following:

Noun plus noun - Find the car and the bus. Get a knife and a spoon.

Adjective plus noun - I want the big spoon. Where's the mommy dinosaur?

Noun and prepositional phrase - Put baby in the bed. Put the cow in the truck.

Noun and verb - Make the fish swim. Cut the apple.

Noun and possessive pronoun – Where are my socks?

Remember, developing auditory memory can be very easily incorporated into play situations, book share and daily routines.

Book share

A love of books will introduce your toddler to a world of imagination, one outside her immediate environment. Toddlers love to hear favorite stories over and over again and will often sit for a long time listening to, and participating in retelling a story. They will join in and use repetitive phrases.

The listening skill of 'auditory closure' can be introduced by beginning with your toddler's favorite part of a story, for example, *I'll huff and I'll puff and I'll blow your house...*, Waiting for your toddler to complete a sentence in this way is a useful strategy to practice listening and to check comprehension.

Use book sharing to introduce new vocabulary, new language structures and the skills of sequencing and predicting. Use a variety of questions to see if your toddler has understood certain parts of the story. Be wary of falling into the trap of just asking "What's that?" This can be answered with one word and therefore does not extend your toddler's language or thinking skills. It is better to use more open-ended questions such as "What happened? Where? What do you think will happen?" If your toddler does not offer any solution, model with another adult or sibling so she can hear a variety of possibilities and learn how to answer appropriately. This lays the foundation for critical thinking skills.

Commenting is a good strategy to use. By saying "I think Peter Pan saw Captain Hook on the pirate ship," there is an expectation that your toddler will comment on the observation. Also use comments such as "mm, uh oh, oh dear, and wow" to encourage your toddler to make her own contributions. This provides the opportunity to further expand language. Start sentences with "look at" and "tell me." This is another useful strategy as it invites your toddler to offer her own ideas, which can then be expanded on.

At two and a half, a toddler has an auditory memory of two items or more, can follow two directions and can listen from a distance. Expressive language is at the two- and three-word utterance level. Often the language produced is in imitation of the adult model but there are also many spontaneous utterances. The toddler understands early prepositions such as *under*, *in* and *on* and can answer *wh* questions, for example, *who*, *what and where*. Speech is becoming clearer but there still may be consonant deletions and substitutions.

Your toddler is well on the way through the listening and language-learning journey.

Extension ideas for toddlers

The extension activity ideas below will show you how language can be expanded and how you can guide your toddler through the various steps according to the Integrated Scales of Development highlighted earlier in this manual. These ideas are only suggestions. You may prefer to use different language that is familiar and relevant to your own family situation. Try to incorporate one of these extension ideas on a weekly basis. There are more extension activities for toddlers in the Appendix.

Extension ideas for toddlers

Eating breakfast

The simple daily activity of eating breakfast is rich with language-building opportunities for your child.



Strategies

- Model correct language.
- Use expanded language.
- Use repetition.
- Introduce new vocabulary.
- Give the toddler time to respond.
- Encourage turn-taking.

Skills, concepts and language

- Developing understanding of description.
- Following one direction.
- Developing concepts, like on/off, empty/full, hot/cold/warm.
- Understanding a range of body parts.
- Jargoning decreases and more single words are emerging.

Core language-adult input

- Time for breakfast.
- Here's your cereal/oatmeal/yogurt.
- Get your spoon.
- Here's your spoon.
- Open your mouth. Here comes the cereal/oatmeal/yogurt.
- Here's some more cereal/oatmeal.
 Have some more.
- There's no more cereal/oatmeal. It's all gone.
- The bowl's empty/full.
- Do you want a drink? Here's your water. Have a drink. Drink it up.
- It's yummy water/oatmeal/yogurt.

Extended language-adult input

- I'm hungry. Are you hungry?
- It's time for breakfast now.
- What do you want for breakfast/lunch/ morning snack?
- Would you like?.../Do you want...or...?
- I like.../I don't like.
- You like oatmeal.
- It tastes sweet/delicious/yucky/horrible.
- Where's the spoon?
- No, not the teaspoon. It's too little. I want the big spoon.
- Oh! Oh! You spilled the milk. Wipe it up with the towel.
- Wipe your mouth.
- The bowl/glass is nearly empty.
 It's not full anymore.

Related activities

- Mealtimes dinner, lunch, morning snack, afternoon snack.
- Having a picnic/birthday party/celebration.
- Playtime pretending to have a tea party/ feeding the animals on the farm/water play.
- Sharing related storybooks.

What's next?

- Use adjectives, such as size, shape, color.
- Expand language of quantity, for instance, not much, that's enough, that's too much, that's nearly empty.
- Give choices, like do you want chocolate milk or orange juice?
- Use pronouns me, my, mine, you, your, yours.
- Model simple sentences.
- Match objects to pictures in books.
- Develop auditory memory in closed set activities:
- Select two items using "and."
- Select by descriptive phrase.
- Follow two simple directions.

Extension ideas for toddlers

Loading the dishwasher

Turn this daily chore into a vocabulary and language building opportunity.



Strategies

- Encourage joint attention.
- Introduce new vocabulary.
- Model correct language.
- Use expanded language.
- Create a quiet environment.
- Use repetition.

Skills, concepts and language

- Developing categorization.
- Developing concepts of open/close, top/bottom.
- Following one direction using preposition "in", as in Put the spoon in the dishwasher.
- Developing cause and effect.
- Learning new vocabulary, such as jet, dishwasher.

Core language-adult input

- Open/shut the door.
- Where's the big/little/blue bowl/plate/ cup/spoon?
- Here's the big/little/blue bowl/plate/cup/spoon.
- Put the bowl/cup/spoon/plate in the dishwasher.
- Where's your cup?
- Oh, it's on the bench/table.
- Here it is. Put it in. Put it in the dishwasher.
- Put it on the top/bottom shelf.
- Turn it around.

Extended language-adult input

- Here are all the spoons/forks/knives.
- Put them in the dishwasher.
- Here's your bowl and cup.
- Put daddy's mug in. Turn it upside down.
- The plates are very dirty.
- The dishwasher will make them clean.
- Where's the detergent?
- Shake the powder and tip it in.
 The dishwasher is full.
- Let's turn the dishwasher on.
- Can you hear it? It's noisy.
- Everything will be clean soon.

Related activities

- Washing toys.
- Putting clothes away.
- Cleaning up.
- Sharing a book about kitchen activities.
- Bath time.
- Washing the car.
- Packing a suitcase.
- Packing a picnic basket, school bag or lunch box.
- Shopping putting things in the cart.
- Putting the shopping items away.

What's next?

- Use the language of description, for example, a plastic cup, the bowl with the rabbit on it.
- Develop language of categorization, like dishes go in the dishwasher/clothes go in the washing machine/knives, forks, spoons belong together.
- Develop an understanding of functions of objects, such as, the knife is sharp, we use it for cutting.
- Introduce possessives, for example Daddy's cup, Mommy's sandwich.
- Use normal rate and rhythm.
- Use less acoustic highlighting.
- Develop two-item auditory memory with different linguistic features, like put the big bowl in the dishwasher. Put the bowl and the spoon in the dishwasher. Put the bowl on the top shelf.
- Follow a two-step direction, such as put in your bottle and shut the door.

Children Chatter

Children Chatter

The section, Children Chatter, follows the development of your child from 31 months up to the time they start school. This period is a time when children combine their receptive and expressive language skills. They move from speaking in two words and simple sentences to expressing themselves using more involved well-formed structures. They begin to use past and future tense and use a variety of question forms. They learn how to retell stories, describe objects, people and scenes and hold conversations. Their speech becomes clearer. They become little chatterboxes.

Children's listening skills also develop. They move from listening in a quiet environment to listening in background noise. Their auditory memory develops from following two different directions to following multi-element instructions. They can gain information from a recorded sound source such as watching a video on the computer and can learn to talk on the telephone. They are more aware of the world outside their immediate environment.

Use playtime to maximize your toddler's language-learning experiences and to develop cognitive skills. It can lead to a world of fantasy and imagination. Your toddler is at the stage of exploring his world. He is eager to learn. Don't miss a single opportunity.

Expanding language

Your child is developing her receptive and expressive language. You need to extend her language input so that she hears a variety of grammatical structures. You should be constantly offering meaningful interaction and encouraging her to progress from using simple to complex sentences.

As you follow your child's lead and tune into her interests you can introduce new vocabulary and develop structures and concepts. For example, while playing outside in the garden you can talk about parts of the plants, using words like petals, buds and stem. Use a variety of language structures such as:

- Not all the flowers are open. (negative)
- There might be spiders in there. (modal)
- They are all open and these are closed/I think that one needs lots of water. When they open up they become beautiful flowers. (complex sentences plus plurals)
- There are not as many buds. There are a few. (comparative)

Little helpers

Most language-learning occurs when children are engaged in meaningful interaction.

Providing children with varied activities and experiences can create wonderful learning opportunities. Children of this age love to help their parents around the house. Let them help, involve them as much as possible and capitalize on the opportunity to develop their listening and spoken language skills. Give them the language for what they are doing, for example, when washing hands, loading the dishwasher, making lunch, getting a drink and cooking. Give them their own dustpan and brush for sweeping and a shovel for digging. Let them help with bed making, dusting and gardening. They may not do it very well, but these activities provide a wonderful opportunity for expanding language.

You might use the following directions:

Put the pants in Daddy's pile. (possessives)

Rinse it out, squeeze the sponge. (highlight new vocabulary)

Get the butter and the cheese from the refrigerator. (two critical element direction)

Playtime

Through role play, children begin to develop their imagination. They love to play with dolls, puppets and action figures. These can present opportunities for creative play, developing thinking skills and practicing language. Role playing in different scenarios can help your child develop practical skills that are essential if she is to communicate effectively.

You and your child might enjoy pretending to go grocery shopping or to have a tea party.

Playtime also provides many opportunities to further develop listening skills and extend concepts and language. For example:

- Explain similarities and differences such as describing the difference between a raindrop and a snowflake.
- Teach your child the language of games Who do you think should go first? I'm going to shuffle the cards. Select a card. Spread the cards out like this.
- Introduce new vocabulary such as the word *Antarctica* and talk about where penguins live to expand your son's knowledge.
- Practice using descriptive phrases The man with a yellow/red/blue hat.

Be aware of extending your child's vocabulary at all times. For example, use synonyms such as sofa, couch or loveseat. Use category names such as 'musical instruments' for violins, trumpets and drums.

Speech

By three years of age, most children's speech patterns are well established. However, they will need practice listening to and using specific speech sounds in words and phrases. As their listening skills are refined, the clarity of their speech should improve. There are several strategies that you can use to help your child learn to listen to specific speech sounds.

Auditory bombardment

Auditory bombardment is repeated auditory exposure to a particular sound that a child has difficulty producing, for example, /f/. A fun way to do this would be sharing the story of *The Three Little Pigs*, saying over and over again, "I'll huff and I'll puff, huff huff, puff puff and I'll blow your house down." Another way would be making a collage with leaves. As your child cuts and pastes the leaves, the word leaf can be repeated in a phrase or simple sentence many times.

Speech babble

As much as possible speech sounds should be introduced through play with toys and their associated sounds. However, it may be necessary to target particular sounds. A quick and effective way to provide the necessary repetition is through 'speech babble'. You and your child take turns repeating a target sound in isolation using play to reinforce the sound. For example, you may paint dots on a piece of paper while practicing /d-d-d-d/. You may use a plastic knife to cut playdough while practicing /k-k-k/.

Speech babble is also an excellent way to fine-tune listening to help your child with specific speech sounds and consonant discrimination at the beginning of words, for example, /pee pee pee/ /bee bee bee/ /tee tee tee/ /kee kee kee/. Games with rhyming words are another way to fine-tune listening and provide speech practice.

Always capitalize on opportunities for adult input and for the child to produce the sound in phrases and in sentences.

Acoustic highlighting

As we discussed earlier, this is an excellent technique to highlight specific speech sounds at the beginning, middle, and end of words.

You may highlight the /s/ sound for your child as he is learning to produce it with clarity. For example, use a beach sticker scene to acoustically highlight the /s/ sound in "starfish," "sea," "seahorse," "sun," "sand," "seagull" and so on as you talk about each item. Once your child can say the /s/ in words, he can practice the words in phrases and sentences in other play activities. Acoustic highlighting should not be continued once your child can produce the sound correctly in spontaneous speech.

As children mature, they can learn to self-correct their speech using their auditory feedback loop or auditory self-monitoring. Your child listens to your model and begins to recognize when they mispronounce a sound or word. Watch for this to occur and use the waiting strategy to give your child an opportunity to correct himself.

If your child's Listening and Spoken Language Therapy program focuses on targeting sounds through listening, most of the speech sounds should be well established by the time your child is ready for school.

Auditory memory

The previous two sections of this manual showed how babies and toddlers develop auditory memory. They moved from processing one item to two items in a closed set (small grouping of words or items) and then began open set (larger grouping of words or items) listening.

Children's auditory memory can be extended to three or more items in different spoken settings in a closed set. The following examples of three-item auditory memory are in closed set activities:

- Three nouns Get your hairbrush, shampoo and towel (before having a shower).
- Two adjectives and a noun the fluffy white dog (chosen from a selection of animals with different characteristics, for example, a fluffy white cat, a fluffy black dog, a sleek black cat, etc.).
- Two nouns and a verb The stingray and the dolphin are swimming.
- Noun, preposition and noun The doll is behind the couch.
- Noun, conjunction and noun Put the truck and the car on the road.
- Noun, negative and noun Put the truck, not the car, on the road.

From this stage, the child progresses to four and five items in a closed set.

The table below describes the progression for the development of closed set listening tasks. In the beginning you start with familiar vocabulary in a quiet environment and eventually move to a larger number of items using less familiar vocabulary with fewer prompts. You can add a noisy environment to increase the challenge level.

Use the same progression as you introduce open set tasks. You will initially use familiar vocabulary with acoustic highlighting of key words and move to using more complex sentence structures with unfamiliar vocabulary and less highlighting.

Increasing the difficulty of closed set tasks			
familiar vocabulary	\leftrightarrow	less familiar vocabulary	
quiet environment	\leftrightarrow	noisier environment	
small number of items in the set	\leftrightarrow	large number of items in the set	
prompts	\leftrightarrow	fewer prompts to no prompts	
auditory highlighting of key words	\leftrightarrow	normal stress and intonation patterns	
give direction more than once if child requests clarification	\leftrightarrow	give direction once only	
one item to be processed	\leftrightarrow	five items to be processed	
simple sentence structures	\leftrightarrow	complex sentence structures	
live voice	\leftrightarrow	taped voice	

Auditory processing skills such as auditory memory are necessary for children preparing for preschool and school. Processing complex language, following multi element directions and recalling details are a part of everyday school life. Your child will learn to quickly process the information without repetition.

Games can be a fun way to develop these skills, for example, board, card and word games that can be played in the car, while waiting for the doctor or audiologist, or while waiting to be served in a restaurant. Here are some examples of such games:

- I Spy
- Alphabet games
- I went shopping and I bought...
- I'm thinking of something that...
- Rhyming games
- Category game

- Headbandz
- Guess Who
- Which one is different?
- Which one doesn't belong and why?
- Opposites

Auditory sequencing

Auditory sequencing is also an essential skill for school readiness. It is necessary for children to be able to retell stories, jokes and riddles, follow sequential directions and, at a later stage, such as at school, recall information and recount events they have heard. This skill can be developed in nursery rhymes, songs, games and stories.

Children love to listen to their favorite story many times and will start to retell it to their parents and other family members. Encourage your child to take the part of different characters. This gives her the opportunity to use different pitch, voice quality and intensity. This further develops her control of the different aspects of speech. It allows her to express emotions, such as anger, disappointment, surprise, fear or happiness.

Help your child progress from listening to many repetitions to listening to a story only once, then to retelling it in sequence including as many details as possible. To do this, use puppets, pictures or toys to tell a story. Ask questions to assist your child in retelling it in the correct sequence. Move on to having your child retell the story by herself without the prompt of questions but still with the aid of the puppets, pictures or toys. Extend to open set listening without any prompt or props and increase the length of the story to retell.

Experiences outside the home

Excellent language-learning opportunities are available outside the home. These include visiting the park, library, and different kinds of shops; taking a bus, train, boat or car ride; going fishing, to the museum or beach.

Making "experience books" of these outings is a great way to introduce and expand language. They provide a vehicle for using a variety of tenses (past, present and future), new vocabulary and can be used to develop sequencing skills. The books can be illustrated with simple drawings, pictures, photos and memorabilia. Be sure to involve your child in making the experience book. At a later date, it can be used to encourage reading, as children love to read about themselves and their experiences. It can be an effective tool to stimulate conversation. You can download a template for an experience book at www.cochlear.us/experiencebook.

Advanced listening skills

A child's listening skills are also developing during this time. In the beginning of the learning to listen journey, a quiet environment is the ideal situation to develop skills of detection, discrimination, identification and comprehension. This should be extended to listening from a distance, listening in background noise, listening to a sound source like a video on the computer and talking on the telephone.

Listening in noise

Children need to develop the skill of listening in background noise in preparation for preschool and school. Provide lots of experiences to help your child learn to listen in noise. To set her up for success, the language should be familiar and there should be a limited number of choices. Practice listening in the park or at home with music or television in the background. To extend your child's skills, gradually increase the volume and move to open set listening.

Many rich language experiences occur out in our noisy world. It is important to make the most of every opportunity to introduce new vocabulary and expand your child's language. Because of the background noise, you may need to move closer to your child to be near the microphone of his speech processor. When moving closer is difficult, remember to use your Cochlear Mini Microphone 2+ to aid in speech amplification and clarity.

You will want to listen to audiobooks with your child to allow him to get comfortable listening to a recorded sound source, to learn new information and simply for pleasure. You should give him the experience of listening to a digital sound source through direct streaming and through the microphone on his hearing technology. To learn more about direct streaming, visit www.cochlear.us/directstreaming.

Talking on the telephone

Holding a conversation on the telephone is possible for most children with hearing loss. Once your child is able to have an open set conversation without any visual cues, she is ready to practice using the telephone. Help your child explore the benefits of direct streaming options with their device.

When developing the skill of talking on the telephone, begin with a known speaker and use familiar topics with predictable questions. Move from closed to open set by introducing an unexpected question or comment. Gradually this can be increased until your child can converse with several different family members.

Conversation

Finally, your child is starting to develop conversational competence through open set listening, auditory memory and auditory sequencing. He is using complex language and a variety of practical skills, for example, he is able to initiate a topic, maintain a topic and cope with a topic change.

Your child has experienced many years of intensive listening and spoken language input. He is a communicating child. He is a good listener and his speech is becoming clearer. His concepts of shape, size, texture, quantity and color are all developing. He is building conversational skills in a variety of contexts and can predict what will happen. He is most likely overhearing information from the television and can listen in background noise.

He can play creatively and use his imagination. He is a listening, thinking and talking child. This part of the listening journey is over. A new journey is just beginning!

Extended activity examples

As in the previous two sections, the extension examples below show you how language can be expanded and how you can guide your child through the various steps according to the Integrated Scales of Development. These ideas are only suggestions. You may use different language that is familiar and relevant to your own family situation. Try to incorporate at least one activity per week. More activity suggestions for children are available in the Appendix.

In the garden

Exploring your backyard or the park or taking a hike with your child provides many opportunities for vocabulary and language expansion.

Strategies

- Use repetition of new language.
- Use expanded language.
- Introduce new vocabulary.
- Allow the time to process and respond.
- Model correct pronunciation.
- Use auditory close.

Skills, concepts and language

- Making comparisons.
- Beginning plurals.
- Expanding vocabulary.
- Using "wh" questions, like who, what, where.
- Using more consonants.
- Expanding concept of categorization.

Core language-adult input

- Look at the pretty flowers.
- These are yellow and those are pink.
- This flower has a stem.
- These are leaves growing on the stem.
- Not all the flowers are open.
- These are open, but these are closed.
- They're not open yet.
- They're buds.

Extended language-adult input

- Flowers and bushes grow. They have roots.
- Some plants can grow in pots and some in the ground.
- The buds will open out later and become beautiful flowers.
- Be careful when you pick the flowers. Don't break the stems.
- Flowers need water and sunlight so they can grow.
- We'll have to water the garden every day, so the plants don't die.
- Let's pick some of the pink flowers and put them in a vase.
- These are flowers and they are on a bush.
- This one is a bush. A bush is like a small tree.

Children Chatter extended activity examples

Related activities

- Talking about small parts of the whole object, for example, clock (hands and face), kettle (spout and handle), TV (remote, screen, picture, switch).
- Planting seeds or seedlings.
- Starting a vegetable garden.
- Keeping potted plants.
- Pressing flowers and leaves.
- Making a collage with garden things, such as leaves, seeds, grass.
- Making flowers as a craft activity.
- Making an experience book about the garden or vegetable plot.

What next?

- Develop four-item auditory memory in a closed set.
- Develop concept of "what's missing" from parts of objects.
- Develop ideas of categories, as in plants (flowers are plants, trees are plants), vegetables, fruit, vehicles, furniture, tools.
- Introduce more negatives, for example none, nobody.
- Highlight /s/ on plurals and third person singular, such as I live, he lives.
- Expand information about how and why things work.
- Introduce comparatives, like I am taller than you.
- Introduce why and because.
- Develop sequencing of a short story.
- Develop time concepts today, tomorrow and yesterday.
- Develop open set listening 2-3 items, 2-3 directions, like Go and get Daddy's football cap. Get an apple and put it in your lunch box. Get your swimsuit and give it to Mommy.
- Develop listening in noise open set, one familiar item and one simple direction.
- Begin open set listening with a digital sound source such as an audiobook.
- Introduce phonemic awareness skills.

Guess who game

Playing a board game with your family is not only fun for everyone but it also allows you to expand and to provide rich language models for your child.

Strategies

- Expand language.
- Model correct pronunciation of words.
- Model correct language, as in question forms.
- Use language of clarification.
- Model down-to-earth skills of opening/closing a topic.
- Allow time to process more difficult listening and concepts.
- Monitor correct use of complex language.

Skills, concepts and language

- Using correct question and answer.
- Developing negatives.
- Developing descriptions.
- Making inferences.
- Developing thinking skills.

Core language-adult input

- Who will go first?
- You have to shuffle the cards first.
- Then you have to select a card.
- You select one first and then I will.
- OK I think I will have this one.
- Don't look. That's cheating.
- Do you know the rules?
- You have to describe a person.
- Is your person a man or a woman?
- Does your person have a mustache/red hair?
- Yes, he/she does/doesn't.
- Is your person wearing gloves/a silly hat?
- Yes, he/she is/isn't.

- That means I have to put down all the pictures of the women/men with red hair.
- The person who ends up with... wins the game.
- It's your turn next.

Extended language-adult input

- Who do you think should go first, the eldest or the youngest?
- I'm going first because I'm the eldest. Is that OK with you?
- Can you explain the rules to...
- I think this is a great game.
- I like this game, I'm sure I can beat you.
- Select a card and put it in the slot at the front of the board.
- Oh, that wasn't a good question. I've only put down two pictures. I'll have to think next time.
- I'm sorry I didn't understand you. Can you say that again please/can you repeat that, as I didn't hear you properly?
- I'm just wondering what I might ask you next. I'm trying to trick you/I'm trying to make it difficult.
- Do you think there are any people in the world with long crinkly purple hair? Maybe Mommy's hairdresser could give her long crinkly purple hair.
- Could you describe someone who lives on another planet?
- I can't describe this one, as it is so peculiar.

Children Chatter extended activity examples

Related activities

- Playing board games, like Ludo, Snakes and Ladders, Chinese Checkers, Draughts, Trivial Pursuit, Connect Four.
- Playing bingo, barrier and matrix games.
- Describing procedures, that is telling someone how to do something, for instance make a milkshake/brush your teeth/build a LEGO[®] construction/do a craft activity.
- Learn and explain rules of games and sports, like basketball/soccer/football/computer games/hide and seek.

What next?

- Develop complex open set listening.
- Develop listening in noise.
- Develop listening to a taped signal.
- Develop an understanding of the rules of the games.
- Develop the ability to explain.
- Model correct pronunciation of multisyllabic words.
- Model and monitor correct speech production.
- Develop preschool readiness concepts of numeracy and literacy.
- Encourage problem solving, making inferences and predicting.
- Introduce phonemic awareness skills.

Starting a new journey

We encourage you to continue your child's focus on auditory skill development at home with the LEAPing On With Language program provided by Cochlear. This is a fun and innovative program that supports parents with a child who is attending school. This program moves beyond simple sentences to more complex and abstract language, while harnessing those skills to develop independence and self-esteem.

Program activity booklets can be downloaded from the links provided below, or you can visit Cochlear's The Communication Corner at www.cochlear.com/us/communication-corner where you will find the LEAPing program activities under the School-Age Child tab. You will also find more information about this program and other resources for improving listening, encouraging conversations and instilling confidence so that your child can achieve their best.

LEAPing on with language activity booklets:

Listen Activity Book www.cochlear.us/listenactivitybook

Expand Activity Book www.cochlear.us/expandactivitybook

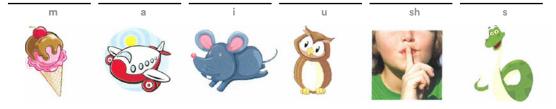
Achieve Activity Book www.cochlear.us/achieveactivitybook

Promote Activity Book www.cochlear.us/promoteactivitybook

Ling-6 Sound How to develop and chart

The Ling 6 Sounds

The Ling 6 Sounds represent different speech sounds from low to high pitch (frequency). They help to test your child's hearing and to check that they have access to the full range of speech sounds necessary for learning language.



What is the Ling 6 Sound test?

The Ling 6 Sound test was developed as a quick and easy test that parents and professionals can use to check their child's hearing. The test checks that the child can hear (detection) and in time recognize each sound (identification) across the different speech frequencies.

The test also checks that the cochlear implant system is working effectively.

Why these 6 sounds?

The Ling 6 Sounds are the particular sounds that occur at particular speech frequencies.

LING SOUND	FREQUENCY
М	/ m / is a low frequency sound and if your child cannot hear this sound it is likely they will not have sufficient low frequency information to develop speech with normal prosody and without vowel errors.
U	/ u / has low frequency information.
<u> </u>	/ i / has some low and some high frequency information.
<u>A</u>	/ a / is at the center of the speech range.
Sh	/ sh / is in the moderately high frequency speech range.
<u>S</u>	/ s / is in the very high frequency speech range.



Ling-6 Sound-How to develop and chart

The table shows speech sounds plotted on an audiogram. It shows both the frequency and the loudness of each sound. We suggest talking with your hearing health professional for a full explanation and interpretation of this audiogram.

How to give the test

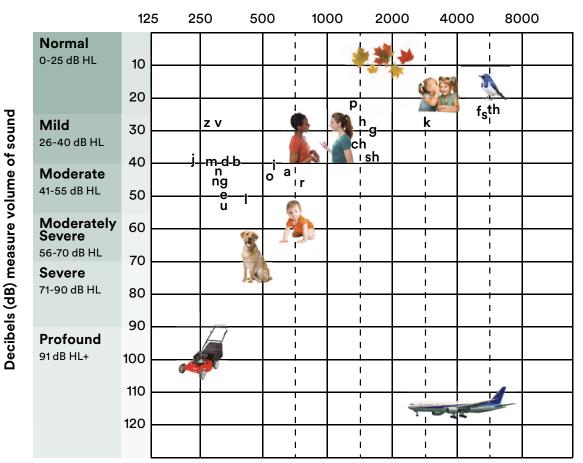
Present each sound individually and randomly to ensure that your child is not predicting or guessing the sound by the order in which they are presented.

Initially say the sound at a distance of 20cm from the child's microphone. Make sure that the environment is quiet and calm.

Once the child is consistently responding at that distance, increase it to 1 meter, then 2 meter, then 3 meters. 2m is the typical distance for conversation between 2 people.

3m is the typical distance for conversation between more than 2 people.

Hertz (Hz) measures pitch or frequency



The Ling 6 Sound test

Use a normal speaking voice, and sit beside or behind the child to ensure a hearing-only response. When the child responds (smile, turn, stilling) give them positive reinforcement. ('You heard that!! ...Good listening!')

If the child does not respond to a sound, try saying the sound again with some intonation and longer. If your child does not respond the second time, move on to another sound. Make a note on the 6 sound chart and discuss with your audiologist and therapist.

Use the daily check form

Record your child's information at the top of each monthly check form. This includes their name, their listening device (CI, HA, CI+HA, or 2CI), the distance and the listening situation.

Use the following symbols to show the child's response.

✓ = correct response

- = no response

If your child says the wrong sound, record what the child said. Also record if repetition was required.

The Ling 6 Sound test should be administered for all your child's hearing technology—cochlear device(s) or hearing aid (aides). For example, if you child has a cochlear implant on the right and a hearing aid on the left, test both ears each day.

		left L			right R	
			Week 1			
			on I			
	AH	M	00	SH	S	EE
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
			w			
			Week 2			
	AH	M	00	SH	S	EE
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
			Week 3			
	AH	M	00	SH	S	EE
Monday	7					
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
			Week 4			
	AH		00	SH	S	EE
Monday	АП	IVI	00	эп	3	EE
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

Early learning to Listen Sounds

тоу	SOUND	INTRODUCED	IMITATED	IDENTIFIED	SPONTANEOUS PRODUCTION
Aeroplane	ah				
Bus	bu bu bu				
Car	brrmm beep beep				
Boat	pah pah pah				
Ambulance	ee or ee or				
Train	00 00 00				
Tractor	gu gu gu				
Truck	nu nu nu			·	
Ready set go	go		-	·	
Clown	ha ha ha				
Ice cream	mm yum yum				
Santa Claus	ho ho ho				
Mirror	Hi/hello				
Sleeping Baby	shhhh				
Slide	up, up, up, wheee				
Baby	waaa				
Clock	tick tock tick tock				
Cat	meow				
Dog	woof woof				
Cow	moo				
Duck	quack quack				
Hen	buck buck buck				
Rabbit	hop hop hop				
Sheep	baaa				
Horse	neigh, tongue click				
<u>Pig</u>	oink oink				
Owl	hoo hoo				
Bird	tweet tweet/ whistle twice				
Rooster	cock-a-doodle-doo				

Appendix

Learning to Listen Sounds*

Aknowledgement Adapted From: † Estabrooks, W. (1998) Cochlear Implants for Kids, © 1998 Warren † Estabrooks and The Alexander Graham Bell Association of the Deaf. Inc. Reprinted by Permission.

SOUND	тоу
a(r)	airplane
ch ch ch oo	train
рор рор	bubbles, popping toys
bu, bu	bus
beep/brm brm	car
brr	truck
pu, pu, pu	boat
tick tock	clock
ow/ouch	fall down, cut
oowar oowar	ambulance
hee, hee	monkey
ha, ha, ha	clown, laughter
go	running
ho, ho, ho	Santa Claus
ya hoo!	cowboy
whee	slide
wa wa wa	baby doll
hi!	mirror
meow	cat
bow wow, woof woof	dog
moo	cow
neigh	horse
baa	sheep
oink	pig
quack	duck
hoo hoo	owl
hop, hop	rabbit
whistle	bird
cock-a-doodle	rooster
caw, caw	crow
round and around	windmill, top, wheels
mmm	food/any good thing
dig dig dig	toy shovel
s	snake
sh	sleeping games
la	rocking the baby
up, up, up	any up activity
gr- gr-	Bear

Listening levels checklist

Listening (levels I-VIII)

√accomplished, + emerging, - not developed

Level I Awareness of sound Responds to very low loud gross sounds, such as a drum, bell, or clacker presented within a 3-foot (1 meter) radius at ear level. Responds to music with a strong beat, such as a lively march. Responds to loud inside environmental sounds when attention is directed to the sound (blender, mixer, vacuum cleaner, TV, etc.). Responds to outside environmental sounds (car, airplane, fire engine, ambulance, police car, birds singing, etc.) when attention is directed to the sounds. Indicates when something is heard by pointing to the ear, nodding head, vocalizing or smiling. Shows an awareness of music, inside/outside meaningful environmental sounds or speech without attention being directed to the sound. Notices the acoustic feedback produced when the earmold of the hearing aid is partially out. Indicates when the hearing aid or cochlear implant is not working.

The following listening levels may be useful for providing feedback to your therapist.
They provide a comprehensive checklist of the stages of listening that should be developed over the years prior to school.

Level II Sound has meaning

	Responds to:
√ + -	Music by dancing, singing or clapping.
√ + -	Some simple speech sounds accompanied by gesture (Sh!, Bye-bye, No-no, or Come).
√ + -	Own name.
	Associates:
√ + -	A specific sound with an object in the environment (I hear that; that's Mother's car).
√ + -	A specific sound with a happening (That's Mother's car Aha, Mother's home! Time to eat.)
√ + -	Learning to Listen to Sound with a toy, object or happening.

√accomplished, + emerging, - not developed

Early listening ⇔ talking loop
Imitates gross body movements appropriate to his/her age level (pat-a-cake, peek-a-boo, follow the leader, Simon says, etc.).
Responds to music by clapping, dancing, swaying or singing.
Vocalization increases when hearing aid or cochlear implant is on.
Imitates laughing, crying, coughing or yelling.
Imitates mother's vocal play (call to each other with stimulating rhythmic and inflectional patterns).
Tests the hearing aid or cochlear implant with voice when turned on.
Practices additional vocal play incorporating the vowel sounds ah, oo and ee.
Imitates mother's babble play, incorporating new inflectional/rhythmic patterns.
Approximates new words or short phrase beginning with the babbled consonant practiced (mu, mu, mu; Mama, more; That's mine! More milk, etc.).
Imitates new babble sounds appropriate to listening age.
Calls back-and-forth in calling games, such as Hide and Seek, incorporating inflection patterns and vowel sounds.
Approximates:
Temporal pattern of a short phrase.
Temporal plus inflectional pattern of a short phrase.
Temporal, inflectional, stress, and articulation of a short phrase.
Imitates whispering.
Knows names of other family members, including pets.

√accomplished, + emerging, - not developed

Level IV	Discrimination
	Responds to the presence or absence (on or off) of the following sounds (first inside, then outside):
√ + -	Clackers, noisemakers.
√ + -	Music.
√ + -	Inside environmental sounds.
√ + -	Outside environmental sounds.
√ + -	Speech.
	Discriminates:
√ + -	Loud and quiet sounds in above areas.
√ + -	High and low aspects of sound in above areas.
√ + -	Fast and slow sounds.
√ + -	A continuous or an abrupt sound.
√ + -	Angry or cheerful voice and responds appropriately.
√ + -	Daddy's and Mommy's voice.
√ + -	A man's, woman's or child's voice.
√ + -	Two gross sounds; later, 3 gross sounds (drum, bell whistle).
√ + -	Imitates the vowel sounds ah and oo; later, ah, oo, and ee.
√ + -	Imitates the consonant and vowel sounds associated with trucks, cars, fire engines, planes, boats, motorcycles, etc.
√ + -	Recognizes own name from the most different family name on the basis of the number of syllables, vowel and consonant differences.
√ + -	Detects the primary signal from other quiet background noise.
√ + -	Imitates a few familiar commands with natural gestures (close your eyes, don't touch it).
√ + -	Discriminates familiar words on the basis of syllable length (1 vs 3 syllables, 1 vs 2 vs 3 syllables).

√accomplished, + emerging, - not developed

Level IV	Discrimination (continued)
√ + -	Familiar words on the basis of vowel and consonant differences (hat, shoe, coat), with the same number of syllables.
√ + −	Imitates a 2- to 3-word sequence.
✓ + -	Imitates phrases on the basis of rhythmic structure and known words ("up the slide", "in the car", "to the store").
✓ + -	Imitates various short familiar sentence patterns (exclamatory, statement, or question on the basis of inflectional and rhythmic patters).
√ + -	Between words containing different vowels but the same initial or final consonant (bat, boat, bee).
√ + −	Imitates a 3- to 4-word sequence.
√ + -	Discriminates similar phrases or sentences (a big blue truck, a little black car).
√ + −	Among rhyming words (shoe, blue, two).
√ + −	Important but minor differences in sentences (in/on, the/a, he/she).
√ + -	Between classes of consonants in syllables (sha, ma, ta vs. see, knee, bee).
√ + -	Within classes of consonants (pa, ta, or ka) (bu, du, gu).
√ + -	Remembers and approximates sentences of 7-10 words.

Localization skills Locates a sound presented at ear level within a 3-foot (1 meter) radius in front or on either side, but not behind. Locates a sound presented at ear level within a 3-foot (1 meter) radius behind them. Understands and verifies gross, environmental, music, or speech sounds within 6 feet (2 meters), then 9 feet (3 meters), 12 feet (4 meters), and finally, within the same room in all directions. Understands sounds that come from a specific location or direction from another room. Understands sounds with a specific location or direction outside. Within classes of consonants (pa, ta, or ka) (bu, du, gu).

√accomplished, + emerging, - not developed

Level VI	Distance and directional listening
✓ + -	Shows awareness of gross sounds in all directions at 3 feet (1 meter), 6 feet (2 meters) and 9 feet (3 meters).
√ + -	Discriminates between gross sounds in all directions in increasing 3-foot (1 meter) intervals.
√ + -	Discriminates other aspects of sound (high or low, loud or quiet, fast or slow, etc.), in all directions at increasing 3-foot (1 meter) intervals.
√ + -	Responds to own name from increasing distances in all directions.
√ + -	Responds to a few short, familiar commands at increasing distances in all directions on the basis of rhythmic structure and inflectional patterns.
√ + -	Discriminates among familiar words of varying syllable lengths at increasing distances.

Level VII Listening in background noise

	Recognizes the following with increasing distances in all directions with added background noise:
√ + -	Own name.
√ + -	Familiar words (closed set → open set).
√ + -	Short, familiar, descriptive phrases.
√ + -	Short, familiar, descriptive sentences.
√ + -	Follows familiar, simple one-step commands.
√ + -	Follows more complicated 2-step and 3-step commands with background noise (go outside; bring me the paper).

√accomplished, + emerging, - not developed

Level VIII	Auditory memory and sequencing
	Short-term memory:
√ + −	Approximates 2- or 3-word phrase by echolalia (I want one).
√ + -	Chooses correct picture names from choice of 2, then 3, then 4, then more (where is the doggie?).
√ + −	Selects 2 pictures or objects named correctly, but not necessarily in order.
√ + −	Selects 2 pictures/objects named correctly, in correct sequence.
√ + -	Tells which object/picture of 3 is missing.
✓ + -	Selects 3 pictures/objects correctly out of a choice of 5 or 6 in sequence.
✓ + -	Imitates a 4-word sequence (echolalia).
✓ + -	Repeats random numbers out of sequence (1, 4, 3, 2).
	Imitates nonsense syllables.
✓ + -	Imitates a 4-word sequence (echolalia).
✓ + −	Selects 4 or 5 cards' names out of a choice of 8 or 9.
✓ + -	Approximates a 6- or 7-word sequence by:
√ + -	Long-term memory span.
✓ + -	Knows own first name, then last name.
✓ + −	Knows names of other family members, including pets.
√ + -	Uses 2- or 3-word patterned sequence spontaneously.

√accomplished, + emerging, - not developed

Level VIII	Auditory memory and sequencing (continued)
	Knows names of the following important people, places and things:
√ + -	Family.
√ + -	Parts of the body.
√ + -	Clothes.
√ + -	Foods.
√ + -	Toys.
√ + -	Other things used.
√ + -	Rooms of the house.
√ + -	Basic furniture at home.
√ + -	Names of feelings (happy, sad, sick, tired, hungry, I like it, I don't like it, I love it, etc.).
√ + -	Common descriptive adjective phrases (It's pretty! Oh, icky! That's nice).
√ + -	Present progressive, tense of common verbs for the things she/he does (is, am sleeping, eating, playing, working, etc.).
√ + -	Generates own 2-word sequence.
√ + -	Knows and supplies key words in favorite nursery rhymes or other repetitive children's stories.
√ + -	Rote counts 1, 2 then 1, 2, 3 etc., always adding new numbers.
√ + -	Generates own 3-or 4-word telegraphic language phrases or sentence.
√ + -	Sings the Alphabet Song.
√ + -	Sings Happy Birthday.
√ + -	Sings seasonal songs or poems.
√ + -	Generates 3-, 4-, or 5-word sequence (may not use adult syntax).
√ + -	Tells age, address and/or telephone number.
√ + -	Knows mother's father's and siblings' names, siblings' ages and names of parents' occupations.
√ + -	Describes past events with fair degree of accuracy and sequence.

Source

[†] Estabrooks, W. (1998) Cochlear Implant for Kids, © 1998 Warren

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Fruit salad

Making food together is a rewarding experience for parents and children and it provides many opportunities for expanding listening and language skills.



Strategies:

- Use listening first.
- Model correct language.
- Use expanded language.
- Use listen cue.
- Use another adult or a sibling as a model.
- Capture baby's attention.
- Use acoustic highlighting.
- Be close to your child when speaking.

Skills, concepts and language:

- Developing understanding of functions.
- Understanding vocabulary related to parts of an object, for example seeds of the strawberry.
- Understanding simple phrases.
- Beginning to follow a simple direction.

Core language-adult input

- I have a banana.
- Do you like bananas?
- I like bananas, yum, yum.
- It's a big/little banana.
- Peel the skin off. Peel it off. Peel it off.
- I have a knife.
- Cut, cut, cut, cut with the knife.
- Cut the banana.
- Smell the banana mmmmm.

Extended language-adult input

- I have a strawberry, kiwi fruit or pineapple.
- Look at the seeds.
- Look at the skin. It feels furry, smooth or rough.
- What do I need to cut with?
- I need a knife. A knife will cut the banana.
- I need a bowl.
- Let's cut up all the fruit.
- Slice the kiwifruit. Slice it.
- Put all the fruit in the bowl.
- The skin's yucky. Don't you like that?
- Oh you don't want to smell it.
- We don't eat the skin. The skin goes in the trash or garbage can.
- It tastes yummy, nice, delicious or yucky.

Related activities

- Having a tea party.
- Making a sandwich/popcorn.
- Putting faces on cookies/cupcakes.
- Playing with doll's house: windows/doors/ chimney/fence. The pillow goes on the bed. The bed is for sleeping. The bed goes in the bedroom.
- Playing with toy vehicles: wheels/steering wheel/windshield wipers/wings on the airplane.
- Singing songs about fruit such as "Where the Watermelon Grows" or "Barney's Apples and Bananas."

What's next?

- Labelling parts of the body, for humans or animals.
- Labelling household items, e.g. legs on table, handle on doors, lids on pots.
- Label all parts of objects that baby is interested in.
- Talk about the functions of many different objects.
- Fade the use of Learning to Listen Sounds and use the real word first.
- Follow a direction (closed set).
- Develop turn-taking.
- Highlight prepositions in, on, under, for example: The train is on the track.
- Develop the concepts of the same/not the same.

Additional Toddlers Talk activities

Making muffins

Maximize a fun activity that all children enjoy—baking delicious treats in the kitchen—to expand your child's listening and language skills.

Strategies:

- Model correct language.
- Use expanded language.
- Create a quiet environment.
- Use listening alone.
- Use repetition.
- Capture the child's attention.
- Make it fun.

Skills, concepts and language:

- Following two directions.
- Developing question forms.
- Beginning sequencing.
- Beginning understanding of quantity language.

Core language-adult input

- Let's make muffins.
- We need a bowl and spoon. Where's the spoon?
- What else do we need?
- Open the muffin mix.
- Shake the muffin mix into the bowl. Shake, shake.
- What do we need next? What do we do now?
- How much water do we need?
- Stir the mixture round and round.
- Turn the oven on.
- Be careful it's hot.
- Put some mixture into the muffin tins.
- That's enough.
- Use the big spoon.
- It's too big.
- Let's put the tray in the oven.
- In you go muffins.
- Now it's clean up time.

Extended language-adult input

- These muffins are delicious. I love muffins.
- Do you like muffins?
- I like blueberry muffins.
- They're my favorite.
- Which ones are your favorite?
- Open the packet and pour in the mixture.
- Pour it all in the bowl. Make sure the packet is empty. Mix it up.
- Stir it with a big spoon.
- Make sure you mix it all up.
- Now what do we need?
- A cup of water and an egg. Who wants to break the egg?
- Uh oh. There is eggshell in the mixture. I'll have to get it out.
- You're mixing it very well.
- Now put a little mixture on a spoon.
- Put it into the muffin tins. Just a little bit.
 We don't want them to be too big.
- I'll put them in the oven.
- Be careful, don't burn yourself.

Related activities

- Any cooking activity, for example making jelly/porridge/oatmeal/sandwiches/cutting vegetables/icing biscuits.
- Any activity that has several steps in sequence, like getting dressed/brushing teeth/making a bed/putting toys away/cleaning up/simple stories/simple sequence activity with toys.
- Making experience books with photos or drawings in sequence of something your child likes to do or of an outing, such as swimming/shopping/playing/dressing up/ park visit/zoo visit.

What's next?

- Auditory memory of two items in different linguistic contexts including prepositions and pronouns. For example she is on the bed. Put the bowl in the sink.
- Auditory memory of three items.
- Introduce question, what do we use for ...? (function).
- Develop concepts of size and shape.
- Introduce language for sequencing, first, next, then, etc.
- Begin listening from a distance.
- Model pronunciation of new words highlight to encourage imitation.
- Introduce more language of quantity, like some, all, half.
- Acoustically highlight speech sounds in words and phrases.
- Develop partitives, such as a bag of...
 a bottle of...
- Develop open set listening following one direction, selecting one item.

Making a birthday card

Creating art together and for others can provide many new language experiences for your child.



Strategies:

- Use auditory bombardment.
- Model correct language.
- Use expanded language.
- Use normal rate and rhythm.
- Wait for the toddler to process new information.
- Give time to respond.

Skills, concepts and language:

- Developing number concepts.
- Developing colors as adjectives.
- Following two directions.
- Developing shape names.
- Understanding prepositions, such as at the top, in the middle.
- Answering "wh" questions, like What's that? Where's the...? What's that for?
- Understanding concepts of size, as in big and little.
- Using two words together.

Core language-adult input

- We're making a birthday card for (daddy, sister, etc).
- Get the paints, paintbrush, markers or crayons.
- Fold the card and cut it.
- Cut the card out. Cut it carefully.
- Let's paint a heart.
- A green heart.
- No, that's not green, that's blue.
- Where's the green?
- That's right. That's green.
- I'm cutting out a heart.
- Where will we stick it?
- Get the paste/glue.
- Paste it on, paste, paste/Glue it on, glue, glue.
- Stick, stick, stick it on.
- We have two hearts one, two.
- One at the top and one in the middle.
- Color the hearts red.
- Where's the red?

Extended language-adult input

- Here's some different colored paper and cellophane.
- What color would you like?
- Oh pink, you want pink. That's a pretty color. I think that's my favorite.
- Is that your favorite color?
- I'll fold it in half, and then you can cut it.
- I'm folding it carefully. Do you want to cut it?
- Cut it out, be careful, the scissors are sharp.
- What will we do first?
- What would you like to do?
- I'm cutting out a big heart. Daddy will like that.
- Oh, you've drawn a house. There are no windows or doors on the house. It needs some windows and doors.
- Paint the door red and the windows blue.
- Let's make a garden around the house.
- Daddy will love this card.

Related activities

- Any craft activity, such as painting, drawing, cutting, pasting, stamping.
- Making a park or beach scene.
- Making a doll's house, farmyard or garage.

What's next?

- Develop ideas of sequencing.
- Develop prepositions of place, such as in the middle, next to.
- Begin counting.
- Introduce pronouns, like she/they/he.
- Build vocabulary, for example synonyms, parts of the whole.
- Use acoustic highlighting for specific sounds.
- Use a variety of speech sounds in words and phrases that the toddler needs to hear auditory bombardment.
- Expand "wh" questions, like who, what, where.
- Model pronunciation.
- Develop three-item auditory memory closed set.
- Develop open set listening, one direction, one-item.

Audiobooks

Listening to audiobooks with your child is another unique way to increase your child's listening and language skills.



Strategies:

- Use prompts.
- Ask questions.
- Rewind/go back and listen again.
- Use clarification, for example by asking "What did you hear?"
- Use a short simple story.

Skills, concepts and language:

- Retelling a story with a live voice.
- Listening to a story with questions as prompts.
- Answering three questions about the audiobook story.

Core language-adult input

- Start the audiobook.
- Push the play button.
- Listen to the entire story first.
- Then listen to the questions.
- Answer each question.
- Rewind or go back if you want to listen to the story again.

Extended language-adult input

- Make sure you have the audiobook you want to listen to selected.
- Press the play button.
- We'll listen to the story and all the questions first and then go back and listen to the story again.
- If you don't hear part of the story or you do not understand, tell me and we can rewind or go back and listen to it again.

Related activities

- Listening to other information from an audiobook or computer video such as YouTube:
 - Procedures.
 - Following directions.
 - Questions.

What's next?

- Answer more questions about the information or story.
- Retell a story without questions as prompts.
- Retell a story in the correct sequence recalling as many details as possible.
- Extend the length of the story.
- Increase the complexity of the story.
- Listen to a video or book on the computer and have soft background noise going such as a fan, window open, and so on.
- Talk on the telephone.

• Are you ready?

Resources

Recipient solutions services

Cochlear provides dedicated individuals that aid in ensuring recipient and parent satisfaction and confidence. These are the Recipient Solutions Managers. These Managers will meet with you individually and provide you with personalized product education, counseling and additional resources to help you and your child achieve hearing goals. Contact Cochlear Customer Service at 800 523 5798 to be connected to a Recipient Solutions Manager in your region, today!

Websites

www.agbell.org www.infanthearing.org www.hearingfirst.org www.handsandvoices.org

Books

* Thirty Million Words, Building a Child's Brain by Dana Suskind MD

† Auditory - Verbal Therapy: Science, Research, and Practice by Warren Estabrooks

Guides and videos

Cochlear Wireless Technology Guide www.cochlear.us/wirelesstechnologyguide

Back to School Guide for Parents and Teachers www.cochlear.us/backtoschoolguide

Nucleus 7 Sound Processor Instructional Videos and Manuals www.cochlear.us/n7videosandmanuals

Kanso Instructional Videos and Manuals www.cochlear.us/kansovideosandmanuals

Kanso 2 Instructional Videos and Manuals www.cochlear.us/kanso2videosandmanuals

Baha 5 Instructional Videos and Manuals www.cochlear.us/baha5videosandmanuals

Baha 5 Power Instructional Video and Manuals www.cochlear.us/baha5powervideosandmanuals

Baha 5 Super Power Instructional Videos and Manuals www.cochlear.us/baha5superpowervideosandmanuals

How to pair with an Apple Device: https://support.apple.com/en-us/HT201466

Disclaimers

The information contained in this manual is intended to educate and guide the parent or caregiver, on their role and influence on the child's development of spoken language. This education and guidance is to complement the Listening and Spoken Language Therapy program the child is already taking part in. It is by no means intended to replace such a program.

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Views expressed are those of the individual. Consult your health professional to determine if you are a candidate for Cochlear technology.

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