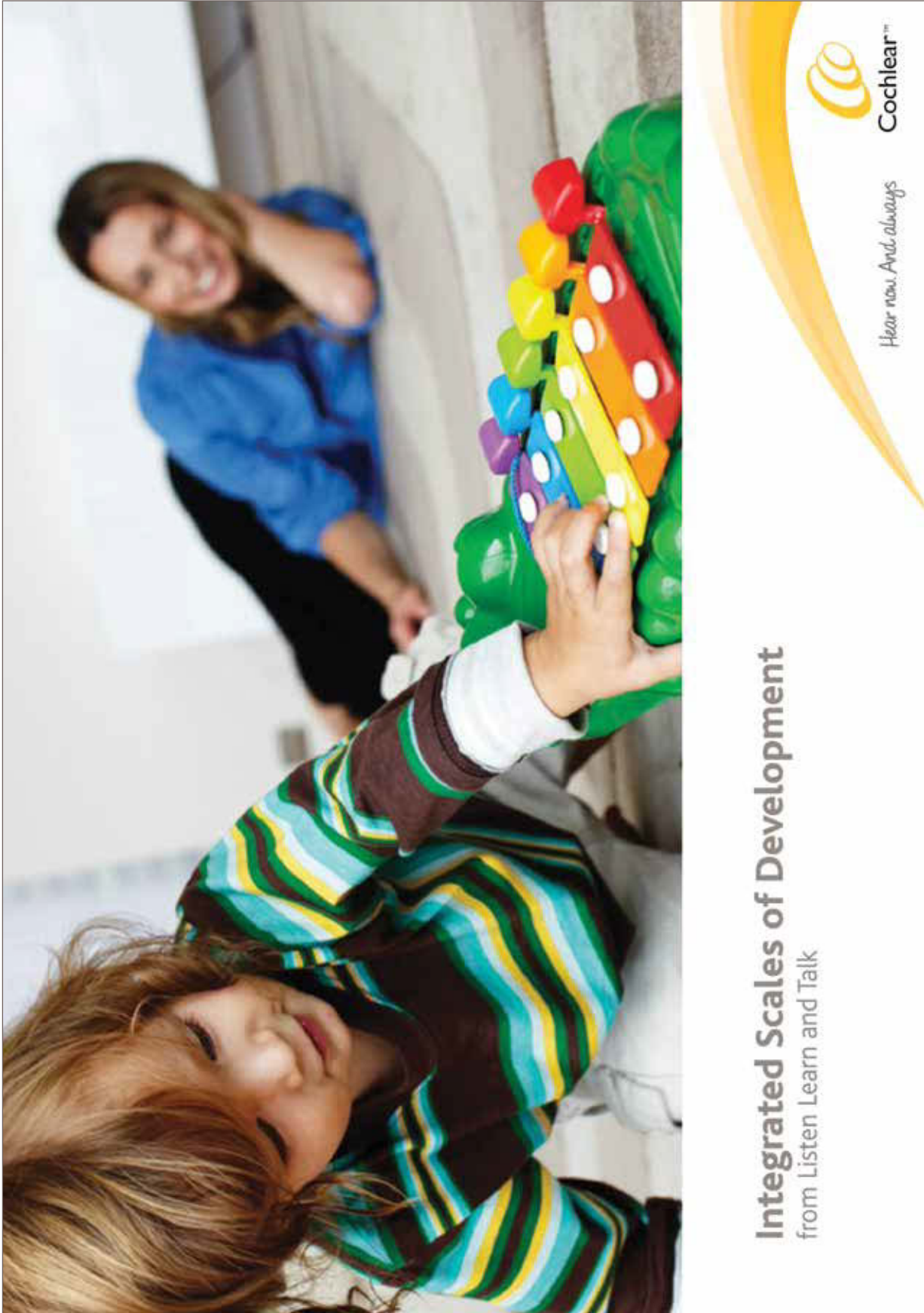


Integrated Scales of Development



Integrated Scales of Development



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 pragmatic 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 a 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 a number of sources:

- Cottage Acquisition Scales for Listening, Language and Speech
- 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 Rosetti Infant-Toddler Language Scale
- St. Gabriel's Curriculum

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

It is important to remember that the skills listed on the following pages are based on an average.

There is a considerable range between the earliest and latest times children achieve the various milestones. Your child may not reach a milestone within the given timeframe, but this does not mean that they will not achieve it. These developmental scales are meant as a guide only. They have been included to assist in the provision of a program to suit the individual needs of a particular child.

For full reference and description see Listen Learn and Talk (Ref. Z60407). This is an auditory habilitation resource from Cochlear.

Integrated Scales of Development

0 to 3 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> • Auditory awareness • Responds to sound by smiling, head turning, stilling, startling • Responds to loud sounds • Recognizes mother's/caregiver's voice 	<ul style="list-style-type: none"> • Startles to sudden noises • Responds to speaker's face • Responds to talking by quietening or smiling • Quietens with familiar voice 	<ul style="list-style-type: none"> • Cries to express hunger and anger • Begins to vocalize to express pleasure • Occasionally vocalizes in response to voicelike sounds 	<ul style="list-style-type: none"> • Cries • Begins vocalizing other than crying, e.g. coos, gurgles 	<ul style="list-style-type: none"> • Awareness of familiar people/situations • Looks at objects/faces briefly • Anticipates certain events, e.g. being fed 	<ul style="list-style-type: none"> • 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 • Smiles/coos in response, in particular to mother/caregiver

Integrated Scales of Development

4 to 6 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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

Integrated Scales of Development

7 to 9 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> Localizes sound source with accuracy Discriminates suprasegmental aspects of duration, pitch and intensity Has longer attention span Associates meaning to words Discriminates vowel and syllable content 	<ul style="list-style-type: none"> Appears to recognize names of family members in connected speech, even when person named is not in sight Responds with appropriate arm gestures to such words as up, high, bye bye, etc. Enjoys music or singing Appears to listen to whole conversation between others Regularly stops activity when name is called Appears to recognize the names of a few common objects by localizing them when they are named More regularly stops activity in response to "no" Will sustain interest up to a minute while looking at pictures or books with adult 	<ul style="list-style-type: none"> Repeats CV syllables in babble [pa pa] Starts to respond with vocalizations when called by name Plays more games, e.g. pat a cake, peek a boo, hand-clapping, etc. and vocalizes during games Appears to "sing" Vocalizes to greet a familiar adult Calls to get attention Uses some gestures and language appropriately, e.g. shakes head for "no" Vocalizes loudly 	<ul style="list-style-type: none"> Babbles CV CV [pa pa] [ba ba] Clicks tongue Uses a "singsong" voice Imitates patterns of intonation Uses low central vowels most frequently [o] (hot) [æ] (bat) [a] (car) Uses some consonants [p, b, m, d] 	<ul style="list-style-type: none"> Imitates physical action Recognizes familiar objects Places object in one hand and then the other Holds one cube and takes another Smiles at self in mirror Loves hiding and finding games Gives, points, shows Pulls rings off peg 	<ul style="list-style-type: none"> Begins to understand that communication is a two-way process Shows a desire to interact with people Becomes more lively to familiar people Demonstrates anticipation of activities Nods, waves and claps Calls to get attention Requests by reaching and pointing Enjoys frolic play Continues to develop turn taking skills Begins book sharing by looking at pictures in a book with adult

Integrated Scales of Development

10 to 12 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> • Associates meaning to more words • Monitors own voice and voices of others • Localizes sound from a distance • Discriminates speaker's voice from competing stimuli 	<ul style="list-style-type: none"> • Appears to enjoy listening to new words • Generally able to listen to speech without being distracted by other competing sounds • Occasionally gives toys and objects to adult on verbal request • Occasionally follows simple commands, e.g. <i>Put that down.</i> • Responds to music with body or hand movement in approximate time • Demonstrates understanding of verbal requests with appropriate head and body gestures • Shows increased attention to speech over prolonged periods of time 	<ul style="list-style-type: none"> • Uses jargon of 4 or more syllables - short sentence-like structures without true words • Starts to use varied jargon patterns with adult intonation patterns when playing alone • Initiates speech gesture games such as round and round the garden • Talks to toys/objects using longer verbal patterns • Frequently responds to songs or rhymes by vocalizing • Imitates action paired with sound • May use first words, e.g. <i>bye bye, mama</i> 	<ul style="list-style-type: none"> • Imitates sounds and number of syllables used by others • Uses suprasegmental features • Uses longer strings of repeated syllables • Vowels and consonants are systematically varied [ba di ba di] • Mostly uses plosives and nasals [p, b, d, m] 	<ul style="list-style-type: none"> • Resists when toy is taken away • Relates an action to an object, e.g. spoon with stirring, car with pushing • Responds to laughter by repeating action • Takes peg from peg board • Matches two identical objects • Attempts to build a two block tower 	<ul style="list-style-type: none"> • Starts to understand question and answer, e.g. shakes head appropriately for "no" • Understanding of interaction continues to develop • Understands greetings • Turn taking skills continue to develop • Vocalizes in response to mother's call • Indicates desire to change activities • Responds to laughter by repeating action • Begins directing others by tugging, pushing • Vocalizes with gesture to protest • Enjoys games and initiates them

Integrated Scales of Development

13 to 15 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> Identifies more words Processes simple language Auditory memory of one item at the end of a phrase/sentence Discriminates between familiar phrases Follows one step directions that are familiar 	<ul style="list-style-type: none"> Understands more new words each week Follows one step directions during play Understands simple where questions, e.g. <i>Where's daddy?</i> Recognizes and demonstrates understanding of many objects by pointing Understands more familiar phrases Begins to recognize names of various body parts, e.g. eyes, hands Enjoys rhymes 	<ul style="list-style-type: none"> Uses 7 or more words consistently Uses voice and gesture to obtain desired object Continues to use jargon with more true words developing Incorporates pausing and intonation into jargon Imitates new words spontaneously Sings 	<ul style="list-style-type: none"> Imitates alternated vowels Approximates single words Uses most vowels in vocal play Uses more front consonants plosives [p, b, d], nasals [m, n] Uses fricative [h] Uses semivowel [w] 	<ul style="list-style-type: none"> Sustains interest in desired object for two minutes and more Places circle in shape board Builds a tower with two cubes Begins to make marks on paper with thick crayon Imitates more actions, e.g. patting doll Demonstrates functional use of objects Removes lid of box to find hidden toy 	<ul style="list-style-type: none"> Continues to develop eye contact with speaker for longer periods Takes turns as expressive language develops Plays fetching game Involves others by showing things, e.g. shoes/clothing during play Begins to understand "wh" questions

Integrated Scales of Development

16 to 18 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> • Discriminates between more phrases • Identifies and associates more words to related objects, e.g. toys, body parts, food, clothing • Imitates words heard 	<ul style="list-style-type: none"> • Understands more simple questions • Begins to understand longer phrases with key word in middle of sentence • Develops category vocabulary • Identifies more body parts • Finds familiar object not in sight • Understands 50 or more words • Identifies some clothing items, toys and food 	<ul style="list-style-type: none"> • Jargon disappears • Increases vocabulary, 10 or more meaningful words • Decreases use of gesture – relies on talking to communicate • Imitates words heard • Asks for more 	<ul style="list-style-type: none"> • Increases single word approximations • Most vowels present • Still mainly producing front consonants [p, b, d, m, n, h, w] 	<ul style="list-style-type: none"> • Imitates circular scribble • Places 3 to 6 pegs in pegboard • Retrieves desired toy from behind an obstacle • Picks up small objects • Turns bottle upside down to obtain toy • Points to pictures in a book and begins to turn pages • Demonstrates object permanence 	<ul style="list-style-type: none"> • Requests object or help from adult by gesturing and vocalizing • Initiates vocal interaction • Prefers to be with familiar people • Shows caution with strangers • Imitates other children

Integrated Scales of Development

19 to 24 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> • Auditory memory of 2 items • Discriminates songs • Comprehends a variety of phrases • Discriminates descriptive phrases • Follows a two step direction, e.g. <i>Get your ball and throw it.</i> • Identifies by category 	<ul style="list-style-type: none"> • Completes two requests with one object • Chooses two familiar objects • Comprehends action phrases • Points to a range of body parts, e.g. elbow, cheek • Begins to understand personal pronouns – my, mine, you • Recognizes new words daily • Increases comprehension - decodes simple syntax • By 24 months understands 250 - 300 words 	<ul style="list-style-type: none"> • Occasionally imitates 2 - 3 word phrases • Uses new words regularly • Increases expressive vocabulary to 30 words or more • Attempts "stories" – longer utterances in jargon to get message across • Begins to use own name when talking about self • Uses possessive pronouns – mine • May ask where questions <i>Where car?</i> • By 24 months may use 2 - 3 word phrases with nouns, some verbs and some adjectives 	<ul style="list-style-type: none"> • Approximates words • Substitutes /w/ for /r/ • Uses suprasegmental features • Most vowels and diphthongs present • Consonants [k, g, t, ng] emerging • Consonants [p, b, m, h, n, d] established – used in initial position in words • Consonants often omitted in medial and final position 	<ul style="list-style-type: none"> • Imitates symbolic play, e.g. household activities • Uses one object as symbol for another • Places triangle, circle, square in shape board • Imitates vertical strokes • Threads three beads • Begins to tear paper • Imitates ordering of nesting cups • Begins to categorize objects in play • Uses two toys together • Stacks blocks/builds tower • Completes simple pull out puzzle • Activates mechanical toy 	<ul style="list-style-type: none"> • Begins to develop more self confidence and is happy to be with other people • Initiates pretend play • Responds to requests from adults • Practices adult-like conversation about familiar themes • Uses words to interact • Requests information, e.g. <i>What is this?</i> • Develops turn taking in conversation

Integrated Scales of Development

25 to 30 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> • Auditory memory of 2 items in different linguistic contexts • Listens to familiar songs on tape • Comprehends longer utterances • Listens from a distance 	<ul style="list-style-type: none"> • Begins to understand complex language • Comprehends more complex action phrases • Understands functions, e.g. What do we use for drinking? – points to up • Begins to understand size differences, e.g. big/little • Begins to understand prepositions, e.g. in, on, under • Receptive vocabulary increases • Begins to understand concept of quantity, e.g. one, all • Understands pronouns, e.g. he, she, they, we 	<ul style="list-style-type: none"> • Uses 2 - 3 word phrases more consistently • Uses some personal pronouns, e.g. me, you • Asks for help using two or more words, e.g. wash hands • Begins to name primary colors • Refers to self by pronoun me • Repeats 2 numbers counting • Answers "wh" questions, e.g. <i>What's that?</i>, <i>What's ... doing?</i>, <i>Who?</i> • Recites nursery rhymes and favorite songs • Understands and answers "can you". Uses negation, e.g. don't, no 	<ul style="list-style-type: none"> • Loves experimenting with prosodic features • Begins to use stress correctly • Repeats words and phrases • Consonants [f, y] emerging • Consonants, e.g. [m, p, b] used in final position • Word/phrases shortened – medial consonants often omitted • Tends to over pronounce words • Different pronunciation of the same word occurs frequently • Whispers 	<ul style="list-style-type: none"> • Continues symbolic play, e.g. talking on the phone • Completes actions, e.g. clap hands and high 5s • Uses toys appropriately • Performs related activities at play • Turns one page at a time • Imitates vertical, horizontal lines and circle • Matches identical picture to picture and shape to shape • Puts two parts of a whole together • Understands number concept of one and two 	<ul style="list-style-type: none"> • Enjoys talking, e.g. pretends to have a conversation on the phone • Completes actions, e.g. <i>Give me five</i> • Begins to develop parallel play with other children • Talks more in play • Shares toys • Asks for help using two or more words • Uses longer utterances

Integrated Scales of Development

31 to 36 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> Continues to expand auditory memory - 3 item auditory memory with different linguistic features Sequences 2 pieces of information in order Listens to stories on tape Follows 2 - 3 directions 	<ul style="list-style-type: none"> Understands most common verbs Understands and responds to more complex language and commands Carries out 2 - 3 verbal commands in one sentence Understands several positions, e.g. in, on under Expands concept development Identifies parts of an object Understands time concept, e.g. today, yesterday, tomorrow Understands <i>What is missing? Which one does not belong?</i> 	<ul style="list-style-type: none"> Knows gender vocabulary Talks about what has drawn Gives both first and last name when asked Relates recent experiences Converses in 3 - 4 word simple sentences Begins using more complex language Uses questions, e.g. who, what, where, why Uses pronouns, e.g. he, she, they, we, you, me Uses some plurals Uses possessives Uses more negatives, e.g. not, none, nobody Begins to use <i>and/because</i> Names three or more colors 	<ul style="list-style-type: none"> Makes some substitutions [f] for [th], [w] for [r] Medial consonants still inconsistent Final consonants inserted more regularly Consonants [l, r, sh, s, z, ch] emerging Vowels and diphthongs established Omits some unstressed parts of speech Pronunciation becomes more correct Whispers frequently 	<ul style="list-style-type: none"> Shares toys and takes turns more appropriately Develops parallel play Begins to develop interest in writing and drawing Begins fantasy play Matches six color cards Sorts and categorizes, e.g. blocks and pegs Names object when part of it is shown in a picture 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 	<ul style="list-style-type: none"> Takes turns and shares Recites rhymes Acts out songs - sometimes changes endings Engages in make-believe activities Begins to ask permission of others Expresses feeling Initiates conversation Uses questions for a variety of reasons, e.g. to obtain information, to request

Integrated Scales of Development

37 to 42 Months

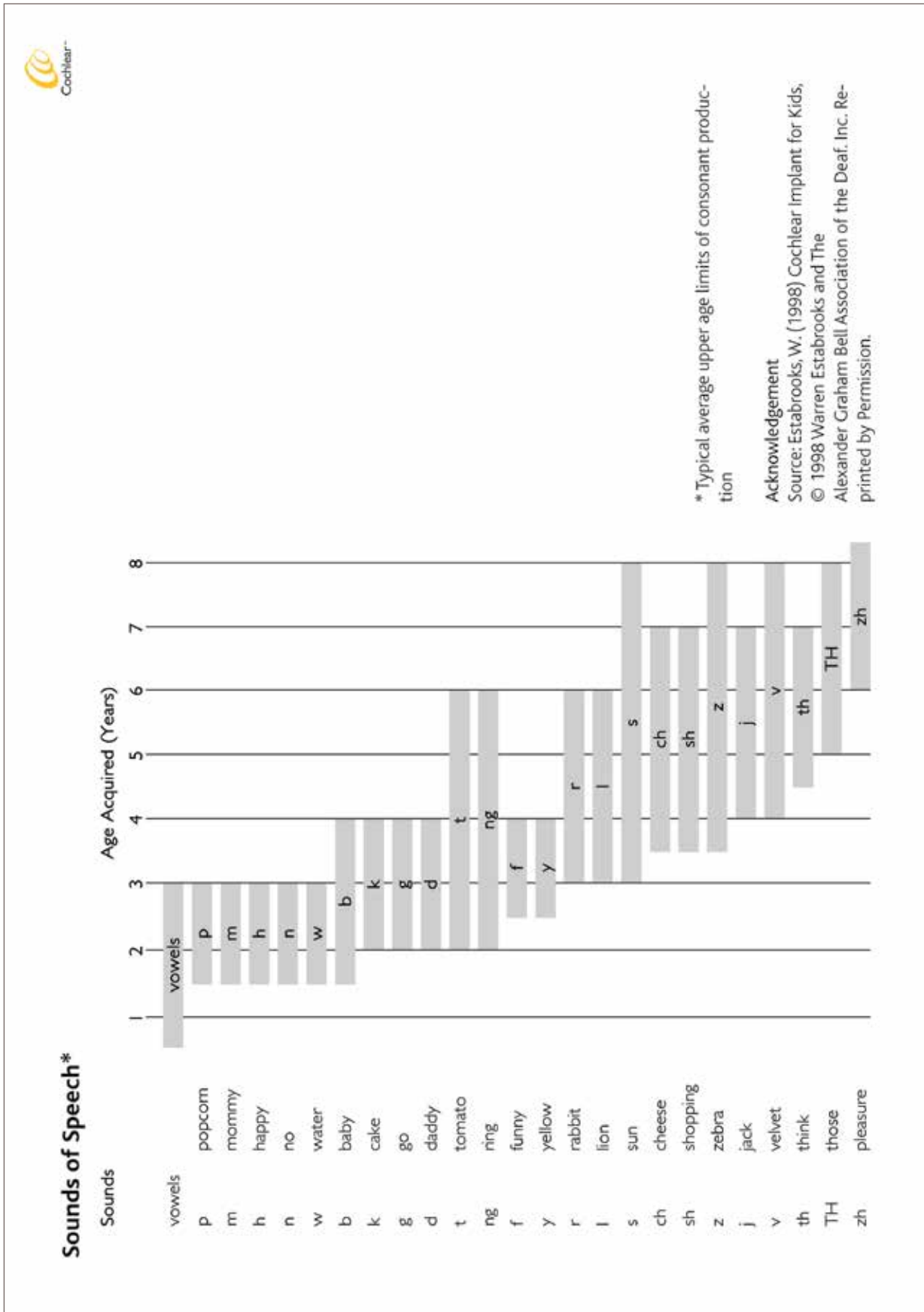
Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> • Auditory memory increases to 5 items • Sequences 3 or more pieces of information in order • Retells a short story • Follows 3 directions • Processes complex sentence structures • Tracks a 6 word sentence 	<ul style="list-style-type: none"> • Can listen to a 10 - 15 minute story • Comprehends an increasing level of complex language • Understands more difficult concepts, e.g. quality, texture, quantity • Understands concept of day/night, e.g. distinguishes day from night activities • Follows directions using concepts of empty/full, same/different • Understands locational prepositions, e.g. next to • Begins to understand comparatives, e.g. I am taller than you. • Understands about 900 words 	<ul style="list-style-type: none"> • Holds conversations using many correct grammatical structures (plurals, possession, pronouns, prep, adj.) • Uses "when" and "how" many" questions • Uses so/because • Relays a message • Describes what objects can be used for • Starts to answer "what if?" questions • Answers What is missing? • Identifies which one does not belong and answers Why? • Attempts to answer problem-solving questions, e.g. What if? • Uses about 500 intelligible words 	<ul style="list-style-type: none"> • Uses some blends, e.g. [mp, pt, br, dr, gr, sm] • Consonants [j, v, th] emerging • Some substitutions still made, e.g. [gw] for [gr] in blends • Pronunciations of words more stable from one production to the next 	<ul style="list-style-type: none"> • Begins one-to-one correspondence • Follows directions using concepts, e.g. empty, full, same, different • Develops more difficult concepts, e.g. quality, quantity, texture • Compares objects • Begins simple problem solving • Develops imagination 	<ul style="list-style-type: none"> • Takes turns • Plays with other children more appropriately • Shows understanding of others' feelings/needs • Interacts through simple conversation • Initiates conversation • Enjoys role-plays

Integrated Scales of Development

43 to 48 Months

Listening (Audition)	Receptive Language	Expressive Language	Speech	Cognition	Social Communication (Pragmatics)
<ul style="list-style-type: none"> Processes longer and more complex language structures, e.g. <i>Can you find something that lives in a tree, has feathers and a yellow crest?</i> Follows directions with more difficult concepts, e.g. <i>Put the thick blue square behind the empty jug.</i> Re-tells longer stories in detail - 5 or more sentences Tracks an 8 word sentence 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 43. 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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

Integrated Scales of Development



Integrated Scales of Development



Integrated Scales of Development Tracking Form

This form is designed to be used with Integrated Scales of Development (Listen Learn and Talk - Cochlear 2005).

How to use the ISD tracking form:

1. Complete the child's name and information in the space at the top of the form.
2. Record the child's progress by reference to the Integrated Scales of Development
3. The vertical column along the left side records the child's hearing age (HA), ie. The child's developmental progress from the time of first effective sound access – hearing aids fitting or cochlear implant switch-on.
4. The horizontal row across the top of the form shows the six key areas of development which will be followed:
 - Audition or Listening
 - Receptive Language: what does the child understand
 - Expressive Language: what does the child say
 - Speech: how does the child say it
 - Cognition: thinking processes.
 - Communication: social interaction with others (Pragmatics)
5. For each hearing age (HA) stage, there are two spaces.

(+) **emerging skills or goals.** This means that the child is starting to develop skills at this stage but has not fully achieved them yet. These are goals that the parents and therapist are working on.

(✓) **achieved skills or goals.** This means that the child is demonstrating the particular skills of that HA stage in their spontaneous language and interactions at home, with parents, various members of the family, and later with friends.

For each of the six vertical columns. Mark the start date in (+) column, and later, the achieved date (✓) on the correct line.

For a clearer visual view of the child's developmental progress, you can also fill in the spaces with the related colors, as shown in the top row. However, the dates of start, and achievement are the key information.

6. CA column

For each HA stage, record the child's CA (chronological age) in the CA column. This is important information: to be able to consistently observe the gap between the HA and CA. We expect this to reduce over time.

The general expectation for a child diagnosed with a hearing impairment under the age of 12 months and following an auditory habilitation program, is that they can achieve age appropriate listening and spoken language levels by school age. ... 'provided they are in a stimulating language enriched environment where learning through listening is the focus.' (Listen Learn and Talk p13, Auditory Habilitation Theory).

Expectations would be different for those children who have additional problems.

Regular monitoring of the child's progress is recommended. This form will give a clear overview of progress in the 6 key areas of development, relative to hearing age (HA) and chronological age (CA).

Integrated Scales of Development



Integrated Scales of Development Tracking Form

NAME: _____ DOB: _____ Date of Birth _____ S/O: _____ Switch-On Date _____

HA months	CA	Listening	Receptive Language	Expressive Language	Speech	Cognition	Social Communication
43 - 48		√	√	√	√	√	√
		+	+	+	+	+	+
37 - 42		√	√	√	√	√	√
		+	+	+	+	+	+
31 - 36		√	√	√	√	√	√
		+	+	+	+	+	+
25 - 30		√	√	√	√	√	√
		+	+	+	+	+	+
19 - 24		√	√	√	√	√	√
		+	+	+	+	+	+
16 - 18		√	√	√	√	√	√
		+	+	+	+	+	+
13 - 15		√	√	√	√	√	√
		+	+	+	+	+	+
10 - 12		√	√	√	√	√	√
		+	+	+	+	+	+
7 - 9		√	√	√	√	√	√
		+	+	+	+	+	+
4 - 6		√	√	√	√	√	√
		+	+	+	+	+	+
0 - 3		√	√	√	√	√	√
		+	+	+	+	+	+