



The AG Bell Academy for
Listening and Spoken Language

LSLS CERTIFICATION EXAM BLUEPRINT

OCTOBER 2018

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DOMAIN 1

Hearing and Hearing Technology

14.3%
OF EXAM

1	Subdomain A: Hearing Science	Knowledge of anatomy of the ear, neural pathways, and auditory brain centers
2	Subdomain A: Hearing Science	Knowledge of anatomy and physiology of the vestibular and balance system
3	Subdomain A: Hearing Science	Knowledge of physiology of hearing from the outer ear to the secondary auditory cortex
4	Subdomain A: Hearing Science	Knowledge of embryonic development of the vestibular and auditory systems
5	Subdomain A: Hearing Science	Knowledge of physics of sound (e.g., decibel, frequency, sound waves)
6	Subdomain A: Hearing Science	Knowledge of psychoacoustics (e.g., HL, SPL, SL)
7	Subdomain A: Hearing Science	Knowledge of auditory perception (e.g., masking, localization, binaural hearing)
8	Subdomain A: Hearing Science	Knowledge of speech acoustics as related to the audiogram (e.g., formants, speech frequency spectrum)
9	Subdomain A: Hearing Science	Knowledge of environmental acoustics (e.g., signal-to-noise ratio, distance, noise, reverberation)
10	Subdomain A: Hearing Science & Subdomain B: Hearing Assessment	Knowledge of causes of hearing loss (e.g., birth defects that affect the structures of the outer, middle, and/or inner ear; exposure to chemicals/medicines; genetic disorders; infections)
11	Subdomain A: Hearing Science & Subdomain B: Hearing Assessment	Knowledge of causes of vestibular disorders
12	Subdomain A: Hearing Science & Subdomain B: Hearing Assessment	Knowledge of types/characteristics of hearing loss and disorders (e.g., conductive, sensorineural, mixed, ANSD, auditory processing, unilateral, site of lesion, age of onset, degree)
13	Subdomain A: Hearing Science & Subdomain B: Hearing Assessment	Knowledge of types/characteristics of vestibular disorders (e.g., balance, low muscle tone)
14	Subdomain A: Hearing Science & Subdomain B: Hearing Assessment	Knowledge of early identification and high risk factors (e.g., congenital malformations, premature births)
15	Subdomain B: Hearing Assessment & Subdomain C: Hearing Technology	Knowledge of newborn hearing screening (e.g., Early Hearing Detection and Intervention [EHDI]) and follow up diagnostics

DOMAIN 1 Hearing and Hearing Technology *continued*

16	Subdomain B: Hearing Assessment	Knowledge of audiogram, audiogram interpretation, and implications to speech perception
17	Subdomain B: Hearing Assessment	Knowledge of audiologic assessments—behavioral (e.g., BOA, VRA, and play audiometry)
18	Subdomain B: Hearing Assessment	Knowledge of audiologic assessments—speech perception testing (e.g., SRT, word identification)
19	Subdomain B: Hearing Assessment	Knowledge of audiologic assessments—electrophysiologic (e.g., OAE, ABR, ASSR, acoustic immittance, cortical potentials)
20	Subdomain B: Hearing Assessment	Knowledge of audiologic assessments—hearing aid evaluation (e.g., candidacy criteria, real ear/probe mic, electroacoustic analysis, behavioral validation, functional assessments)
21	Subdomain B: Hearing Assessment	Knowledge of audiologic assessments—cochlear implant candidacy, surgery, activation, functional application of programs/MAPs, behavioral validation, and functional assessments
22	Subdomain B: Hearing Assessment	Skill to integrate audiologic test results in planning management
23	Subdomain C: Hearing Technology	Knowledge of sensory devices (e.g., hearing aids, cochlear implants, hybrid devices, bone conduction devices, frequency lowering/transposition aids, auditory brainstem implants, and other implantable devices)
24	Subdomain C: Hearing Technology	Knowledge of earmold acoustics (e.g., impact of the earmold characteristics on the transmission of sound)
25	Subdomain C: Hearing Technology	Knowledge of hearing assistive technology (HAT) and accessories (e.g., candidacy, remote microphone systems, personal FM systems, soundfield FM, infrared (IR) systems, Bluetooth, behavioral validation, functional assessments)
26	Subdomain C: Hearing Technology	Knowledge of sensory device and hearing assistive technology (HAT) troubleshooting strategies (e.g., listening check, battery, cables)

DOMAIN 2

Auditory Functioning

18.9%
OF EXAM

27	Subdomain A: Auditory Development and Foundations	Knowledge of infant and child auditory development
28	Subdomain A: Auditory Development and Foundations	Knowledge of hearing vs. listening
29	Subdomain A: Auditory Development and Foundations	Knowledge of meaning and complication of determining “hearing age” (e.g., age of initial amplification, age of initial CI stimulation, changes in hearing, gaps in amplification)
30	Subdomain A: Auditory Development and Foundations	Knowledge of rationale for early auditory access
31	Subdomain A: Auditory Development and Foundations	Knowledge of integrating listening into overall child development (e.g., not a “set to listen” condition, bonding to their device, self-reporting on malfunctions with hearing technology and/or listening abilities)
32	Subdomain A: Auditory Development and Foundations	Knowledge of biological factors impacting audition (embryologic development, prenatal hearing, cross-modal reorganization, retrograde deterioration of auditory systems)
33	Subdomain A: Auditory Development and Foundations	Knowledge of neural plasticity and critical periods of language learning, including the importance of early access to sound
34	Subdomain A: Auditory Development and Foundations	Knowledge of variables affecting auditory learning (e.g., etiology, additional challenges, bimodal devices, hybrid devices)
35	Subdomain A: Auditory Development and Foundations	Knowledge of impact of auditory skill development on social-emotional growth/self-concept/mental health
36	Subdomain A: Auditory Development and Foundations	Knowledge of models of auditory skill development (e.g., Erber, Caleffe-Schenck, Estabrooks, Sindrey, The Auditory Learning Guide, Ling 7 Stages of Development)
37	Subdomain A: Auditory Development and Foundations	Knowledge of impact of lack of auditory access on theory of mind and social development
38	Subdomain A: Auditory Development and Foundations	Knowledge of intersection of audition and working memory/processing speed/executive function/sequencing
39	Subdomain A: Auditory Development and Foundations	Knowledge of incidental listening/ “overhearing access” and its effect on language-development
40	Subdomain A: Auditory Development and Foundations	Knowledge of auditory feedback loop
41	Subdomain A: Auditory Development and Foundations	Knowledge of auditory training vs. auditory learning

DOMAIN 2 Auditory Functioning *continued*

42	Subdomain A: Auditory Development and Foundations	Knowledge of top-down and bottom-up processing as they relate to audition
43	Subdomain A: Auditory Development and Foundations	Knowledge of development of localization skills and their significance
44	Subdomain A: Auditory Development and Foundations	Knowledge of identifying familiar speakers by their voice
45	Subdomain A: Auditory Development and Foundations	Knowledge of listening in noise
46		Knowledge and Skills Statement removed and not included in exam; intentionally removed by AG Bell Academy
47	Subdomain B: Acoustic Phonetics	Skill to analyze perception and production using speech acoustic information
48	Subdomain C: Functional Use of Audition	Skill to teach self-monitoring for comprehension
49	Subdomain C: Functional Use of Audition	Skill to teach self-monitoring for production accuracy
50	Subdomain C: Functional Use of Audition	Skill to teach self-monitoring of auditory function
51	Subdomain C: Functional Use of Audition	Knowledge of how to integrate audition into global developmental progression—how does audition impact other things in your development (includes literacy [phonological awareness], cognition, and music)
52	Subdomain C: Functional Use of Audition	Knowledge of how to manage personal auditory needs (e.g., move closer to teacher, move away from fan)
53	Subdomain C: Functional Use of Audition	Knowledge of how to maximize use of advancing hearing assistive technology (HAT)
54	Subdomain D: Functional Listening Skill Assessments and Evaluations [Formal/Informal]	Knowledge of standardized/nonstandardized functional listening skill assessments
55	Subdomain D: Functional Listening Skill Assessments and Evaluations [Formal/Informal]	Skill to use knowledge of speech acoustics to monitor perceptual progress
56	Subdomain D: Functional Listening Skill Assessments and Evaluations [Formal/Informal]	Skill to use information gleaned from assessments to verify the function of the maps/programs of the child's hearing technology

DOMAIN 2 Auditory Functioning *continued*

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| 57 | Subdomain D: Functional Listening Skill Assessments and Evaluations [Formal/Informal] | Skill to communicate pertinent data to inform the audiologist, parents, and others about the child's functional performance using particular maps and programs |
| 58 | Subdomain D: Functional Listening Skill Assessments and Evaluations [Formal/Informal] | Skill to observe and assess child's functional use of audition in a variety of environments |
| 59 | Subdomain D: Functional Listening Skill Assessments and Evaluations [Formal/Informal] | Skill to apply knowledge of functional use of audition to assessments in other domains |

DOMAIN 3

Spoken Language Communication

14.9%
OF EXAM

60	Subdomain A: Speech Development	Knowledge of impact of auditory access on speech production
61	Subdomain A: Speech Development	Knowledge of anatomy of speech/voice mechanism (coordination of respiration/phonation/articulation)
62	Subdomain A: Speech Development	Knowledge of physiology of speech/voice mechanism (consideration of breath support/vocal tension)
63	Subdomain A: Speech Development	Knowledge of suprasegmental, segmental, coarticulatory aspects of speech production (vowels, diphthongs, consonants – vowels by tongue height/tongue position/ lip rounding; consonants by place, manner, and voice features)
64	Subdomain A: Speech Development	Knowledge of sequence of typical speech development (e.g., articulation, phonology, intelligibility)
65	Subdomain A: Speech Development	Knowledge of sequence of speech development in children with various sensory devices (e.g., hearing aids, cochlear implants) (consider typical development vs. remedial speech teaching; consider milestones [e.g., crying, cooing, babbling, jargon])
66	Subdomain A: Speech Development	Knowledge of speech production assessment measures, both formal and informal (assess speech intelligibility and consider experienced vs. naïve listeners, resonance and vocal quality)
67	Subdomain A: Speech Development	Knowledge and application of teaching techniques related to speech production—prerequisite skills for phoneme production (e.g., adequate form/anatomy and function/physiology, breath support)
68	Subdomain A: Speech Development	Knowledge and application of teaching techniques related to speech production—developmental (habilitative) and remedial speech development
69	Subdomain A: Speech Development	Knowledge and application of teaching techniques related to speech production—suprasegmental and segmental aspects of speech facilitation
70	Subdomain A: Speech Development	Knowledge and application of teaching techniques related to speech production—auditory strategies for speech facilitation
71	Subdomain A: Speech Development	Knowledge and application of teaching techniques related to speech production—visual and tactile strategies for speech facilitation only as needed (then “put it back into hearing”)

DOMAIN 3 Spoken Language Communication *continued*

72	Subdomain A: Speech Development	Knowledge and application of teaching techniques related to speech production—integration of speech targets into spoken language (carryover)
73	Subdomain A: Speech Development	Knowledge of speech characteristics of children without auditory access to the full speech spectrum
74	Subdomain A: Speech Development	Knowledge of International Phonetic Alphabet (IPA)
75	Subdomain B: Receptive and Expressive Language	Knowledge of impact of auditory access on language development
76	Subdomain B: Receptive and Expressive Language	Knowledge of aspects of receptive and expressive language (components of phonology, pragmatics, morphology, syntax, semantics)
77	Subdomain B: Receptive and Expressive Language	Knowledge of sequence of typical language development (e.g., prelinguistic, communicative intent, linguistic, spoken language milestones [crying, cooing, babbling (simple, reduplicated, variegated), jargon])
78	Subdomain B: Receptive and Expressive Language	Knowledge of language assessment measures both formal and informal (consider tests normed on children with typical hearing and those developed for children with hearing loss)
79	Subdomain B: Receptive and Expressive Language	Knowledge and application of teaching techniques related to expressive and receptive language, including the components of phonology, pragmatics, morphology, syntax, semantics
80	Subdomain B: Receptive and Expressive Language	Knowledge of impact of speech acoustics on choice of language targets (e.g., varying syllable number, glass/glasses versus boat/boats)
81	Subdomain B: Receptive and Expressive Language	Knowledge of development of conversational competence
82	Subdomain B: Receptive and Expressive Language	Knowledge of development of divergent/convergent thinking
83	Subdomain B: Receptive and Expressive Language	Knowledge of bilingual language learners
84	Subdomain B: Receptive and Expressive Language	Knowledge of children with additional challenges (e.g., multiple disabilities, additional speech/language disorders)

DOMAIN 4

Child Development

8.6%
OF EXAM

85	Child Development	Knowledge of sequence of typical child development—social/emotional
86	Child Development	Knowledge of sequence of typical child development—cognitive
87	Child Development	Knowledge of sequence of typical child development—gross/fine motor
88	Child Development	Knowledge of sequence of typical child development—self-help
89	Child Development	Knowledge of sequence of typical child development—play
90	Child Development	Knowledge of sequence of typical child development—neurological maturation
91	Child Development	Knowledge of executive function and theory of mind
92	Child Development	Knowledge of associated factors (e.g., family, community, access to resources)
93	Child Development	Knowledge of indicators of atypical development (e.g., early signs of autism spectrum disorder)
94	Child Development	Knowledge of impact of atypical development on the development of spoken language
95	Child Development	Knowledge of additional medical diagnoses and disabilities and their effect on child development
96	Child Development	Knowledge of cultural differences in parenting skills and child development expectations
97	Child Development	Knowledge of how to identify the effects of prenatal environment/care, prematurity, early/prolonged hospitalizations, and other biological conditions on development
98	Child Development	Knowledge of importance of family/caregiver relationships (e.g., bonding, attachment), early reciprocal communication, play, and daily routines in development
99	Child Development	Knowledge of effect of etiology and age of onset of hearing loss on child development
100	Child Development	Knowledge of developmental synchrony/Vygotsky's Zone of Proximal Development
101	Child Development	Knowledge of presymbolic communication

DOMAIN 4 Child Development *continued*

102	Child Development	Knowledge of Piaget's stages of child development
103	Child Development	Knowledge of effects of technology (screen time) on child development and strategies to help parents make informed decisions about technology use with their children

DOMAIN 5

Parent Guidance/Coaching, Education, and Support

13.1%
OF EXAM

104	Parent Guidance/Coaching, Education, and Support	Knowledge of adult learning styles/preferences
105	Parent Guidance/Coaching, Education, and Support	Knowledge of family systems (e.g., boundaries, roles, extended family, siblings)
106	Parent Guidance/Coaching, Education, and Support	Knowledge of impact of hearing loss on family (e.g., coping mechanisms, family functioning, grieving process)
107	Parent Guidance/Coaching, Education, and Support	Skill to apply family counseling techniques (e.g., active listening, reflective listening, questioning, open-ended statements)
108	Parent Guidance/Coaching, Education, and Support	Skill to apply family coaching and guidance techniques (e.g., demonstration; modeling; turning over the task; providing feedback; co-teaching; home carryover; strategies related to speech, language, and literacy development)
109	Parent Guidance/Coaching, Education, and Support	Knowledge of impact of associated factors on parent guidance (e.g., cultural, language in the home, economic, “lifestyle”, community)
110	Parent Guidance/Coaching, Education, and Support	Knowledge and application of behavior management techniques

DOMAIN 6

Strategies for Listening and Spoken Language Development

14.9%
OF EXAM

111	Subdomain A: Auditory Learning	Knowledge and application of strategies to maximize auditory input (e.g., creating optimal acoustic environment, positioning)
112	Subdomain A: Auditory Learning	Knowledge and application of strategies to facilitate attention (e.g., auditory presentation prior to visual, singing what you say, expectant look)
113	Subdomain A: Auditory Learning	Knowledge and application of strategies to facilitate processing and comprehension (e.g., acoustic highlighting, wait time, provide choices, auditory sandwich)
114	Subdomain A: Auditory Learning	Knowledge and application of strategies for developing a child's auditory feedback loop (e.g., ask child "what did you say?", use of remote microphone for child to hear own speech)
115	Subdomain B: Speech	Knowledge and application of strategies for vocalization/vocal play development (e.g., parentese, repeat child's vocalizations)
116	Subdomain B: Speech	Knowledge and application of strategies for suprasegmental development—duration, intensity, pitch (e.g., parentese, singing, rhyming, onomatopoeia, use of varying acoustic contrasts)
117	Subdomain B: Speech	Knowledge and application of strategies for vowel/diphthong development (e.g., present vowels with greatest acoustic contrast first, pair vowels with fricatives to reduce nasality, facilitate context)
118	Subdomain B: Speech	Knowledge and application of strategies for consonant development (e.g., phonetic to phonologic transfer, place and manner of articulation and voicing, follow typical developmental speech patterns, develop automaticity, using meaningful context)
119	Subdomain C: Language and Vocabulary	Knowledge and application of strategies primarily for language and vocabulary input (e.g., repetition, parentese, narration, self-talk, parallel talk, descriptions)
120	Subdomain C: Language and Vocabulary	Knowledge and application of strategies primarily for language and vocabulary imitation (e.g., model and look expectantly, lean toward child and cup your ear, have child tell someone else)
121	Subdomain C: Language and Vocabulary	Knowledge and application of strategies primarily for language and vocabulary use (e.g., sabotage, open-ended questions, create need to talk, wait time)
122	Subdomain D: Facilitating Conversation	Knowledge and application of strategies for facilitating meaningful conversation (e.g., expansion and extension, sabotage, create motivation for the child to talk, follow the child's lead, seizing the moment)

DOMAIN 7

History, Philosophy, and Professional Issues

2.9%
OF EXAM

123	Subdomain A: History and Philosophy	Knowledge of history of pioneers of auditory verbal practice (e.g., Daniel Ling, Helen Beebe, Doreen Pollack)
124	Subdomain A: History and Philosophy	Knowledge of philosophical underpinnings of communication approaches (e.g., children with hearing loss can learn to listen and talk, cultural vs. medical model)
125	Subdomain A: History and Philosophy	Knowledge of current communication approaches for children with hearing loss
126	Subdomain B: Professional Issues	Knowledge of ethical requirements, principles, and issues for Listening and Spoken Language practice (e.g., LSL Code of Conduct, Principles of LSL Cert. AVT, Principles of LSL Cert. AVEEd)
127	Subdomain B: Professional Issues	Knowledge of professional development activities (e.g., self-assessment, continuing education, seeking professional guidance, cultural competence training)
128	Subdomain B: Professional Issues	Knowledge of evidence-based and evidence-informed practice (e.g., integrating research findings and best practice guidelines into daily practice)
129	Subdomain B: Professional Issues	Knowledge of service delivery models (e.g., tele-practice, use of para-professionals, translators, home-based, center-based, daycare, natural environment, family-centered practice)

DOMAIN 8 Education

6.3%
OF EXAM

130	Education	Knowledge of continuum of educational and community placements
131	Education	Knowledge of strategies for pre-teaching and re-teaching academic curriculum
132	Education	Knowledge of integration of audition, speech, and language goals throughout the curriculum
133	Education	Knowledge of attention to the effects of auditory access and language development on performance on cognitive and academic assessments
134	Education	Knowledge of instructional technology and appropriate accommodations
135	Education	Knowledge of development of measurable objectives that meet local educational standards
136	Education	Knowledge of collaborative strategies with school professionals
137		Knowledge and Skills Statement removed and not included in exam; intentionally removed by AG Bell Academy
138	Education	Knowledge of how to structure learning environments (e.g., instructional technology) to maximize curricular access through audition
139	Education	Knowledge of educational accommodations and modification (e.g. CART, voice-to-print transcription, assistive technology)
140	Education	Knowledge of opportunities for successful inclusive general education experiences/ mainstream placements
141	Education	Skill to individualize and adapt practices for each child based on ongoing data to meet children's changing needs
142	Education	Skill to use systematic procedures within and across environments, activities, and routines to promote children's learning and participation
143	Education	Skill to identify and utilize appropriate resources for specialized instruction
144	Education	Knowledge of lesson planning that covers all domains

DOMAIN 9 Emergent Literacy

6.3%
OF EXAM

145	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to reciting finger plays and nursery rhymes
146	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to telling and/or retelling stories
147	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to activity and story sequencing
148	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to singing songs and engaging in musical activities
149	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to creating experience stories/experience books
150	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to organization of books (e.g., cover, back, title, author page)
151	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to directionality and orientation of print
152	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to distinguishing letters, words, sentences, spaces, and punctuation that mark text
153	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to phonics (e.g., sound-symbol correspondences and letter-sound correspondences)
154	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to phonemic awareness (e.g., sound matching, isolating, substituting, adding, blending, segmenting, deleting)
155	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to sight word recognition
156	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to strategies for the development of listening, speaking, reading, and writing vocabulary
157	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to contextual clues to decode meaning
158	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to oral reading fluency development

DOMAIN 9 Emergent Literacy *continued*

159	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to text comprehension strategies (e.g., direct explanation, modeling, guided practice, and application)
160	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to abstract and figurative language (e.g., similes, metaphors)
161	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to divergent question comprehension (e.g., inferential questions, predictions)
162	Emergent Literacy	Knowledge of the learning sequence and teaching techniques related to theory of mind in literacy applications