



PDE's Commitment to Least Restrictive Environment (LRE)

Our goal for each child is to ensure Individualized Education Program (IEP) teams begin with the general education setting with the use of Supplementary Aids and Services before considering a more restrictive environment.







## EBP and ABA Applied Behavior Analysis (ABA) is currently the most evidence-based framework for autism intervention. "Interventions based on principles of ABA have a track record of effectiveness when incorporated in well-designed programs for individuals with ASD" (NAC Standards Report, 2015). "Thirty years of research demonstrated the efficacy of applied behavioral methods in reducing inappropriate behavior and in increasing communication, learning, and appropriate social behavior" (U.S. Surgeon

General, 1999).







Traditional Accounts of Language Development

Traditional theorists (Chomsky, Piaget, Pinker, Brown, etc.) view language development as an innate, biological process controlled by cognitive mechanisms which accept, classify, code, encode, and store information.







A cognitive/linguistic account of language development currently dominates the field of language assessment, and it forms the foundation for our intervention programs.



Our goal is to fix some sort of communication problem—not simply to describe it.

- 1. How do you fix a mental structure? A cognitive/linguistic approach to treatment does not exist.
- 2. If we are inevitably treating language as behavior in order to fix it, why aren't we analyzing language as behavior in order to assess it?





## Behavioral Account of Language Development

 In his 1957 book, Verbal Behavior, Skinner argued that language is not some innate, cognitive process. Rather, language is behavior verbal behavior.



B.F. Skinner

 As behavior, language is best explained by the same environmental variables that explain other behavior.







Antecedent	Behavior	Consequence
Something interesting happens	Look in that direction	Seeing the Event
Need to go out and see a door knob	Turning the knob	The door opens
Driving and the traffic light turns red	Depress brake pedal	Car stops



















**Verbal Operants** 

Video: Verbal Operants













ctivity: Identify the Operant				
As a result of:	One has a tendency to:	This is a:		
Seeing banana	Say "banana"			
Wanting a banana	Say "banana"			
Hearing someone say "banana"	Say "banana"			
Hearing someone say "a yellow fruit"	Say "banana"			
Being told to get banana	Grab a banana			

As a result of:	One has a tendency to:	This is a:
Seeing a grape	Say "grape"	
Hearing a horn	Say "truck"	
Wanting a push on the swing	Say "push"	
Being told to "stand up"	Standing up	
Someone says "door"	Say "door"	
Someone says "door"	Say "keyhole"	
Smelling smoke	Say "barbeque"	
Seeing a cloud	Say "white"	

As a result of	One has a	This is at
As a result of.	tendency to:	THIS IS A.
Wanting to buy a book	Ask "where's my wallet?"	
Seeing banana	Say "yellow"	
Hearing "banana"	Say "yellow"	
Hearing "cowboy"	Say "boy"	
Being presented with a ask	Say "later"	
Seeing teacher	Say "go away"	
Seeing teacher while getting ready for an activity	Say "can I have a marker?"	
Seeing teacher	Say "teacher"	
learing "teacher"	Say "teacher"	









Skill Area	Level 1	Level 2	Level 3
Mand	X	X	X
Tact	x	x	x
Listener Resp.	X	X	X
VP/MTS	X	X	X
Play	X	X	X
Social	X	X	X
Imitation	X	X	
Echoic	X	X	
Vocal	X		
LRFFC		X	X
IV		X	X
Group		X	X
Linguistics		X	X
Reading			X
Writing			X
Math			X







	Mand	Tact	Listener Responding	Visual Perceptual Skills/Matching to Sample	Independent Play	Social Behavior Socia Play
	The child uses words, signs, or pictures to ask for desired items or activities	Does the child tact people, objects, body parts, or pictures?	Does the child attend to and respond to the words spoken by others?	Does the child attend to and respond to visual stimuli and match objects or pictures?	Does the child engage in independent play behavior that is automatically reinforcing?	Does the child attend to others and attempt to socially engage others?
1.	Emits 2 mands with echoic or imitative prompt/no physical prompts	Tacts any 2 items (people, pet, character, or object) (may be part mand) (no echoic prompt)	Attends to speakers voice by orienting toward speaker 5 times	Visually tracks moving stimuli for 2 seconds, 5 times	Manipulates and explores objects for 1 minute	Visually tacks and shows interest in people's movement at least 5 times.
2	Emits 4 mands w/o prompts except item and/or "What do you want?"	Tacts any 4 items (may be part mand) (not echoic prompts)	Responds to hearing his own name 5 times	Grasps small objects with thumb, index finger, and middle finger (pincer grasp) 5 times	Shows variation in play by independently interacting with 5 different items	Indicates that he wants to be held or physically played with 2 times
3.	Generalizes 6 mands across 2 people, settings, and examples	Tada 6 non-reinfoncing itema (w/o echoic prompts)	Looks at, touches, or points to the correct family member, pet, or other reinforcer when presented in an array of 2, for 5 different reinforcers (e.g., Where's Elmo? Where's Normmy?)	Visually attends to a toy or book for 30 seconds (Not a self stim item)	Demonstrates generalization by engaging in exploratory movement and playing with the toys in a rovel environment for 2 minutes	Sportaneously looks (glances) at other children 5 fimes.
4.	Emils 5 mands in 1 hour (Item can be present).	Spontaneously tacts 2 items during an observation (ne time limit)	Performs 4 different motor actions on command without a visual prompt (e.g., Can you jump? Show me clapping	Places 3 items in a container, stacks 3 blocks or places 3 rings on a peg for 2 of these or similar activities.	Independently engages in movement play for 2 minutes	Spontaneously engages in parallel play near other children for a total of 2 minutes
5.	Emits 10 mands wib prompts except item and/or "What do you want?"	Tacta 10 itema (common objects, body parts, pictures, or people)	Selects the connect item from an array of 4, for 20 different objects or pictures (e.g., Show me cat, Touch shoe	Matches any 10 identical items (e.g. inset puzzles, toys, objects, or pictures	Independently engages in cause-and ~effect play for 2 minutes	Spontaneously follows peers or imitates their motor behavior 2 times

	Motor Imitation	Echoic	Vocal
	Does the child imitate the actions of other people?	Does the child immediately repeat (echo) vowel and consonant phonemes, singly and in combinations?	How often does the child spontaneously vocalize and what is the nature of the vocalization?
1.	Imitates 2 gross motor movements when prompted with 'Do this' (e.g. clapping, raising arms, etc)	Scores at least 2 on the EESA sublest.	Spontaneously emits an average of 5 sounds each hour.
2.	Imitales 4 gross motor movements when prompted with "Do this"	Scores at least 5 on the EESA subtest.	Spontaneously emits 5 different sounds, with averaging 10 total sounds each hour.
3.	Imitates 8 gross motor movements 2 of which involve objects (e.g. shaking a maraca, tapping sticks together)	Scores at least 10 on the EESA sublest.	Spontaneously emits 10 different sound with varying intonations averaging 25 total sounds each hour.
4.	Spontaneously imitates the motor behaviors of others on 5 occasions.	Scores at least 15 on the EESA sublest.	Spontaneously emits 5 different whole word approximations.
5.	Imitates 20 motor movements of any type (e.g. fine motor, gross motor, imitation with objects.)	Scores at least 25 on the EESA subtest (at least 20 from group I)	Spontaneously vocalizes 15 whole wants of phrases with appropriate intonation and rhythm.

	Mand	Tact	Listener Responding	Visual Perceptual Skills/Matching to Sample	Independent Play Social
	Does the child demonstrate frequent and spontaneous manding primarily controlled by metivation (MOs)?	Does the child fact nouns and verbs?	Is the child acquiring more advanced listener skills?	Does the child match identical and non-identical objects and pictures?	Does the child engage in independent play behavior that is automatically reinforcing?
1.	Mands for 20 different missing items w/o prompts.	Tacts 25 items when asked "what's that?"	Selects the correct item from a messy array of 6 for 40 different objects or pictures (e.g., Find cat. Touch ball.)	Matches identical objects or pictures in a messy array of 6 for 25 items.	Searches for a missing or corresponding toy or part of a set for 5 items or sets (e.g., a puzzle piece, a ball for a drop-in toy, a bottle for a baby dol).
2.	Mends for 5 actions.	Tacts across 3 exemplars of 50 items	Generalizes listener discriminations (JLDs) in a messay anzay of 8, for three different examples of 50 terms (e.g., The child can find three examples of a train	Softs similar colors and shapes for 10 different colors or shapes given models (e.g., given red, blue, and green boals and a pile of ned, blue, and green bears the child softs the items by color	Independently demonstrates the use of toys or objects according to their function for 5 idems (e.g. placing a train on a track, pulling a wagon, holding a telephone to the ear
3.	Emits 5 different 2 word mands (not including '1 want').	Tacts across 3 oxomplars of 50 items	Performs 10 specific motor actions on commend (e.g., Show me clapping. Can you hop?)	Matches identical objects or pictures in a measy array of 8 containing 3 similar stimuli, for 25 ferms (e.g., matches a dog to a dog in an array that also contains a cat, pig, and pony	Plays with every day items in creative ways 2 times (e.g., uses a bowl as a drum or a box as a imaginary car)
4.	Spontaneously emits 15 different mands in 30 minutes (at least 2 MOs involved).	Tacts 50 two-component verb-noun or noun verb combinations	Performs 10 specific motor actions on command (e.g., Show me clapping, Can you hop?)	Matches non-identical objects or non-identical pictures in a messy array of 10, for 25 items (e.g., matches a Ford truck to a Toyota truck)	Independently engages in play on structures and playground equipment for a total of 5 minutes (e.g. going down a side, swinging) timed observation
5.	Emits 10 new mands without specific training (can be for items trained as tacts or LD but not as mands).	Tacts a total of 200 nouns and/or verbs.	Selects the correct item in a book, picture scene, or natural environment when named, for 250 items (Tested or from an accumulated list of known words)	Matches non-identical objects (3D) to pictures (2D) and/or vice versa, in a messy array of 10 containing 3 similar stimuli, for 25 items.	Assembles toys that have multiple parts for 5 different sets of materials (e.g., Mr. Potato head, Little People sets, Coote Bugs, Kind K' Next).

	Social Behavior Social Play	Motor Imitation	Listener Responding by Function, Feature, and Class	Intraverbai	Classroom Routines and Group Skills
	Does the child spontaneously participate in activities with other children and spontaneously verbally interact with them?	Does the child imitate the actions of other people?	Does the child understand as a listener works that describe or modily nours and werbs by their functions, features, or classes?	Does the child verbally respond to the content of the words of others?	Does the child follow the daily routines in a classroom and appropriately participate in group activities, and respond in a group teaching format?
5.	Initiates a physical interaction with a peer 2 times (e.g., a push in a wagon, hand holding, Ring Around the Rosy).	Imitates 10 actions that require selecting a specific object from m an array (e.g., selects a drum- stick from an array also containing a hom and a bell, and imitates an adult's drumming)	Selects an animal or object from an array of 3, for 5 different sounds made b the corresponding items (e.g., Meow says a Tool, toof goes the)	Completes 10 different fill-in- blank physics of any type (e.g., song fill-ins, social games and fun full-in, animal or object sounds	Sits at a group snack or lunch table without negative behavior for 3 minutes.
t.	Spontaneously mands to peers 5 times (e.g., My turn, Push me, Look!	Imitates 20 different fine motor actions when prompted, Do this (e.g., wiggling fingers, pinching, making a fist, making a butterfly)	Selects 5 different foods or drinks when each is presented in an array of 5 (along with 4 non- food or non-drink items) and asked the wrball fill-its You eatand You drink	Provides first name when asked, What is your name?	Puts away personal iteme lines up, or comes to a table with only 1 verbal prompt.
8.	Engages in sustained social play with peers for 3 minutes without adult prompts or reinforcement (e.g., cooperatively setting up a play set, water play	Imitates 10 different three- component sequences of actions when prompted. Do this (e.g., clapping, jumping, touching toes, pick up a doll, place her in a crib, and rock the crib	Selects the correct item from an amy of 8, for 25 different LRFFC (Fil-in statements of any type (e.g., You sit on a)	Completes 25 different fil-in- blaric phrases (not including songe) (e.g., You at You sleep in aShoes and)	Transittions between classroom activities with not more that 1 gestural- verbal prompt.
	Spontaneously responds to the mands from peers 5 times (e.g., Pull me in the wagon, I want the train.)	Spontaneously imitates 5 functional skills in the natural environment (e.g., eating with a spoon, putting on a coat, removing shoes)	Selects the correct item from an array of 10 (or from a book), for 25 different verb-nounLPFFC what, which, or who questions (e.g., What do you ride? Which one basis? Who can beit??	Answers 25 different <u>what</u> questions (e.g., What do you like to eat?)	Sits in a small group for 5 minutes without disruptin behavior or attempting to leave the group.

	Mand	Tact	Listener Responding	Visual Perceptual Skills/Matching to Sample	Independent Play
	Does the child mand for information, mand with different parts of speech, and give directions to others?	Does the child emit a wide variety of tacts, and do they contain several different parts of speech?	Does the child understand complex words and sentences involving the different parts of speech?	Does the child complete complex designs, patterns, and sequences?	Does the child spontaneously engage in independent play that is automatically reinforcing?
11.	Spontaneously mands for different verbal information with "Wh" question 5 times in 60 minutes	Tact color, shape, and function of 5 items.	Selects terms by color and shape from an array of 6 similar stimuli, for 4 colors and 4 shapes. (i.e. Find the red car. Find the square cracker.)	Bpontoneously matches any part of an arts and crafts activity to another person's sample 2 times.	Sportaneously engages in pretend or imaginary play on 5 occasions.
12.	Politely mands for removal of aversive/stop an activity for 5 different circumstances.	Tact 4 prepositions and 4 pronouns	Follows 2 instructions involving 6 different prepositions (e.g. Stand behind the chair.) 4 different pronouns (e.g. Touch my ear).	Demonstrates generalized non- identical matching in a messy array of 10 with 3 similar stimuli, for 25 items.	Repeats a gross mator behavior to obtain a better effect for 2 activities.
13.	Mands with 10 different adjectives, prepositions, or adverts in 60 minutes.	Tact 4 different adjectives excluding colors and shapes and 4 adverts	Selects items from an array of similar stimuli based on 4 pairs of relative adjoctives (e.g., big- little, long-short) and demonstrates actions based on 4 pairs of relative advorts (e.g., quiet-loud, bat-skovi	Completes 20 different block designs, parquetry shape puzzles, or similar tasks with at least 8 different pieces.	Independently engages in arts and crafts type activities for 5 minutes.
14.	Gives directions, instructions, or explanations as to how to do something or participate in an activity 5 finnes.	Tacts using 4 or more words 20 times	Follows 3-step directions for 10 different directions (e.g. Get our cost, hang it up, and sit down)	Sorts 5 items from 5 different categories without a model.	Independently engages in sustained play activities for 10 minutes without adult prompts or reinforcement.
15.	Mands for others to attend to his own verbal behavior at least 5 times	Tacts at least 1000 non-verbal stimuli (nouns, verbs, adjectives, etc.) tested from a list of known tacts.	Has a total listener repertoire of 1200 words (nouns, vertis, adjectives, etc.), tested or from an accumulated list of known words.	Continues 20 three-step patterns, sequences, or seriation tasks (i.e. star, triangle, heart, star, triangle)	Independently draws or writes in pre-academic activity books for 5 mins (e.g. dot+to-dot, matching games mazes, tracing letters and numbers)

	Social Behavior Social Play	Reading	Writing	Listener Responding by Function,	Intraverbal
				Feature, and Class	
	Does the child spontaneously engage in play and reciprocal verbal interactions with peers?	Does the child show interest in words and books, tact and LD letters, and read and comprehend a few words?	Does the child draw, copy letters and numbers, and independently write his name?	Does the child understand as a listener multiple words that describe or modify neurs and verbs by their function, features, or classes?	Does the child verbally respond to the content of the words of others?
11.	Spontaneously cooperates with a peer to accomplish a specific outcome 5 times.	Attends to a book when a story is being read to him for 75% of the time.	Imitales 5 different writing actions modeled by an adult using a writing instrument and writing surface.	Selects the correct item from an array of 10 that contains 3 similar etimuli (e.g., similar colors, shape, or class, but they are the wrong choices), for 25 offlexent WH questions LRFPC tasks,	Sportaneously emits 20 intraverbal comments (can be part mand) (e.g. Dad says, Tm going to the car, and the child sportaneously says, I want to go for a ridel)
12.	Spontaneously mands to peers with WH questions 5 times.	Selecta (LDs) the correct uppertase letter from an array of 5 letters, for 10 different letters.	Independently haces within % inch of the lines to 6 different geometrical shapes (e.g. circle, square, triangle, rectangle, star)	Selects items from a book based on 2 verbal components: either a Issature (e.g., color), function (e.g., draw with), or class (e.g., clothing) for 25 LRFFC tasks, (e.g., Do you see a brown animal? Care you lind some clothing with buttom 70	Demonstrates 300 different intravebal responses, tested or obtained from an accumulated list o known intraverbals.
13.	Intraverbally responds to 5 different questions or statements from peers.	Tacts 10 uppercase letters on command.	Capies 10 letters or numbers legibly.	Selects items from a page in a book or in the natural environment based on 3 verbal components (e.g., verb, adjective, preparation, pronoun), for 25 WH quarter LIMPFC tasks (e.g., Which have grows on trees 3	Answers 2 questions after being read short passages (15+ words) from books, for 25 passages (e.g. Who blew the house down?)
14.	Engages in protend social play activities with peers for 5 minutes without adult prompts.	Reads his own name.	Legibly spells and writes his own name without copying.	Selects the correct items from a book or the natural environment given 4 different realing LIPFPC questions about a single topic (where does the cove live? What does the cove eat? What does the cove eat? What cov?) for 25 different logics.	Describes 25 different events, videos, stotes, etc. with 8+ words (e.g. Tel me what happenedThe monitor scared everybody and they all son into the house.)
15.	Engages in 4 verbal exchanges on 1 topic with peers for 5 topics. (e.g. the children go back and forth talking about making a creek in a sandbox).	Matches 5 words to the correspending pictures or items in an array of 5 and vice verse (e.g. matches the written word bird to a gicture of a bird).	Copies all 24 upper and lower case letters logibly.	Demonstration 1000 different LHFPC responses, tested or obtained from an accumulated list of known responses	Answers 4 different sotating WH questions about a single topic for 10 trajecting. Who takes you to achoo?? Where do you po to achoo? What do you take to schoo!?)





## Level 1 Learners



Selection of Verbal Response Form			
Form	Function		
• Vocal	Verbal (Saying Water)		
• Non-Vocal	• Verbal (Signing Water, handing over a picture of water, writing)		
• Vocal	<ul> <li>Non-Verbal (non-social vocal noises such as coughing)</li> </ul>		
• Non-Vocal	<ul> <li>Non Verbal (crossing legs)</li> </ul>		























## Level 2 Learners





<ul> <li>Intraverbals         <ul> <li>Fun fill-ins (e.g., songs)</li> <li>Personal information (name, age, address, birthday, etc.)</li> <li>Beginning FFCs (Be Careful!! Not too soon!)</li> </ul> </li> </ul>	
Begin teaching simple independent work activities	
<ul> <li>Vocal shaping through echoics to make articulation of mands, tacts, and intraverbals clearer</li> </ul>	
<ul> <li>Motor shaping through imitation to make signs of mands, tacts, and intraverbals clearer</li> </ul>	











































