

GUIDE

A Language and Social Skills Assessment Program
for Children with Autism or Other Developmental Disabilities

VB-MAPP

*Verbal Behavior Milestones
Assessment and Placement Program*

Preview

Mark L. Sundberg, Ph.D.

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2008



AVB Press
Advancements in Verbal Behavior

4425-C Treat Blvd. Suite #210
Concord, CA 94521
www.avbpress.com

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CHAPTER 1

A Behavioral Approach to Language Assessment

The Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP) presented in this Guide and the accompanying Protocol is based on B.F. Skinner's *Verbal Behavior* (1957), a landmark analysis in the study of language. Skinner's book provides a comprehensible and sensible approach to language that is derived from the solid empirical foundation of learning principles, and has stood the test of time (Andresen, 1990; Schlinger, 2008). In addition to Skinner's study of language, his groundbreaking work in behavioral psychology and learning led to the professional field known as applied behavior analysis (Cooper, Heron, & Heward, 2007; Morris, Smith, & Altus, 2005; Skinner, 1953).

Applied behavior analysis (ABA) has provided many successful applications to the learning and language problems faced by children with autism or other developmental disabilities (e.g., Guess & Baer, 1973; Halle, Marshall, & Spradlin, 1979; Koegel & Koegel, 1995; Krantz & McClannahan, 1993; Leaf & McEachin, 1998; Lovaas, 1977, 2003; Maurice, Green, & Luce, 1996; Wolf, Risley, & Mees, 1964). The VB-MAPP brings together the procedures and teaching methodology of ABA and Skinner's analysis of verbal behavior in an effort to provide a behaviorally based language assessment program for all children with language delays.

About the VB-MAPP

There are five components of the VB-MAPP presented in this Guide. The first is the **VB-MAPP Milestones Assessment**, which is designed to provide a representative sample of a child's existing verbal and related skills. The assessment contains 170 measurable learning and language milestones that are sequenced and balanced across 3 developmental levels (0-18 months, 18-30 months, and 30-48 months). The skills assessed include mand, tact, echoic, intraverbal, listener, motor imitation, independent play, social and social play, visual perceptual and matching-to-sample, linguistic structure, group and classroom skills, and early academics. Included in the Milestones Assessment is the Early Echoic Skills Assessment (EESA) subtest developed by Barbara E. Esch, Ph.D., CCC-SLP, BCBA.

The second component is the **VB-MAPP Barriers Assessment**, which provides an assessment of 24 common learning and language acquisition barriers faced by children with autism or other developmental disabilities. The barriers include behavior problems, instructional control, defective mands, defective tacts, defective echoic, defective imitation, defective visual perception and matching-to-sample, defective listener skills, defective intraverbal, defective social skills, prompt dependency, scrolling, defective scanning, defective conditional discriminations, failure to generalize, weak motivators, response requirement weakens the motivators, reinforcer dependency, self-stimulation, defective articulation, obsessive-compulsive behavior, hyperactive behavior, failure to make eye contact, and sensory defensiveness. By identifying these barriers, the clinician can develop specific intervention strategies to help overcome these problems, which can lead to more effective learning.

The third component is the **VB-MAPP Transition Assessment**, which contains 18 assessment areas and can help to identify whether a child is making meaningful progress and has acquired the skills necessary for learning in a less restrictive educational environment. This assessment tool can provide a measurable way for a child's IEP team to make decisions and set priorities in order to meet the child's educational needs. The assessment is comprised of several summary measures from other parts of the VB-MAPP, as well as a variety of other skills that can affect transition. The assessment includes measures of the overall score on the VB-MAPP Milestones Assessment, the overall score on the VB-MAPP Barriers Assessment, negative behaviors, classroom routines and group skills, social skills, academic independence, generalization, variation of reinforcers, rate of skill acquisition, retention, natural environment learning, transfer skills, adaptability to change, spontaneity, independent play, general self-help, toileting skills, and eating skills.

The fourth component is the **VB-MAPP Task Analysis and Skills Tracking**, which provides a further breakdown of the skills, and serves as a more complete and ongoing learning and language skills curriculum guide. There are approximately 900 skills presented covering the 16 areas of the VB-MAPP. Once the Milestones have been assessed and the general skill level has been established, the task analysis can provide further information about a particular child. The skills identified on the task analysis contain a wide range of supporting components of the target areas. These skills may not be significant enough to identify as Milestones or IEP goals, but each of them play an important role in moving a child's repertoire closer to that of a typically developing child. They also provide parents and teachers with a variety of activities that can facilitate generalization, maintenance, spontaneity, retention, expansion, and the functional use of skills in a variety of educational and social contexts.

The task analysis of the learning and language skills contained in the VB-MAPP presents a new sequence of the verbal behavior curriculum that is developmentally balanced. Collectively, these four components of the VB-MAPP represent over 30 years of research, clinical work, field-testing, and revisions (Partington & Sundberg, 1998; Sundberg, 1980, 1983, 1987, 1990; Sundberg & Michael, 2001; Sundberg & Partington, 1998; Sundberg, Ray, Braam, Stafford, Rueber, & Braam, 1979).

The fifth and final component is the **VB-MAPP Placement and IEP Goals**, which correspond with the four assessments above. The placement guide provides specific direction for each of the 170 milestones in the Milestones Assessment as well as suggestions for IEP goals. The placement recommendations can help the program designer balance out an intervention program, and ensure that all the relevant parts of the necessary intervention are included.

The Importance of Assessment

The primary purpose of an assessment is to identify the baseline level of a child's skills, and to compare it to his' typically developing peers. If an intervention program is warranted, the data from the assessment should provide the essential information for determining the basic elements of an individualized educational program (IEP) and a language curriculum. The assessment should provide guidance in terms of 1) what skills need to be the focus of the intervention 2), what level of the skill should the intervention program begin with, 3) what barriers to learning and language acquisition need to be addressed (e.g., non-compliant behaviors, echolalia, or failure to generalize), 4) what type of augmentative communication, if any, might be best, 5) what specific teaching strategies might be the most effective for the child (e.g., discrete trial training, natural environment training), and 6) what type of educational setting might best meet the child's needs (e.g., in-home, 1:1 classroom, small group, or inclusion),

In order to obtain the maximum benefit from the VB-MAPP, it is essential that the assessor have a basic understanding of the principles of behavior analysis and Skinner's analysis of verbal behavior. It is beyond the scope of the current Guide to provide an overview of behavior analysis

General Administration Guidelines

The VB-MAPP Milestones Assessment is designed to identify the existing language and related skills for a child with autism or other developmental disabilities. The results of this assessment, along with the results of the VB-MAPP Barriers Assessment and the Transition Assessment, will suggest the short and long term focus of an intervention program. The current chapter contains the general instructions for conducting the VB-MAPP Milestones Assessment and for using the Task Analysis and Skills Tracking Forms.

Learning and Language Milestones

Milestones mark a significant point along the way to a greater destination. The common goal for a child with language delays is to achieve a level of linguistic competence commensurate with his typically developing peers. By identifying milestones, the focus of the intervention program can be sharper and the direction clearer. The IEP goals can match these milestones and help to avoid placing too much emphasis on minor skills, or steps that are not developmentally appropriate. The complete task analysis of each verbal operant and related skill is still relevant and valuable, but for measuring progress and setting goals, milestones are more meaningful and manageable, and provide a better overall curriculum guide.

The suggested milestones in the VB-MAPP Milestones Assessment were selected and sequenced by averaging the milestones from over fifty developmental charts obtained from a variety of sources. The milestones were then reclassified in terms of Skinner's analysis of verbal behavior (none of the existing developmental charts had mand or intraverbal sequences, although there were many examples of these skills). A variety of child development books were also consulted as guides, such as Bijou & Bear (1961, 1965, 1967), Brazelton and Sparrow (2006), Novak (1996), and Schlinger (1995). In addition, guidance was provided by the author's own experience in teaching college-level child development courses, supervising child development labs, conducting language research, and conducting language assessments for a wide variety of children over the past 35 years. The milestones were also frequently adjusted based on field-testing data and feedback from behavior analysts, speech pathologists, psychologists, occupational therapists, special education teachers, and parents of children with language delays.

Conducting the Assessment

This assessment tool contains 16 separate measurements of language and language-related skills. Most of the scales correspond with Skinner's classification of verbal operants (i.e., echoic, mand, tact, intraverbal). Standard linguistic measures such as mean length of utterance (MLU), vocabulary size, and the use of various syntactical and grammatical conventions (autoclitics) are also assessed, as well as a variety of listener skills and visual perception skills. In addition, there are measures of vocal output, play, and socialization skills. The 16 skill areas are presented in a developmental sequence that is presented in three levels. Level 1 contains 9 measures that are designed to approximately correspond with the learning and language skills demonstrated by a typically developing child between 0 and 18 months of age. Level 2 contains 12 measures that are

designed to approximately correspond with the learning and language skills demonstrated by a typically developing child between 18 and 30 months of age. Level 3 contains 13 measures that are designed to approximately correspond with the learning and language skills demonstrated by a typically developing child between 30 and 48 months of age. Some measures are present in all three levels, such as the mand, tact, and listener repertoires, while others are contained in only the relevant levels, such as vocal babbling for Level 1, intraverbal and listener responding by function, feature, and class (LRFFC) for Levels 2 and 3, and reading, writing, and math for Level 3.

The scores for the individual areas at each level are approximately balanced. That is, a score of 5 on the Level 1 mand is developmentally about the same as a score of 5 on the Level 1 tact, echoic, listener, etc. For example, a typically developing 18-month-old child is likely to emit about 10 different mands, be able to tact about 10 nonverbal stimuli, and understand about 20 words as a listener. This pattern is held throughout the VB-MAPP except for very early development (0-6 months) where play, social, and visual perceptual skills develop well before echoic, imitation, and tact skills. Thus, these early scales may seem a little out of balance. The attempt to match these scales to typical development should be viewed as an approximation, since all children develop at different rates and there is significant variation in language development, especially in intraverbal, social, and academic skills.

Once a child meets a specific milestone it is extremely important to not assume that training on that skill is finished. Rather, that skill should be moved on to a more advanced level. For example, if a child meets the Tact Milestone 2-7. (“Tacts 10 actions”), he still needs to learn more tacts of actions, generalize those tacts, incorporate them into natural environment activities, learn to use them with nouns, use them with peers, use them as mands and intraverbals, and eventually be able to read those words and act on what was read. The VB-MAPP Placement and IEP Goals (Chapters 8, 9, and 10) further describes the milestones and provides general curriculum direction upon meeting each of the milestones.

Age and Diagnosis of the Individual Tested

The VB-MAPP can be conducted with any language-delayed individual, regardless of age or specific diagnosis. While the focus of the program is clearly on younger children and children with autism or other developmental disabilities, the program can be modified to accommodate teenagers and adults, as well as those with other forms of language delays such as expressive and receptive language disorder, or those produced by traumatic brain injury (Sundberg, San Juan, Dawdy, & Arguelles, 1990). The examples, materials used, and specific test items should be adjusted to account for age-appropriateness, but this does not change the general progression of language acquisition, or the need to assess all the verbal operants and related skill areas.

Who Can Conduct the Assessment?

In order to conduct this language assessment it is essential that the tester have a basic understanding of behavior analysis, Skinner’s (1957) analysis of verbal behavior, and the components of linguistic structure. For example, in order to assess a child’s mand repertoire, the tester must understand what a mand is, and how the mand is related to motivating operations (MOs). Part of this understanding involves being able to distinguish between MOs that control a mand and discriminative stimuli (S^D s) that control echoic, tact, and intraverbal responses. Furthermore, being aware of the subtleties of the various types of prompts, and being able to determine if a response is controlled by inadvertent prompting, is essential for determining exactly what skills a child has mastered. And finally, knowledge about nouns, verbs, adjectives, sentence structure, grammatical conventions, etc., is also necessary for conducting an accurate assessment of a child’s language skills.

Milestones Scoring Instructions: Level 2

This chapter contains the specific instructions for administering Level 2 of the VB-MAPP Milestones Assessment. There are four new skills areas added to Level 2: Listener Responding by Function, Feature, and Class (LRFFC), Intraverbal, Classroom Routines and Group Skills, and Linguistic Structure. These areas were not included in Level 1 because most typically developing 18 month children have not acquired them yet. In addition, they should be avoided as part of the curriculum for a child with language delays whose scores fall primarily in Level 1. It is hoped that by presenting these skills in Level 2 it makes it clearer what skills to focus on for a child scoring in each of the levels. One skill area, Spontaneous Vocal Behavior, is not included in Level 2 because it is less of a target area for a child who has acquired echoic behavior. As a reminder, the four methods of assessing a specific skill are: 1) formal testing (T), 2) observation (O), 3) either observation or testing (E), and 4) a timed observation (TO).

MAND – LEVEL 2

MAND 6-M	Mands for 20 different missing items without prompts (except, e.g., <i>What do you need?</i>) (e.g., mands for paper when given a crayon). (E)
---------------------	---

- Objective:** To determine if a child mands for items when a part of a desired item is missing from a toy or desired activity.
- Materials:** Gather items that are reinforcing for a child that have multiple parts, such as a Play Doh set. The removal of one part of a toy will create motivation (MOs) for that part, when the entire toy is presented.
- Examples:** A child is playing with Play Doh and wants to make star shapes, but the star form has been removed. When asked, “What’s missing?” does the child ask for the missing star form? If the child likes juice and drinks it with a straw, give him a juice box without a straw and test if he mands for straw.
- 1 point score:** Give the child 1 point if he mands for 20 different missing items without prompts (other than verbal prompts such as, “What’s missing?” or “What do you need?”). It is important that the item that is missing be valuable to the child at that moment, (i.e., there must be a current MO at strength for the item).
- ½ point score:** Give the child ½ point if he mands for 10 different missing items without prompts.

Guidelines for Conducting the Transition Assessment

There are three general categories in the Transition Assessment (Table 7-1). The first category (numbers 1-6) covers the child's language skills, social skills, academic independence, and the existence of potential learning and language barriers, all of which will affect learning in a less restrictive environment. The second category (numbers 7-12) covers the child's specific leaning patterns, and the third category (numbers 13-18) covers self-help, spontaneity, and independence. Some of the areas assessed in the Transition Assessment are covered in other sections of the VB-MAPP, but they also fit within the context of transition (e.g., group skills, generalization). Thus, rather than refer the reader back and forth to these sections, they are repeated in this component of the VB-MAPP.

Table 7-1

VB-MAPP skills related to transition to a less restrictive educational environment.

Transition Category 1: VB-MAPP Scores and Academic Independence

Overall VB-MAPP Milestones score
 Overall VB-MAPP Barriers score
 VB-MAPP Barriers score on negative behaviors and instructional control
 VB-MAPP scores on classroom routines and group skills
 VB-MAPP scores on social behavior and social play
 Works independently on academic tasks

Transition Category 2: Learning Patterns

Generalization
 Variation of reinforcers
 Rate of skill acquisition
 Retention of new skills
 Natural environment learning
 Transfer to new verbal operants

Transition Category 3; Self-help, spontaneity, and self-direction

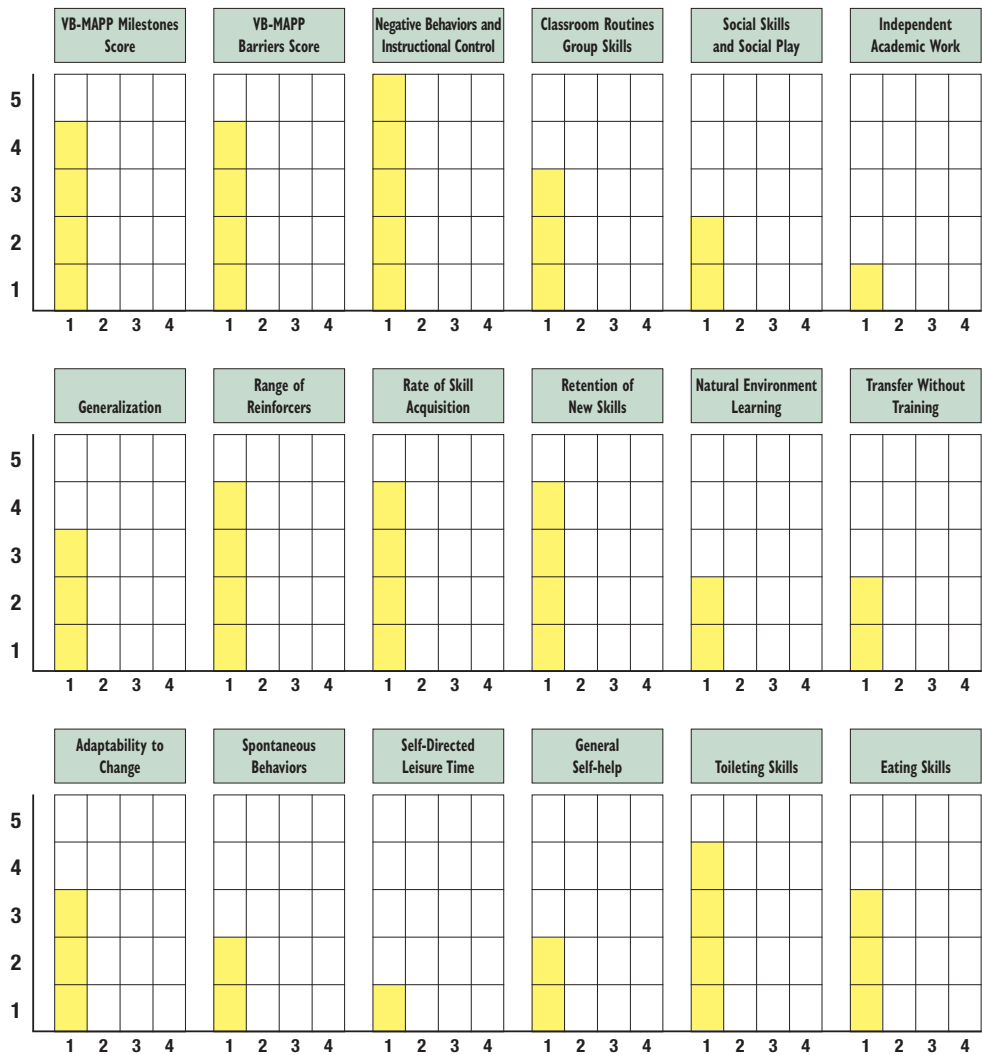
Adaptability to change
 Spontaneous behaviors
 Independent play skills
 General self-help skills
 Toileting skills
 Eating skills

Figure 7-1
A sample Transition Scoring Form.

VB-MAPP Transition Scoring Form

Child's name:	Isabella
Date of birth:	3-27-03
Age at testing:	1 5 yrs. 2 3 4

Key:	Score	Date	Color	Tester
1ST TEST:	53	5-03-08		MS
2ND TEST:				
3RD TEST:				
4TH TEST:				



Interpreting the Level 1 Assessment: Curriculum Placement and Writing IEP Goals

The results of the Milestones Assessment, the Barriers Assessment (Chapter 6), and the Transition Assessment (Chapter 7) provide a comprehensive overview of the child and can be used to design an individualized intervention program. These three assessments identify what skills a child needs to acquire, and what language and learning barriers need to be reduced or removed in order to move the child forward. The VB-MAPP Task Analysis can also provide further information about the many additional skills that can be incorporated into a daily program. Although the task analysis is not designed to be a formal assessment tool because of its size (approximately 900 skills), it can be used to identify skills that contribute to the development of a more complete intervention program.

The next three chapters will describe how to read a VB-MAPP Milestones Assessment profile, and how to determine placement within a verbal behavior intervention program. The basic components of a verbal behavior program can be found in any number of available texts and book chapters (e.g., Barbera, 2007; Greer & Ross, 2008; Schramm, 2006; Sundberg, 2007; Sundberg & Partington, 1998; Vargas, in press). The current chapter focuses on a child whose scores fall primarily in Level 1 of the Milestones Assessment. Following several general points about a Level 1 program, each milestone will be presented with specific recommendations for the next step after meeting that milestone.

How to Interpret the Overall VB-MAPP Milestones Assessment Results

The first step in reading a VB-MAPP Milestones profile is to identify the general level of the child. A child who scores primarily in the Level 1 area will require an intervention program quite different from a child whose scores fall primarily in Level 2 or Level 3. Many children may show specific strengths and weaknesses, and may score points in multiple levels. However, a child could be identified as primarily scoring in Level 1, Level 2, or Level 3. Since each level is designed to correspond with an approximate linguistic and developmental age, certain skills, targets, and teaching styles may be more effective with particular levels (e.g., intensive 1:1 teaching strategies versus natural environment and group teaching strategies). In addition, major programming issues may be of more concern at certain levels, such as whether to use augmentative communication for children scoring in Level 1, or the nature and degree of the integration program for children scoring in Level 2, or the specific focus of an academic program for children scoring in Level 3.

The second step in reading a VB-MAPP profile is to analyze the scores in each of the relevant skill areas and their relation to the child's performance in other areas. The assessor should look at the strengths and weaknesses, and determine if there are particular strengths in one area that can be of special benefit to a child, or weaknesses that need to be addressed. For example, if a child with limited language skills demonstrates a strong motor imitation repertoire, but has relatively weak echoic skills, a sign language program may provide the child with a head start for language

SOCIAL 8-M	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).
-----------------------	--

If the target child is now spontaneously engaging in cooperative social play that involves imitation and echoic behavior, as well as manding and perhaps some tacting, there can be an increased focus on responding to peer mands, turn taking, sharing, and beginning intraverbal behavior. Also, aspects of creative and imaginative play can be introduced allowing the child to move beyond concrete play. The child's increased ability to engage in social play with fewer adult prompts may indicate a readiness for "play dates" that may provide social interaction with peers in a looser and more natural environment. More complex social skills may still need to be established in a more structured environment.

SOCIAL 9-M	Spontaneously responds to the mands from peers 5 times (e.g., <i>Pull me in the wagon. I want the train.</i>).
-----------------------	---

Once a child is manding to a peer and responding to the peer's mands, other more complex verbal and nonverbal interactions may naturally develop. Much of what is called "friendship" involves the delivery of reinforcers (including attention) and the removal of aversives. Manding can do this. Once a peer becomes a conditioned reinforcer, imitating his behavior becomes fun for the child and new behaviors are learned this way. Wanting to be with other children can be a fragile process, and even many typically developing children have trouble with successful social interaction because of the many complicated variables involved (i.e., the complex verbal, nonverbal, and listener skills that form the basis of effective social interaction). If a child is successful at manding for reinforcers from peers, this increases the probability that the target child will "invite" the peer to join an activity, hang out with him, or cooperate in some other social game or interaction. Specific teaching procedures to prompt and reinforce a target child to include other children in activities can be valuable in starting this important social process.

SOCIAL 10-M	Spontaneously mands to peers to participate in games, social play, etc., 2 times (e.g., <i>Come on you guys. Let's dig a hole.</i>).
------------------------	---

This milestone represents a significant step for most children with autism or other developmental disabilities. It demonstrates that the necessary motivating variables for social interaction are operative, and are effective in evoking behaviors that can lead to further emotional and social development. Verbal behavior is an essential component of social behavior, and any opportunity to encourage children to verbally interact during social play should be taken. Once children are imitating and manding to each other, additional types of verbal interactions can be developed through social play. Narrating play activities is a type of tacting, but it may have mand and intraverbal elements as well; it is thus a complicated form of behavior that will only begin to emerge at this point, but should nevertheless be encouraged. For example, a child says, "I'm shooting webs from my hand like Spiderman" (a type of tact, but also a mand for attention). The second child may respond "Me too. Look out!" (an intraverbal and a mand). Thus, this forms the beginning of verbal exchanges on a single topic, and represents a very healthy type of social behavior. The more time that the target child spends in verbal and nonverbal interaction with peers, the higher the probability that social behavior will become more comfortable and productive for the child. A focus on cooperation to achieve a result, sharing responsibilities, turn taking, and verbal interactions using mands for information and intraverbal responses between children, will be an important component of the program at this point.

Suggested IEP Goals for Social Behavior and Social Play: Level 2 (select only 1 or 2 goals and modify them as appropriate for the individual child).

- The child will spontaneously mand to peers at least 25 times per day.
- The child will spontaneously respond to the mands from peers 25 times in a single day.
- The child will engage in cooperative, constructive, or physical play activities with peers lasting at least 5 minutes.
- The child will spontaneously mand to peers using questions, directions, instructions, etc. (e.g., “What’s that?” “Where is your lunch?” “Come on, get your bike”) at least an average of 25 times per day.
- The child will take turns and share reinforcers with peers without prompts at least 5 times in a day.

MOTOR IMITATION – LEVEL 2

IMITATION 6-M	Imitates 10 actions that require selecting a specific object from an array (e.g., selects a drumstick from an array also containing a horn and a bell, and imitates an adult’s drumming).
--------------------------	--

A child who scores at this level is learning to imitate the behavior of others, but this skill may be under the multiple control of adult verbal prompts such as “do this.” The formal teaching of imitation skills can have several valuable payoffs for a child. For example, imitation helps to teach a child to attend to the behavior of others (a major deficit for many children with autism), and can become a powerful vehicle for teaching new behaviors such as play, self-help, group responding, general compliance, and social skills. Imitation can also strengthen fine and gross motor skills, as well as promote physical fitness. The goal at this point is to encourage spontaneous imitation and imitation of others in the child’s natural play and social (group) contexts. In addition, adults should focus on increasing the number of different imitative behaviors, as well as teaching more complex imitation with objects (e.g., building a block house, tooth brushing, putting on a shoe), and functional imitation in the child’s day-to-day natural environment. Motor imitation along with vocal imitation (echoic) should be encouraged as well (e.g., pretending to be sleeping and snoring, pretending to be driving a car and saying “beep-beep”). A variety of additional activities for this level and the upcoming levels can be found in the VB-MAPP Imitation Task Analysis.

IMITATION 7-M	Imitates 20 different fine motor actions when prompted, <i>Do this</i> (e.g., wiggling fingers, pinching, making a fist, making a butterfly).
--------------------------	--

The ability to imitate small motor movements will help set the stage for the development of a number of skills such as self-help, eating, drawing, writing, connecting things, assembling things, etc. Eventually, imitation begins to occur spontaneously and frequently, and as it does, it should become less of a formal target of the daily intervention program (as in intensive discrete trial training). For many children, acting like others becomes automatically reinforcing. In fact, the establishment of automatic reinforcement is one of the primary goals in developing both motor and vocal imitation. The reinforcers that maintain echoic and imitative behavior should gradually shift from contrived reinforcers to natural and automatic reinforcers, like in typical child development. Initially children may need to be taught to imitate others, but eventually children imitate others

VB-MAPP

Verbal Behavior Milestones Assessment and Placement Program

The VB-MAPP provides educators and parents with an effective means of assessing the learning, language, and social skills of children with autism or other developmental disabilities. Based on B.F. Skinner's analysis of language, the principles of Behavior Analysis, and developmental milestones, the VB-MAPP offers a comprehensive and well-grounded assessment approach that can help identify barriers that impede learning and language and assist in providing direction in developing an individualized intervention program. Each VB-MAPP set contains an Individual Protocol and an Instruction Guide.

Features:

- **Milestones Assessment.** Focuses on 170 milestones that serve as the foundation of language, learning, and social development.
 - Sequenced across three developmental levels (0-18 months, 18-30 months, and 30-48 months)
 - Includes objective measurement criteria for treatment or research outcomes
 - Echoic assessment by Barbara Esch, Ph.D., BCBA, CCC-SLP
 - Color-coded for ease of use
- **Barriers Assessment.** Focuses on 24 barriers that may impede a child's acquisition of new skills.
- **Transition Assessment.** A summary assessment of 18 areas that serves as a guide for planning the child's educational needs.
- **Task Analysis and Skills Tracking.** A checklist of approximately 900 skills that support the milestones and can be used for daily curriculum activities and skill tracking.
- **VB-MAPP Instruction Guide.** Provides the scoring criteria, examples, and a further explanation for each milestone, barrier, and transition measure, as well as the general scoring instructions and tips for the tester. The guide also contains a basic overview of Skinner's analysis of verbal behavior and how to use it for language assessment.
- **Placement and IEP Goals.** Helps to interpret the assessment results for each of the 170 milestones, establish intervention and curriculum priorities, and develop IEP goals that are measurable, meaningful, and manageable.

MARK L. SUNDBERG, Ph.D., BCBA is a licensed psychologist with 35 years of experience working with children and adults with autism or other types of developmental disabilities. He earned his Ph.D. from Western Michigan University (1980) under the direction of Dr. Jack Michael. He is the co-author of the Assessment of Basic Language and Learning Skills (The ABLLS), and Teaching Language to Children with Autism or Other Developmental Disabilities and the author of 45 research or theoretical publications. He is the founder and former editor of the journal The Analysis of Verbal Behavior. His awards include "The Distinguished Psychology Department Alumnus Award" from Western Michigan University.



AVB Press
Advancing the world of behavior

4425-C Treat Blvd., Suite #210
Concord, CA 94521
www.avbpress.com



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