



# ABA & PBS

Everything Under the Sun

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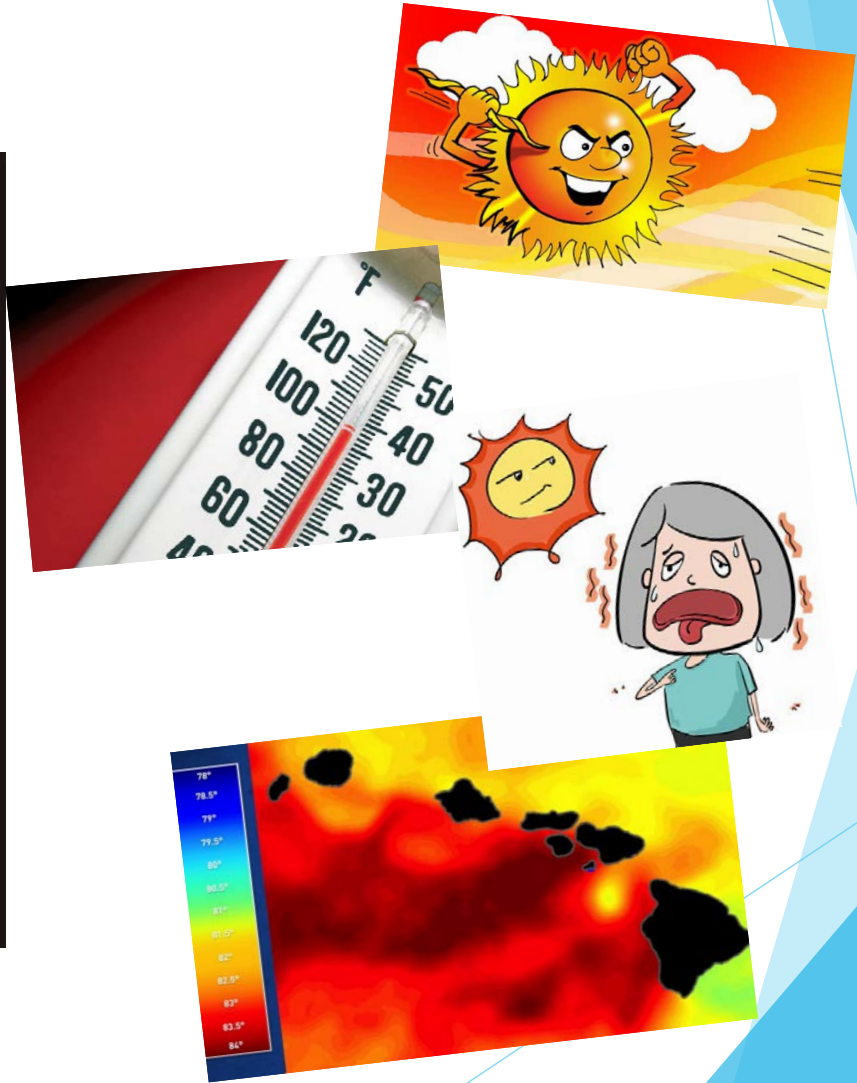
# 2020 SPIN Conference

March



October





# Today's Agenda

1. Function-based treatment for behavior
2. Function-based treatment for behavior
3. Function-based treatment for behavior
4. Function-based treatment for behavior
5. Function-based treatment for behavior
6. Function-based treatment for behavior
7. Function-based treatment for behavior

and...

- ▶ *Relationship between 'positive behavior supports' and 'applied behavior analysis'*
- ▶ *why, when, how*
- ▶ *role of parents and teachers in helping to implement a behavior support plan*
- ▶ *functional behavioral assessment (FBAs)*
- ▶ *Evidence-based strategies to help improve a child's behavior at home and in the classroom*
- ▶ *monitor own behavior*

## What is ABA?

- ▶ Skills are broken down into **measurable units** and systematically taught through repeated opportunities
- ▶ **Individualized** teaching methodologies
- ▶ **Reinforcement** is an essential component
- ▶ **Visual presentation** of data is vital to evaluation/modification
- ▶ Problem behaviors are **systematically assessed and treated**

# Official Definition

(Baer, Wolf & Risely, 1967)


- ▶ Must be **applied**; targeted bx should have some social significance
- ▶ Must be **behavioral**; environment/events are accurately recorded
- ▶ Must be **analytic**, clear data shows intervention has changed bx


## Top 10

“additional things to know about behavior”

1. Positive behavior support (PBS) is a form of applied behavior analysis (ABA)
2. In ABA “*the pigeon is always right*”
3. ABA has two purposes: a) *Reduce* problem behaviors & b) *Build* adaptive behaviors



- 
4. Problem behaviors serve a *purpose*
  5. *Problem behaviors are learned* (like any other behavior)
  6. If problem behaviors are persisting, they are being *reinforced*
  7. Improving problem behavior happens by understanding the effect problem behavior has on the environment

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8. End goal: increased inclusion into mainstream, independence, better quality of life
  9. No problem kids, rather contexts that support the problem behavior
  10. If a child can't learn the way we teach, we should teach the way they learn

- ▶ Remember to see the person first (and not disorders, disabilities, conditions, etc.)
- ▶ This is just another way the brain can work

## NEURODIVERSITY

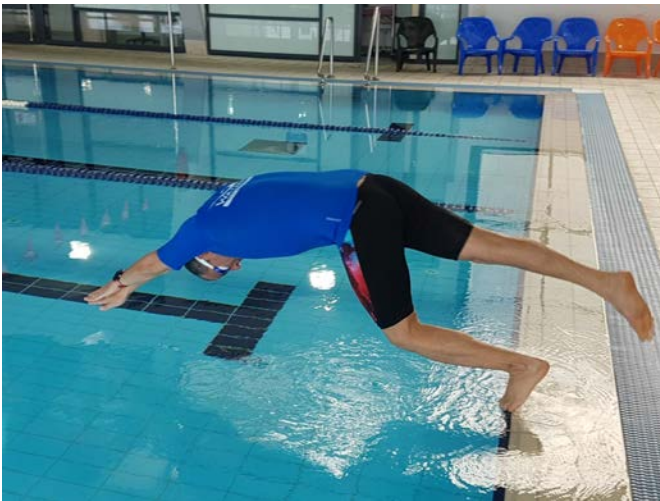
*the range of differences in individual brain function and behavioral traits*

We want individuals who may be *different*,  
to not feel *different*

## Basic Client Rights

- ▶ An individual has a right to a **therapeutic environment**
- ▶ Has a right to services whose overriding goal is **personal welfare**
- ▶ Has a right to treatment by a **competent therapist**
- ▶ Has a right to programs that **teach functional skills**
- ▶ Has a right to **behavioral assessment and ongoing evaluation**
- ▶ Has a right to the **most effective treatment procedures** available

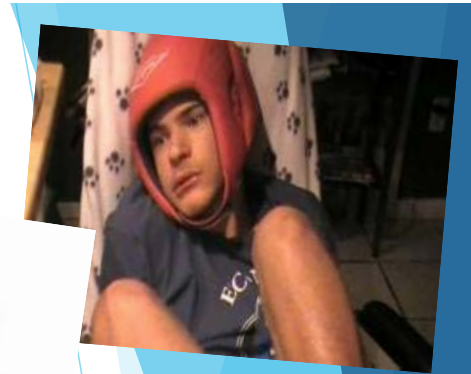
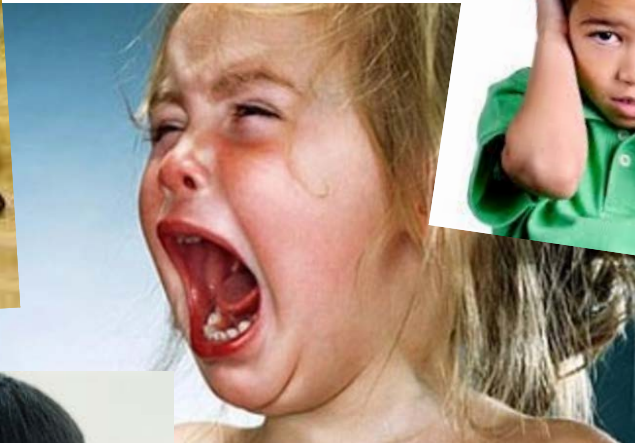
Let's dive & jump in.....



## Two types of Behavior

- Maladaptive
- Adaptive

# What does maladaptive looks like?



## Behavior Excesses

- ▶ Tantrums
- ▶ Self-stimulatory behaviors
- ▶ Restrictive
- ▶ Self-injury
- ▶ Repetitive

## Behavior Deficits

- ▶ Language skills
- ▶ Social skills
- ▶ Play skills
- ▶ Self-help skills
- ▶ Attention skills

# What does adaptive looks like?





## *Why, When, How* is behavior bad or good?

- ▶ **Why:** Because it works for the individual
- ▶ **When:** Anytime it has been reinforced
- ▶ **How:** based on a function of our current environment, history, and genetics

## Functions of Behavior

**S**ensory - taps the pleasure zone in the brain

**E**scape - trying to escape or avoid something

**A**ttention - when a student is trying to get your attention or that of his/her peer's

**T**angible - can be a toy/object or power/control

STRATEGIES

STRATEGIES

STRATEGIES

STRATEGIES

STRATEGIES

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STRATEGIES

## Attention Seeking Behavior



## Evidence-based strategies (attention)

- Planned ignoring
- Make attention a reinforcer for behavior you want to see
- Teach appropriate ways to get attention
- Use attention to reinforce others doing the right thing



This is the part that you ignore.



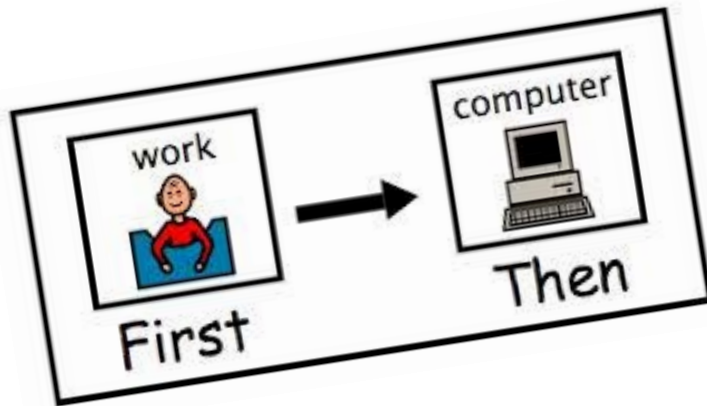
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## Escape Behavior



## Evidence-based strategies (escape)

- Continue to repeat the demand
- Teach appropriate requesting
- Reduce the demand following cooperation (negative reinforcement)
- First/Then Rules



# Tangible Seeking Behavior





## Evidence-based strategies (tangible)

- Use the tangible as a reinforcer for appropriate behavior
- Reinforce others using the preferred tangible
- Heavy emphasis on choice



# Don't Forget

- Try to be as consistent as possible
- Offer choices whenever possible
- Use timers and other visual prompts
- Stay calm at all times
- If you make a request, follow through
- Pay attention to the behaviors you want, ignore the ones you don't want

# Internally Motivated Behavior



**stimming**

- Ticking
- Clapping hands
- Humming
- Lining up and stacking objects
- Rolling eyes
- Grinding teeth
- squinting
- swinging
- Spinning**
- Flapping hands
- Dropping things to hear their sound
- Licking, chewing and sucking on objects
- rocking**
- Snapping fingers
- wiggling fingers
- Staring at moving objects wheels/trains

The list goes on and on .....  
but this is a start to what to look for in stimming in your own child.



## Definition

- ▶ Behavior that is reinforced by its own sensory consequences

## Types

- ▶ Stereotypy: restricted, repetitive, maladaptive patterns of behavior
- ▶ Echolalia: immediate or delayed repetition of an utterance made by another person or source

## Motivation

- ▶ Sensory Stimulation
- ▶ Self-Calming

## What Does it Look Like

- ▶ Visual: staring at lights, repetitive blinking, moving fingers in front of the eyes, hand-flapping, moving a train along a track in a back and forth movement
- ▶ Auditory: tapping ears, snapping fingers, making vocal sounds, repeating scenes from TV
- ▶ Tactile: rubbing the skin with one's hands or with another object, scratching
- ▶ Vestibular: rocking front to back, rocking side-to-side
- ▶ Taste: placing body parts or objects in one's mouth, licking objects
- ▶ Smell: smelling objects, sniffing people

## Concerns


- ▶ Interferes with Attending and Learning
- ▶ Challenging to treat due to both its persistence and its tendency to occur in the absence of adult supervision
- ▶ Solitary activity
- ▶ Verbal reminders to stop are often not enough

## Evidence-based strategies (sensory)

- ▶ Medication
- ▶ Vigorous exercise
- ▶ Block the behavior
- ▶ Reinforce the absence of the behavior
- ▶ Replacement behavior
- ▶ Self-Monitoring
- ▶ Use it as a reinforcer



# Role of parents and teachers in helping to implement a behavior support plan

1. Self-Care 
2. Get together with your BCBA, Teacher, specialist, therapist, etc.
  - ▶ Team effort in plan development, open communication, & frequent and relevant feedback
  - ▶ Difficult to identify the variables that predict and maintain problem behaviors
  - ▶ **Example:** Multiple Functions may be in play



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# Deciding What behaviors to teach

*There are over **2 MILLION** links to various treatment for ASD and there is no guarantee that what you click on is evidence-based.*

## Functional Behavior Assessment (FBAs)

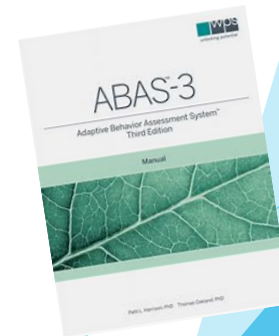
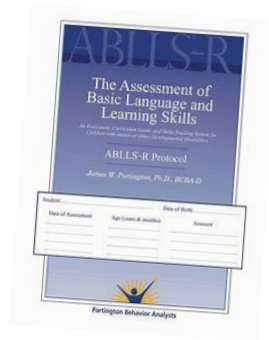
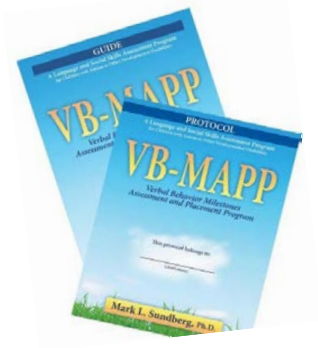
- ▶ A comprehensive assessment designed to obtain information about the **functions a behavior**
- ▶ Results in the formation of hypotheses about the relations among specific types of **environmental events and behaviors**
- ▶ Used to develop an effective **behavior intervention plan**

## 3 FBA methods

- ▶ **Indirect** Obtaining information from persons who are familiar with the target individual (e.g. Interviews, Checklists, Rating scales, & Questionnaires)
- ▶ **Descriptive** Direct observation under naturally occurring conditions (e.g. Open-Ended ABC, Structured ABC, & Scatterplots)
- ▶ **Experimental** Systematically evaluation with the following Test conditions attention, escape, tangible, Alone (automatic), & Play (control)

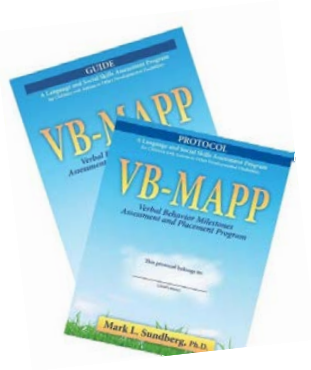
# Evidence-Based Assessment

- ▶ Norm-referenced: Vineland, Bayley, ABAS
- ▶ Criterion-referenced assessment: VB-MAPP, ABLLS, PEAK

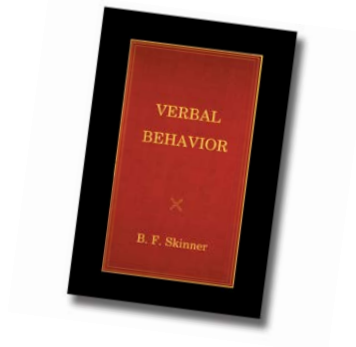


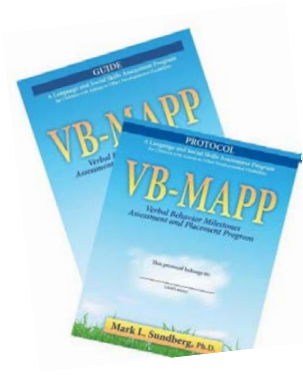
# VB-MAPP

## What is it?



- ▶ **VB-MAPP**; Verbal Behavior Milestones Assessment and Placement Program (Sundberg, 2008)
- ▶ For all children with language delays
- ▶ A developmental criterion referenced assessment and based on Skinner's Verbal Behavior

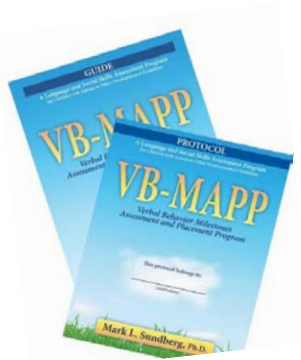




## VB-MAPP

# What is the purpose?

- ▶ Identify a baseline level of skills compared to typically developing peers
- ▶ Identify what skills to teach
- ▶ Identify the appropriate level of instruction for each skill
- ▶ Create a comprehensive treatment program



## VB-MAPP

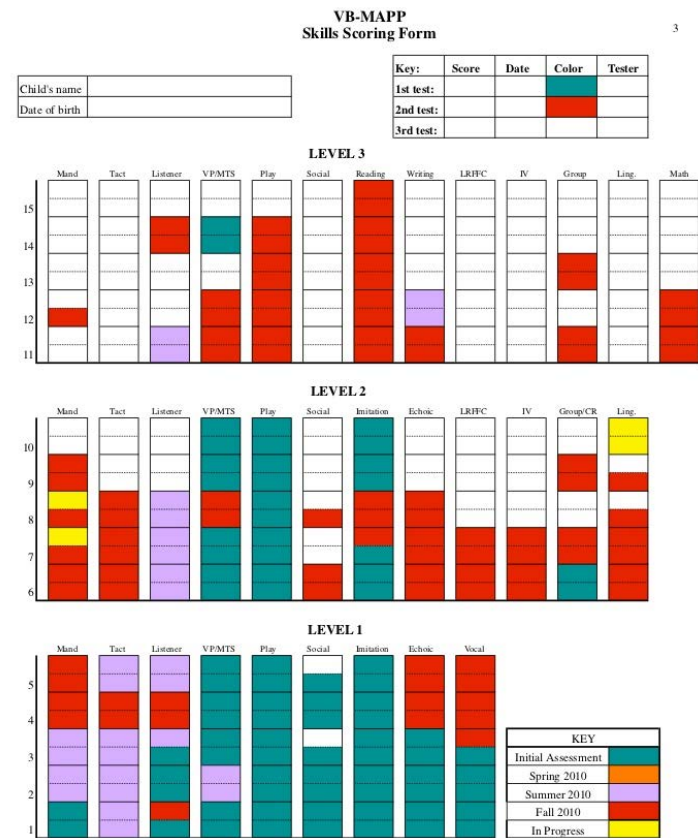
# How does it differ?

- ▶ Traditional language programs focus on the formal properties of language
  - ▶ Nouns/Verbs
  - ▶ MLU
- ▶ VB focuses on the formal properties and the functional properties (the why)
  - ▶ Context
  - ▶ Antecedent
  - ▶ Consequences

A word cloud containing various VB-MAPP categories. The words are arranged in a roughly rectangular shape and include: Autoclitic, Mimetic, Mand, Tact, Echoic, Duplic, Speaker, Intraverbal, Listener, Codic, Textual, and Transcription. The words 'Duplic', 'Codic', and 'Textual' are highlighted with black backgrounds.

# Test Structure

- ▶ 3 Developmental Levels
- ▶ 16 Skill Areas
- ▶ 170 Measurable Milestones







## Mand

### “I WANT A COOKIE”

- ▶ Speaker asks for what he needs/wants
- ▶ Motivation and Reinforcement are key
- ▶ Not always vocal
- ▶ First type of communication
- ▶ Only form that directly benefits the speaker
- ▶ Critical to all aspects of human behavior

# Tact

“A CHOCOLATE CHIP COOKIE”



- ▶ Naming stimuli (things) in the immediate environment
- ▶ “Expressive Labeling”
- ▶ Range from very simplistic (fire truck) to complex (the red fire truck under the table)

Just because an individual can tact, does not mean that they can mand or vice versa

# Listener Responding (LR)

MOM SAYS “Find the Cookie”

**CHILD BRINGS THE MOM A COOKIE**

- ▶ Responding to the words of others through a physical response
- ▶ Includes following simple directions and “receptive identification”



# Visual Perceptual Skills

- ▶ Matching to Sample
- ▶ Puzzle Completion
- ▶ Block Design
- ▶ Patterns
- ▶ Sequences



# Intraverbal

WHAT'S YOUR FAVORITE FOOD?  
"Cookie"

- ▶ Talking about things that are not present
- ▶ Verbally responding to the words of someone else
- ▶ A typical adult emits thousands of intraverbals every day
- ▶ Many children with language delays fail to develop a functioning intraverbal repertoire
- ▶ Do not assume that intraverbals will simply develop as mands and tacts develop

What Evidence-Based Strategies are there to improving your child's behavior in the home or classroom?

**ANTECEDENT**

**RESPONSIVE**

## ANTECEDENT STRATEGIES

*(Stimulus Control/Motivation)*

- ▶ Premack principle (Grandma's Law)
- ▶ Increase pairing
- ▶ Provide higher rate of interspersing mastered skills with target skills
- ▶ Decrease the response effort (i.e. further reduce errors)
- ▶ Modify prompt procedure/prompt fade procedure
- ▶ Change the pace of instruction
- ▶ Decrease/increase session time
- ▶ Conduct a SR+ assessment
- ▶ Increase the saliency of SR+
- ▶ Change the field of stimuli
- ▶ Change the physical environment
- ▶ Teach pre-requisite skills
- ▶ Decrease the number of goals/objective
- ▶ Build MO by deprivation of specific reinforcers
- ▶ Change teaching procedure

## RESPONSIVE STRATEGIES

*(Reinforcement/Extinction/Punishment)*

- ▶ Provide more valuable reinforcer
- ▶ Provide higher rate of reinforcement (lower variable ratio)
- ▶ Reinforce immediately
- ▶ Provide greater magnitude of reinforcement
- ▶ Better use of extinction
- ▶ Improved implementation of differential reinforcement
- ▶ Behavior modification (i.e. hand over hand, response block, and re-direction)

# Professional Tips for Compliance

(Hanley, 2014)

- ▶ **Decrease the amount of instructions per day**
- ▶ **Eliminate instructions from play-based interactions**
- ▶ **Only provide instructions with which you can follow through**
- ▶ **Provide many choices to give the child some degree of control**
- ▶ **Always call the child's name prior to an instruction,**
- ▶ **Deliver clear, concise, and direct instructions I**
- ▶ **Deliver instructions using 3-step prompting (tell, show, help)**
- ▶ **Always follow through with that which was instructed**



# Professional Tips for Compliance

(Lansbury, 2014)

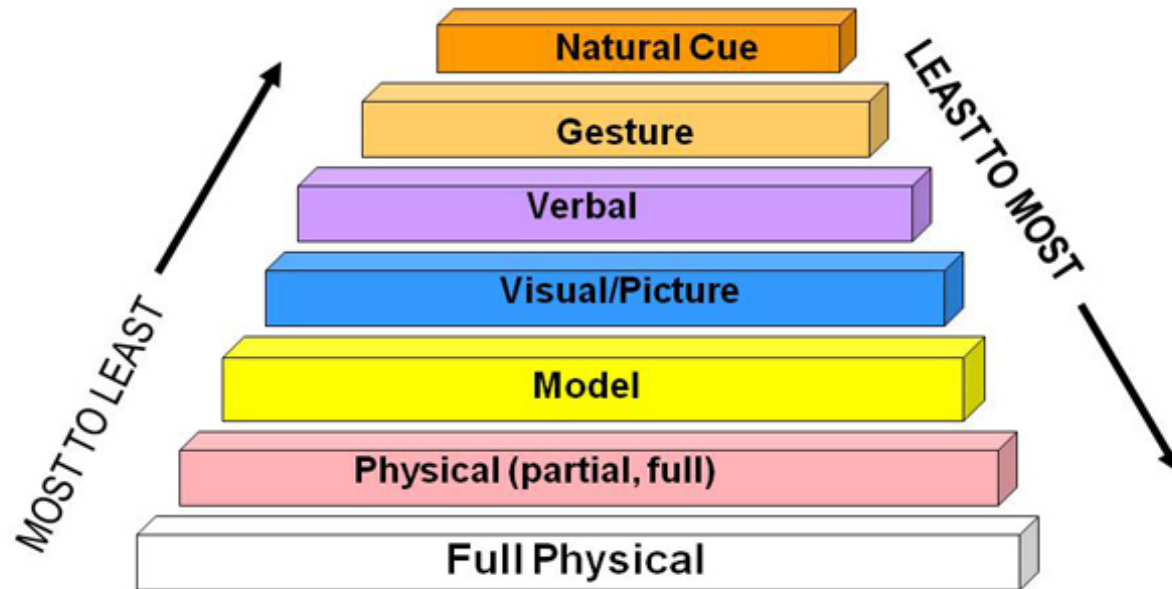
- ▶ **Speak in first person** for the most honest, direct communication
- ▶ **Lectures, emotional reactions, scolding and punishments do not give our child the clarity they need & can create guilt and shame**
- ▶ **We learn discipline best when we experience natural consequences for behavior**
- ▶ **React immediately.** Once the moment has passed, it is too late. Wait for the next one
- ▶ **Don't discipline for crying,** a child needs the freedom to safely express their feelings without our judgment

## Time and Place

- ▶ Often telling a child to stop will only result in a decrease when you are around and a possible increase when they are alone
- ▶ It is unlikely to go away on its own
- ▶ The more you work on it now, the less you'll have to do later

# Prompts

## Prompting Hierarchy



## Discrimination Training

- ▶ Teaching an individual to differentiate between something specific and other things
- ▶ Teaching a child to select their name card from all the other name cards on the blackboard
- ▶ Example: Tyler selects any name that starts with a T instead of his specific name (Stimulus Over selectivity)

# Shaping

- ▶ Differential reinforcement of successive approximations of a specified target behavior.
- ▶ The form of an existing response is gradually changed across successive trials towards a desired target behavior by reinforcing exact segments of behavior.
- ▶ Example: greetings

# Chaining

- ▶ Instructional procedure that reinforces individual responses in a sequence, forming a complex behavior.
- ▶ A task analysis is a vital component to chaining
- ▶ Different types of Chaining
  - ▶ Forward
  - ▶ Backward
  - ▶ Total Task



## Task Analysis

- ▶ Determine what task will be taught
- ▶ Ensure that the individual has the necessary prerequisite skills
- ▶ Determine the necessary materials
- ▶ List all components of the task





# Forward Chaining

- ▶ Steps are taught in their naturally occurring forward order
- ▶ The first step in the skill is taught while the remaining steps are fully prompted
- ▶ New steps are added when the individual becomes fully fluent in the first step
- ▶ Cumulative performance of all previous steps in the correct order are required.

## Backward Chaining

- ▶ The components of the chain are acquired in reverse order with the last component taught first.
- ▶ The steps in the skill are fully prompted except for the current step
- ▶ New steps are added as the individual becomes fluent in the target step
- ▶ Appealing because reinforcement is delivered at the end of the task making it very natural

## Total Task Presentation

- ▶ The individual performs all the steps in the task analysis during every single session.
- ▶ Trainer assistance is provided with any step the person is unable to perform independently,
- ▶ The chain is trained until the individual independently performs the entire sequence.
- ▶ Ideal when most of the steps are mastered, but not in the specified order

## Social Stories

- ▶ Simple description of an everyday event
- ▶ Written in first person/present tense
- ▶ Rehearse story ahead of time as a method of priming
- ▶ Preparation for a novel event, a new social situation or a new skill







I enjoy playing with other children



I can ask other children: "You want to play with me?"



If they say "Yes", I can go and play with them and have fun



If they say "No", it's OK



I can play with other children or play by myself

## Video Modeling

- ▶ Video clips of **children** engaging in a task or a series of tasks
- ▶ Emphasizes visual stimuli
- ▶ Can increase attention to task
- ▶ May reduce reliance on others

## Video Self-Modeling

- ▶ Video clips of **individual** engaging in a task or a series of tasks

## Behavioral Contracts

- ▶ Describes a rule: specified behavior will be followed by a specified consequence.
- ▶ Specifies how 2 or more people will behave toward each other.
- ▶ Makes one person's behavior dependent on the other person's behavior



## Self- Contract

- ▶ A contract a person makes with himself, incorporating a self-selected task and reward as well as personal monitoring of task completion and self-delivery of the rewards



# Behavior Contract

Date: \_\_\_\_\_

I promise to work on these behavior expectations: \_\_\_\_\_  
\_\_\_\_\_

Choose 3 of the following or create your own.

- |  |   |  |
|--|---|--|
| ★ I will avoid whining   | ★ I will go to bed when asked   | ★ I will complete my homework on time                            |
| ★ I will use good manners                                      | ★ I will not interrupt  | ★ I will not hit   |
| ★ I will respect the property and privacy of others            | ★ I will be sensitive to the feelings of others                                     | ★ I will get ready for school on time                            |
| ★ I will avoid places and objects that are unsafe or dangerous | ★ I will present a positive attitude instead of being negative, pessimistic or rude | ★ I will take responsibility for my actions and not blame others |
| ★ I will pick up after myself                                  | ★ I will not tattle   | ★ I will keep good hygiene                                       |
| ★ I will eat healthy foods                                     | ★ I will do my chores   | ★ I will _____   |
| ★ I will _____   | ★ I will _____  |  |

Reward for meeting these expectations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Consequence for not meeting these expectations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Child Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Student Behavior Contract

for

\_\_\_\_\_

Student's Name

All concerned parties, whose signatures are present on this document below, are in agreement with and will follow the rules, consequences, and privileges of this Student Behavior Contract as listed herein.

1. (List rule) \_\_\_\_\_

Consequence: \_\_\_\_\_

Privilege: \_\_\_\_\_

2. (List rule) \_\_\_\_\_

Consequence: \_\_\_\_\_

Privilege: \_\_\_\_\_

3. (List rule) \_\_\_\_\_

Consequence: \_\_\_\_\_

Privilege: \_\_\_\_\_

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Teacher's Signature

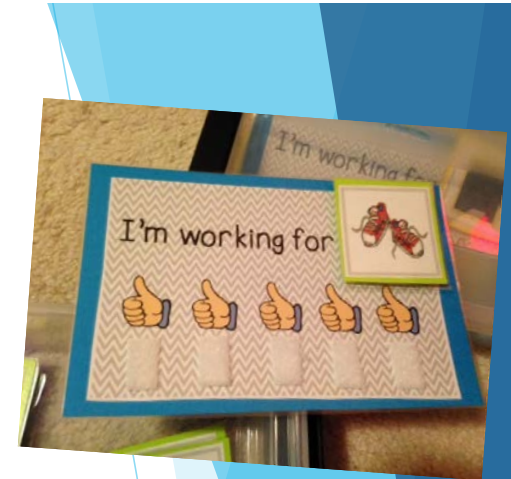
\_\_\_\_\_  
Parent's Signature

\_\_\_\_\_  
Parent's Signature

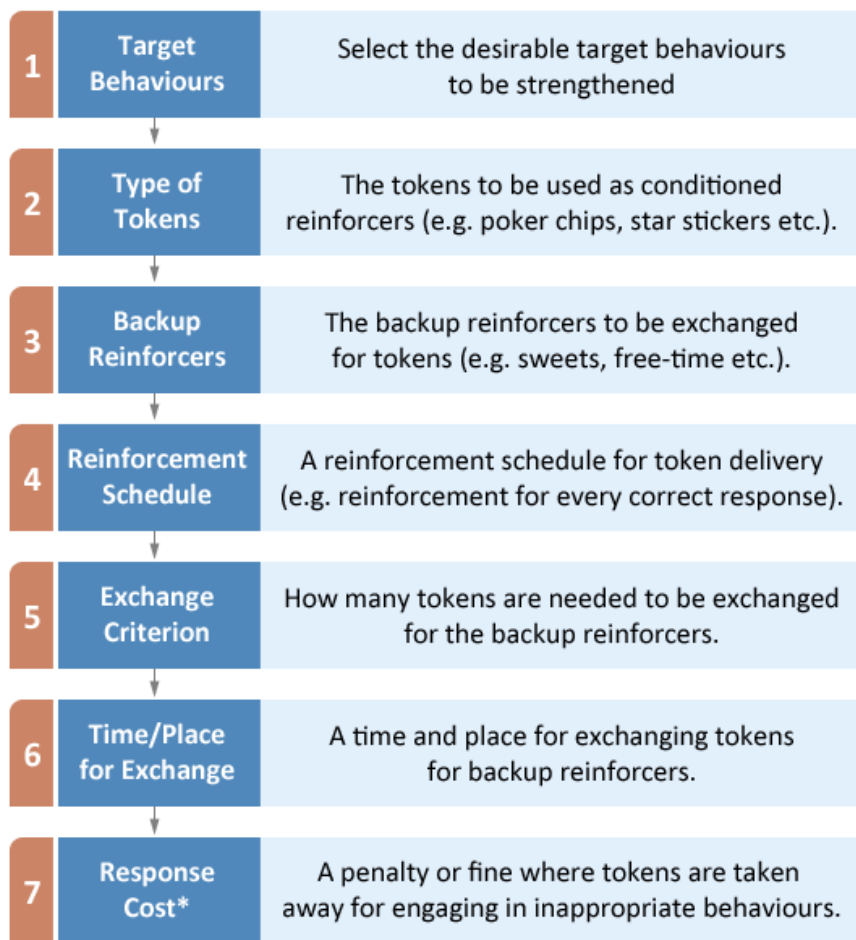


## Token Economy

- ▶ Definition: Behavior change system consisting of 3 major components:
  - ▶ A specified list of target behaviors
  - ▶ Tokens or points that participants receive for engaging in the target behaviors
  - ▶ A menu of backup reinforcer items
    - ▶ preferred items, activities, or privileges
- ▶ Can also include a Level system
  - ▶ Fosters self-management



## Seven Elements of a Token Economy (Miltenberger, 2008)



\*A response cost is not always used. See Cooper, Heron, and Heward (2007, p. 370)

# Self-Management Strategies

- ▶ Definition: Personal application of behavior change tactics that produces a desired change in behavior.
- ▶ Can help a person:
  - ▶ Be more effective and efficient in his daily life
  - ▶ Replace bad habits with good ones
  - ▶ Accomplish difficult tasks
  - ▶ Achieve personal goals

## Noncontingent Reinforcement

- ▶ Is the use of positive reinforcement that is **not related to the occurrence of a target behavior**
- ▶ Reinforcement is delivered on a **fixed time schedule** independent of whether the individual exhibits the target behavior during the interval
- ▶ **Example:** sitting the students who has attention-maintained behavior in the front of the class

# Differential Reinforcement

- ▶ Systematically reinforcing a **predefined behavior** and **withholding reinforcement** when the behavior is not exhibited.
- ▶ A teacher cannot stand calling out. She calls on students who have their hand raised and are sitting quietly. In addition, she delivers verbal praise and classroom points to those who raise their hand. She ignores students who call out.

## Types of Differential Reinforcement

- ▶ Other Behavior (DRO): delivering reinforcement whenever the target behavior has not occurred during a set time interval.
- ▶ Alternative Behavior (DRA): Reinforcement is presented contingent on occurrences of a desirable alternative to the target behavior.
- ▶ Incompatible Behavior (DRI): Reinforcement is presented contingent on the occurrence of a behavior that is physically incompatible with the target behavior

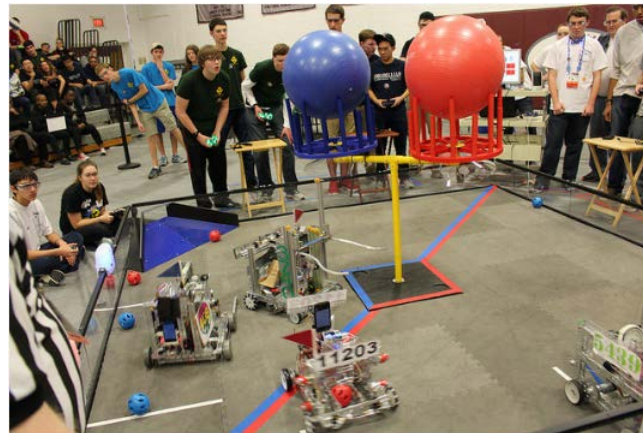


Putting  
it all  
Together





# Generalization & Maintenance



# Generalization

- ▶ Occurrence of the behavior in the presence of ALL relevant stimuli outside of the training situation
- ▶ The more similar the stimuli, the more likely that generalization will occur

## Types of Generalization

- ▶ Settings: Taught to wash hands at his house, but successfully does it at school too
- ▶ People: Taught to say hello to his teacher, but also greets his mother at home
- ▶ Stimuli: Taught to build a tower with blocks, but will also do it with Legos
- ▶ Instructions: Taught to touch his nose, but will engage in the same response when told to find his nose

# Maintenance

- ▶ Continued performance of learned behavior after contingencies have been withdrawn
- ▶ A new behavior is not considered “mastered” until it can be maintained
- ▶ Sample Schedule
  - ▶ Once a week
  - ▶ Once every other week
  - ▶ Once a month

## ABA?

It's not as  
complicated  
as it sounds.

We promise.

# Final Thoughts

"THE SECRET OF  
CHANGE IS TO FOCUS  
ALL OF YOUR ENERGY,  
NOT ON FIGHTING THE  
OLD, BUT ON BUILDING  
THE NEW."

— SOCRATES

~~mistakes~~  
Mistakes  
are  
opportunities  
to learn.

# Mahalo & Aloha

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