Introduction to ABA
Applied Behavior Analysis

- ABA is defined as the science in which the principles of the analysis of behavior are applied systematically to improve socially significant behavior, and in which experimentation is used to identify the variables responsible for change in behavior.

- “Thirty years of research demonstrated the efficacy of applied behavioral methods in reducing inappropriate behavior and in increasing communication, learning, and appropriate social behavior.” Surgeon’s General

- Endorsed by the National Institutes of Health.
Applied Behavior Analysis Continued

- ABA is the only treatment for autism whose efficacy is supported by empirical evidence.

- Multiple studies have shown that ABA increases desired behaviors, including communication and social skills, and decreases undesired behaviors.

- The Association for Science in Autism Treatment provides a summary of different treatments based on research studies.
Is ABA just for Autism?

- ABA-based interventions are best known for treating people with developmental disabilities and Autism.

- Applied behavior analysis contributes to a full range of areas including: AIDS prevention, conservation of natural resources, education, gerontology, health and exercise, industrial safety, language acquisition, littering, medical procedures, parenting, seatbelt use, severe mental disorders, sports, and zoo management and care of animals.

- ABA-based interventions are also used for Organizational Behavior.
  - I.e. Business Management, Staff Consistency etc.
What is Applied Behavior Analysis (ABA)?

ABA is the science of Behavior

Applied: Social Significance
Behavior: Specific Response
Analysis: Functional Relationship
We use the principles of ABA to influence behavior:

Decrease

Undesired, maladaptive, socially inappropriate behavior

Increase

Desired, socially appropriate behavior

Maintain

All necessary behavior
Differential Reinforcement: Differential reinforcement means that reinforcement is provided for behaviors when these behaviors occur at certain times and places, whereas reinforcement is not provided when the behaviors do not occur during other times and places (Wolery & Fleming, in Bailey & Wolery, 1992).

Shaping: A process through which we gradually modify the client’s existing behavior into what we want it to be. This is typically done by adjusting the response required to gain reinforcement. For example, if a client is just learning to say words, he may just be asked to touch an item before receiving it. Later, we may require the beginning sound or syllable and eventually the word.
Prompting: Assistance provided by the therapist to teach a correct response. Prompts include physical guidance, modeling, verbal cues, and visual cues. Always try to use the least intrusive prompt that will cause the behavior to occur.

Chaining: Taking the discrete components of a skill and teaching each one individually as part of a series of behaviors. Forward and backward chaining are both common techniques used when teaching a new skill. This technique is also known as scaffolding and is often discussed in education classes.
Behavior

Anything that a person says or does that is...

- Observed: Objective vs. Subjective
- Measured: Frequency, duration, intensity etc.
- Defined: (operational) Able to be analyzed
Behavior or Not a Behavior?

- Client is Hungry
  - Not a Behavior
    - Actions that the client may be exhibiting that ARE behaviors:
      - Crawling into the kitchen
      - Verbally requesting a food item
      - Rubbing their stomach
- Client is Kicking the Wall
  - Behavior
- Client is Setting the Table
  - Behavior
Behavior or Not a Behavior?

- Client is Bored
  - Not a Behavior
    - Actions that the client may be exhibiting that ARE behaviors:
      - Tapping Fingers on the desk
      - Expressing boredom through words (I’m bored)
      - Deep sighs

- Client is Over stimulated
  - Not a Behavior
    - Actions that the client may be exhibiting that ARE behaviors:
      - Hand Flapping
      - Closing Eyes
      - Leaving the Room
Three-Term Contingency

- **Antecedent:** Observable & Objective
  - Change in stimulus PRIOR to the behavior
  - Can be Verbal or Non-Verbal
  - If I can say and “event” caused the behavior then the “event” is the antecedent.

- **Behavior:** Observable & Measurable
  - Response to the Antecedent
  - Maintained by the consequence

- **Consequence:** Immediately follows
  - If the behavior persists there is a pay-off

Antecedent: Phone Rings  BEHAVIOR: Answer the Phone  Consequence: Talk to a friend
### The Three Term Contingency

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>The alarm goes off</td>
<td>Turn the alarm off and get out of bed</td>
<td>Ready for work (desired consequence)</td>
</tr>
<tr>
<td>The alarm goes off</td>
<td>Hit OFF instead of snooze stay in bed</td>
<td>Late for work (undesired consequence)</td>
</tr>
<tr>
<td></td>
<td>Double check that you hit SNOOZE button</td>
<td>Ready for work (desired consequence)</td>
</tr>
</tbody>
</table>
Eliminating/Decreasing Behavior:

- Identify and understand the ABC’s
- Identify the Function of behavior
- Extinguish Inappropriate Behavior
- Teach Replacement Behavior
On 8/07 at 11:00 am Lilly crawls into the kitchen. Next, she throws herself onto the floor and begins crying. Her mother comes into the kitchen, picks her up and places Lilly in her highchair and gives her crackers. Lilly’s behavior stops.

<table>
<thead>
<tr>
<th>Date/ Time</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/07 11:00am</td>
<td>Lilly crawls into the kitchen</td>
<td>Throws herself onto the floor and begins to cry</td>
<td>Mom picks Lilly up and places her in her highchair with crackers and the BEHAVIOR STOPS</td>
</tr>
</tbody>
</table>
On July 14 at 9:00 am the alarm clock goes off. Next, Joe hits the alarm clock and the alarm clock goes off. Joe no longer hears the loud buzzing of the alarm. Joe’s behavior stops.

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 14 9:00am</td>
<td>The alarm clock goes off (buzzing sound)</td>
<td>Joe hits the alarm clock to turn it off</td>
<td>The sound stops and Joe’s behavior stops</td>
</tr>
</tbody>
</table>
Identify The Function of Behavior

There are essentially 2 ways to look at behavior, its form or its function.

- **Form**
  - What the behavior looks like;
  - Observable & measurable

- **Function**
  - What purpose does the behavior serve
  - Why the behavior occurs

In order to decrease inappropriate behavior, you must decrease it based on its function.
Primary Functions of Behavior

- Escape/Avoidance
- Attention from adult and/or peers, intentional or unintentional
- Access to Desired Items
- Automatic Reinforcement

Keep in mind that behavior can occur across multiple functions but only appear as one form (i.e. screaming).

Each function must be addressed in a different manner.
Extinguish Inappropriate Behavior

The term extinction refers to the process by which a reinforcer is withheld from a previously reinforced behavior.
Extinction

1. Determine what the function and consequence of the behavior is either through observation or FBA (Functional Behavior Assessment).

2. Begin the extinction process by:
   - Withdrawing or Withholding the Reinforcement that has been given for the behavior in the past.
   - Providing DRA/DRO/DRI for desirable behaviors during this moment.
   - Continue to use DRA/DRO/DRI until the behavior stops.
3. Important Considerations

- Never to be used in isolation
- Effectiveness of extinction depends on the correct identification of the reinforcement/consequence
- Depends on consistency
- When reinforcement is abruptly removed, and initial increase in frequency and magnitude of behavior will occur
- Change or decrease in the target behavior will be gradually
- Once the behavior has decreased to a non-existent level, it may reappear even without reinforcement
- Contact the office for additional support when using extinction
# Teach Replacement Behavior

<table>
<thead>
<tr>
<th>Date/ Time</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/10 11:00a</td>
<td>Lilly crawls into the kitchen</td>
<td>Physical prompt: cracker sign &amp; say “cracker” (with cracker present)</td>
<td>Mom puts Lilly in the highchair and gives Lilly a piece of the cracker</td>
</tr>
<tr>
<td>08/10 11:10a</td>
<td>In highchair w/ cracker present, Mom touches Lilly’s hand to prompt sign &amp; says “cracker”</td>
<td>Lilly completes sign</td>
<td>Lilly receives a piece of the cracker</td>
</tr>
<tr>
<td>08/10 11:13a</td>
<td>In highchair w/ cracker present</td>
<td>Lilly signs cracker independently</td>
<td>“WooHoo!!” Give Lilly rest of the cracker.</td>
</tr>
</tbody>
</table>
Differential Reinforcement of Behavior

- **D.R.O.:**
  - Differential Reinforcement of Other behavior Or Differential Reinforcement of Zero Responding
  - Reinforcement is provided for NOT RESPONDING
    - Ex: Curtis’ targeted inappropriate behavior is spitting. For each 30 seconds that Curtis does not spit, he will be provided with reinforcement. As long as Curtis isn’t spitting, he will be reinforced, despite the other behaviors he is exhibiting (i.e. screaming, crying)

- **D.R.A.:**
  - Differential Reinforcement of Alternate behavior.
  - Reinforcement is provided as an ALTERNATIVE
    - Ex: reinforce asking for attention (i.e. “Mom look at me”) instead of hitting himself
Differential Reinforcement of Behavior

- D.R.I.:
  - Differential Reinforcement of Incompatible behavior.
  - Reinforcement is provided for behaviors that CANNOT be exhibited concurrently with the undesired behavior
  - Ex: reinforce the use of a chewy tube instead of biting
Differential Reinforcement of Behavior

- When using a DRA or DRI, the alternative or incompatible behavior should:
  - Already be in the client’s skill set or quickly learned
  - Require equal or less effort than the inappropriate behavior
  - Already be exhibited by the client frequently
Reinforcement

“Reinforcement has been demonstrated to be not only very effective but essential in changing behavior” (Leaf & McEachin, 1999).

In order for something to be considered a reinforcer, it MUST increase or maintain the behavior it immediately follows.

- Positive reinforcement (SR+) = receive/gain
- Negative reinforcement (SR-) = avoid/escape

Both serve to increase behavior.

- If the behaviors/goals that we are teaching are not increasing then they are not being reinforced.
- If problem behaviors continue to occur, they are being reinforced somewhere, for example, escape and avoidance behaviors.
Two classes of Positive Reinforcers

Primary Reinforcers
- Items or events that an individual is automatically reinforced by. They do not need to learn that these items are reinforcing (i.e., food, liquids, warmth, oxygen)

Secondary Reinforcers
- Previously reinforced neutral items and events that the individual has “learned” are reinforcing because they have been associated with primary reinforcers or well-established secondary reinforcers (i.e., toys, money, playing games, hugs)
Reinforcement

Natural/Social

*Fun for fun's sake, Pride Itself*

vocal praise

Secondary

*Thomas the Train (tangible item)*

*Going to the mall (tangible activity)*

- Fade the primary reinforcers
- How are most of us reinforced?

Primary

*(food, drinks, etc.)*
How to maximize reinforcer effectiveness:

1. Determine what is reinforcing to the CLIENT.
2. Understand and follow the CLIENT’S motivation.
4. Give the reinforcer immediately after the correct response.
5. Give the reinforcer consistently.
6. Do NOT use reinforcers/rewards as bribery.
# How to maximize reinforcer effectiveness:

## Positive Reinforcement

**receive/gain access**

- Items (i.e. toys, candy etc.)
- (Client receives toy after requesting for it)
- Activities (i.e. games, sports etc.)
- (Client receives TV time after completing a series of tasks)
- Social (i.e. Praise, hugs)
- (Mom tells child “Great Job” after he/she ties their shoes)
- Free time (i.e. break)

## Negative Reinforcement

**avoid/escape**

- Behaviors may inadvertently be reinforced by allowing a child to escape/avoid undesired events/activities.
- For tools on how to address these behaviors or utilize Negative R- to increase desired behaviors please contact the office.
A Preference Assessment is a procedure (s) to find out what stimuli (food, items, activities) a person prefers and the value of those preferences.

How can you determine preferences?
- Can ask the person/parent
- Observe the person
- Observe the length of time that the client engages with the item/activity
Preference Assessments

- Paired Choice
- Free Operant
- Single Stimulus
- MSWO (Multiple Stimulus Without Replacement)

Today we will briefly discuss Free Operant Preference Assessment to get you started.
Free Operant Preference Assessment

- Observe and record activities person engages with
- Have unrestricted and simultaneous access to items
- No response requirements
- All stimuli are visible, within reach, and available
- Measure the total duration of time person engages with each stimulus
Free Operant Preference Assessment Continued

- The longer the person engages, the stronger the preference
- Can rank the order of the items (see Preference Menu)
- Best to be used for individuals that exhibit problem behavior when items are taken away
Building the Reinforcement Cycle

- Understanding the cycle of reinforcement
  - Immediate: First you may start off with a trade of desired items
  - Then you can increase the time before you trade back while engaging in another “fun” activity (increasing their ability to WAIT to receive the desired reinforcement)
  - Contrived: Then the client will have to do something in order to gain access to his item again
  - Delayed: The client will continue to perform actions for reinforcement that is not immediate and should be as natural as possible
Is a cookie a reinforcer to the clients listed below?

- **Client J**
  - Has not eaten anything in 3 days and is extremely hungry. This client has been asked to complete a puzzle. Is this client likely to complete the puzzle to earn the cookie?
  - **YES,** this client is VERY likely to complete the puzzle due to a high motivation factor to earn the cookie.

- **Client K**
  - Just finished eating a cookie after lunch and is full. This client was also asked to complete a puzzle. Is this client likely to complete the puzzle to earn the cookie?
  - **NO,** this client may have a preference for cookies, however is not very likely to complete the puzzle due to motivation.
Positive Reinforcement

Positive- To receive or gain access to something/event (presentation of something)

Reinforcement- An increase in the likelihood that the behavior will happen again.

Behavior MUST increase in order to be considered reinforcement.

List some examples of possible Positive Reinforcement items/events/activities:

- Toys
- Free Time
- Snacks
- Books
- Stickers
- Hugs

Primary vs. Secondary Reinforcement: ultimately we aim to use the environment as a natural reinforcer for the individual by using the process of Building Reinforcement
Utilizing a Reinforcement Schedule

Different schedules of reinforcement are more appropriate for certain skills:

- For INSTRUCTIONAL CONTROL and NEW SKILLS = Continuous reinforcement (CRF)  
  - (ex: after every correct response)

- For IN PROGRESS SKILLS that are not mastered = Intermittent Schedule of Reinforcement (INT) on a Fixed Schedule  
  - (ex: every 5 correct responses)

- For MASTERED SKILLS, easy skills = Intermittent Schedule of Reinforcement (INT) on a Variable Schedule  
  - (ex: on an average of 5 correct responses)
Teaching New Behaviors

Prompting

Shaping

Chaining
Prompt Levels (Response):

- Physical (full and partial): physical guidance of the individual’s movements
- Model: demonstration of the correct movement
- Gestural: pointing to, looking at, moving or touching an item to help achieve a correct response
- Verbal (full and partial): the verbal answer is provided by the instructor, immediately following the instruction
- Independent: the individual completes the task start to finish without additional support or prompting
What is a Stimulus Prompt?

Stimulus prompt is a prompt in which a stimulus (ie. visual cue) is added or removed in an effort to increase the likelihood of a correct response.
Prompting

Prompting is a teaching procedure that:

- Provides corrective feedback
- Helps the individual respond with the desired response
- Moves the goal closer to completion
- Increases the likelihood that the individual will provide the desired response
- Increases the success rate of the individual
- Provides the instructor with opportunities to deliver reinforcement
How do we use prompting?

- Decide which prompt is most appropriate
- Use errorless teaching
- Attempt to get an independent response after a prompted trial.
- Use differential reinforcement
- Avoid unintentional prompts
- Fade the prompt as quickly as possible
Most to Least Prompting
(Errorless Learning): for NEW Skills

*We are NOT allowing room for failure*

Fade prompts by systematically moving through the prompt level hierarchy (physical, model, gestural, verbal, independent) as the individual becomes more confident with his/her participation and attempts to respond correctly (see example on next slide).

How:

- Give the instruction
- Use the most intrusive prompt
- Stay on this prompt level until the client is successful
- Fade your prompt to a less intrusive prompt until behavior is independent
Least to Most Prompting: for Maintenance Goals

*Use the least intrusive prompt necessary to teach the skill and move into more intrusive prompting as needed for the client to be successful.*

How:

- Give the instruction and wait 3-5 seconds
- Prompt using last successful prompt.
- If no response= give the instruction again and increase the prompt level to a more intrusive prompt
- Move through the prompting hierarchy (independent, verbal, gestural, model, physical) until the client gives the correct response; remember to re-present the instruction before prompting to avoid a chain of errors
Example #1 of Prompting: Most to Least (for a NEW action response)

**Prompt Level = Full Physical Prompt**

Antecedent: “Clap Your Hands”

Behavior: Instructor Hand over hand claps the clients hands

Consequence: Reinforcement is delivered

**Prompt Level = Partial Physical**

Antecedent: “Clap Your Hands” while instructor touches client’s hands

Behavior: Client claps their hands

Consequence: Reinforcement is delivered
### Example #1 of Prompting: Most to Least (for a NEW action response)

<table>
<thead>
<tr>
<th>Prompt Level: Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antecedent: “Clap your hands” while demonstrating hand clapping</td>
</tr>
<tr>
<td>Behavior: Client claps their hands</td>
</tr>
<tr>
<td>Consequence: Reinforcement is delivered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prompt Level: Independent Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antecedent: “Clap your hands”</td>
</tr>
<tr>
<td>Behavior: Client claps their hands</td>
</tr>
<tr>
<td>Consequence: Reinforcement is delivered</td>
</tr>
</tbody>
</table>
## Example #2 of Prompting: Most to Least (for a NEW action response)

<table>
<thead>
<tr>
<th>Prompt Level= Model</th>
<th>Prompt Level= Gesture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antecedent:</strong> “Pick Up Your Shoes” While the instructor demonstrates</td>
<td><strong>Antecedent:</strong> “Pick Up Your Shoes” While the instructor points to shoe</td>
</tr>
<tr>
<td><strong>Behavior:</strong> Client Picks up shoes</td>
<td><strong>Behavior:</strong> Client picks up their shoes</td>
</tr>
<tr>
<td><strong>Consequence:</strong> Reinforcement is delivered</td>
<td><strong>Consequence:</strong> Reinforcement is delivered</td>
</tr>
</tbody>
</table>
Example #2 of Prompting: Most to Least (for a NEW action response)

Prompt Level=
Independent Response

Antecedent: “Pick Up Your Shoes”

Behavior: Client picks up their shoes

Consequence: Reinforcement is delivered
Example #3 of Prompting: Most to Least (for a NEW Verbal response)

Prompt Level= Full Verbal

Antecedent:  "What Color is this"  
"Red"

Behavior: Client repeats "Red"

Consequence: Reinforcement is delivered

Prompt Level= Partial Verbal

Antecedent:  "What Color is this"  
"Rrr"

Behavior: Client says "Red"

Consequence: Reinforcement is delivered
Example #3 of Prompting: Most to Least (for a NEW Verbal response)

Prompt Level = Independent Response

Antecedent: “What Color is this”

Behavior: Client repeats “Red”

Consequence: Reinforcement is delivered
Go from Errorless Learning to Correction Procedure

- Step 1: Instruction + (3-5 seconds delay) Correct Response = Reinforcement
  - Instruction + Incorrect/NR = go to step 2

- Step 2: Instruction + Prompt (last level of success) = Reinforcement

- Step 3: Instruction + (3-5 second delay) Correct Response = Big Reinforcement!
  - (if the response still needs a prompt, go back to errorless teaching)

Make sure you have attention and instructional control before any instruction.

*Practice, Practice, Practice!!*
Example #1 of Prompting: Least to Most (for a MAINTENANCE action response)

Antecedent: “Clap your hands”

Behavior: Child claps within 3-5 seconds

Consequence: Reinforcement is delivered

Behavior: Incorrect or No response

Consequence: Move to last successful prompt

Prompt Level = Model

Or

Antecedent: “Clap your hands like me” + instructor demonstrates

Behavior: Child claps within 3-5 seconds

Consequence: Reinforcement is delivered

Behavior: Incorrect or No response

Consequence: Move to next more intrusive prompt

Prompt Level = Full Physical
Example #1 of Prompting: Least to Most
(for a MAINTENANCE action response)

Antecedent: “Clap your hands” + instructor hand-over-hand claps the child’s hands

Behavior: Child claps

Consequence: Reinforcement is delivered
Example #2 of Prompting: Least to Most (for a MAINTENANCE Verbal response)

Antecedent: “What Color Is This”

Behavior: Child says “Red” within 3-5 seconds

Consequence: Reinforcement is delivered

Behavior: Incorrect or No response

Consequence: Move to last successful prompt

Prompt Level= Partial Verbal

Or

Antecedent: “What color is this?” “Rrr”

Behavior: Child says “red” within 3-5 seconds

Consequence: Reinforcement is delivered

Behavior: Incorrect or No response

Consequence: Move to next more intrusive prompt

Prompt Level= Full Verbal

Or
Example #2 of Prompting: Least to Most (for a MAINTENANCE Verbal response)

Antecedent: “What Color is this” + instructor says “Red”

Behavior: Child repeats “Red”

Consequence: Reinforcement is delivered
**Shaping:**

Utilizes differential reinforcement in order to gradually teach a new behavior or to refine a behavior that is not occurring at the desired frequency.

Example using Sign Language:

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ball is shown/presented to the child</td>
<td>The provider physically prompts the client’s hands into the sign for “ball”</td>
<td>The ball is given to the child</td>
</tr>
<tr>
<td>The ball is shown/presented to the child</td>
<td>The child moves their hands up when she sees the ball + physical prompt</td>
<td>The ball is given to the child</td>
</tr>
<tr>
<td>The ball is shown/presented to the child</td>
<td>The child attempts “ball” sign on their own + prompt to fine tune it after the sign was given</td>
<td>The ball is given to the child</td>
</tr>
</tbody>
</table>
### Example using Verbal Behavior:

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ball is shown/presented to the child</td>
<td>The child says “ba ba”</td>
<td>The ball is given to the child</td>
</tr>
<tr>
<td>The ball is shown/presented to the child</td>
<td>The child says “ba ba all”</td>
<td>The ball is given to the child</td>
</tr>
<tr>
<td>The ball is presented to the child</td>
<td>The child says “ball”</td>
<td>The ball is given to the child</td>
</tr>
</tbody>
</table>
Example not relating to communication:

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>The client is presented with his glasses</td>
<td>The client touches his glasses</td>
<td>The client is given a sticker</td>
</tr>
<tr>
<td>The client is presented with his glasses</td>
<td>The client picks up his glasses</td>
<td>The client is given a sticker and a high-five</td>
</tr>
<tr>
<td>The client is presented with his glasses</td>
<td>The client puts his glasses on his face</td>
<td>The client is given a sticker and tickles</td>
</tr>
<tr>
<td>The client is presented with his glasses</td>
<td>The client puts his glasses on his face and leaves them on for 20 seconds</td>
<td>The client is given tickles and a high-five</td>
</tr>
</tbody>
</table>
Chaining

A behavior chain is a specific sequence of responses for one task in order to achieve task completion. The technique of chaining is often used to teach tasks/behaviors that, when broken down, have multiple responses or steps.

Example of a behavior chain:

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>When standing in the bathroom in front of the sink to wash hands</td>
<td>Person turns the water on</td>
<td>Water is on</td>
</tr>
<tr>
<td>Water is on</td>
<td>Person gets soap on their hands</td>
<td>Soap is on hands</td>
</tr>
<tr>
<td>Soap is on hands</td>
<td>Person scrubs hands</td>
<td>Hands are scrubbed</td>
</tr>
<tr>
<td>Hands are scrubbed</td>
<td>Person rinses soap off hands</td>
<td>Hands are clean</td>
</tr>
<tr>
<td>Hands are clean</td>
<td>Person turns the water off</td>
<td>Task completion</td>
</tr>
</tbody>
</table>
Backward Chaining:

Beginning with the final step in the sequence, the individual is only expected to complete one step before reinforcement is delivered. Once the final step has been mastered, the individual will be expected to complete the last two steps before reinforcement is delivered. This procedure continues until all steps have been completed before reinforcement is delivered.

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>When standing in the bathroom in front of the sink, the provider says, “Wash hands”</td>
<td>Provider response: hand over hand turns on water</td>
<td>Water is on</td>
</tr>
<tr>
<td>Water is on</td>
<td>Provider response: hand over hand gets soap on their hands</td>
<td>Soap is on hands</td>
</tr>
<tr>
<td>Soap is on hands</td>
<td>Provider response: hand over hand scrubs hands</td>
<td>Hands are scrubbed</td>
</tr>
<tr>
<td>Hands are scrubbed</td>
<td>Provider response: hand over hand rinses soap off hands</td>
<td>Hands are clean</td>
</tr>
<tr>
<td>Hands are clean, prompt individual to turn the water off</td>
<td>Individual response: turn water off</td>
<td>Task completion <strong>reinforcement is delivered</strong></td>
</tr>
</tbody>
</table>
### Example Data for Backward Chaining

<table>
<thead>
<tr>
<th></th>
<th>G</th>
<th>G</th>
<th>V</th>
<th>+</th>
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<tbody>
<tr>
<td><strong>Turn water on</strong></td>
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<tr>
<td><strong>Get soap</strong></td>
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<tr>
<td><strong>Scrub hands</strong></td>
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<tr>
<td><strong>Rinse hands</strong></td>
<td>G</td>
<td>G</td>
<td>V</td>
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<tr>
<td><strong>Turn water off</strong></td>
<td>G</td>
<td>V</td>
<td>+</td>
<td>+</td>
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</tbody>
</table>
Forward Chaining:

Beginning with the first step in the sequence, the individual is only expected to complete one step before reinforcement is delivered. Once the first step has been mastered, the individual will be expected to complete the first two steps before reinforcement is delivered. This procedure continues until all steps have been completed before reinforcement is delivered.

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>When standing in the bathroom in front of the sink, the provider says, “Wash hands” and prompts individual to turn water on</td>
<td>Individual response: hand over hand turns on water</td>
<td>Water is on</td>
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<tr>
<td></td>
<td></td>
<td><strong>Reinforcement is delivered</strong></td>
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<tr>
<td>Water is on</td>
<td>Provider response: hand over hand gets soap on their hands</td>
<td>Soap is on hands</td>
</tr>
<tr>
<td>Soap is on hands</td>
<td>Provider response: hand over hand scrubs hands</td>
<td>Hands are scrubbed</td>
</tr>
<tr>
<td>Hands are scrubbed</td>
<td>Provider response: hand over hand rinses soap off hands</td>
<td>Hands are clean</td>
</tr>
<tr>
<td>Hands are clean</td>
<td>Provider response: hand over hand turns the water off</td>
<td>Water is off; task completion</td>
</tr>
<tr>
<td>Action</td>
<td>G</td>
<td>V</td>
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<td>---------------------</td>
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<td>---</td>
</tr>
<tr>
<td>Turn water on</td>
<td>G</td>
<td>V</td>
</tr>
<tr>
<td>Get soap</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>Scrub hands</td>
<td>P</td>
<td>M</td>
</tr>
<tr>
<td>Rinse hands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn water off</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please take a minute to fill in the following information in your packet:

3 Things You have learned so far

2 Questions You still have about the topic

1 Favorite part of the training so far
Generalization & Maintenance

- Generalizing skills into the natural environment is a fundamental aspect of habilitation and of independence.

- Skills are of little use unless they are able to be applied outside of the home, in a variety of environments, situations and with a variety of people, including strangers.

- Instances such as spontaneity and novel situations can arise at any time. We must teach our clients to be adaptable and that it's ok to do something new.

Teaching Flexibility!!

- Once taught, skills must be maintained. This is similar to learning another language, without practice we forget. When a pro athlete stops training, your abilities may decrease.
Maintenance Log

• How often will skills be revisited?
  • Daily, once a week or Bi-weekly

• Who will be responsible for running the maintenance skills from week to week?
  • Someone who is in the home more than once a week to ensure accuracy of current skill level as well as the maintenance skills

• What do we do with the maintenance skills that are incorrect?
  • Adding any regressed target back into daily program schedule.
H.O.P.E. Group, LLC. offers an array of classes specific to the individuals needs of our clients. These classes are specific to the goals you will be working on. You should be attending the classes specific to the needs of your client to ensure proper implementation of ABA Therapy.

Class Topics Include:

- Picture Exchange Communication
- Verbal Behavior
- Puberty & Growth
- Everyday Living
- Functional Behavior Assessment
- Preference Assessment
- Pivotal Response Treatment
- And many more!
In Closing

- If in doubt fall back on the BASICS (prompting, ABC, Reinforcement)! Until the moment has passed and you are back on track.

- These are basic techniques to use doing habilitation sessions to increase, decrease, and maintain skills.

- These techniques can be used with any method of programming.

- The goal of habilitation is to give the individual the skills he/she will need to live up to their potential. We are here to make the individual that you are working with successful!

- Remember to look for the ABCs! Pay attention to the antecedents.

- Please contact the Clinical Services Department for assistance in implementing these techniques or teaching objectives.
ABA Flashcards

- Cut and Paste the attached cards onto index cards.
- Using a folder, ring, card holder etc. bring these cards to your sessions with you to help you implement the Habilitation Goals
- When the Lead Trainer comes into the home he/she will expect to see these cards prepared and available.
If you have questions about anything that was taught today, please be sure to contact the Clinical Services department as soon as possible so that we can assist you.

Clinical Services Department Information:
- Kristine Mooney, Clinical Services Manager
  - kmooney@hopegroupaz.com
- Stacy Smith, Training Coordinator
  - ssmith@hopegroupaz.com
- Phone: 480-610-6981 Extension #15
Survey

Please take a minute to complete the Introduction to ABA survey! This survey MUST be completed with an 80% accuracy and turned in in order to receive credit for taking this class.