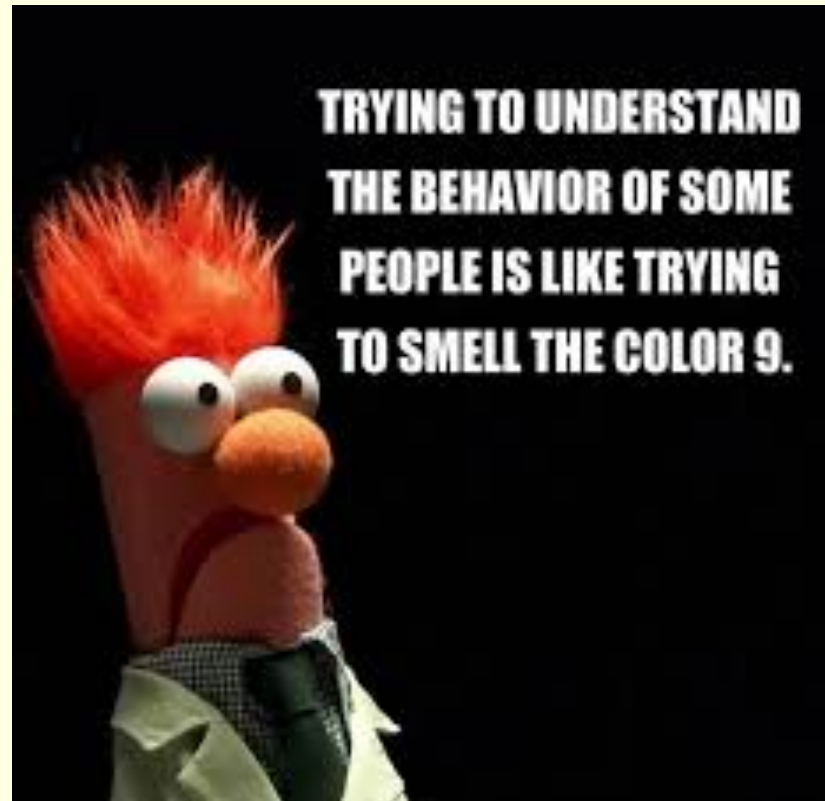# Behavior building blocks: MABC

D. Reed Bechtel M.S., BCBA
Bechtel Behavioral Services
University of West Florida

Workshop Outcomes

- Learn basic ABA approach
- Learn how to develop function based interventions

TRYING TO UNDERSTAND THE BEHAVIOR OF SOME PEOPLE IS LIKE TRYING TO SMELL THE COLOR 9.

BRICKS—ABA BEHAVIORAL TERMS

BEHAVIOR

- Behavior has reference to:
  - Physical characteristics
  - Functions

BEHAVIOR

- A behavior is anything that the person/ student does-- any physical actions or movements
- **This term does not exclusively or even primarily mean acting out or violent conduct,**

BEHAVIOR

- Physical characteristics
- Count it or measure it
- How many times,
- How long

BEHAVIOR

- Functions
- What purpose does it serve the individual?
- It's not the form of behavior-it's the function that is important

BEHAVIOR

- Behavior also can produce products such as completed homework assignments

- **Verbal behavior** is a special class of behavior
  - Children with ASD or othe language issues

Verbal Behavior: Skinner

- ECHOICS: repeating verbal sample. (I say "doggie" you say "Doggie")

- MANDS Asking for reinforcers you want ("DOGGIE, PLEASE")

- TACTS   Naming or identifying objects, actions, events (see dog, say "DOGGIE"; "Hears" that's right it's a doggie")

- INTRAVERBALS   Answering questions or conversations when one's words are controlled   by other words(hear "PET", say "DOG")

BEHAVIOR

- Reading aloud
- Completing a worksheet
- Painting a picture
- Playing a video game on the computer
- Being hyper
- Running around the room

BEHAVIOR

- Screaming
- Sitting in a chair
- Noncompliance
- Hitting
- Disrespecting
- Aggression
- Bringing a completed homework assignment

Environment

- All behavior occurs within an environmental context;
- Behavior cannot occur in an environmental void or vacuum
- Includes all events, sounds, people, etc. in the environment

BASIC MABC MODEL—KEY TO SUCCESS!

Basic MABC Model

MOTIVATING OPERATION

What the student currently is seeking to get or escape/avoid

ANTECEDENT

What happens before the behavior occurs
Learning based triggers

BEHAVIOR

The actual behavior of the child/student

CONSEQUENCE

What happens following the behavior

MOTIVATING OPERATION

- Strict behavioral definitions: 2 naturally occurring processes
- **Deprivation**: absence of preferred items or events:
  - Toys, snacks, praise,

- **Aversive stimulation**: presence of items or activities student will seek to escape or avoid
  - Loud noise or light too bright in room
  - Math worksheet

MOTIVATING OPERATION

- Two types of procedures/operations

- Establishing operation
  - Increases effectiveness of an item or activity

- Abolishing operation
  - Reduces effectiveness of an item or activity

Increases effectiveness of an item or activity
Providing salty snacks increases effectiveness of a drink as a reinforcer

Reduces effectiveness of an item or activity

Providing attention reduces effectiveness (temporarily) of attention as a reinforcer

Effects of establishing operations

- Temporarily changes value of an item or activity

- Temporarily increases behaviors reinforced by the item or activity in the past

- "Capture the motivation" during training
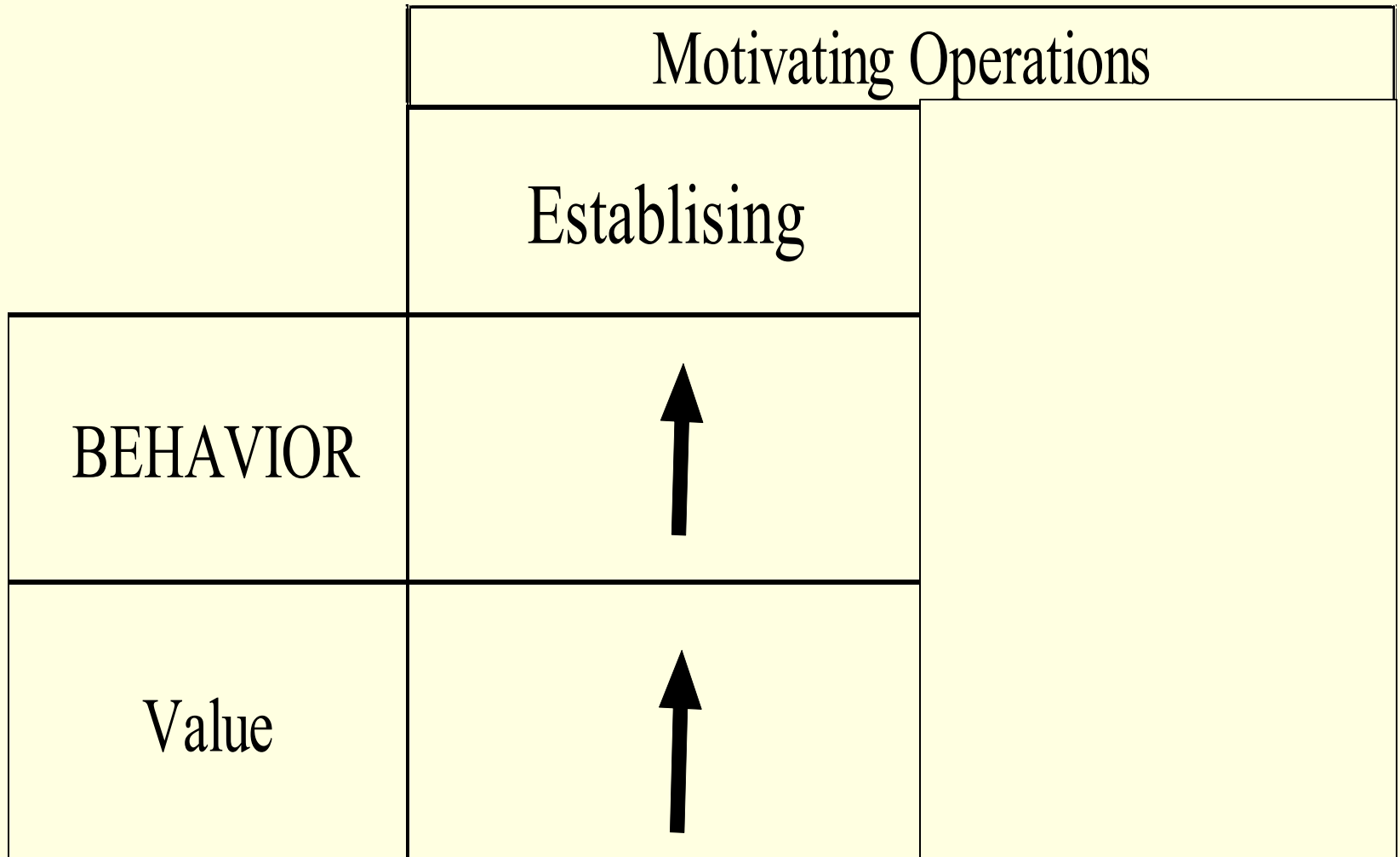
Motivating operations

Motivating Operations

Behavior

Value

Motivating operations

Motivating Operations	
Establising	
BEHAVIOR	↑
Value	↑

Motivating operations

	Motivating Operations	
	Establising	Abolishing
BEHAVIOR	↑	↓
Value	↑	↓

Antecedent-Triggers

- Setting or situation (including people, noise, environment, instructions, other students etc) that **occurs before the behavior in question**

- **Doesn't make the behavior occur**

- Sets the occasion for the behavior

Antecedent-Triggers

- Can be immediately before (Temporally Proximal Antecedent)
  - The teacher says "take out your math book"

- Temporally remote/distal (setting event)
  - Getting in a fight with brother at home before school

Antecedent-Triggers

- Identify possible situations in which the behavior

- ALWAYS OCCURS

- NEVER OCCURS (But could)

- And , SOMETIMES OCCURS (the most frequent result)

Sample antecedents

- Story problem in math
- Being asked to read in front of class
- Not getting to be line leader
- Name calling
- Sitting in back of room
- Group work
- Doing already mastered work
- Getting the teacher's attention

Sample antecedents

- Being told to take out math books
- Being told "No" in a firm voice
- Air conditioner comes on
- Fire alarm
- Another student saying something bad about a family member at lunch
- Substitute teacher
- Transition between social studies and reading class

Consequences!!!!!!!!!!!!!!!!!!!!!!

- **Increases/Maintains behavior occurring in the future**
- Consider all sources of consequences
  - Occur each time or intermittently
  - Produced not only by adults
    - Peers
    - Behavior itself

Sample Consequences

- Getting other students to laugh
- Getting out of doing an assignment
- Getting 1-1 time with an adult
- Getting to watch a preferred video
- Getting to run an errand for the teacher
- Receiving praise
- Getting what the student "wants"
- Successfully solving a problem correctly

BEHAVIORAL DEFINITIONS

- ## Function not intent

- ## Effect on behavior
  - ### Immediately
  - ### In the future

BEHAVIORAL DEFINITIONS

- POSITIVE REINFORCEMENT
- An item, event, or condition <u>is added</u> to the environment that results in the increase (or maintenance) of the behavior in the future
  - Praise
  - Good grade
  - Smile from Grand dad
  - Successfully solving a problem
  - Points
  - Access to video

BEHAVIORAL DEFINITIONS

- NEGATIVE **REINFORCEMENT**

- An item, event, or condition <u>is removed/ avoided</u> from the environment that results in the increase (or maintenance) of the behavior in the future
  - Not having to do an assignment
  - Avoiding the other kids laughing at you
  - Removing someone from your social space
  - Reducing noise

Reinforcement

- <u>REINFORCEMENT INCREASES BEHAVIOR!!!!!!!!</u>

  - Positive reinforcement
  - Negative reinforcement

- <u>REINFORCEMENT INCREASES BEHAVIOR!!!!!!!!</u>

BEHAVIORAL DEFINITIONS

- POSITIVE PUNISHMENT
- An item, event, or condition <u>is added</u> to the environment that results in the decrease of the behavior in the future
  - Reprimands
  - Extra work or effort

BEHAVIORAL DEFINITIONS

- NEGATIVE PUNISHMENT
- An item, event, or condition <u>is removed</u> from the environment that results in the decrease of the behavior (and its response class) in the future
  - Loss of free time
  - Loss of access to preferred activity
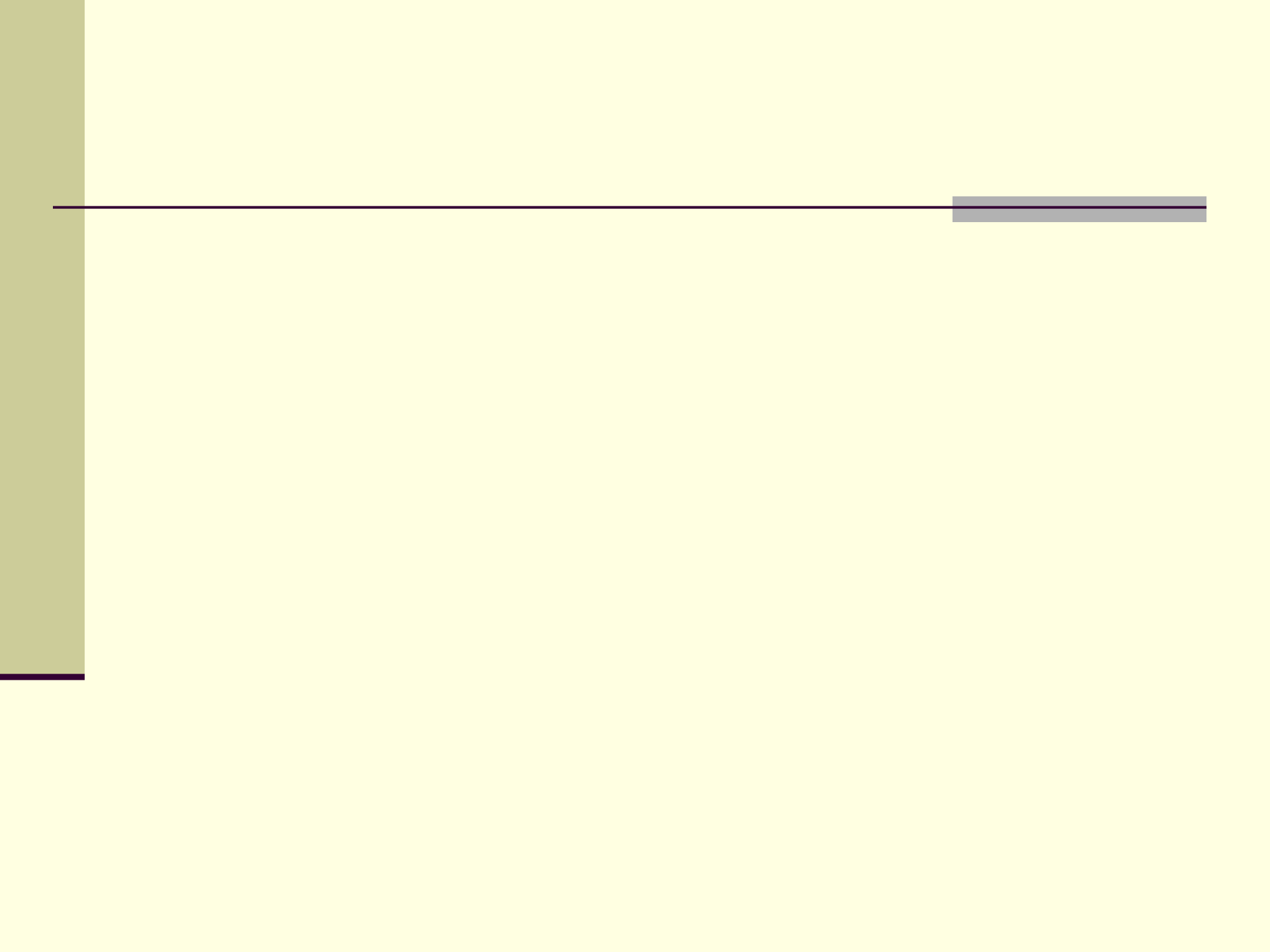 - Loss of points/tokens

Punishment

<u>PUNISHMENT DECREASES BEHAVIOR!!!!!!!!</u>

- Positive punishment
- Negative punishment

<u>PUNISHMENT DECREASES BEHAVIOR!!!!!!!!</u>

BEHAVIOR--OPERATIONS SUMMARY
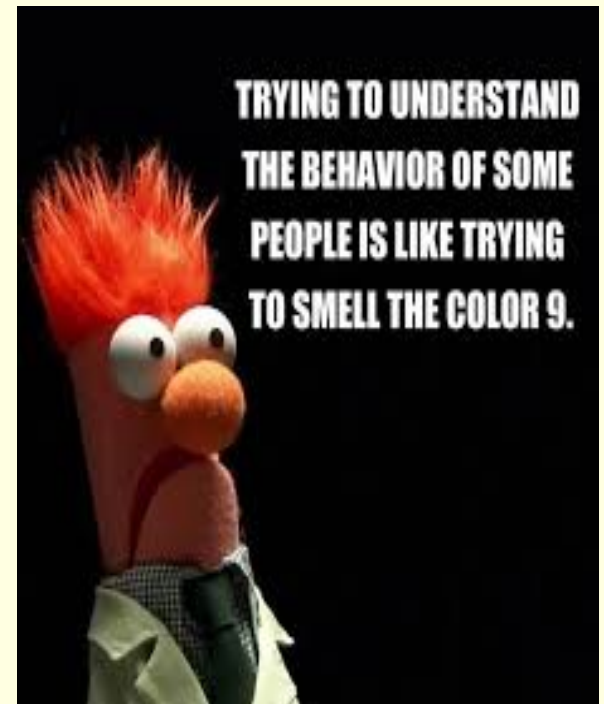
	Behavioral Operations	
	Add (Positive)	REMOVE/AVOID (NEGATIVE)
INCREASE BEHAVIOR ↑	(Positive) REINFORCEMENT	(NEGATIVE) REINFORCEMENT
DECREASE BEHAVIOR ↓	(POSITIVE) PUNISHMENT	(NEGATIVE) PUNISHMENT

- **It is the effect of what we do– not the intent**

- **Data tell the story**

TRYING TO UNDERSTAND THE BEHAVIOR OF SOME PEOPLE IS LIKE TRYING TO SMELL THE COLOR 9.

DATA COLLECTION

Data Recording strategies

- Frequency/event recording

- Time sampling

Interval or Time Sampling

- Some but not all occurrences of behavior are recorded in a **<u>systematic manner</u>**

- An observation session or class period is divided into a number of intervals of equal duration.

- The occurrence (or non occurrence) of the behavior (or behaviors) is (are) recorded/ scored during each interval

Interval or Time Sampling

- The length of the interval depends on the properties of the behavior.

- Higher frequency behaviors usually have shorter intervals (e.g. 10 seconds).

- Lower frequency behaviors have longer duration intervals (e.g. 15 minutes).

Interval or Time Sampling

- Scoring an interval means recording that a behavior did (or did not) occur.

- May also record the Antecedent or activity that was occurring when the behavior occurred

- May also record the Consequence or activity that was occurring when the behavior occurred

Interval or Time Sampling

- PARTIAL INTERVAL

  An interval is marked as "scored" if the behavior occurs during any part of the interval

- MOMENTARY

  The occurrence/ nonoccurrence of the behavior is scored at the exact moment the interval elapses.

Interval or Time Sampling

- Results are reported in the percent of time or percent of intervals in which the behavior occurred (or did not occur).

  Scoring is based on the number of scored (or non scored) intervals divided by the total number of intervals the student was observed

Yelling or screaming

26	26	26	26	26	26	26
25	25	25	25	25	25	25
24	24	24	24	24	24	24
23	23	23	23	23	23	23
22	22	22	22	22	22	22
21	21	21	21	21	21	21
20	20	20	20	20	20	20
19	19	19	19	19	19	19
18	18	18	18	18	18	18
17	17	17	17	17	17	17
16	16	16	16	16	16	16
15	15	15	15	15	15	15
14	14	14	14	14	14	14
13	13	13	13	13	13	13
12	12	12	12	12	12	12
11	11	11	11	11	11	11
10	10	10	10	10	10	10
9	9	9	9	9	9	9
8	8	8	8	8	8	8
7	7	7	7	7	7	7
6	6	6	6	6	6	6
5	5	5	5	5	5	5
4	4	4	4	4	4	4
3	3	3	3	3	3	3
2	2	2	2	2	2	2
1	1	1	1	1	1	1

date

BUILDING INTERVENTIONS

FBA & Intervention matching

- Identify possible causes/functions of behavior
- Base intervention on function of behavior
- Develop positive opposite as target of reinforcement and as alternative
- Break down problem into specific skill deficits
- Teach prerequisite skills or component skills

Non-matching Interventions

- Ineffective
- Possibly deleterious behaviorally
- Burns resources
- May inoculate the student against effective interventions
- May prejudice against the specific student as well as others with similar behavioral phenotypes

Non-matching Interventions

- May generate
  - Intrusive, coercive, or punishment-based interventions (default technologies)
  - Often selected arbitrarily
- Default technologies may generate new problem behaviors
- Default technologies may produce injury

Non-matching Interventions

- Understanding *why* a behavior occurs suggests *how* it can be changed

INTERVENTION STRATEGIES
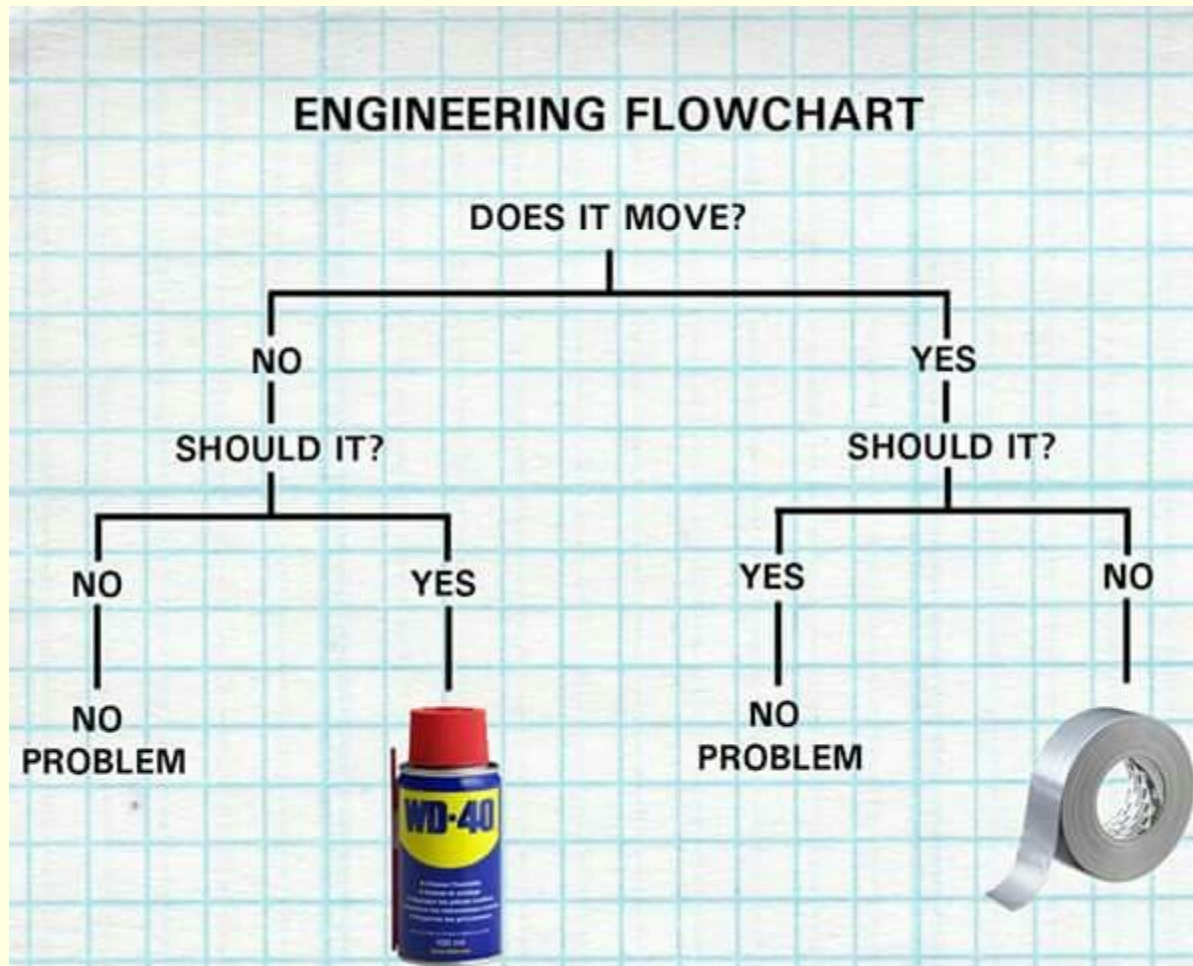
BEHAVIOR TIPS FOR POSITIVE INTERVENTION

- What's in it for the student?

- If the behavior is occurring it probably is being reinforced

- Make sure the student is clear on what the expectations are (Parents/teachers too)

- Practice makes perfect

BEHAVIOR TIPS FOR POSITIVE INTERVENTION

- Problem behavior usually serves a purpose for the person displaying it

- Functional analysis is used to identify the purpose of the behavior

- The goal of intervention is education, not simply reduction of inappropriate behavior

BEHAVIOR TIPS FOR POSITIVE INTERVENTION

- Problem behavior typically serves many purposes and therefore requires many interventions

- Problem behavior typically serves many purposes and therefore requires many interventions

- Eliminate power based conflict resolution and reliance on "me bigger" to terminate an episode.

BEHAVIOR TIPS FOR POSITIVE INTERVENTION

- Try to say what you want—not what you don't want.

- You play the way you practice. If you want a big game, you have to have big practice.

- Focus on what you want you want the student to do rather than on stopping a behavior

BEHAVIOR TIPS FOR POSITIVE INTERVENTION

- Reinforcement is the key to building new behavior

- It's the effect not the intent of what we do

- Consistency is important

- Whose problem is it?

BEHAVIOR TIPS FOR POSITIVE INTERVENTION

- Don't do it when **you're** mad!

- If you use punishment, be alert to using more and more

-

- If you punish the student's behavior, do it immediately after the behavior then set a time later to discuss what happened and how to behave differently in the future

REINFORCEMENT

POSITIVE REINFORCEMENT
BASIC PROCEDURE

1 Present immediately after the behavior you want to increase

2 Smile!   Positive voice tone!   Be happy!   Enthusiasm!!!!

3 Provide descriptive verbal praise: be specific (You picked up your books; You did what I asked the first time, You used your inside voice)

4 Provide physical touch when appropriate (high five; pat on arm, shoulder touch)

5 Provide most powerful item last (tokens, points on card, food, access to game boy)
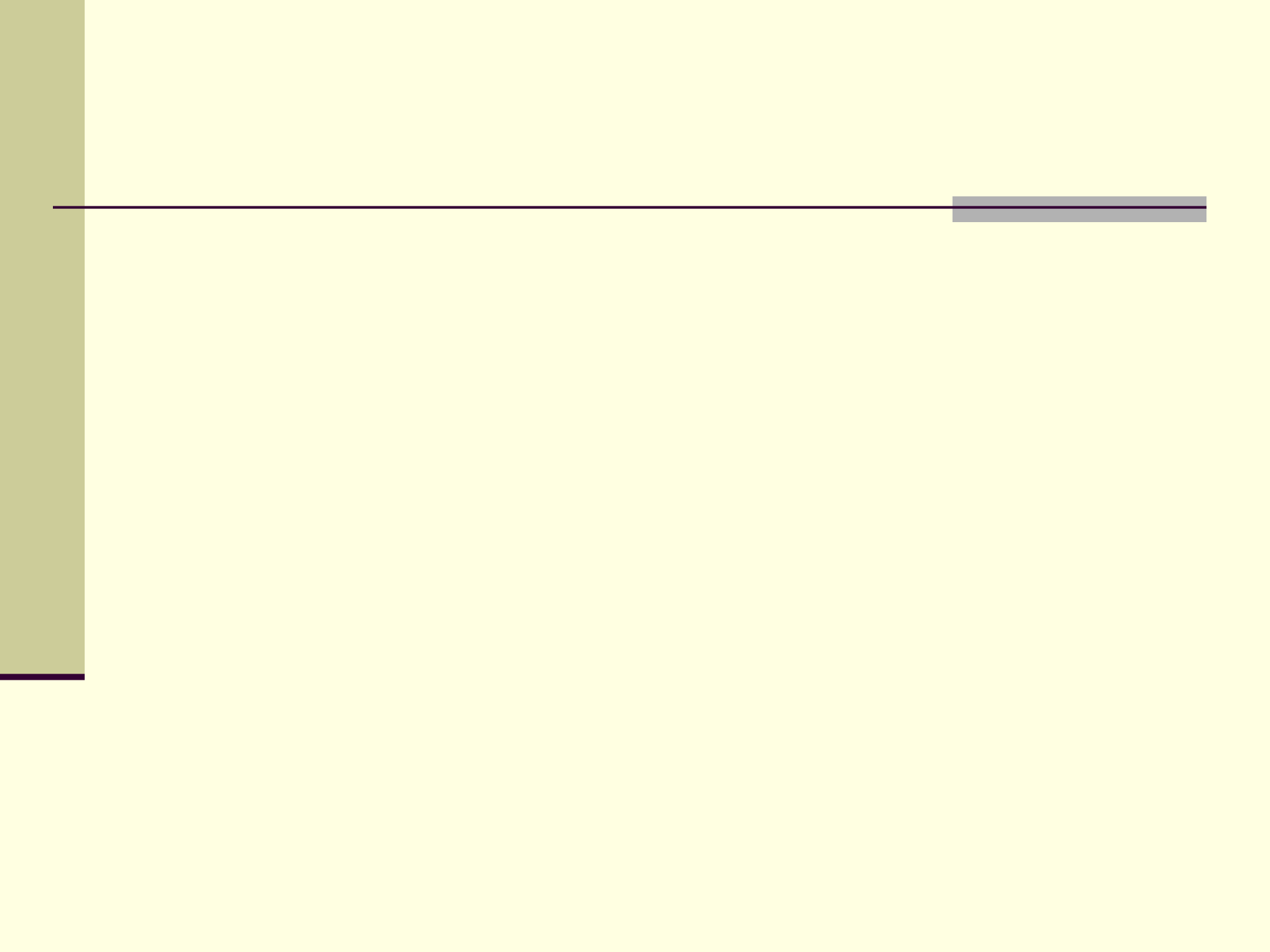
OPERATIONAL EFFECT

- The behavior <u>must increase</u> (or be maintained) as a result of reinforcement

COROLLARY

- If the behavior is occurring, it is being reinforced

- Data tells the story about increases

INAPPROPRIATE BEHAVIORS & PUNISHMENT

- Social definition may invoke issues of values, punitiveness, or bias

- Behavioral definition is value neutral and merely reflects the effects of a procedure, intervention, or event.

- Punishment is behavioral: discipline may or may not be

- Determine the effects of the intervention or procedure via data

Intervention Strategies

- When the function of problem behavior has been identified, intervention can consist of:
  - Altering antecedent variables
  - Altering consequent variables
  - Teaching alternative behaviors
  - All of the above

Intervention Strategies

- The longer the inappropriate behavior has occurred, the more complex and intense the intervention will need to be

- Reinforcement intensity matching

Altering Antecedent Variables

- Change and/or eliminate:
  - Motivating operation for problem behavior
  - Discriminative stimuli (signals) that trigger problem behavior or signal non preferred condition

Teaching Alternative Behaviors

- Select appropriate behaviors that serve the same function as inappropriate behavior:

    Positive Opposites

- Provide reinforcer that previously maintained problem behavior contingent upon the new, alternative behavior

Functional Communication Training

- FCT establishes an appropriate communication behavior to compete with problem behaviors evoked by an EO
- Develops alternative behaviors that are sensitive to the EO's (in contrast to NCR)
- Baseline
- Training alternatives 1
- Training alternative 2

Altering Consequent Variables

- Revisit reinforcement procedures
- Stimulus preference assessments to determine new, positive reinforcers
- Utilize a function based reduction consequence (e.g. a punishment procedure)

DEAD MAN & Positive opposites

- Don't teach a student to do anything a dead man can do;
- Positive opposites
  - Identify constructive, positive alternatives that the student can display

Positive Opposite practice

- Talking out
- Swearing out loud
- Throwing marker on the floor
- Yelling
- Leaving a book bag and jacket on the floor
- Pinching
- Grabbing for another student's snack
- Smashing toys together so they will break
- Jumping out of chair and running around the room

Intervention by function: Attention

- Provide attention independent of behavior
- Provide attention for alternative behavior
- Provide attention in the absence of inappropriate behavior in increasing duration
- Teach appropriate way to get attention (i.e. asking for help, proactive raining hand in small group then extend to whole class setting, greeting/social skills)
- Earn points or tokens to buy extra time with preferred adult

Intervention by function: Escape

- If environmental, remove or reduce uncomfortable situation (too loud, bright, hot, chaotic)
- Reduce expectations then gradually increase them
- Give a choice of two alternatives/tasks and let student have "control" of when she does the task
- Teach student to ask for help or assistance
- Provide "silent signal" to use for authorized escape
-

Intervention by function: Tangible

- Clarify expectations when item is available
- Utilize student schedule to show when item will be available
- Provide equivalent alternatives
- Have student earn item by completing work
- Have student earn tokens or points to access item
- Complete a contract with student to clarify performance to have access to item

Resources

➤ Positive Behavior Supports
    http://www.pbis.org/

➤ Journal of Applied Behavior Analysis
    http://seab.envmed.rochester.edu/
jaba/

➤ Behavior Analysis in Practice

- Not educative

- Produce negative emotional side effects for everyone

- Negative models

- Adaption may require increasingly more intense levels

- Must be planned, non arbitrary, and implemented when adult is **calm**

REPRIMANDS

- Effectiveness questionable
- May actually serve as reinforcer
- Overused
- Susceptible to emotional state of person given reprimands

TIMEOUT

- Must have reinforcing environment!!
- Protect against escape from demand or activity via data
- Remove student or
- Remove opportunity for access to reinforcement
- Protect against reinforcement in "timeout"
- New legal standards for seclusion

FINES/POINT LOSS

- Must have systematic positive point system
- Guard against punitive and arbitrary
- Going in the "hole"
- Logistics of removal
- Presents staff training and control issues

Consequence Intervention:
Neutral interaction:

- Calm, neutral (and more quiet tone of voice than usual) tone of voice

- Least amount of public display as possible.

- Reduce the quantity of verbalization.

- Try to minimize the amount of attention by adults, it may be easier for the student to try to calm

- Try to verbally interrupt the situation

- Request the student engage in another specific behavior or activity (i.e.. say what you want her to do as opposed to telling her to stop doing something else).

- Remind her of reinforcers that would be available for appropriate behavior.

Consequence Intervention
Proximity/separation:

- If possible, try to separate the student from the other individual if there is an interaction with another student
- This may be more easily accomplished by redirecting the other student.

Consequence Intervention Hand off:

- If the student is extremely upset at the person who implemented a corrective action and is not able to process/ respond to the person's instructions, it may be beneficial to 'hand off' incident management to another individual who may be able to pull the student back into control.

- This process needs to be carefully practiced so that a "crowd" does not form explicitly providing the attention that the student may find reinforcing.

- It is also important that the student still be expected to complete the task

- Be alert to authority/role usurpation

SHAPING

- Major way to develop new behavior

- Start where the student is

- Reinforce closer and closer approximations to the final/ target behavior you want to achieve

- Behavioral video