Autism

SLV BOCES
Alamosa Colorado
June 8, 2015

Marcia Braden, PhD
Licensed Psychologist
CDE certified general education, special education and school psychology

Schedule Day One

8-8:15 Sign in

8:15-8:45 Introductions, Getting to know each other, Backgrounds and Needs

8:45-10:15 Autism 101

10:15-10:30 Morning Break

10:30-12 Understanding the Neurobiology of Behavior, and Effective Behavioral Intervention

12-1 Lunch on your own

1:00-2:30 Creating an Effective Learning Environment, Steps to Successful Inclusion

2:30-2:45 Afternoon Break

2:45-4:00 Adolescents and Adults, Vocational Work Model and Educational Strategies

Autism Facts and Stats

- 10 years ago, 1 in 10,000 children were diagnosed with autism. Today, it is 1 in 68 who have a diagnosis of ASD
- Boys are 3:1 times as likely to develop autism
- Autism is the fastest growing developmental disability in the U.S.
- More children will be diagnosed with autism this year than with AIDS, diabetes, and cancer combined
- Diagnosis can reliably be made by age 3. New research is pushing for diagnosis by 6 mo. Cost of lifelong care can be reduced by 2/3 with early diagnosis and intervention.
- Etiology is undetermined and there is no cure.

Gazette Telegraph February 2,2010

- “Researchers consider pill to treat autism component”
- FXS is a genetic defect that disrupts how the brain cells respond to experiences by forming connections called synapses
- In FXS those synapses are too immature to work properly
- The mGluR5 antagonists block an overactive receptor that makes the synapses weak
- If the antagonists work, the synapses will strengthen and allow the brain cells to respond

Wall Street Journal
February 2, 2010

- "LA Confidential: Seeking Reasons for Autism's Rise"
- Children born in northwest LA are 4 times as likely to be diagnosed with autism as a child born elsewhere in CA
- Two research groups studied this and determined: 1)The higher occurrence in certain communities can be explained by the parents' educational levels 2) Social influences such as shared information about diagnoses, doctors and services

Why Is there A Rise In Prevalence?

- For decades after Kanner's original paper was published in 1943, autism was generally considered to be a rare condition with a prevalence of around 2-4 per 10,000 children. Then, studies in the late 1990s and the present century reported annual rises in incidence of autism in pre-school children, based on age of diagnosis, and increases in the age-specific prevalence rates in children.

Why Is there A Rise In Prevalence?

- Reasons for these increases include changes in diagnostic criteria, development of the concept of the wide autistic spectrum, different methods used in studies, growing awareness and knowledge among parents and professional workers and the development of specialist services.

Why Is there A Rise In Prevalence?

- Various environmental causes for a genuine rise in incidence have been suggested, including the triple vaccine for measles, mumps and rubella (MMR]. Not one of the possible environmental causes, including MMR, has been confirmed by independent scientific investigation. There is strong evidence that complex genetic factors play a major role in etiology.
  *www.vaccinateyourbaby.org/safe/**autism/mmr**.cfm*

Why Is there A Rise In Prevalence?

- The evidence suggests that the majority, if not all, of the reported rise in incidence and prevalence is due to changes in diagnostic criteria and increasing awareness and recognition of autistic spectrum disorders. Whether there is also a genuine rise in incidence remains an open question.

Prevalence 2014

The Center for Disease Control and Prevention (CDC) March 2014 released new data of prevalence in US

- 1 in 42 boys and 1 in 189 girls
- 1 in 68 children have a diagnosis of ASD
- The prevalence has increased 119.4 % since 2000

"Red Flags" for Autism

- No big smiles or joyful expressions by 6 months
- No back and forth sharing of sounds, smiles, or facial expressions by 9 months
- Does not babble, point, or make meaningful gestures by 12 months
- Does not use single words by 16 months
- Does not combine 2 words by 24 months
- Poor eye contact
- Does not respond to name
- Does not seem to know how to play with toys
- At times, appears to be hearing impaired
- Repeats actions over and over again
- Has difficulty with changes in routine
- Any loss of language/social skills at any time

Neurobiological Underpinnings

- Frontal lobes are dysfunctional evidenced by brain imaging
- The frontal lobes affect social functioning and the ability to inhibit certain responses
- This area of the brain controls emotions, dealing with changes, being flexible, problem solving, and developing organizational skills (EF)

Changes in the DSM V

- The removal of Asperger's Disorder and PDDNOS is a major change.
- People who currently have these diagnoses will probably be reevaluated to see if they meet the criteria for a autism spectrum disorder

Changes in the DSM V

- The new criteria are more thorough and strict, for example more symptoms are needed to meet criteria within the area of fixated interests and repetitive behaviors.
- In addition, the Communication and Social Interaction domains will be combined into one, titled “Social/Communication Deficits

Changes in the DSM V

- The requirement of a delay in language development is no longer necessary for a diagnosis.
- The revisions have been made with the hope that the diagnosis of autism spectrum disorders will be more specific, reliable, and valid
- One of the biggest concerns is that some who are higher functioning will no longer meet the more strict diagnostic criteria and will therefore have difficulties accessing relevant services

Changes in the DSM V

- There is uncertainty regarding how state and educational services and insurance companies will adopt these changes
- The state of Colorado has now endorsed an educational diagnosis of autism. The diagnosis comes when the autism is impacting the educational process.

Changes in the DSM V

- It is clear these changes will have an impact on families and people currently diagnosed with an autism spectrum disorder. It remains to be seen how diagnosticians and clinicians will use the new criteria in evaluating children and the impact it will have on the availability of services. Therefore, it is important to remain informed and up to date. To follow and learn more about the proposed changes, see the DSM-V revision website.

DSM V
Autism Spectrum Disorder

- **1. Deficits in social communication and social interaction**
- 3 of 3 criteria addressing deficits in…
  - Social-emotional reciprocity
  - Nonverbal communicative behaviors used for social interaction
  - Developing, maintaining, and understanding relationships

- **2. Restricted repetitive behaviors, interests, and activities (RRBs)**
- 2 of 4 criteria addressing…
  - Overly dependent on routines
  - Highly sensitive to changes in their environment
  - Intensely focused on inappropriate items
  - Sensory input sensitivity

DSM V
Autism Spectrum Disorder

Adult textual narrative…

- Difficulties processing and responding to complex social cues
- Consciously calculating what is socially intuitive for most individuals
- Struggles to understand what behavior is considered appropriate in one situation but not another
- Desire to establish friendship without a complete or realistic idea of what a friendship entails
- Learn to suppress RRBs in public

- Severity Ratings
  - Recognize these may *vary by context and fluctuate over time* as intervention, compensation, and current support may *mask* difficulties
  - Independently rate SC/SI and RRBs
  - Focus on <u>treatment</u>, not on symptom criteria count
    - Level 1 (mild): “requiring support”
    - Level 2 (moderate): “requiring substantial support”
    - Level 3 (severe): “requiring very substantial support”

DSM V
Autism Spectrum Disorder

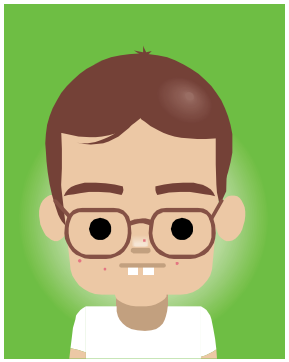
New Specifiers

- Provide clinicians with an opportunity to individualize the diagnosis and communicate a richer clinical description of affected individuals

  - With or Without Accompanying Intellectual Impairment
  - With or Without Accompanying Language Impairment
  - Associated with a known medical or genetic condition or environmental factor (e.g., Rett disorder)
  - Associated with another neurodevelopmental, mental or behavioral disorder
  - With catatonia (risk greatest in adolescent years)

DSM V
Autism Spectrum Disorder

- The former diagnosis of Asperger's will now be diagnosed as:
  - Autism Spectrum Disorder, Without Accompanying Intellectual Impairment and Without Accompanying Language Impairment; Requiring Support with Social Communication and Social Interaction; Requiring Substantial Support with Restricted Repetitive Behaviors, Interests, and Activities



ASD = Autism Spectrum Disorder DSM 5

- Exhibits impairments in communication
- Exhibits impairments in social interaction
- Exhibits restricted, repetitive patterns of behavior
- Exhibits unusual responses to sensory experiences
- Difficulties with change of routine, schedule
- *Anxiety- Not in DSM 5 as a qualifier but seems to be pervasive per Dr. Braden*

Unusual Interests and Behaviors

Sensory Integration Deficits

Iarocci and McDonald 2006

- Atypical behaviors among children with autism can be due to either hypo or hyper arousal states
- Sensory deficits often have downstream effects on the development of perceptual systems
- Children with autism exhibit behaviors consistent with sensory seeking, oral sensory sensitivity, poor sensory registration and unusual reactions to sensory input

Sensory Integration Deficits

- Provides visual symbols for sensory diets
- Provide visual supports for breaks, alternative activities and self regulation

Sensory Processing and Learning

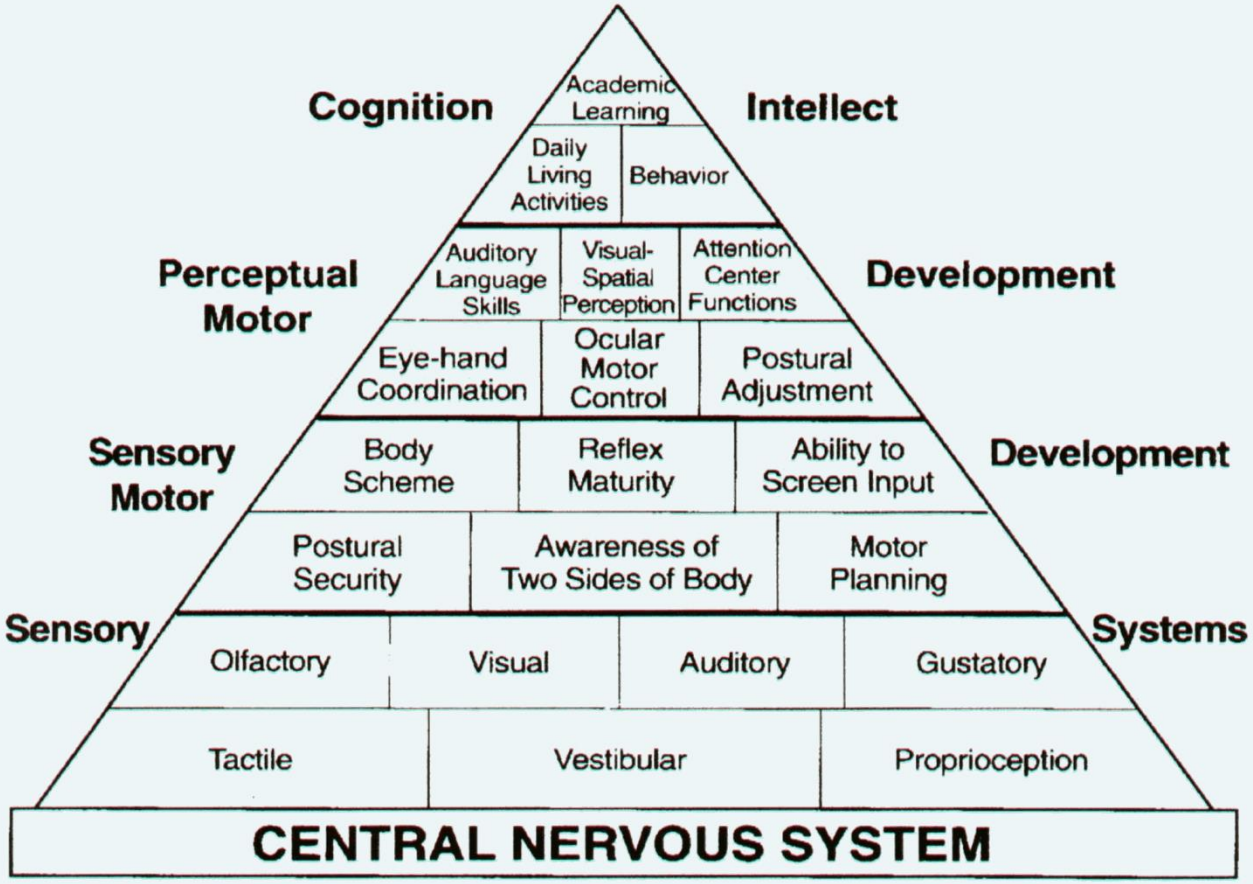
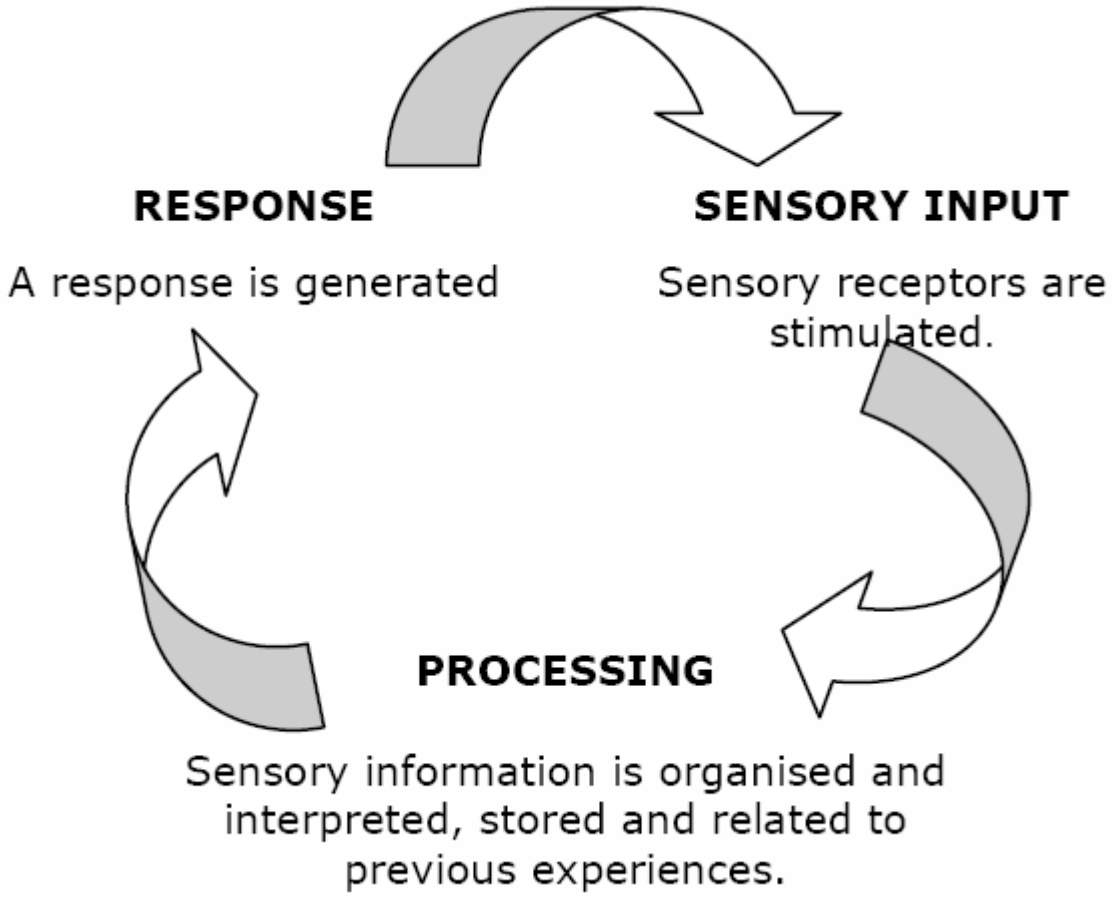


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

So, why is it important?



Anxiety

- Children with autism express anxiety or nervousness in many of the same ways as typically developing children.
- Social anxiety – or a fear of new people and social situations – is especially common among kids with autism.
- If the child suffers from anxiety, he may experience strong internal sensations of tension. This can include a racing heart, muscular tensions, sweating and stomachache. Intense anxiety can result in repetitive behaviors that appear to serve no function, such as shredding paper or clothing

Anxiety

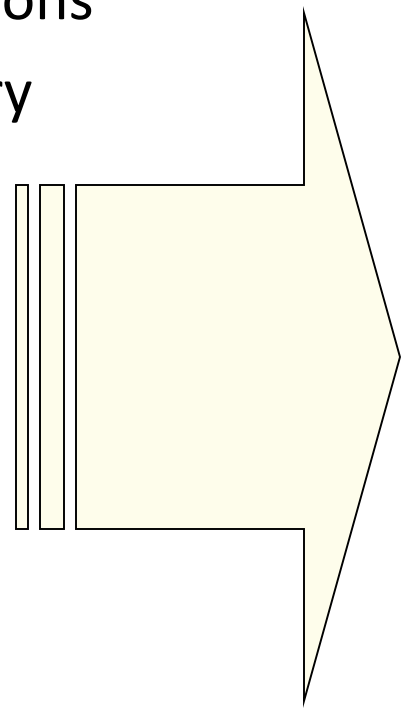
Perceived
Danger

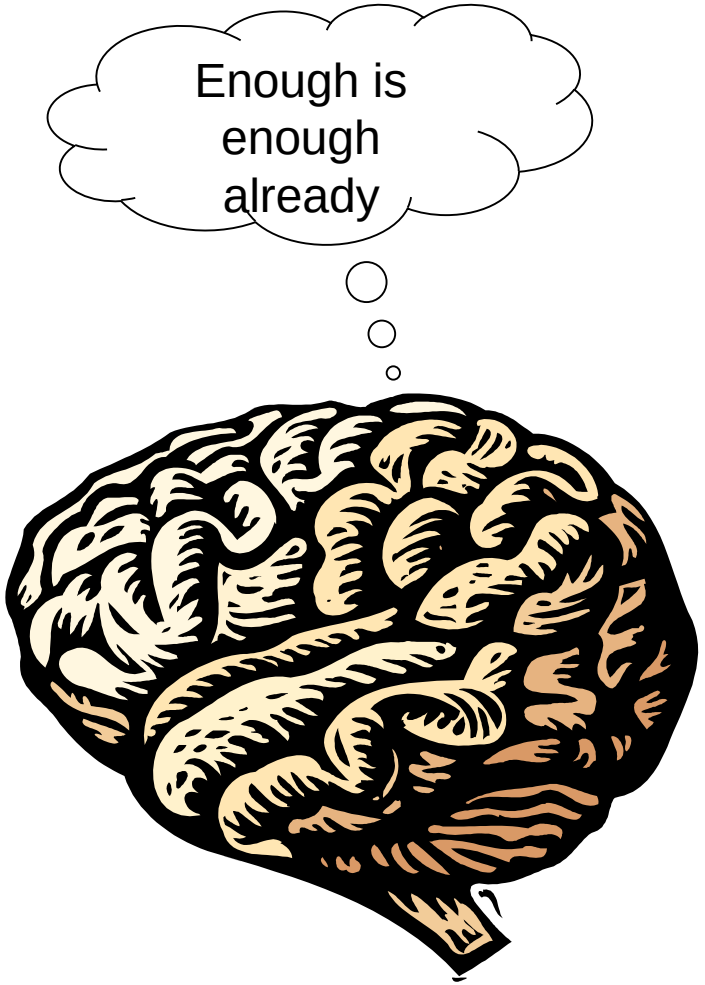
Normal Anxiety-

- A neurobiological response to danger.
- The brain's way of waking up the central nervous system.
- Prepares the body for fighting a threat or flight from a threat.

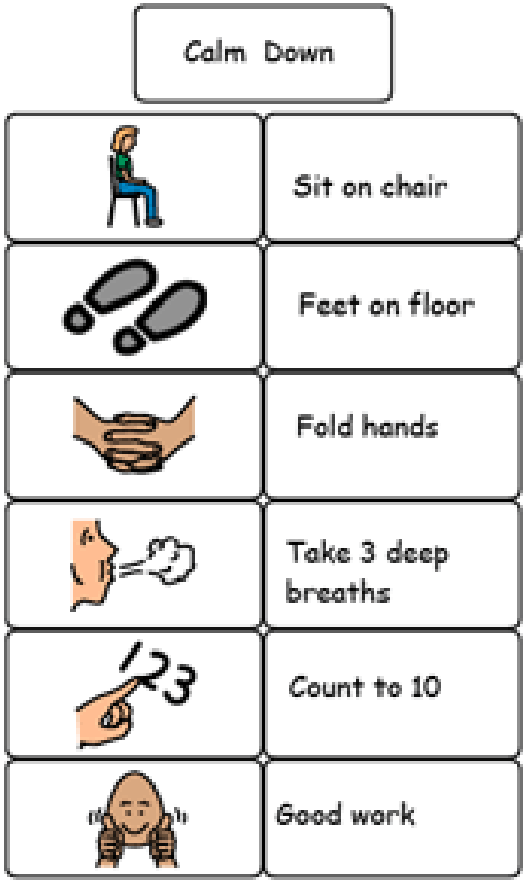
Perceived Threats

- Unclear expectations
- Too much auditory input
- Sensory
- Transitions
- Fear of failure
- Frustration

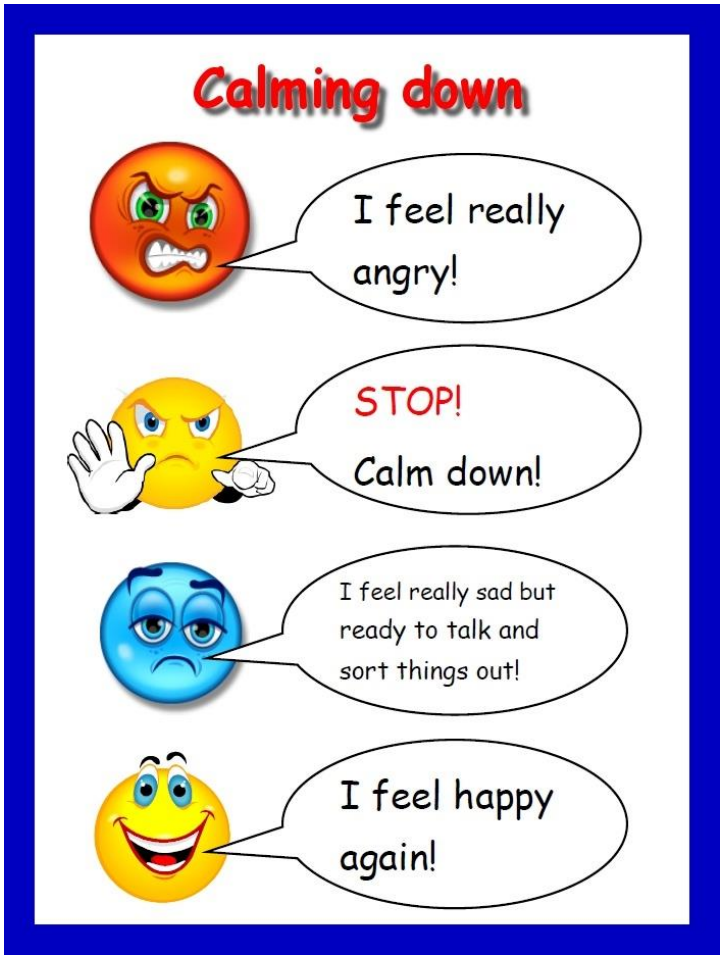




Anxiety



Students with Anxiety



Calm Down Video

What about parents and teachers?

- It is important to understand the impact that parents, teachers, therapists, and siblings etc. have on the behavior of the individual with autism
- What is the impact of the individual with behavioral issues on parents, teachers, therapists, siblings.
- What happens when you as educators become frightened or anxious around students with autism? Can they detect the fear or uncertainty?
- Do you behave differently when you are anxious? Are you as confident? Can you follow protocols and procedures if you are anxious?

Children with Autism vary in level of impact and level of need

Just as the level of impact varies…so does the level of service

- **Some children need intensive and structured programming in order to gain access skills**
- **Others can benefit from natural settings and using probe data to measure progress**

The Evolution of Treatment for Children with Autism

The History of Behavioral Treatment Approaches for Autism

- The events that brought behavioral therapy to the forefront

  ▲ Absolute failure of treatments seeded in psychopathology caused by the parents- refrigerator mother

  ▲ Behavioral treatments were non existent. Children with autism were most often institutionalized, making any treatment that worked a big success

- Schreibman 2005

The events that brought behavioral therapy to the forefront

- Early demonstration of applied behavior intervention included one in 1958 by Fuller in which he described the changes in an individual who was then called a “vegetative idiot” and another by Lovaas and Simmons 1969 showing that self-injurious behaviors could be controlled and reduced using behavior intervention

- Schreibman 2005

The events that brought behavioral therapy to the forefront

- The behavioral manifestations of those with autism go to the very core of human development and relationships causing great concern for children and families.
- These issues enticed scientists and behaviorists to get involved in the treatment

- Schreibman 2005

The events that brought behavioral therapy to the forefront

- There are no other effective treatments that have been empirically validated
- 2006 National Institutes of Mental Health: “Among the many methods available for treatment and education of people with autism, applied behavior analysis (ABA) has become widely accepted as an effective treatment”
- http://www.nimh.nih.gov/publicat/autism.cfm

Role and Challenges of Public Schools

- Develop and implement special education program (Individualized Education Plan, IEP)
- Challenge is defining and implementing an ABA program within the school structure. Most ABA programs have been implemented in a clinical non school setting
- Historically, public schools have not provided ABA methodology. Most ABA programs have been privately funded outside the constructs of the school district
- Average cost of quality ABA programming nationwide is $50,000 - $75,000 annually

Neuro-behavioral Theory

Neurobiology

- Protein depletion

Behavioral Phenotype

- Sensory defensiveness/hyper-arousal
- Anxiety
- ADHD
- Aggression
- Self abuse

Function

Escape

Avoidance

Gain Access to preferred activity

Attention seeking

Reduce anxiety

What I've Learned About Autism and Behavior

- They show or tell us what they need
- It is our job to give them a more appropriate way to communicate their need
- We have to observe the behavior looking for function in order to help modify the behavior
- It often takes "thinking outside the box"

They Show Us What They Need

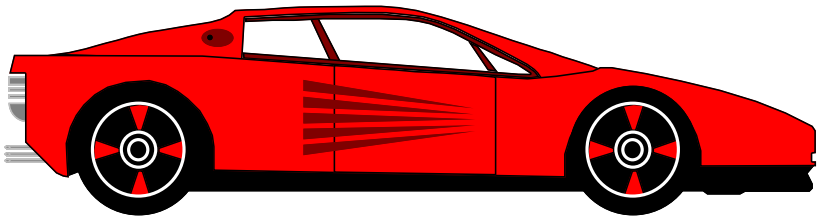
Behavior Intervention 101

- Don’t engage in power struggles
- Be direct and exact- tell what you want not why you don’t want
- Regulation of your response will set the stage for redirection
- Use “cave man and woman” talk to redirect
- Modulate your voice and body language
- Be consistent- target one behavior at a time

Different Strokes for Different Folks

- Accommodations and interventions must be specific to the child's individual profile, learning plan or IEP
- Not all children within a specific etiology demonstrate the same profile
- Children differ in their reinforcement needs and motivation

Cars and Kids



- A car needs gas
- Some cars need more gas than others
- Some activities require more gas than others
- When you run out of gas the car will not work
- It takes time to refill a tank once it has run out

Optimize Fuel Efficiency

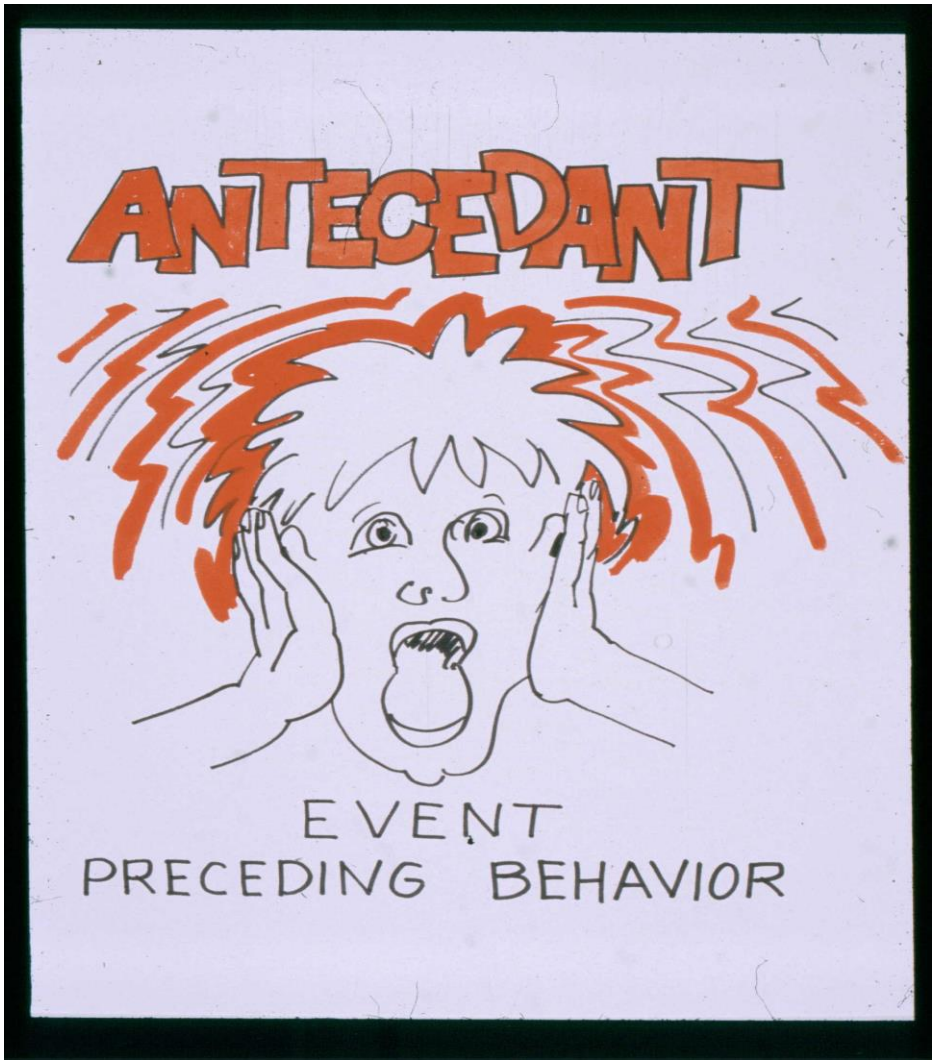
- Continually top of the tank
- Provide aides that decrease need for fuel
- Use good fuel

Foundations of Behavior

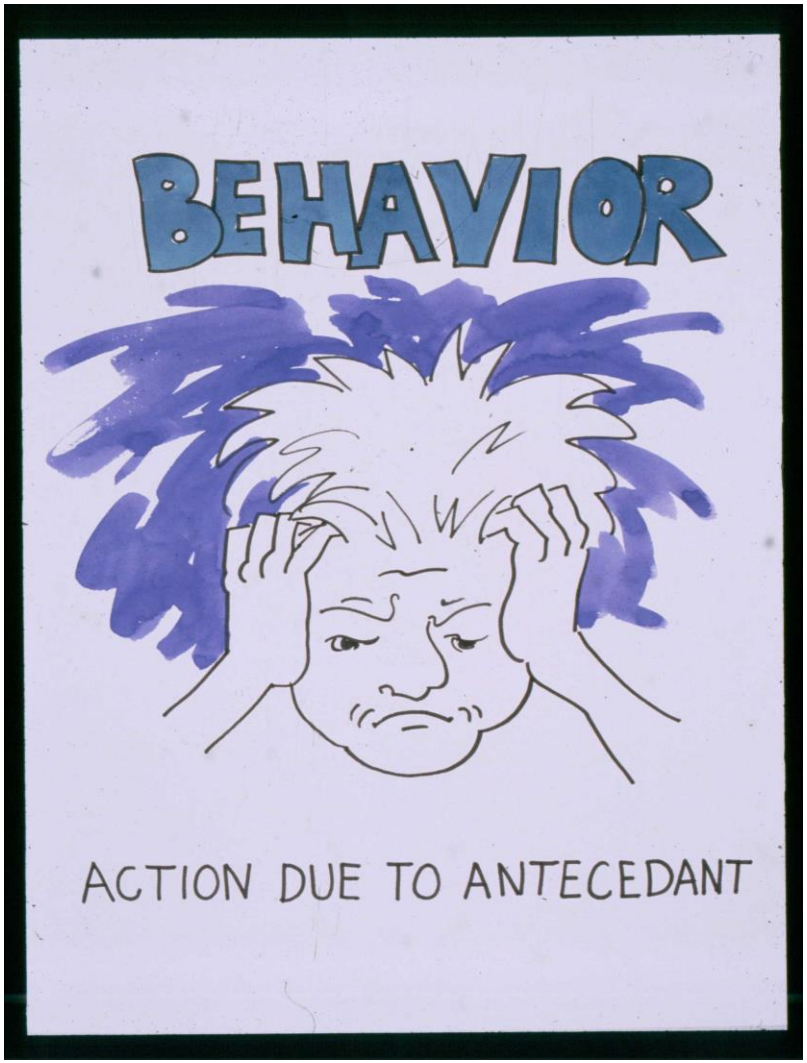
- In order to change behavior we must first understand the foundational aspects of behavior.
- All behavior serves a purpose.
- Behaviors do not continue unless they are reinforced in some way.
- Sometimes the reinforcing aspect of the behavior is internal.
- If you do not address the cause of the behavior it will not change.

ABC's of Behavior

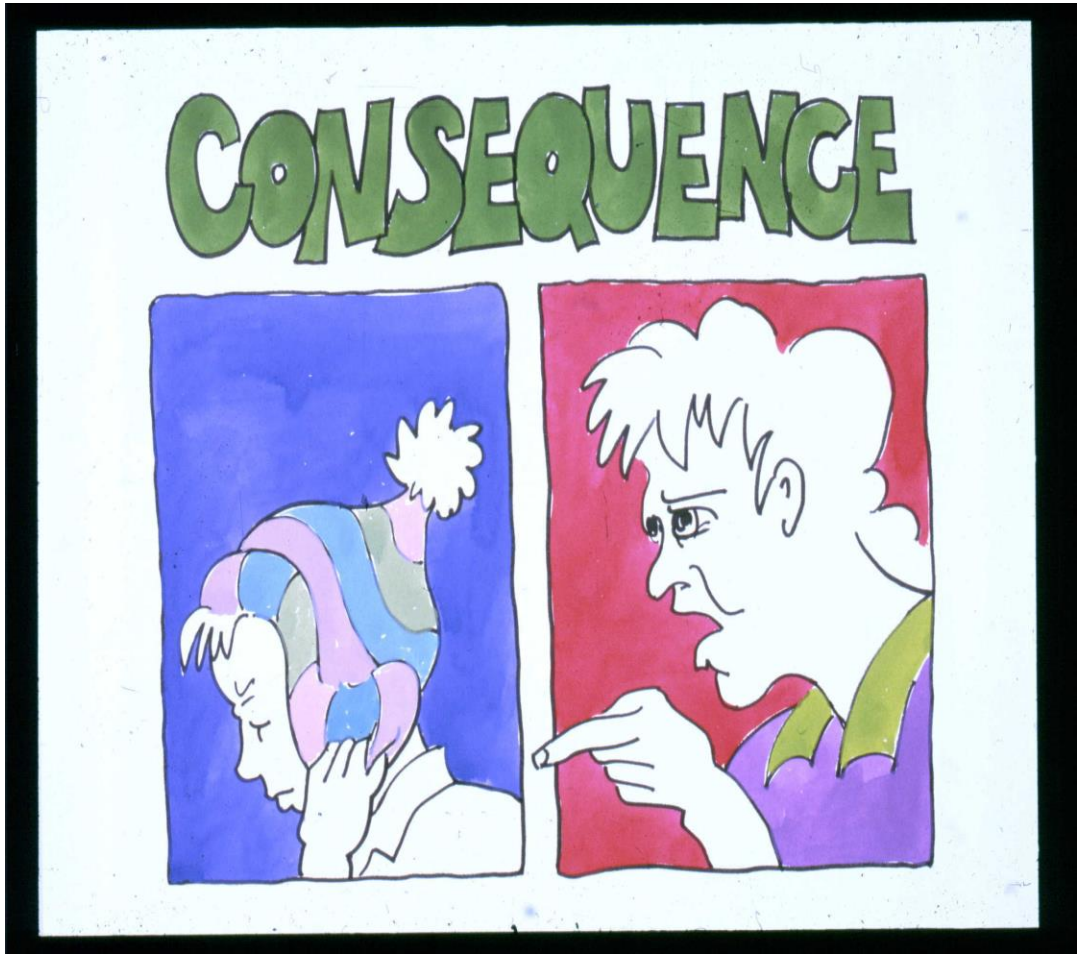
Behavioral Factors



Behavioral Factors



Behavioral Factors



ABC's of Understanding Why students engage in problem behavior: Finding out the Pay-off or Function of Behavior

A= Antecedent(s). Find out the events that occur right before the behavior.

- Allows you to predict: **Where (During routine)? & When (Trigger event)?**

ABC's of Understanding Why students engage in problem behavior:
Finding out the Pay-off or Function of Behavior

B=Behavior. Find out **what** is the observable problem behavior?

C=Outcome/ Consequence. Find out what happens after the behavior occurs? WHY?

A → B → C

Determining the Antecedents

- It is sometimes difficult to define the antecedents
- It is difficult to know where to start.
- We often create additional issues through our attempts to make things better.
- When we make changes in a systematic way we can decrease the need for subsequent interventions.

Common Antecedents

- Removing access to preferred item or activity
- Requiring compliance
- Requesting completion of non preferred tasks
- Participation in a group

PC

Hidden Antecedents

- Social
  - Greetings, phone calls, introductions, novel social settings
- Physical
  - Ill
  - Anxious, panicked, headaches, gastro intestinal issues
- Curricular
  - Tasks that are too difficult and require executive functioning, motor planning and problem solving
- Environmental
  - Transitions
  - Crowds
  - Loud and unpredictable sounds

Social Antecedent

Curricular Antecedent

Executive Function Deficits

Physical Antecedent

Anxiety, physical ailment related to anxiety

Environmental Antecedent

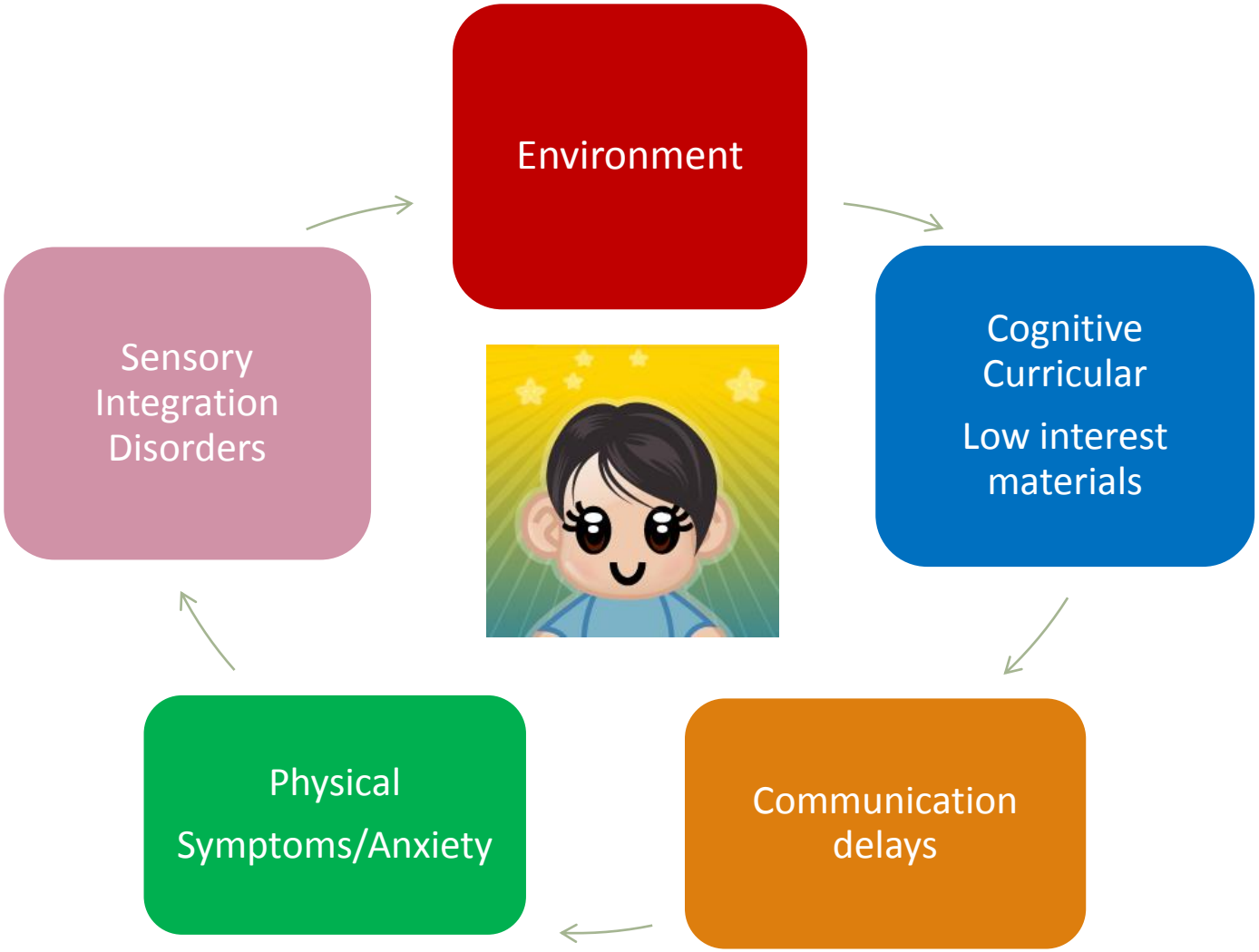
Transitions

- Why are transitions so difficult? The obvious reason relates to the anxiety provoked by the unknown- what is the expectation when I enter the new environment? What is the environment like? Will it be noisy, and chaotic? Who will I see there?

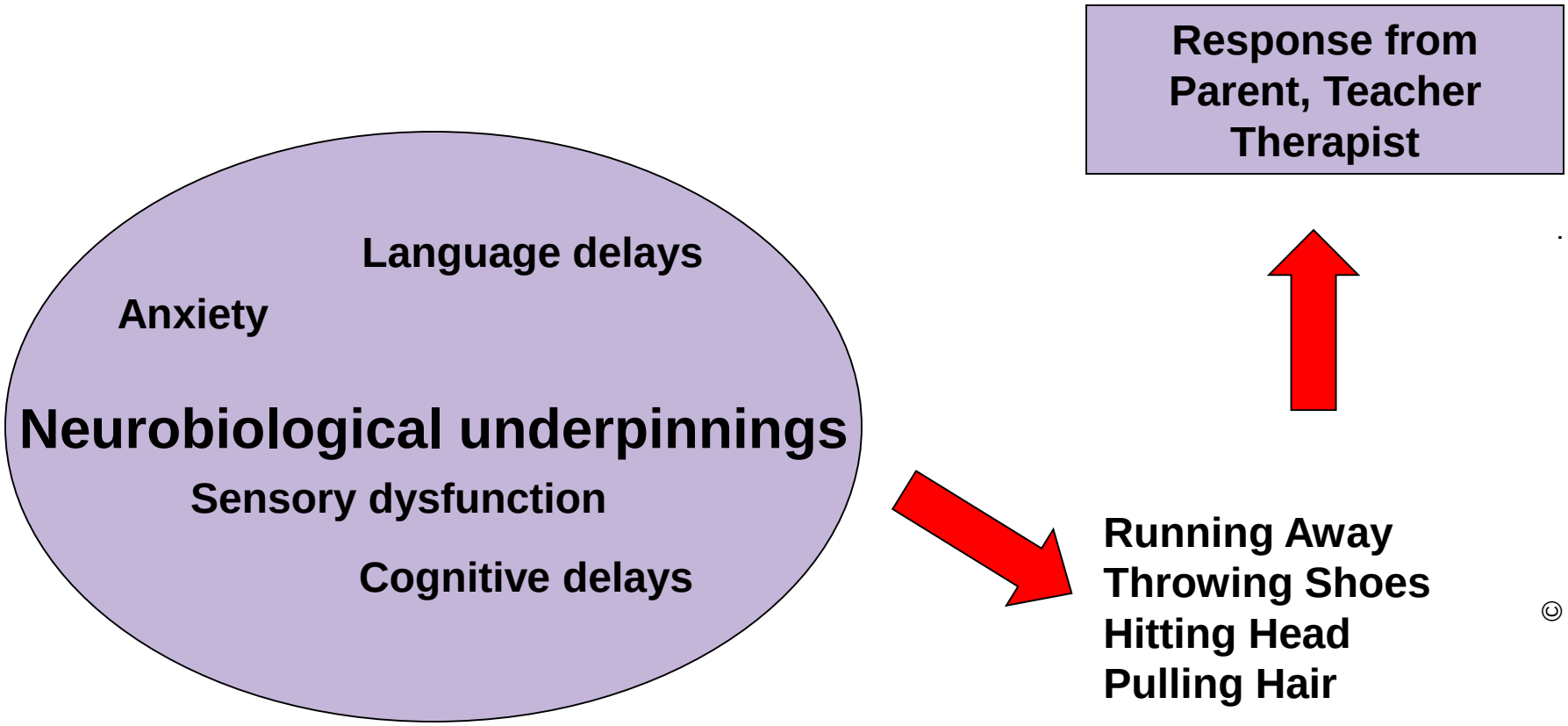
Modify the schedule to assist in transitioning

- It is much easier to modify the schedule then to modify the individual to fit the schedule.
- What are the challenging times? And what are challenging activities? Don't mix the two.
- What is the purpose of the current schedule and what can be shifted?
- Use physical props to help with the schedule/transitions.

Factors that Impact Behavior



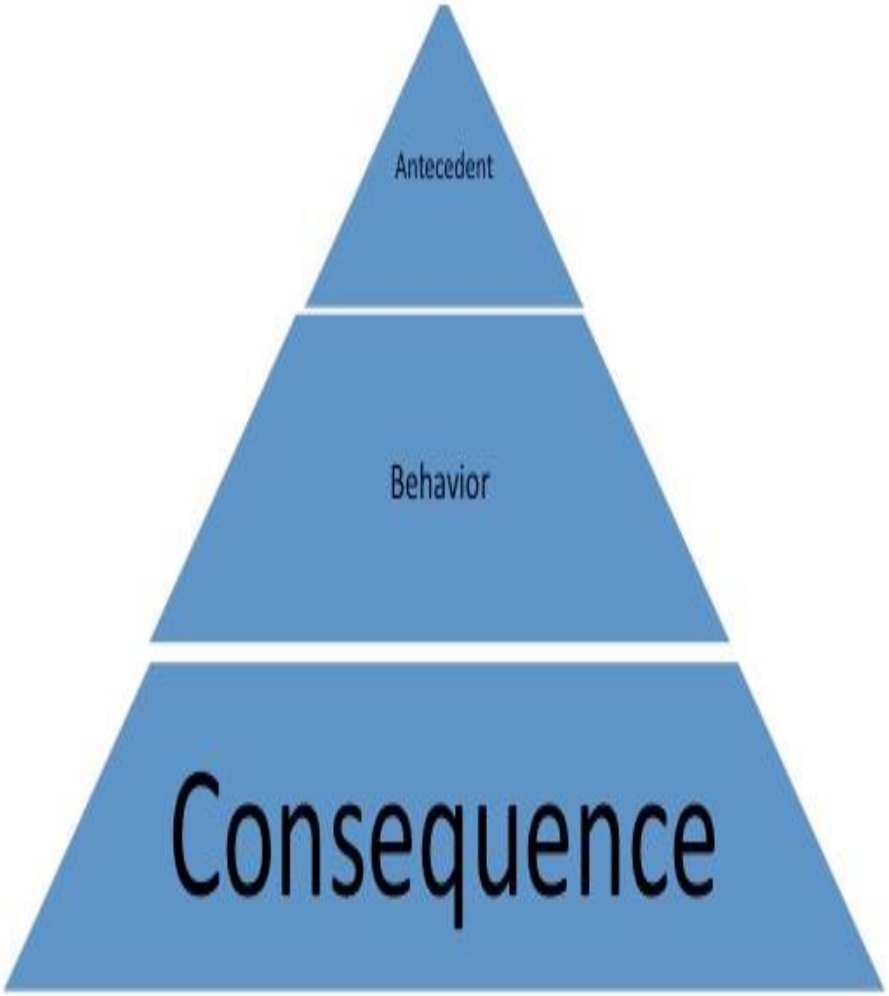
The behavioral cycle

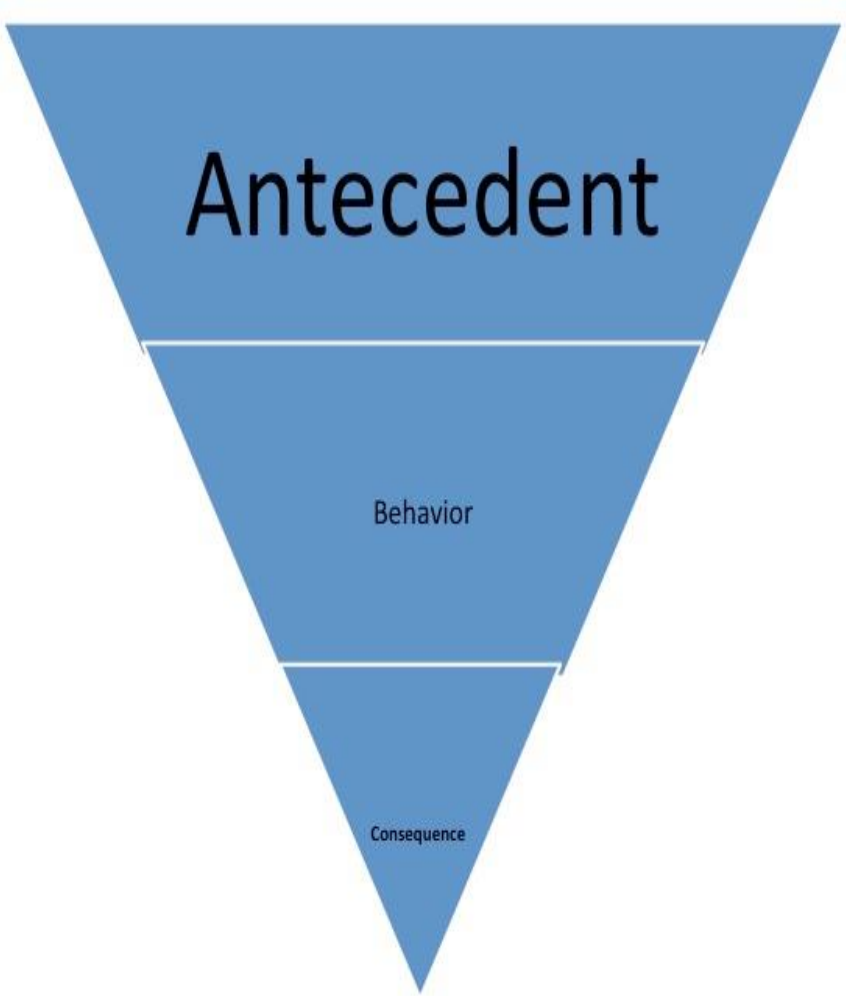


Consequences

- Sometimes the consequence can play a part in maintaining the behavior.
- It is often necessary to interrupt the behavioral chain by changing the consequence
- Some behaviors are internally motivating (biting applying pressure, masturbating, hitting head, etc.) which can make a deterrent consequence difficult

Flip the model





Some behaviors are more difficult to extinguish because they are internally motivating

Goals of Functional Analysis

- Operational Definition of the Behavior
- Prediction of times and situations when the behavior will and will not occur
- Definition of the function (the maintaining reinforcers) that the undesirable behavior produces for the person

Common Functions of Behavior

- Avoidance- What is the person trying to avoid? It may be important to look more carefully at the antecedent
- Escape- wanting to avoid by more direct means like dropping to the floor, hiding, running away. Is this because the more subtle behaviors are not communicating a need?
- Attention Seeking- What is the consequence for attention seeking- is it maintaining the behavior?

What is the function of the behavior?

- What is he avoiding?
- What is he trying to communicate?
- How does the environment contribute?
- What supports could be added to increase his engagement?
- What proactive measures might have been employed?

Creating a Sound Behavior Plan

- Identify one specific behavior to target.
- Determine when, where and how often the behavior occurs.
- Examine and address any physiologic causes.
- Examine and modify the structure of the situation, when possible to decrease the opportunity for the behavior to occur.

Creating a Sound Behavior Plan

- Provide the child with additional resources for dealing with the stressors associated with the behavior.
- Outline natural consequences for the behavior.
- Be consistent.
- Provide a substitute behavior.
- Reinforce positive behavior.
- Start in a controlled setting.
- Provide opportunities for both success and for failure

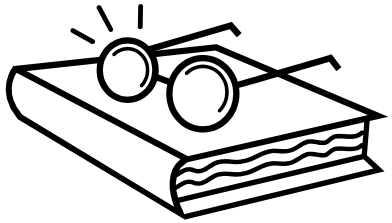
Why do most behavior plans fail?

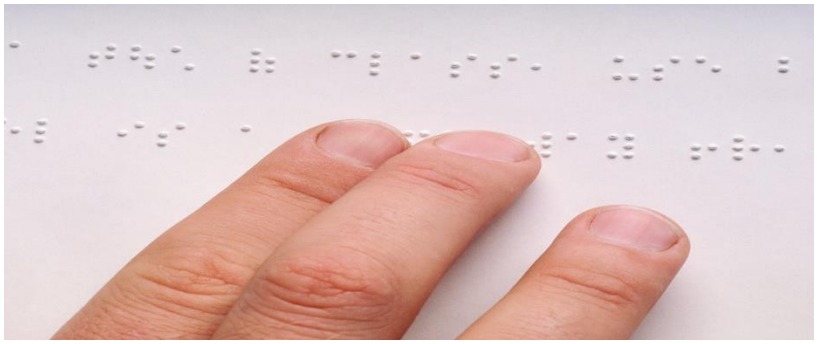
- They assume behavior occurs in isolation.
- They are not holistic in their approach.
- They are too complicated.
- Do not address the foundations of the behavior.

Behavior Intervention Plans should be multi-disciplinary

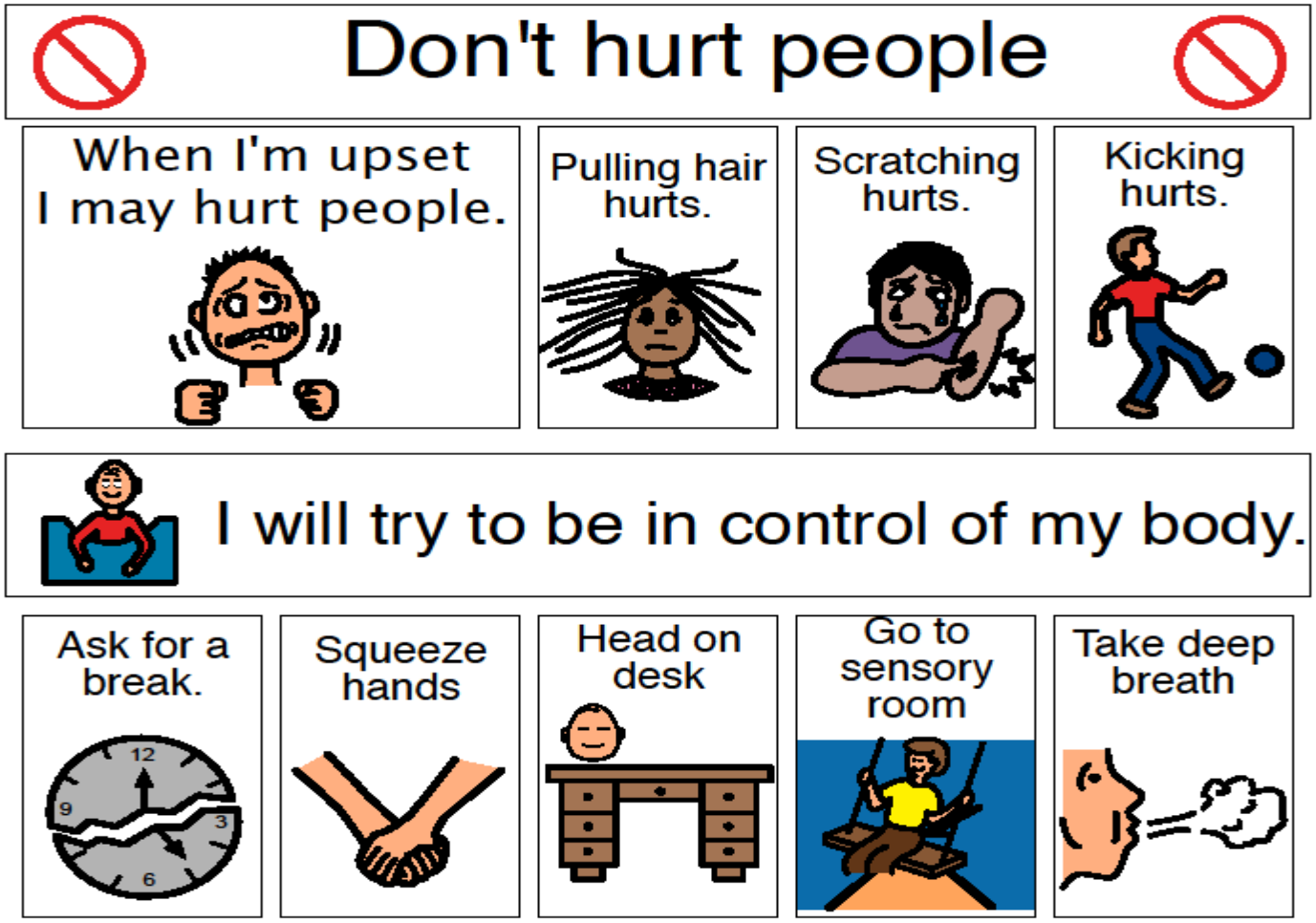
- Consult the SLP to determine proactive strategies and positive support
- Utilize visual supports whenever possible
- Adjust the schedule, times of inclusion, environmental concerns, social expectations, and transitions
- Consult the OT regarding sensory dysfunction and how it contributes to behavioral issues
- Consult general education teachers, specials teachers, lunchroom staff, building mangers and office staff

We would never make a sticker chart to help people with visual impairments see better.

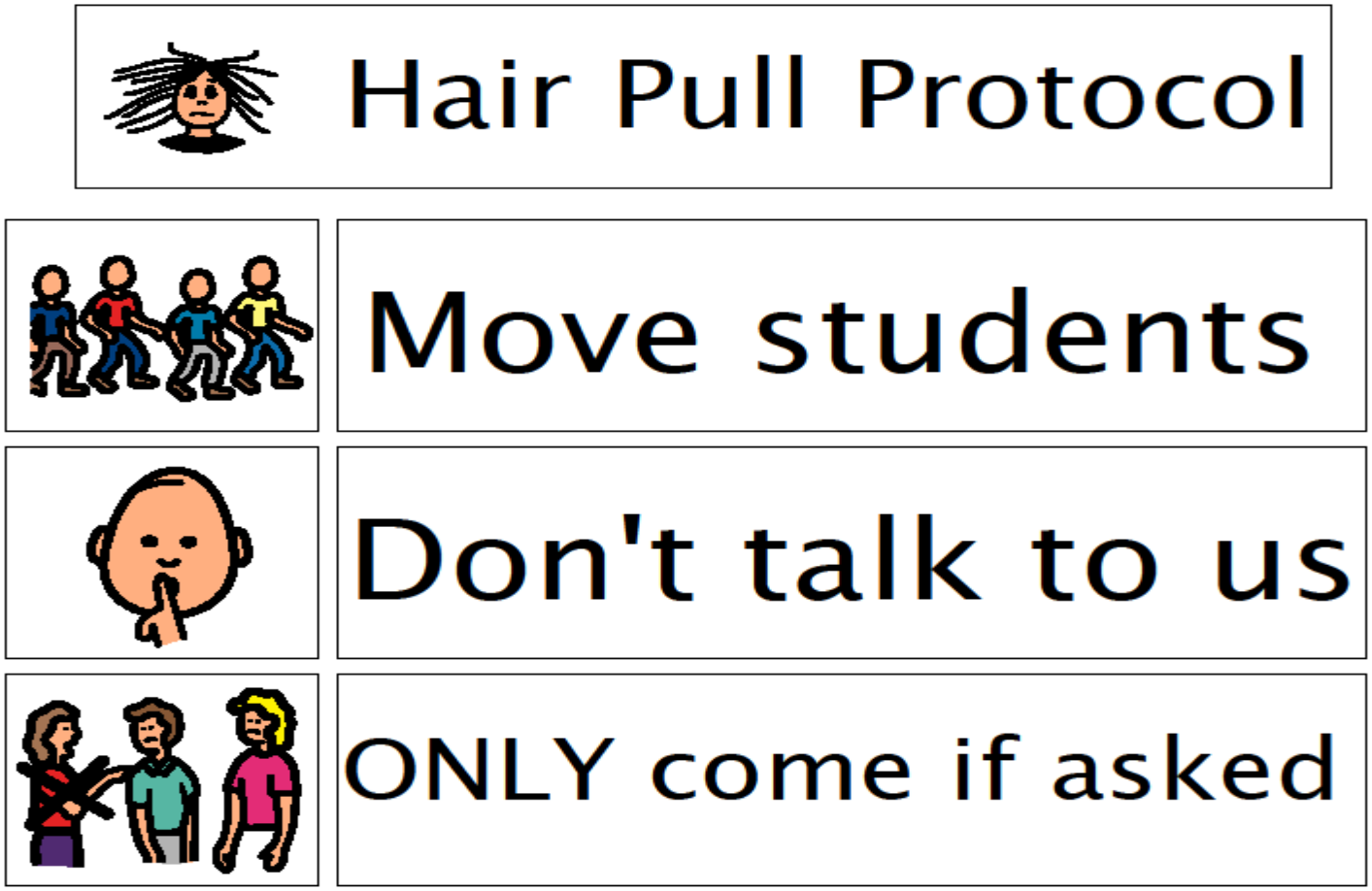




Use Visuals to Teach Regulation



Use Visuals to Sequence a Behavioral Intervention



Using Visuals to Teach Advocacy

A Behavior Plan Must Consider the Cause or Antecedent of the Behavioral Cycle (previous slide)

- Creating a behavior chart to keep hands “quiet” will fail
- Providing a DRO- differential reinforcement of other (behavior) may work if it targets an effective replacement behavior
- Offering a more adaptive remedy to provide deep pressure WILL work!

Behavioral Problems
When is it significant?

- Rate of behavioral episodes
- Intensity of episodes
- Time to return to baseline
- Specific environmental factors that disproportionately affect the behavior:
  - Transitions
  - Noises
  - Textures
  - Scheduling changes
  - Interruptions in routine
  - Group size
  - Different instructors ,teachers or caregivers

Developmental Aspects of Behavior

birth to preschool

- There is a good deal of evidence about effective interventions for this age group. Early intervention is critical to overall prognosis.

Developmental Aspects of Behavior

birth to preschool

- video

We can learn about behavior while observing play

Developmental Aspects of Behavior

birth to preschool

- video

We can impose structure to compare performance and prognosis

Birth to Preschool

Most Common Behavioral Issues

- Self-regulation skills begin to rapidly during the preschool age period
- Self-regulation involves the ability to control impulses and expressions of emotion
- Children with difficulties in self-regulation might show a range of problems including higher rates of tantrums, irritable mood, compositionality and disturbances in sleep, eating, activity and attention.(Patterson, 1982, Shaw & Bell, 1993)

Birth to Preschool

Most Common Behavioral Issues

- Eating (sensory dysfunction) causes the baby to have difficulty tolerating texture and taste which continues throughout the life span- diet is poor due to eating preferences. This presents behavioral issues as the parent tries to satisfy and nourish the baby
- Sleep is often disturbed due to hyper arousal and acute auditory sensations
- Independent toileting is delayed due to neurobiological functions such as textural sensitivity and slow development of sphincter muscle
- Separation anxiety, communication deficits and delays and cognitive deficits.

Birth to Preschool
Most Common Behavioral Issues

Sleep Disturbances

Parents of children with autism often report that their children have sleep problems.

When children with autism have sleep disturbances it is often related to diet, obsessions (video games and computers) hyperactivity and sensory dysfunciton.

Birth to Preschool
Most Common Behavioral Issues

Sleep Disturbances

Children, especially those with an already compromised nervous system, need their sleep for optimal development and functioning. Ongoing support toward that end from medical providers can help play an important role.

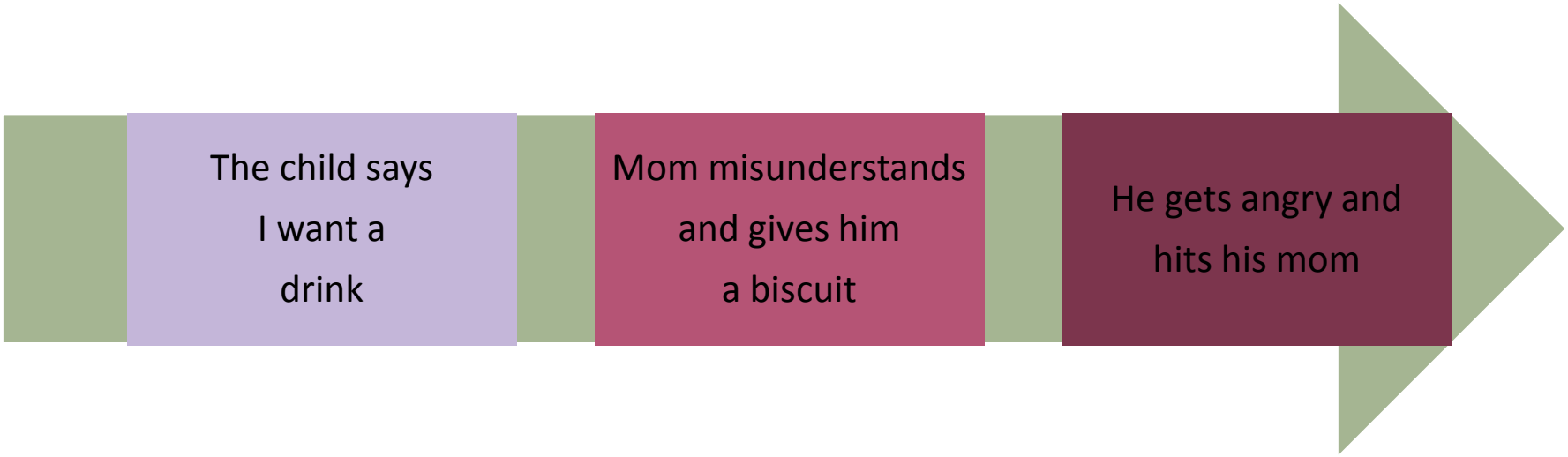
Kronk, R., Noll. R., &Dahl, R. (2009). Caregiver reports of sleep problems on a convenience sample of children with fragile X syndrome. *American Journal on Intellectual and Developmental Disabilities* 114, pp 383-392.

Birth to Preschool
Most Common Behavioral Issues
Toileting

- Toilet training can be delayed and can be persistent . The length of time it takes will depend on the child's motoric or muscular difficulties, the child's awareness of his body and sensations, as well as the level of cognitive deficits

The Cycle of Communication Delays and Behavior

- Difficulty communicating a need often results in a behavioral sequence such as this:



Visual Supports for Communication Delays

School Aged
Most Common Issues

- Riding to and from school on bus
- Transitioning from home-school-home
- Waiting
- Seeing own image in mirror or window glass
- Hearing screams, unpredictable sounds, conflictual disagreements
- Social stressors, inclusion and interaction

School Aged

Most Common Issues

Social Stressors

- If you are anxious in social settings, you avoid them. When you avoid you become less social.
- It is easier to be with adults than age similar peers because adults repair social interaction and help support successful social collaboration.
- If you have social deficits you dislike talking on the phone, attending social events, being with people you don’t know, and taking social risks.

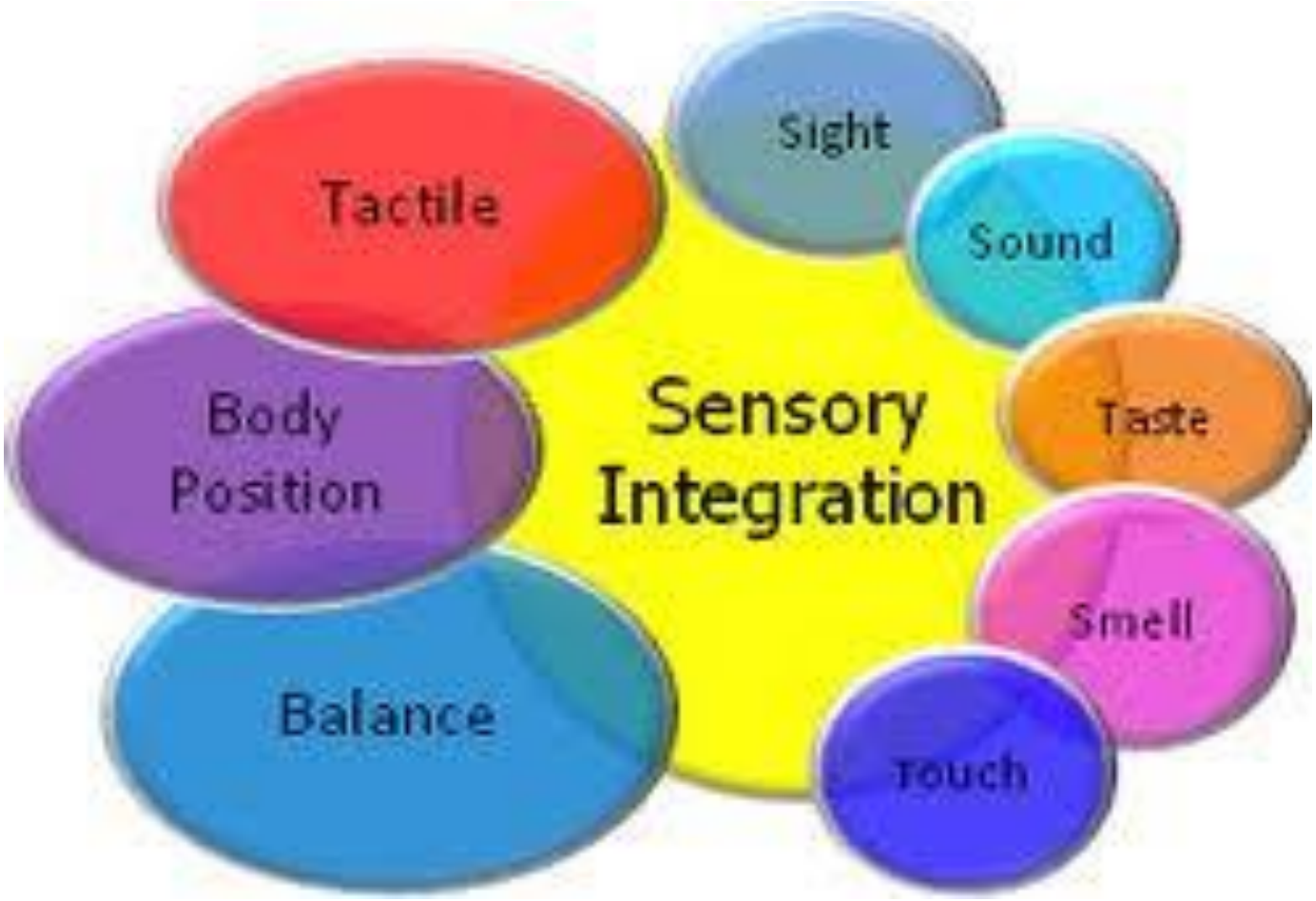
Social Expectations

- Introductions, eye contact, hand shaking
- Perceived or real conflict/confrontation
- Embarrassment, compliments, criticism, attention
- Verbal interaction, conversational exchange, answering direct questions is challenging

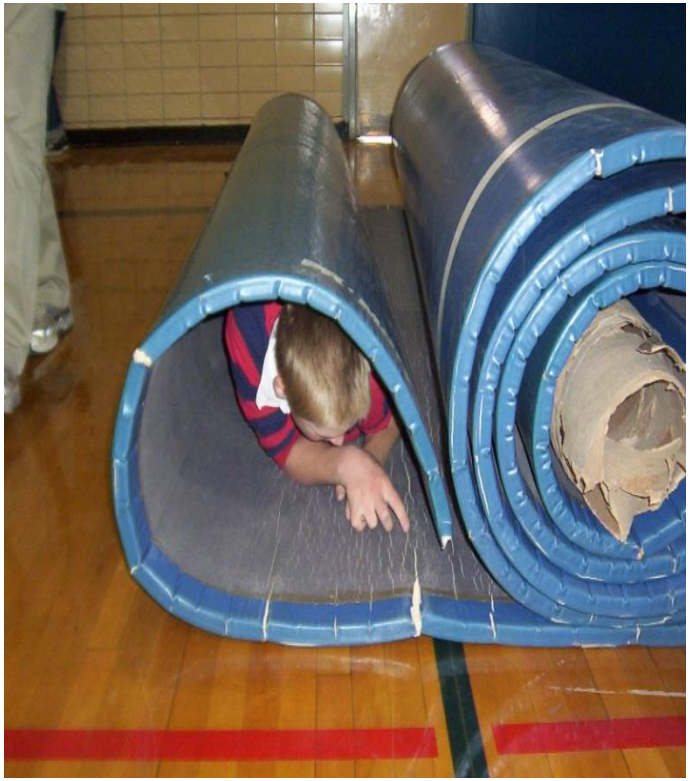
School Aged
Most Common Issues
Sensory Integration Disorder

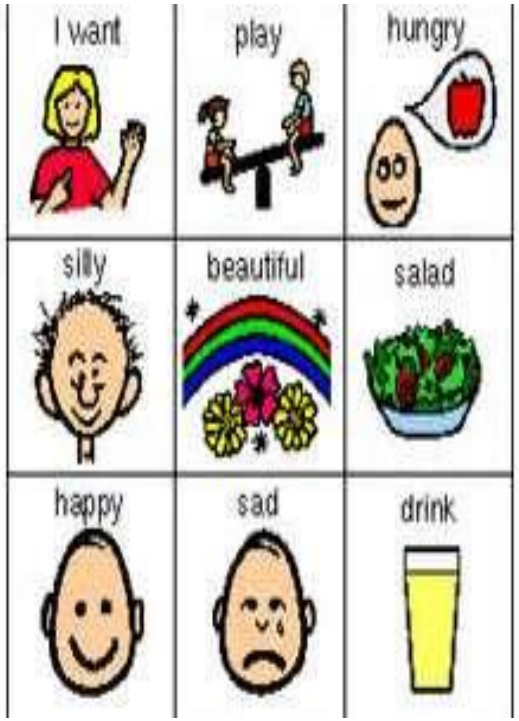
- As the child progresses through school, the environment grows and the child is required to function within a variety of environments
- As the environment grows so do the expectations and norms
- There are a number of ways that sensory dysfunction can contribute to behavioral issues
- Sensory diets, accommodations in the classroom and regulation protocols should be considered when addressing behavioral issues

Our 7 Senses



Remedies for Sensory Processing Deficits





Cool things can be used therapeutically

Tight fitting clothing can Provide deep pressure

I-phones or pods can provide a distraction or can include visual schedules

Creating a Good Place to Learn

- Consider lighting, visual clutter and extraneous noises
- Utilize visual supports whenever possible
- Reduce verbiage
- Organize spaces with desk placement and work table charts
- Include spaces for sensory input, calming and high interest materials

Creating a Good Place to Learn

- Visual timetables
- Consistent routines that build predictability
- Boundaries
- Movement breaks (www.yourtherapysource.com)
- Heavy work activities
- Fidgets
- Seating options
- Fast paced presentation
- High interest materials to enhance engagement
- Opportunities to interact socially with adults and peers

Start with the Environment

- The environment is the easiest thing to change.
- The environment can have a huge impact on behavior as the neurobiology collides with the environment.
- Changing the environment can shed light on the antecedent of behaviors.
- The environment is anything physical.

It is difficult to

Overcome this

With this

Or this..with this

Use physical props to help control the aspects of the environment that you can't control.

A Good Place to Learn

- Environment
- Instructional Quality
- Structure of the Classroom
- Visual Supports and Structure
- Sensory Integration and Regulation Protocols
- Opportunities for Inclusion with Typical Peers
- Opportunities to cooperate and help in the classroom

A Good Place to Learn

- Incorporate high interest material into instruction
- High interest links familiarity with novelty
- Novel skills are not taught in isolation, but embedded into the high interest materials
- Interests may neutralize the full impact of learning something new and unfamiliar, hopefully reducing anxiety
- Utilize peers as teaching models. This facilitates indirect learning and reduces the intensity of the learning experience.
- Use side dialoging to introduce a schedule change, subtle shift in activity or other communication need.

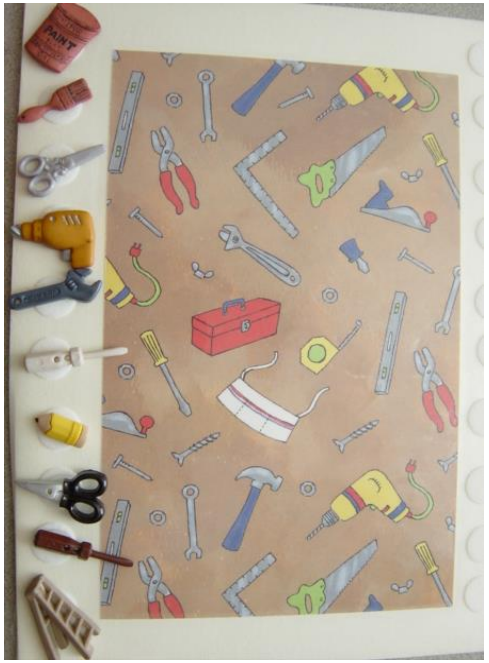
Ways to remediate EFD

- Rhythm
- Music
- Do the first step for them
- Fill-ins
- Backward chaining
- Change intonation patterns
- Use an accent

A Good Place to Learn

- Structured Teaching uses gestalt staging. This is consistent with seeing the whole and not the parts. Students with cognitive delays often require a concrete presentation
- Non sequential learners can benefit from a global visual picture which includes the “whole” of what is expected
- Provide the entire sequence of a task so that the student can see the end to better understand the completion and steps to get there
- Encourage flexibility in responding- help the student adapt to new situations

A Good Place to Learn



Customized token boards provide clear expectations, summons attention and provides motivation

A Good Place to Learn

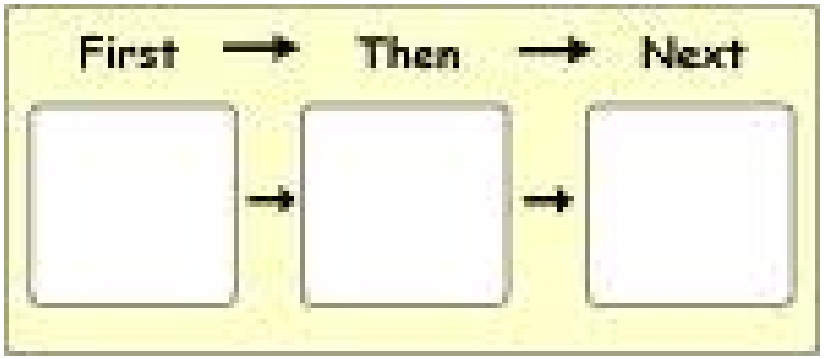
- Structured teaching provides appropriate and meaningful environments that reduce stress and anxiety.
- Visual backups provide support when the student is unable to receive meaningful benefit from traditional instruction
- Visual support is always there to refer to whenever frustration mounts
- Rules and consequences are clearly defined reducing the need to manipulate or “deal”
- Expectations are clearly defined making it easier to understand and ultimately comply

A Good Place to Learn

Provide visual reminders
for behavioral programming

Marcia L. Braden, Ph.D., P.C

A Good Place to Learn

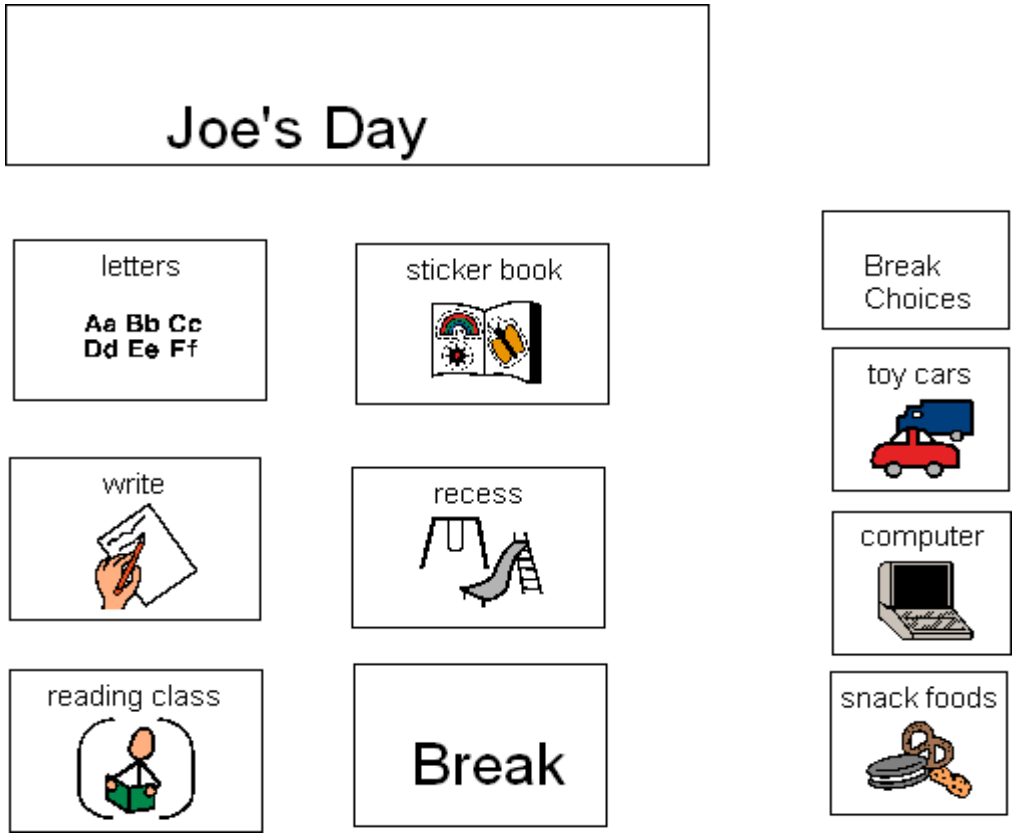


A Good Place to Learn

- Structured teaching provides concrete parameters and physical organization of the learning environment
- Provides specific guidelines and expectations to promote the development of independence and task completion
- Provides limited input, applying reduced verbal input with visual supports. Helps the student focus on the concept and not the details.
- Consistency of expectations provides predictability and takes out the guess work

A Good Place to Learn

- Providing choices between activities gives students a sense of control

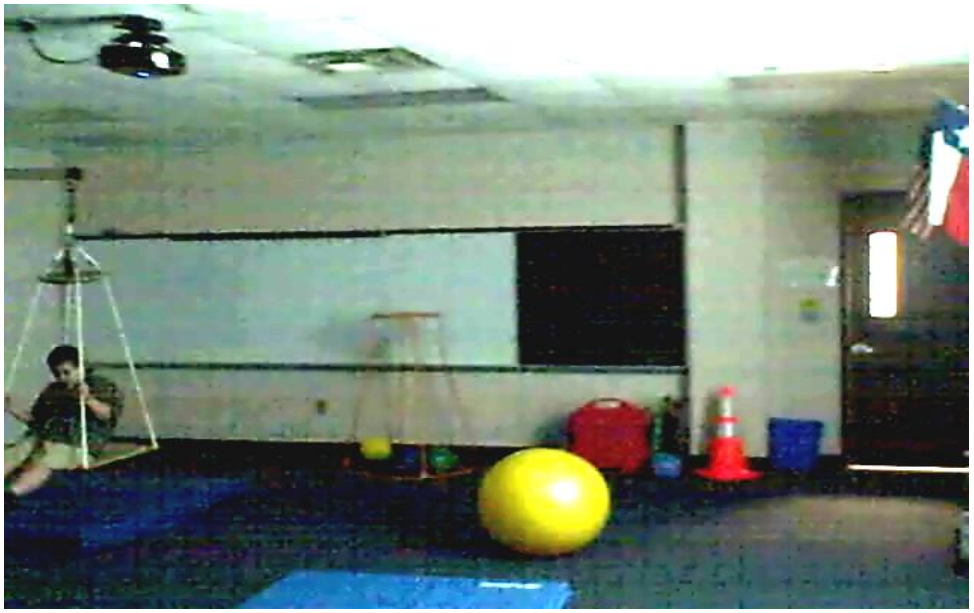


A Good Place to Learn

- Structured teaching provides predictability and sameness which is calming and stabilizing to students.
- Anxious students may engage in flight or fight behaviors, preoccupations, perseveration, obsessions (the thought) and compulsions (the behavior) which can be reduced with predictability and clear expectations
- Clearly defined expectations, assignments and time lines are comforting and allow the student who is anxious to access their full potential

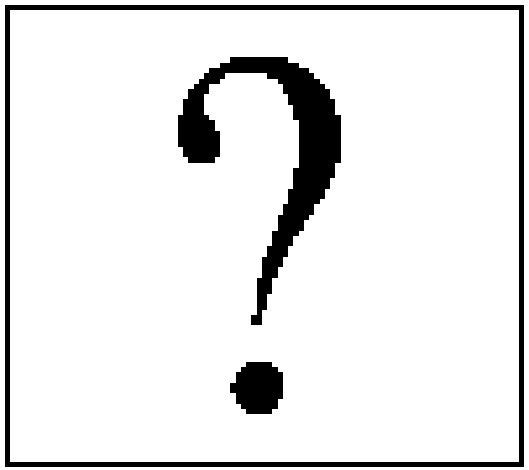
A Good Place to Learn

- Students with autism often have difficulty interpreting sensory input and need an area in which to learn how to self-regulate



A Good Place to Learn

Indicate changes by placing a symbol/word by the activity



Visual supports to aid in learning

- Object schedule
- Dry erase board
- 3-ring binder
- Clip board
- Manila folder
- Written list schedule
- Sentence schedule
- Photograph schedule
- Picture/Symbol schedule
- Picture/Symbol with written schedule

With permission from Julie Race and Jody Minarick

Symons, Clark & Roberts 2001

- Classroom engagement of elementary school children with FXS is strongly related to the environmental and instructional quality of the teachers and classroom
- The ways the teachers structured and arranged the classroom environment was much more important to student engagement than specific aspects of the child's FX status, medication use or dual diagnosis

Symons, Clark & Roberts (2001) What does it mean to you?

- Classroom structure- be sure the student has access to the focus of instruction
- Remember learning strengths and weaknesses:

  IF YOU TEACH TO THE WEAKNESSESS YOU WILL GET LOW FUNCITONING LEARNERS AS WELL AS MORE BEHAVIORAL INTERFERENCE
- Include more visual supports and less verbiage

Symons, Clark & Roberts (2001) What does it mean to you?

- Avoid sequential instruction; if the task is broken down, allow the student to execute the task using his strengths (simultaneous)

Marcia Braden, PhD

Encouragement

- Children are sensitive
- Look for small improvements
- Give a great deal of praise
- Increase your level of enthusiasm and excitement
- As time goes on require larger gains for encouragement
- Pay attention to signs of frustration and anger
- Back away when your child becomes agitated
- Provide a break and return to the task at hand
- Always end on a positive note

Errorless Learning

- Do not allow your child/student to make mistakes as they begin to learn words
  - guide your child's/student's hand so they always make a correct match
  - adjust the difficulty level of a task to be sure your child/student is successful
- Ensures initial success which leads to greater feelings of competence and motivation

Steps to Successful Inclusion

- History behind STSI
- If the student is included during the school day what does he/she miss in SPED setting?
- Identify the outcome and reflect it in IEP goals

  social, behavioral, academic?
- Use probe data to the efficacy

Steps to Successful Inclusion

Based on the STAR curriculum for functional routines such as:

- Bathroom
- Specials (art, music and PE)
- Small group
- Teacher table
- Lunch

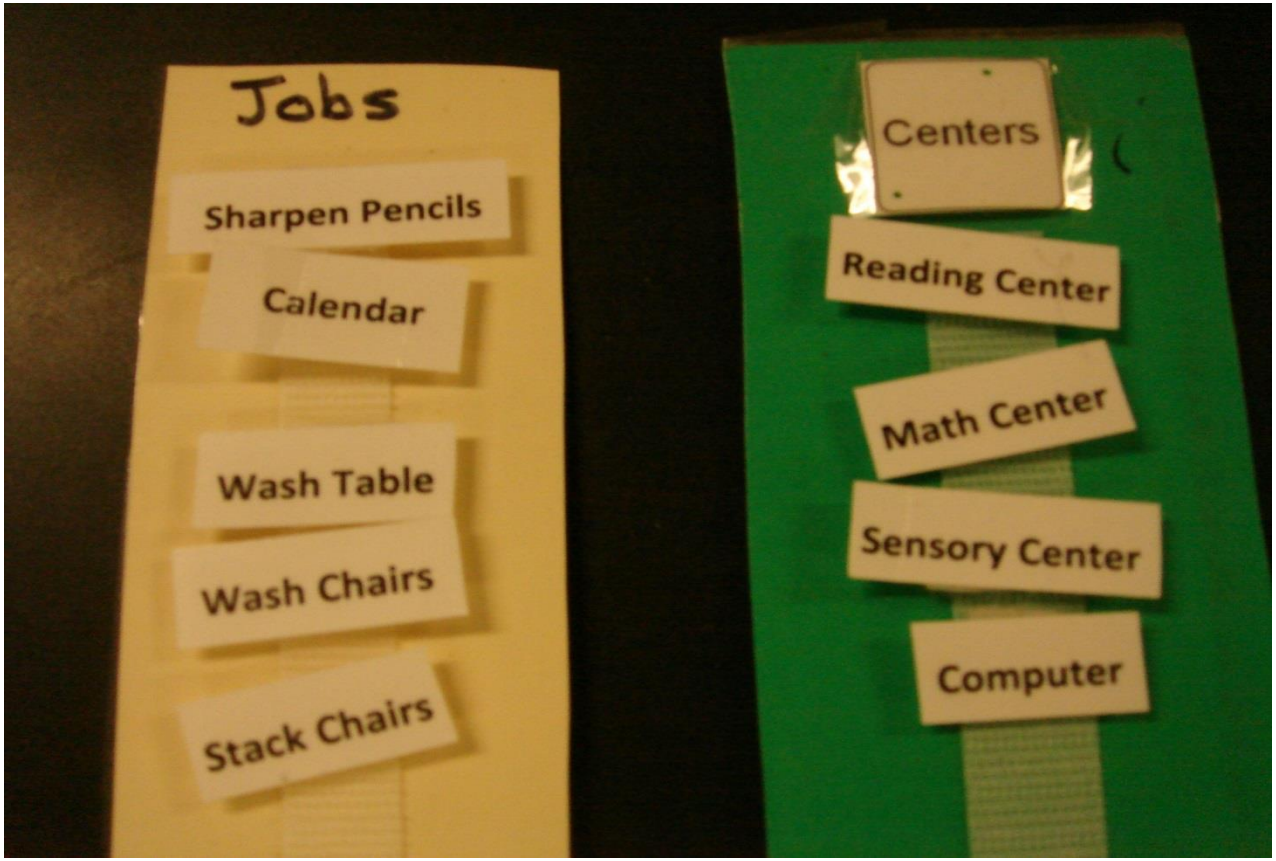
Steps to Successful Inclusion

- Determine the outcome (behavior, social, academic etc).
- Start with the behaviors necessary to be successful
- Task analyze the sequence
- Test the student to see how much support is needed in order to be successful

Steps to Successful Inclusion

- The observation occurs (gen ed. classroom)
- The structure is first implemented in the special education setting
- The instructional supports are provided and taught in a SPED setting
- As the student becomes more independent and needs less instructional support based on the probe data, the structured supports became essential.
- The structure and visual supports are adapted to be used in the general education setting

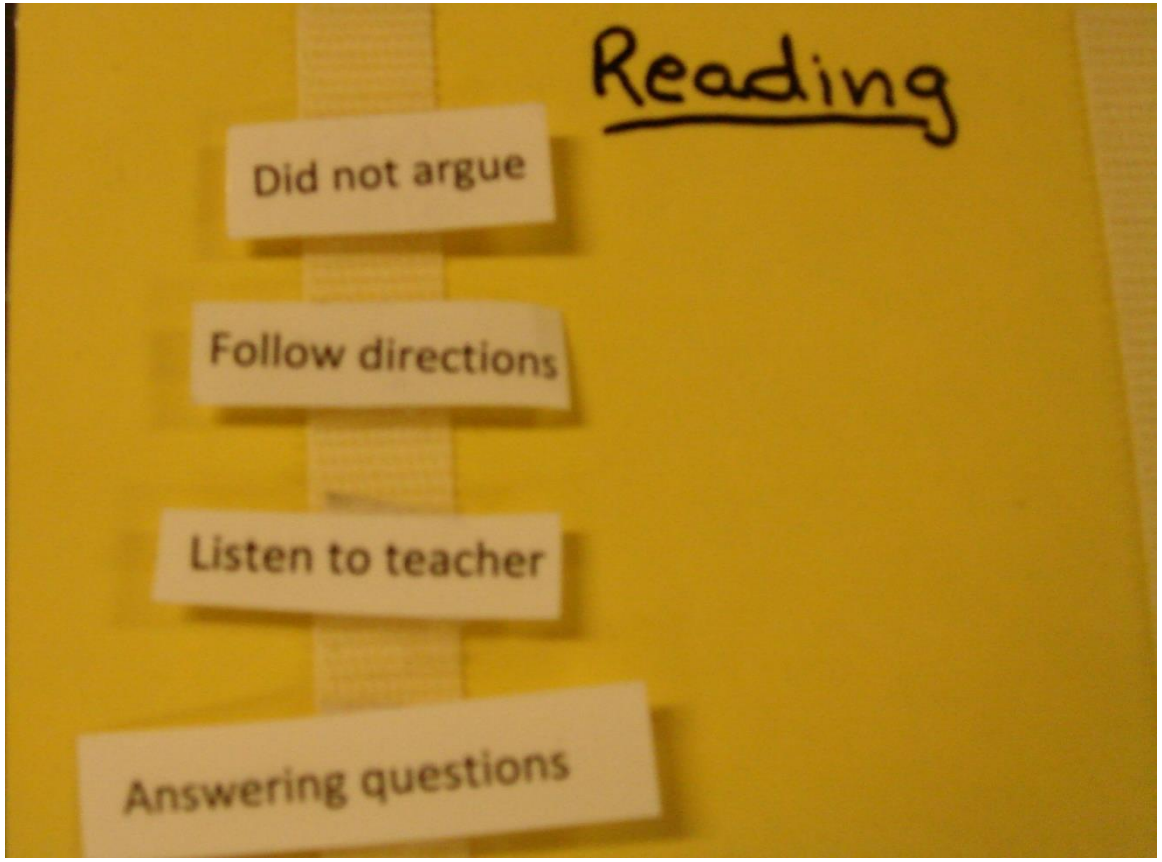
Steps to Successful Inclusion



Steps to Successful Inclusion

- As the student becomes integrated into the general education setting, the natural supports provided by the classroom teacher are utilized.
- Those natural supports are surveyed by the SPED teacher to determine if additional supports are necessary using probe data.

Support Steps to Successful Inclusion



Steps to Successful Inclusion

Objective																									
1)	Attend to teacher																								
	at desk or circle/																								
		instructional probes																							
					Proficiency																				
2)	Complete task with																								
	typical classroom																								
	supports																								
					Proficiency																				
3)	Sustain focus on task								3	5	5+	10			3	5	5+	10			3	5	5+	10	
	for time requested																								
		instructional probes																							
					Proficiency																				
4)	Sustain focus on visuals/																								
	at desk or circle																								
		instructional probes																							
					Proficiency																				

Example STSI data sheet

Cue	Response	Date	Data code
Schedule indicates X	Student goes to designated area in classroom and waits		
Classroom teacher gives instruction	Student attends to classroom teacher		
Academic materials are required	Student gets required materials		
Classroom teacher gives assignment	Student works on assignment appropriately		
Classroom teacher is available	Student asks for help in an appropriate way if needed		
Classroom teacher indicates X is over	Student moves/transitions from the activity		

Data codes NA 0= No response 1= Physical prompts for almost all
2= Physical prompt for part 3= Verbal or gestural 4= No additional prompts

Adolescents and Adults

- If you have social deficits you dislike talking on the phone, attending social events, being with people you don't know, and taking social risks.
- Cognitive deficits limit work choices and opportunities
- Finding the right placement will enhance success

Aging

- Often as the adults get older, they are included in fewer activities and can become agoraphobic
- There is a subset of this population that becomes more agitated, less tolerant and a tendency to fixate on a schedule
- Psychiatric disorders are common and often result in significant anxiety and phobias.

The World of Work

Characteristics that Impact Work

- Executive function deficit
  - Planning: Coordinating and retrieving information, motor planning (trouble getting started)
  - Inhibition: Modulating/regulating incoming sensory stimuli, concentration/focus (absorbed in own thoughts)
  - Mental Flexibility: Bogged down with details, rigid cognitive set, perfectionism, perseveration (getting stuck)
- Perception (auditory discrimination)
- Auditory processing < Visual processing
- Sequential Processing < Simultaneous processing
- Expressive language/pragmatics

Characteristics that Impact Work

Planning and Execution

1. Difficulty starting or sequencing a task
2. Modulating sensory input- things in the environment are distracting and the reaction is often maladaptive
3. Rigid thinking; inability to remain flexible and problem solve

How Could Understanding Sensory Dysfunction Affect Vocational Success or Failure?

How Could Understanding Sensory Dysfunction Affect Vocational Success or Failure?

Braden/Simard Vocational Curriculum

- Based on the work of Krug, Almond and Arick.
- Requires a tasks analysis of each step of the job
- Data is collected to determine which aspects of the job are viable for the client and which may need more support
- Data documents levels of independence and future direction; can the client eventually access natural supports to get the same outcome?
- Data also determines if the job is not a match (requires too much support, adult direction) - will the client ever be able to reach a reasonable level of independence?

Braden/Simard Vocational Curriculum

- This curriculum blends the clients' interests and skill set with specific job skills. This match enables the client to work productively and independently.
- The leading cause for failure among DD clients in the work force is boredom and loss of work momentum.
- Allowing for a better match enables employers to utilize their staff to train and supervise less. If the interest is inherent in the job tasks it requires less coaching and coercion to get the job done. The client is internally motivated to complete the tasks.

Braden/Simard Vocational Curriculum

- If there is a discrepancy between the tasks the client is capable of performing and his interests, the use of task analysis to diagnose work strengths enables a better fit to determine what resources are necessary to build employee viability.

Job Coaching
Level I

The client is observed by the job coach in a work rotation so that the coach can analyze how the client performs a variety of work experiences. In addition, the coach assesses the environment to identify what distractors, noises proximity and other environmental factors that may interfere with overall performance and job success. Further, the job coach assesses what aspects of the job may promote work motivation (social contacts, opportunities to move, high interest work content, natural supports in place).

Job Coaching
Level II

The coach's assessment is used to construct the job elements that best fit the needs of the client. The client is placed in the work environment. The job is then broken into steps with a baseline taken for individual performance on each step. The coach also analyzes the amount of support necessary for each step in order to perform the overall job.

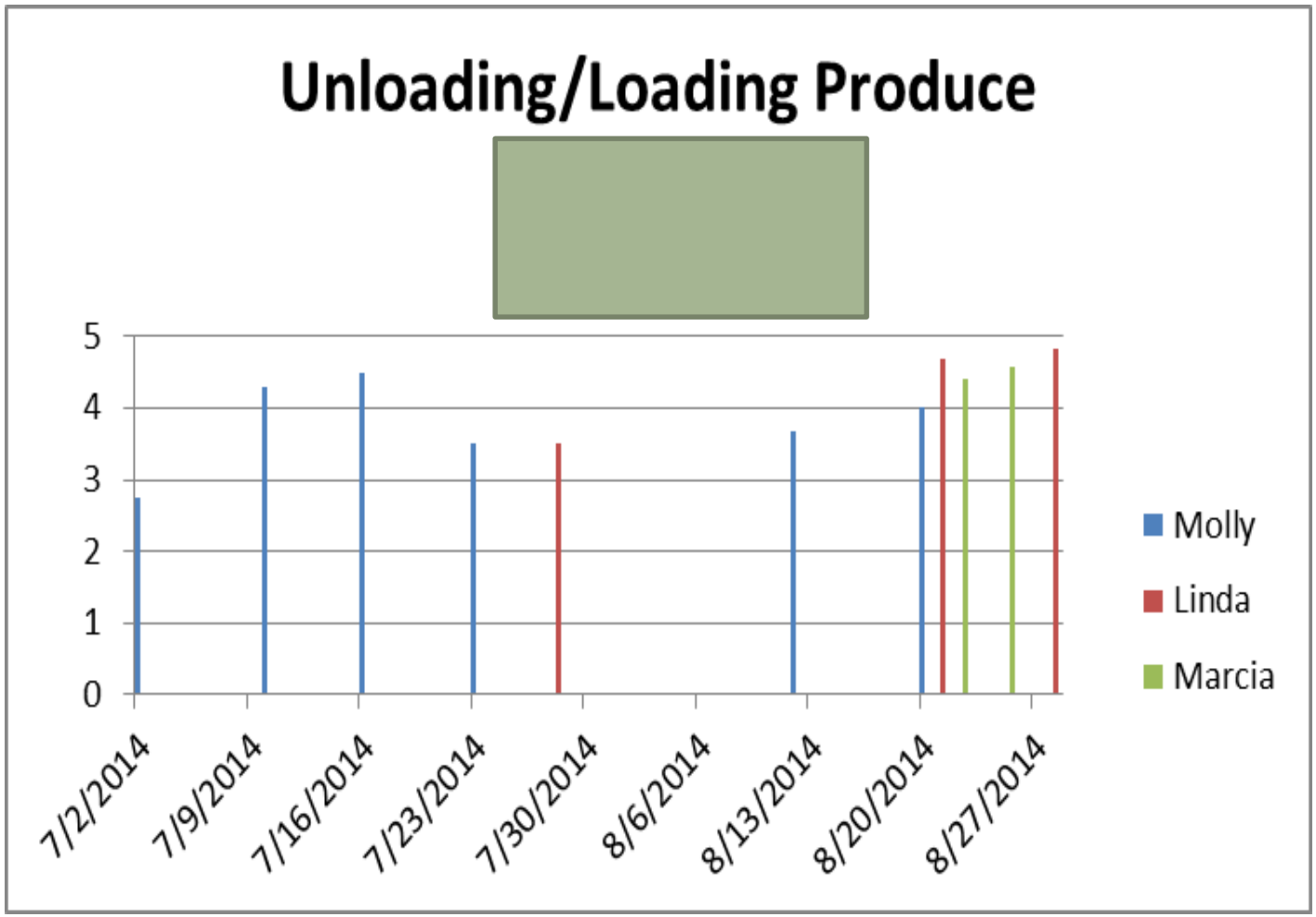
Job Coaching
Level III

After the client is placed in a job and making progress to independence, the level of support for each job is calculated. As the client gains independence needing less and less support from the coach, the natural supports- supervisors and coworkers begin to assume the responsibility of coaching the client to succeed in the work environment and the job coach is faded. If the job needs significant support at this level, decisions about the job efficacy should be made.

The client is assessed using a step by step analysis. Those steps form the basis for data collection using a support matrix to determine how much support is necessary from the trained job coach and when or if the transition to a natural support (job supervisor employed by the site) is possible. Examples of the steps to successful employment follow.

Visual Schedule

Produce



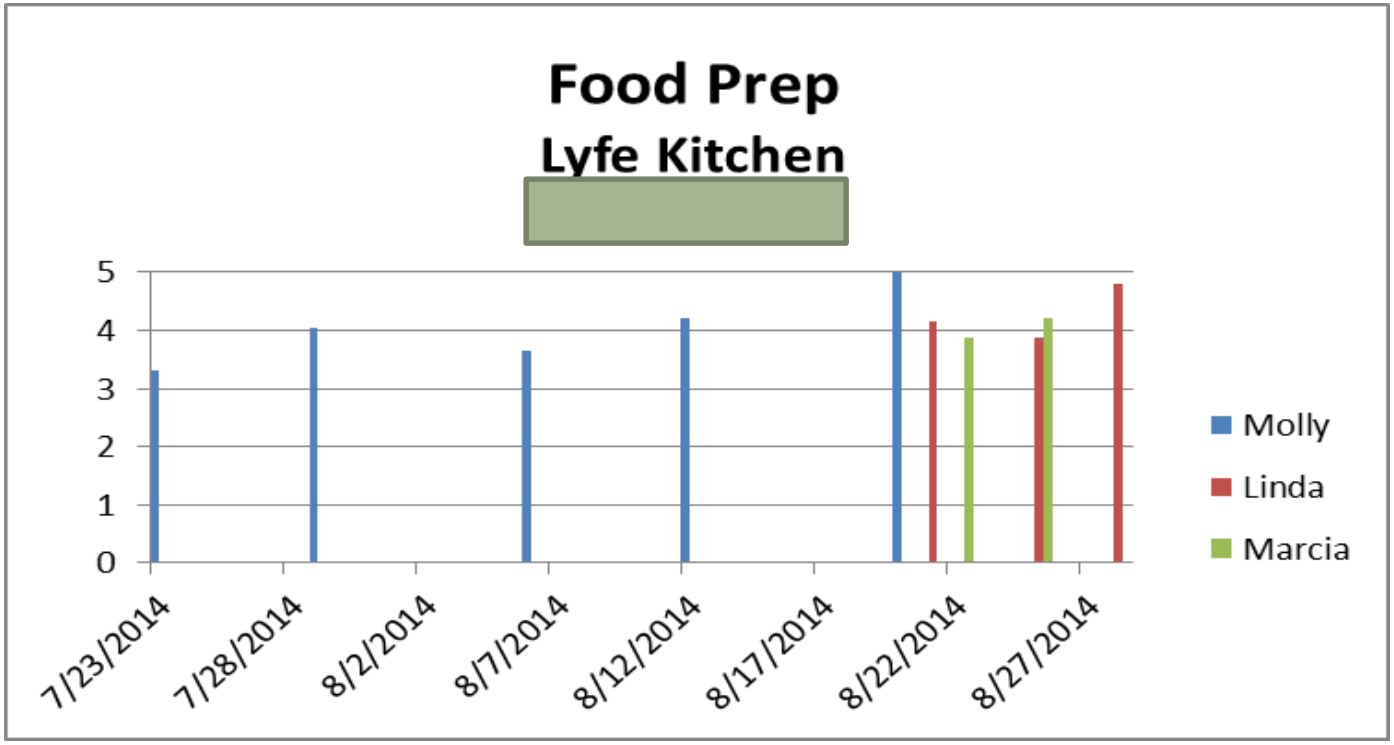
Outcome:																
LYFE kitchen																
Job Loading produce		**Date of Probe**														
Cue	**Response**	**Data code**														
X sees produce visual on schedule.	X takes the black marker from the wall and moves a black cart next to the boxes of produce.															
Boxes of produce are stacked up.	X uses the marker to write the date on each produce box.															
The date has been written on each box.	X loads boxes onto the cart.															
The cart is full.	X pushes the cart to the cooler.															
The cart is full and in the cooler.	X determines what is in each box and locates where it goes on shelves.															
Location is determined and old produce is removed and put aside.	New produce is placed in back and the old produce is rotated to the front of the shelf with date facing out. X flattens any empty boxes and puts on bottom of cart.															
The black cart is filled with empty boxes.	X wheels out the cart and puts empty boxes by the door. again dates the boxes, fills cart with any remaining boxes.															
The cart is empty.	X locates remaining produce and dates boxes, loads cart, wheels the cart to the cooler and puts away rest of the boxes. X flattens boxes.															
The cart is filled with empty boxes.	X wheels the cart out of the cooler, puts boxes by door, and does not find any more produce to put away.															
There are no more boxes of produce to put away.	X returns the cart to where he found it.															
The cart has been returned. The task is completed.	X returns the marker to the wall. X checks his visual schedule.															

Data Codes:
NA = Not Applicable 0 = No complaints 1 = Physical prompts for part of task 2 = Gestural prompts for part 3 = Verbal prompts
4 = visual prompts 5= independent no prompts

Lyfe Kitchen																
Job: Tortilla Chips																
		Date of Probe														
Cue	**Response**	**Data code**														
Food prep is on the visual schedule	D. checks in w/ the kitchen staff															
Tray needs parchment paper	D. places parchment paper on tray															
Paper needs to be sprayed w/ no stick oil	D. Sprays the tray w/ oil															
Spray is evenly spread on sheet	D. holds spray bottle above the paper															
Tray is prepped and tortillas cut	D. places cut tortillas onto the tray															
Tortillas are on tray	D. holds spray bottle above the tortillas and sprays															
Shaker w/ seasonings is pre cut	D. picks up shaker and shakes evenly onto tortillas															
Tray is filled w/ tortillas	D. takes tray and places on rack															
	D. checks his schedule															

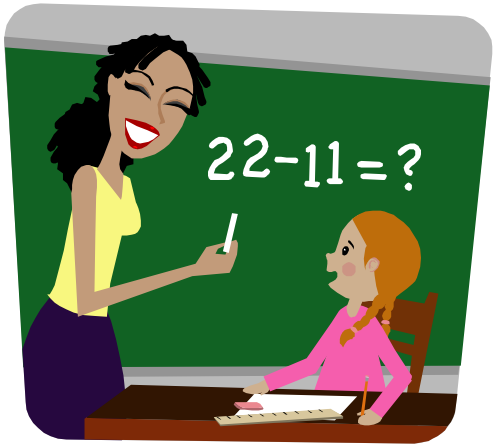
Data Codes:
NA = Not Applicable 0 = No response 1 = Physical prompts for all or most 2 = Physical prompts for part
3 = Verbal or gestural prompts 4 = No added prompts

Food Prep


Food Prep
Lyfe Kitchen
5
4
3
2
1
0
7/23/2014
7/28/2014
8/2/2014
8/7/2014
8/12/2014
8/17/2014
8/22/2014
8/27/2014
Molly
Linda
Marcia

Strategies and Methods

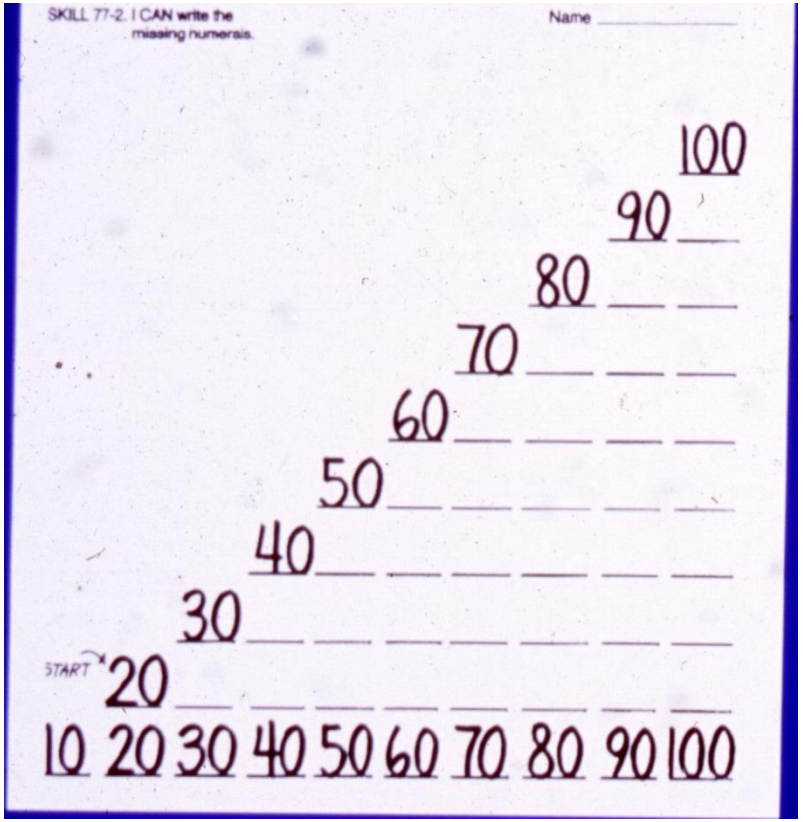
to teach math, reading and writing

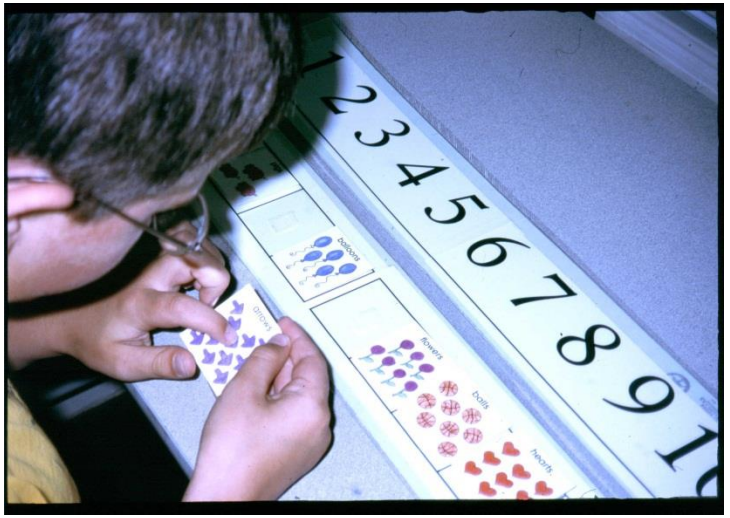


Math

Math

Use patterns to teach math order and the gestalt of a number sequence





Marcia L Braden, PhD PC

Math

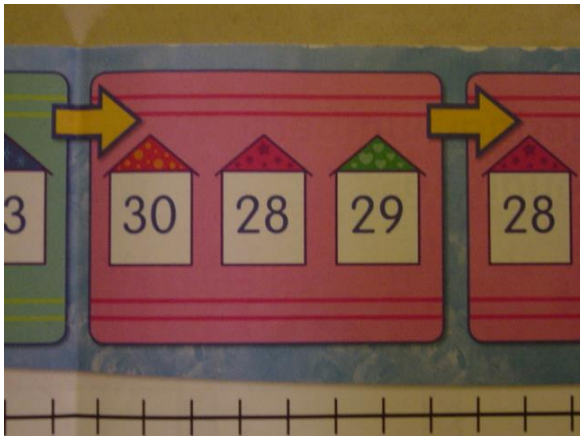
- Start with the basics of building number sense

Math

Continue to expose students to numbers by matching number to number

Math

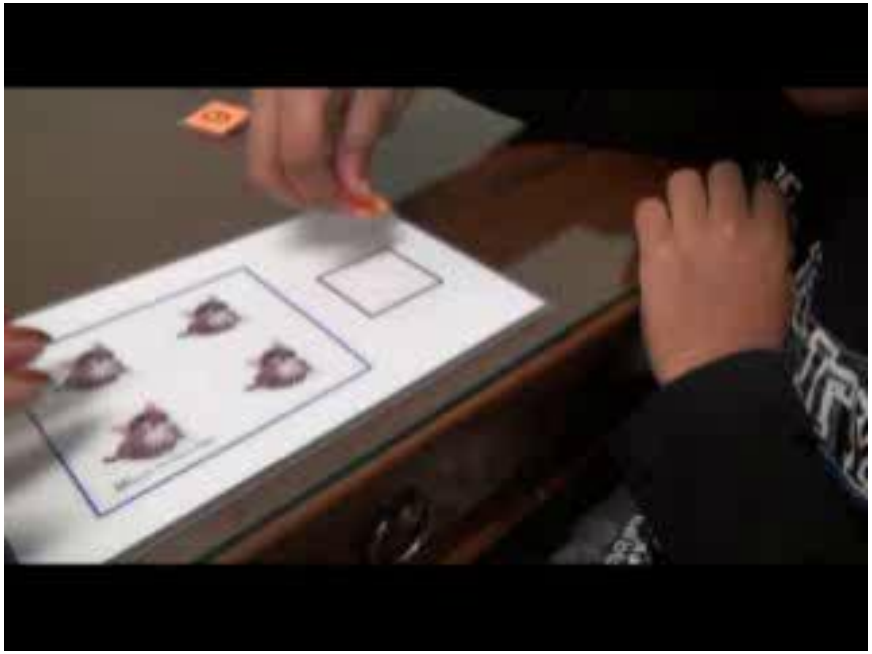
- Teach math sequence incidentally
- Use dot math, matching and number lines
- Utilize patterns to teach



Math

Math

Continue to build an understanding of number value by matching an amount to a numeral



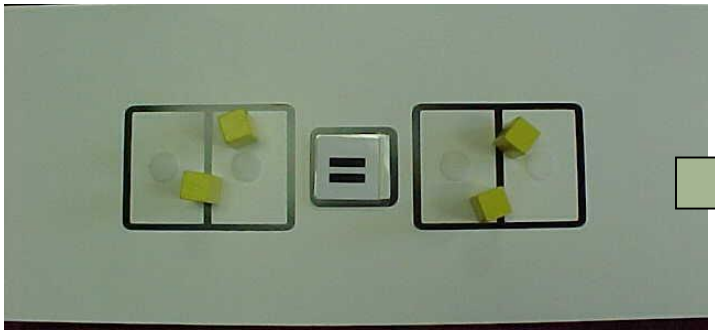
Math-Equivalence Board

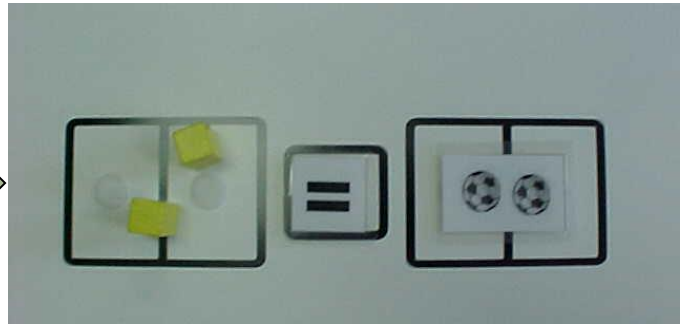
- Based on the”stimulus equivalence” paradigm
- Equivalence and = is akin to “put with same”
- Can be expanded to teach content information through associations and equivalence such as: digital and analog time, money and digital equivalence, 1:1 correspondence/ object to numeral

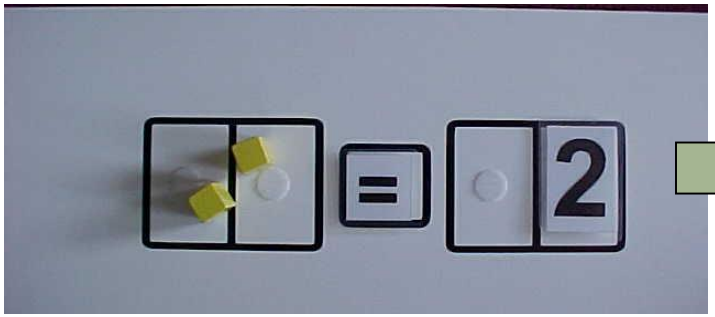
Math-Equivalence Board

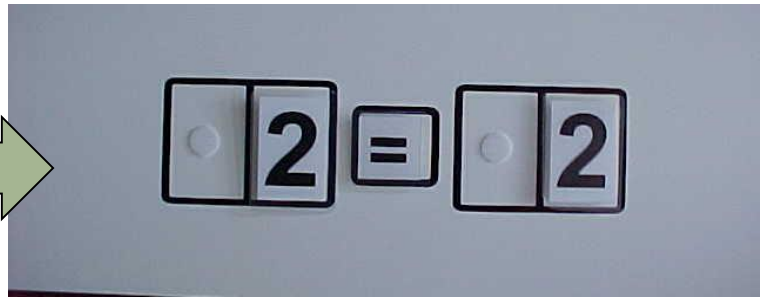
Marcia L Braden, PhD PC

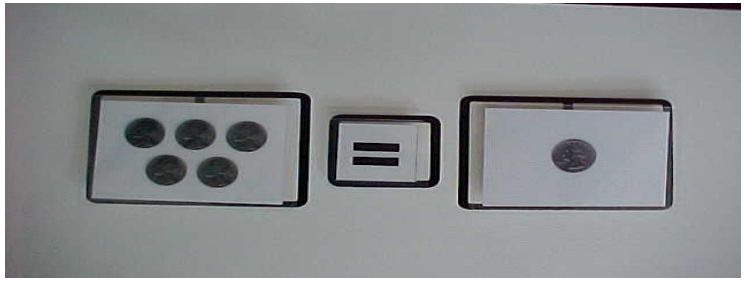
Math-Equivalence Board

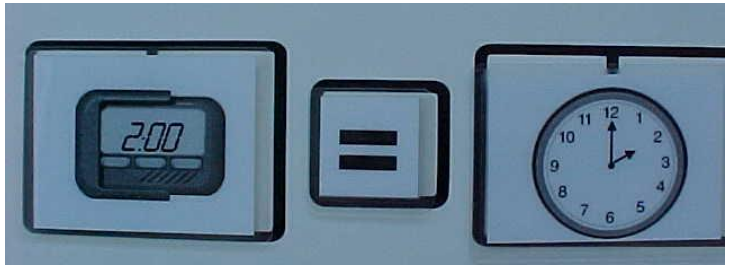




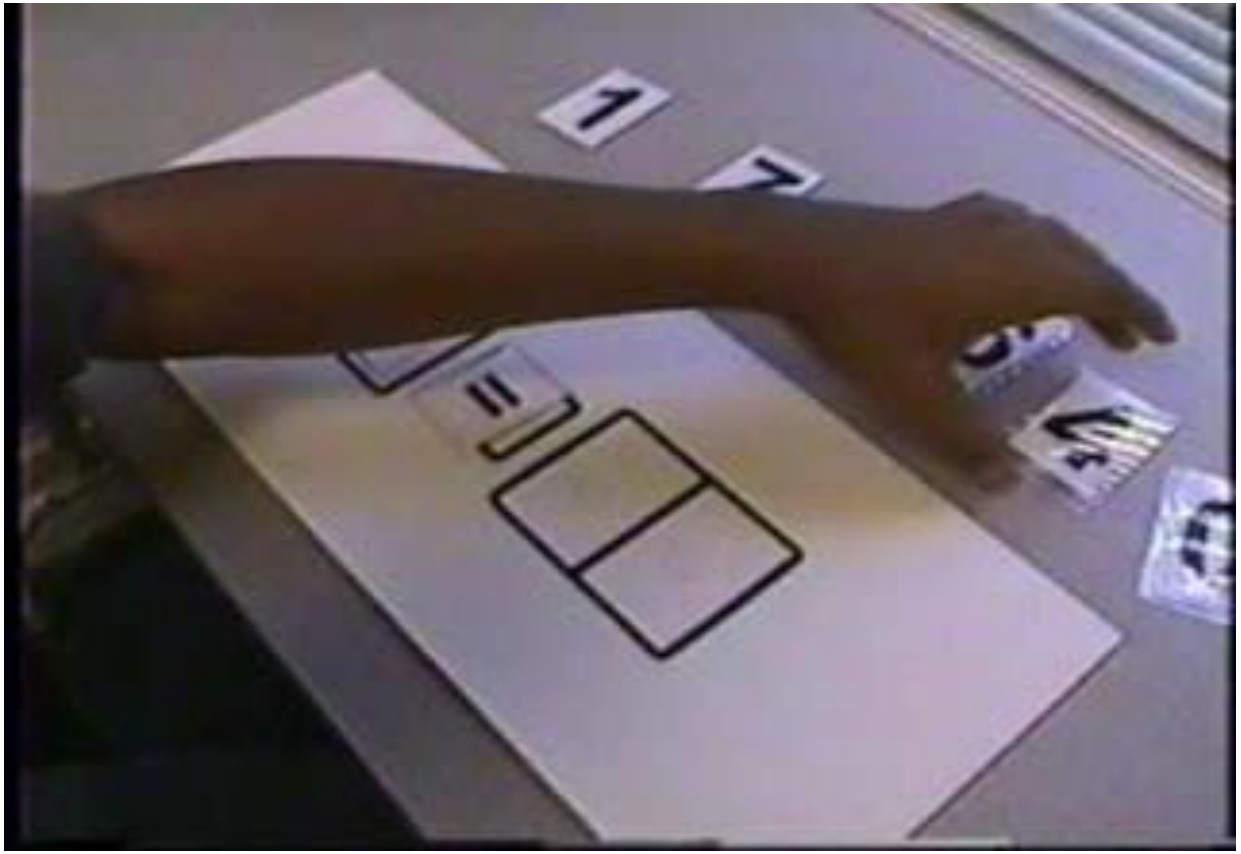




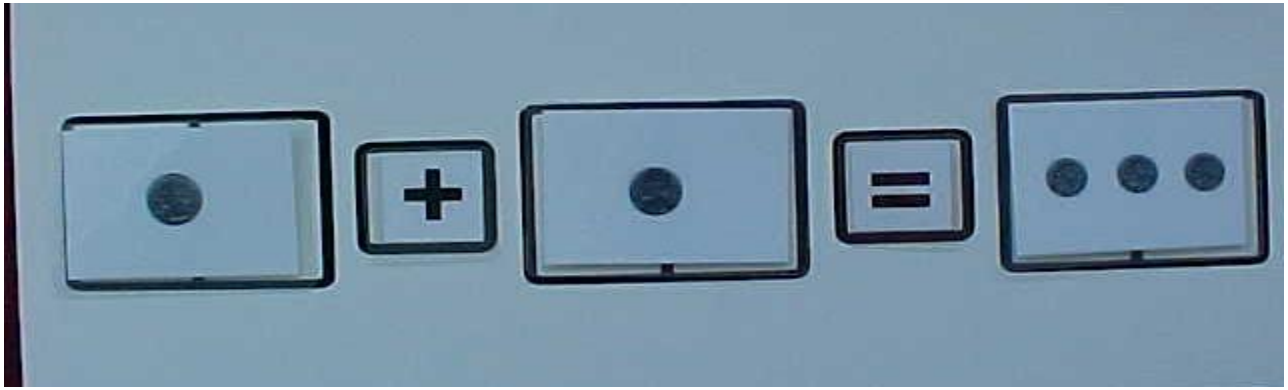


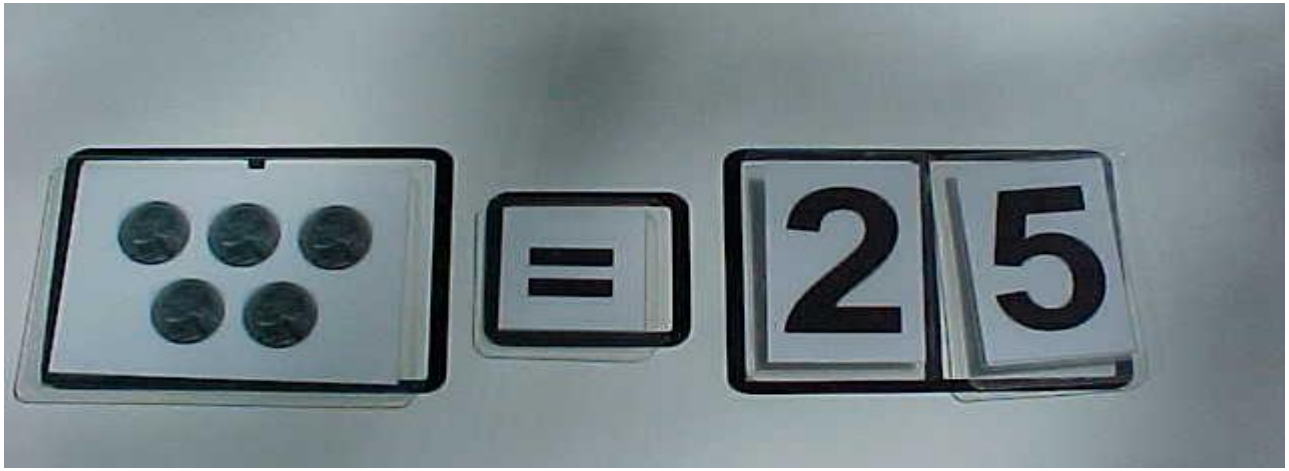


Math-Equivalence Board



Math





Math

- Using money to understand counting can be effective especially when there is a purchase used as a reward.
- Token boards can use pennies, nickels, dimes and quarters
- Tokens (coins) can be used to buy things at a school store, treasure chest or vending machine

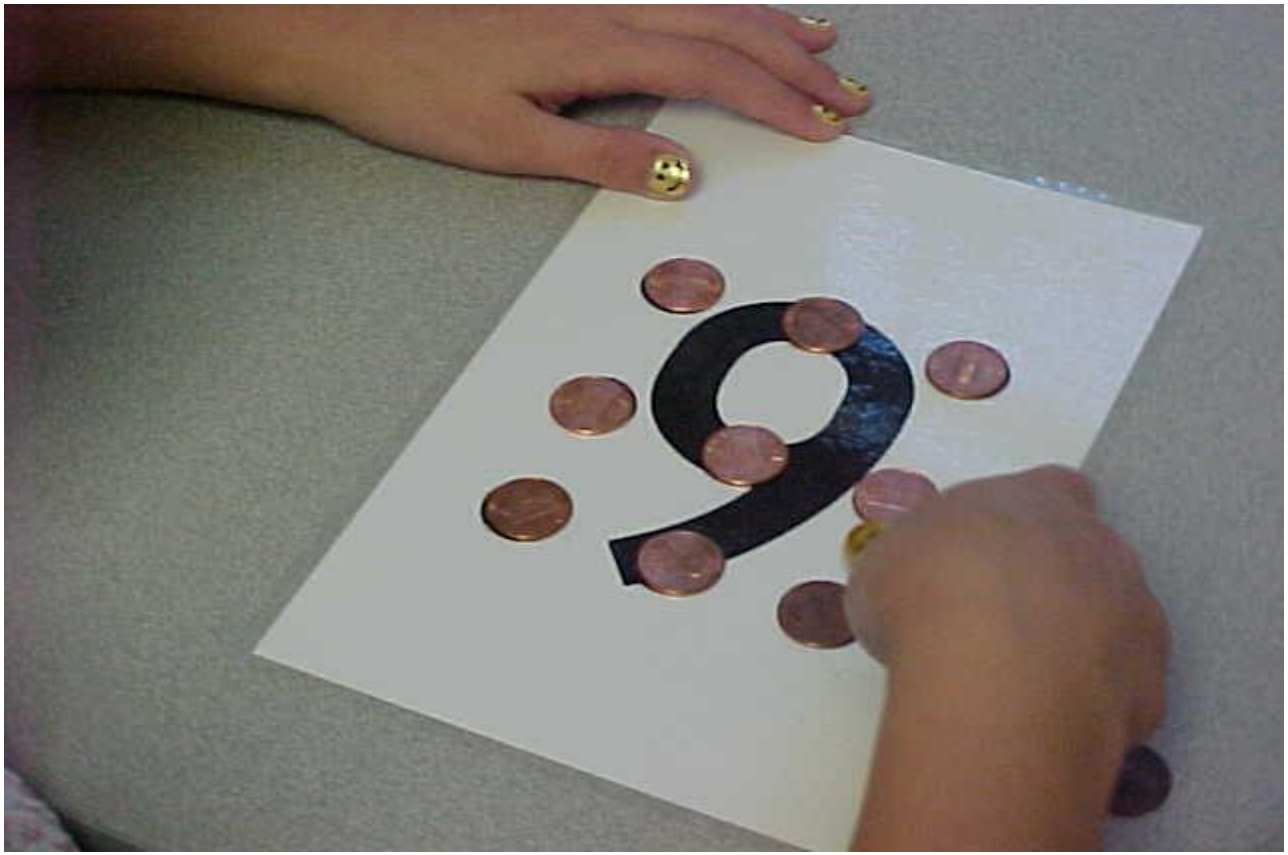
Math

The use of the penny board teaches the student to earn tokens (money) to buy a reinforcer

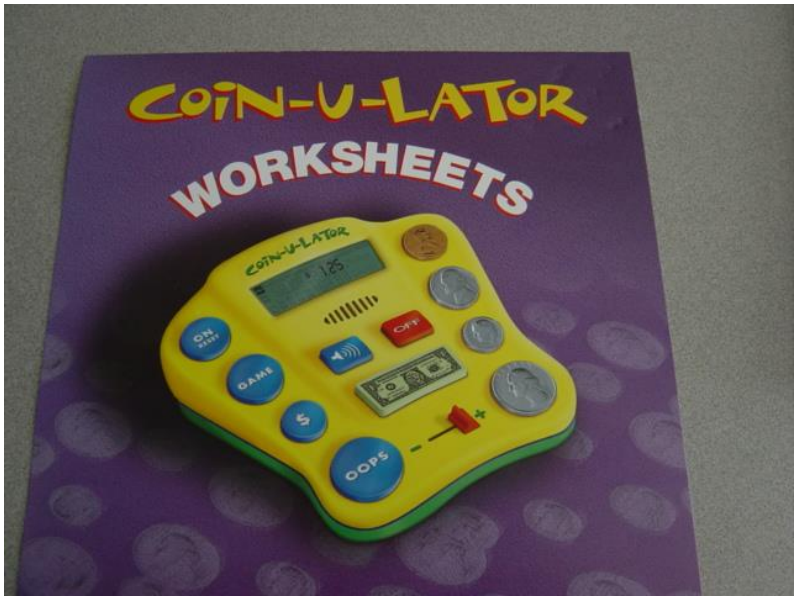
Math

Placing coins on a configured pattern teaches number value

Math



Math



Marcia L Braden, PhD PC

Math

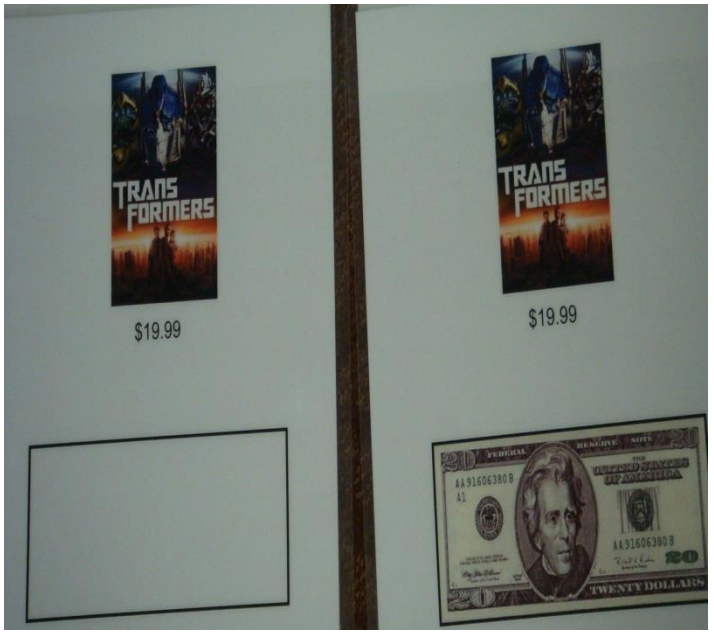
- Use closure strategies

  5_7_ _10 or 6 + _ = 9, 3 + _ = 9, 6 + 3 = _
- Use real life experiences to make math functional

  calculator, computer programs, purchases, microwave

Math

- Pairing a reinforcer with the price of purchase helps teach money identification as well as the value

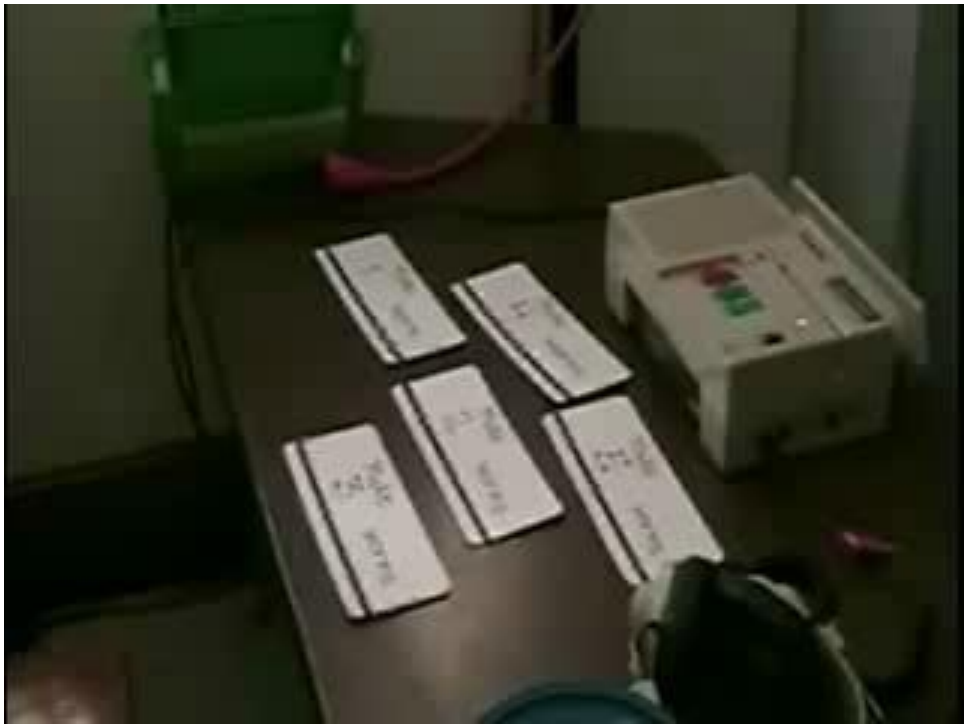


Math

Understanding math requires repetition.
Vary the materials to teach the same concept

Math

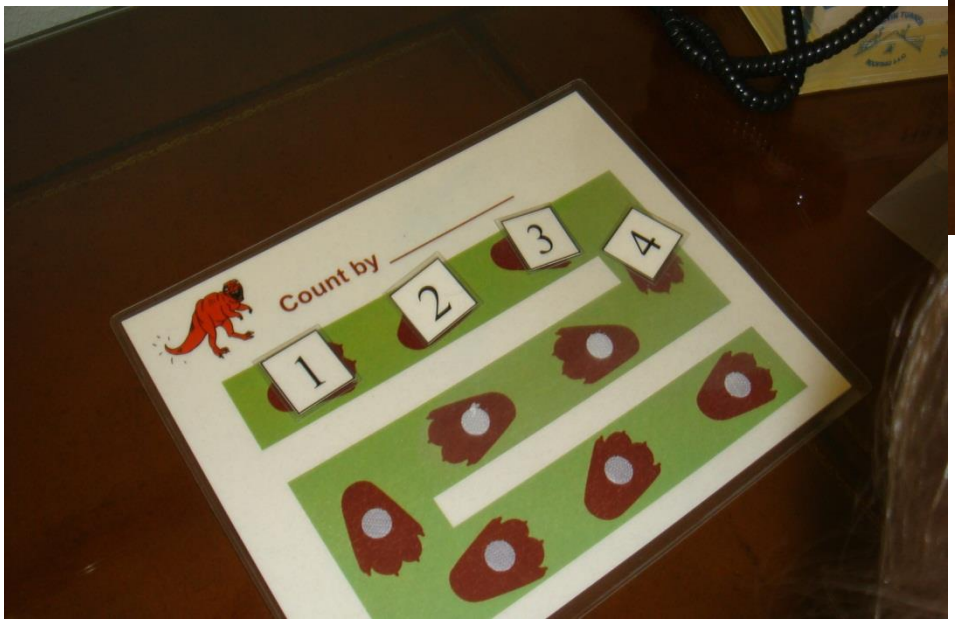
Understanding math requires repetition.
Vary the materials to teach the same concept



Math

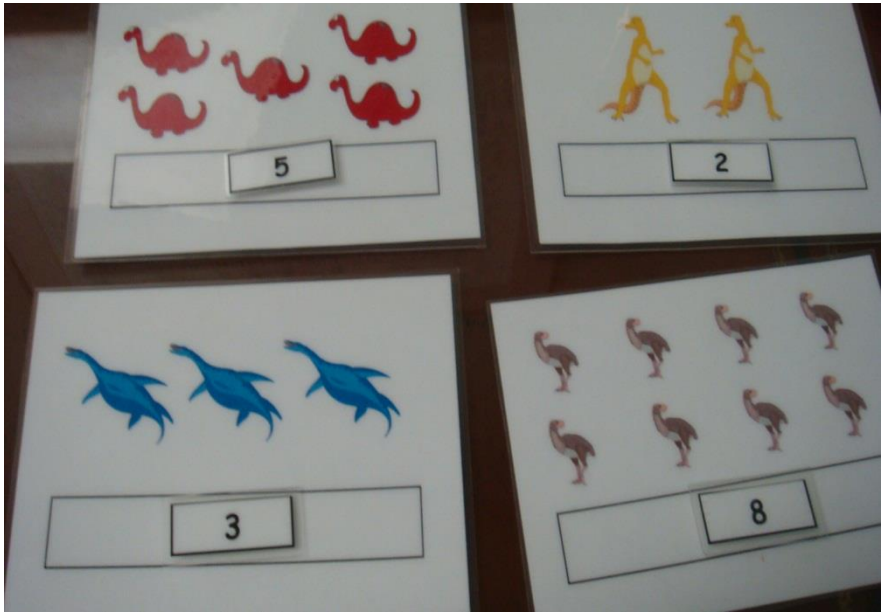
Understanding math requires repetition.

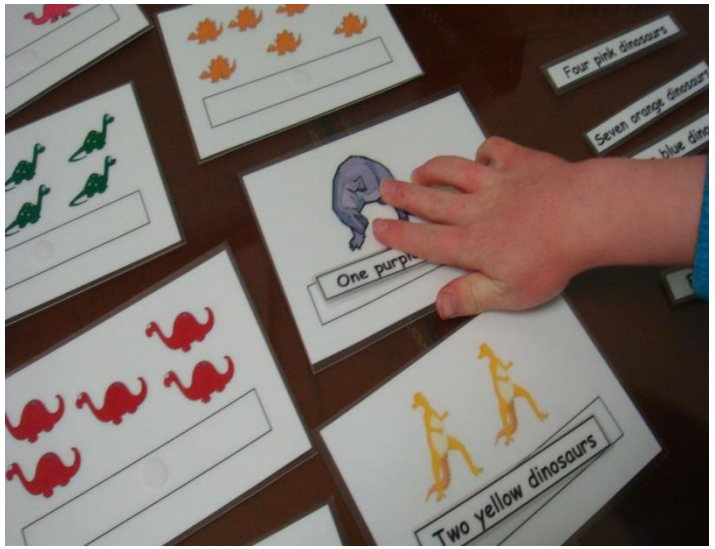
Vary the materials to teach the same concept



Math

Understanding math requires repetition.
Vary the materials to teach the same concept

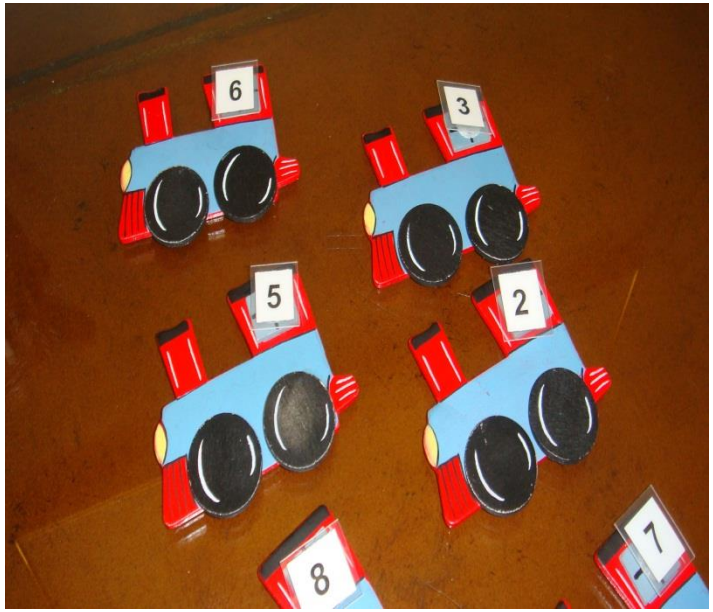




Marcia L Braden, PhD PC

Math

Understanding math requires repetition.
Vary the materials to teach the same concept

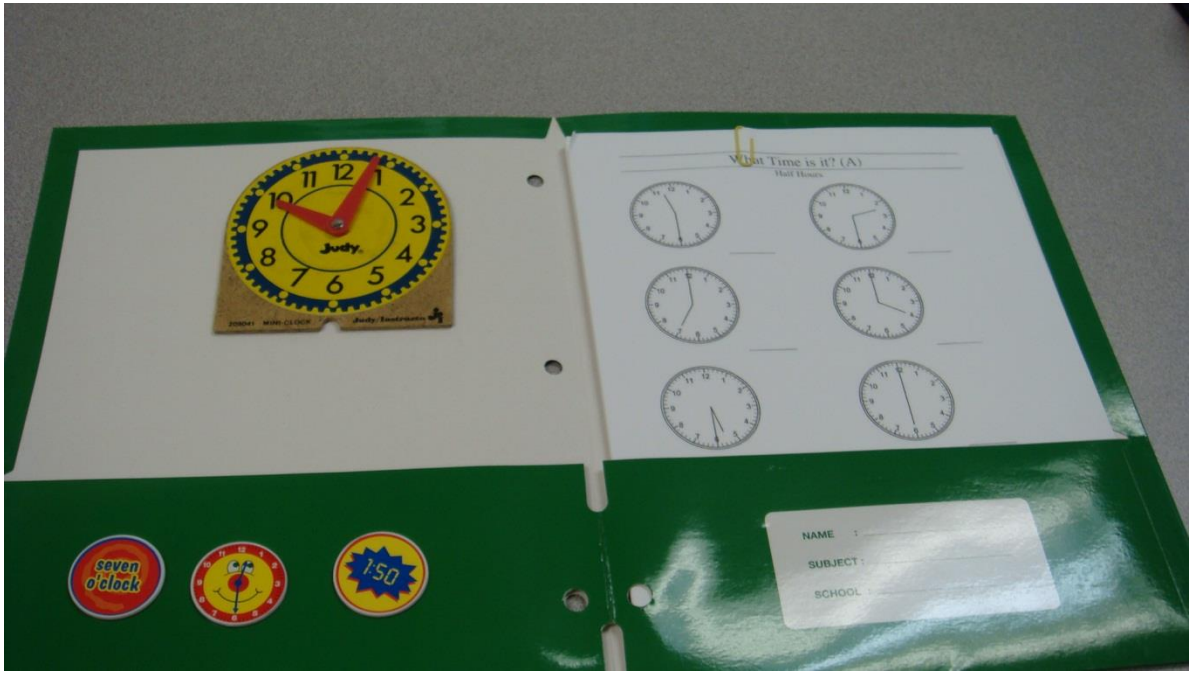


Math

Understanding math requires repetition.
Vary the materials to teach the same concept

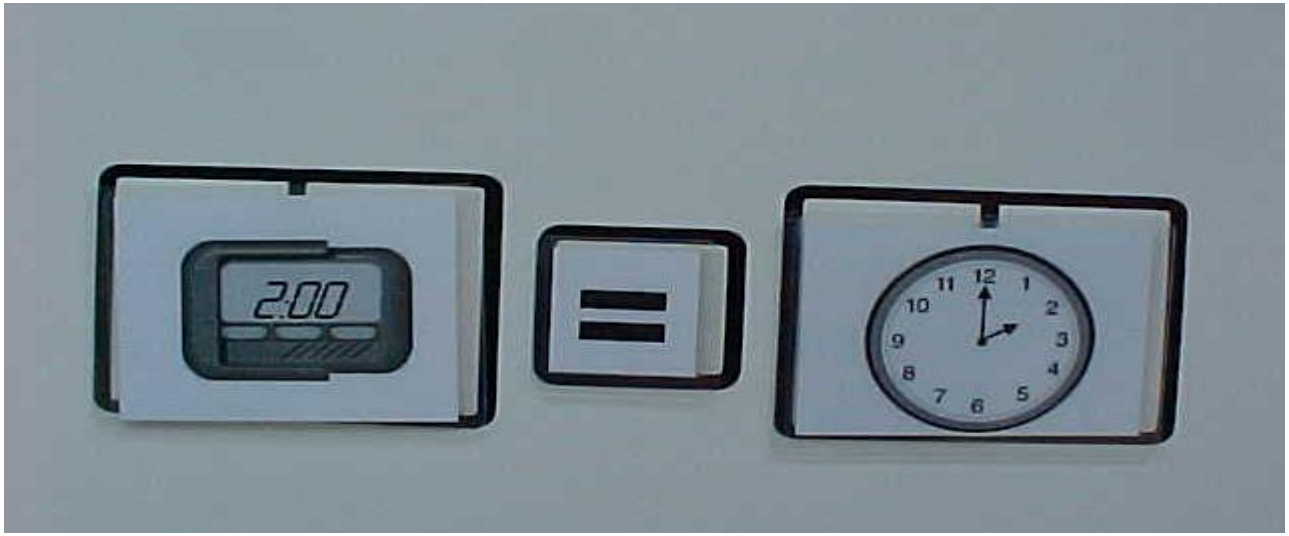
Math

Understanding math requires repetition.
Vary the materials to teach the same concept



Math

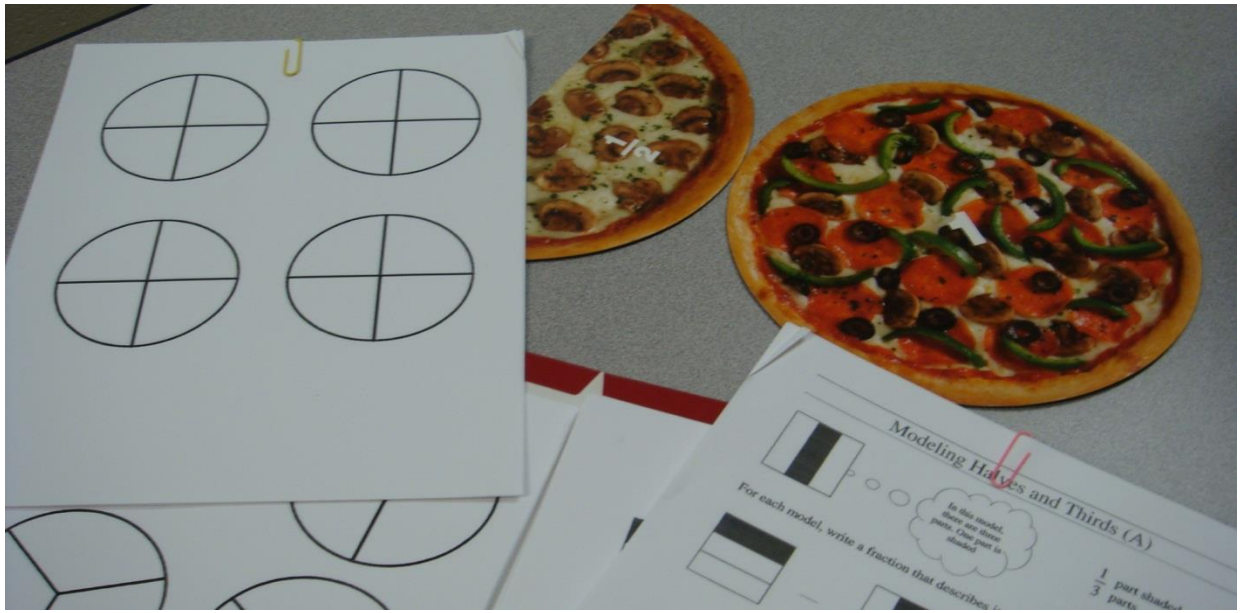
Understanding math requires repetition.
Vary the materials to teach the same concept



Marcia L Braden, PhD PC

Math

Understanding math requires repetition.
Vary the materials to teach the same concept



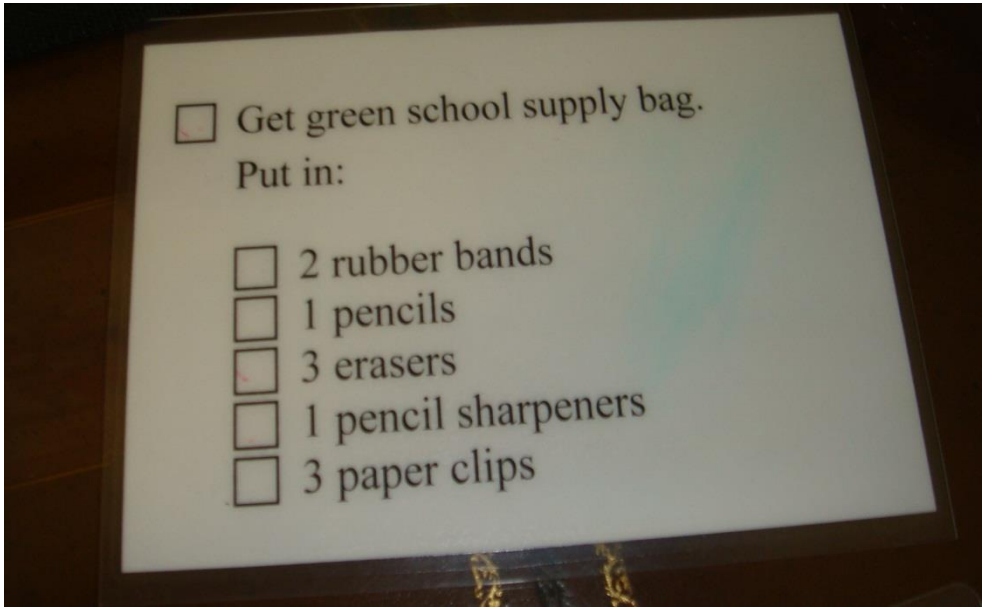
Marcia L Braden, PhD PC

Math

Understanding math requires repetition.
Vary the materials to teach the same concept

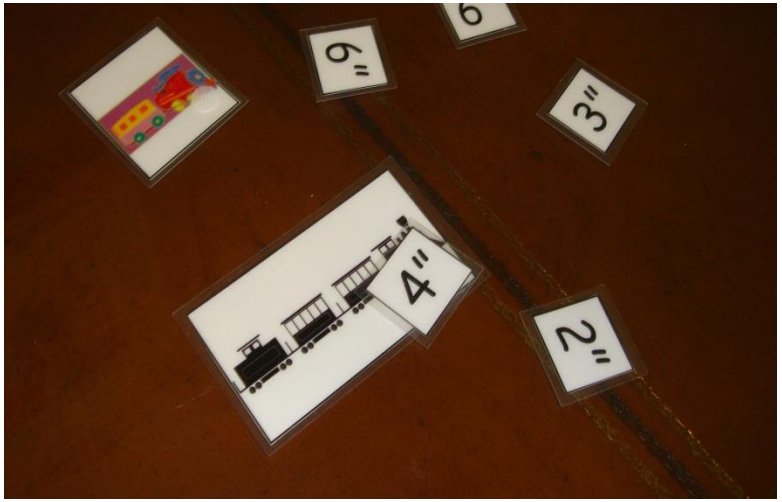
Math

Understanding math requires repetition.
Vary the materials to teach the same concept



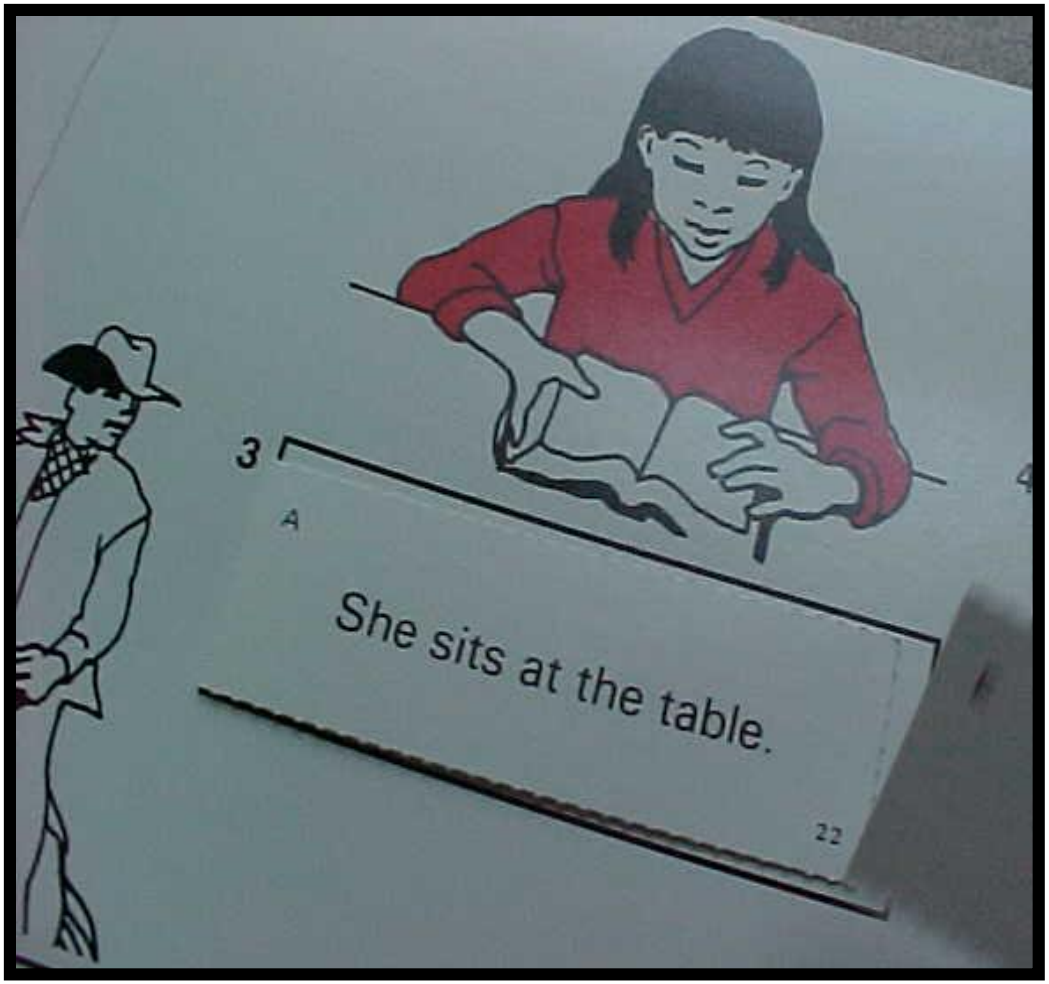
Math

Understanding math requires repetition.
Vary the materials to teach the same concept



Reading

Reading-Edmark

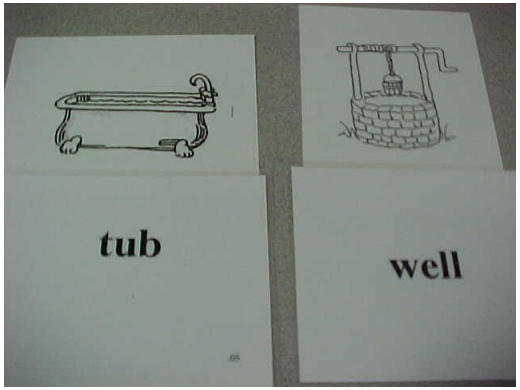


The Edmark Reading System uses a visual format to teach comprehension

Reading

Use objects
To build an
understanding
of the words

LOGO READING SYSTEM- Braden



LOGO READING SYSTEM- Braden

- Who Can Benefit?

  Non readers from the ages of 3-?

  Students who have failed to learn to read using other methods

  Students who need high interest materials to become engaged in a structured reading system

LOGO READING SYSTEM-Braden

- Incidentally Acquired Skills
- Fade out logo
- Retain text font
- Place words with text font into phrases
- Rhyme words with target words

  hut/shut/cut/nut, etc.

LOGO READING Can Be Universal

Ale legge.m4v

Word Families

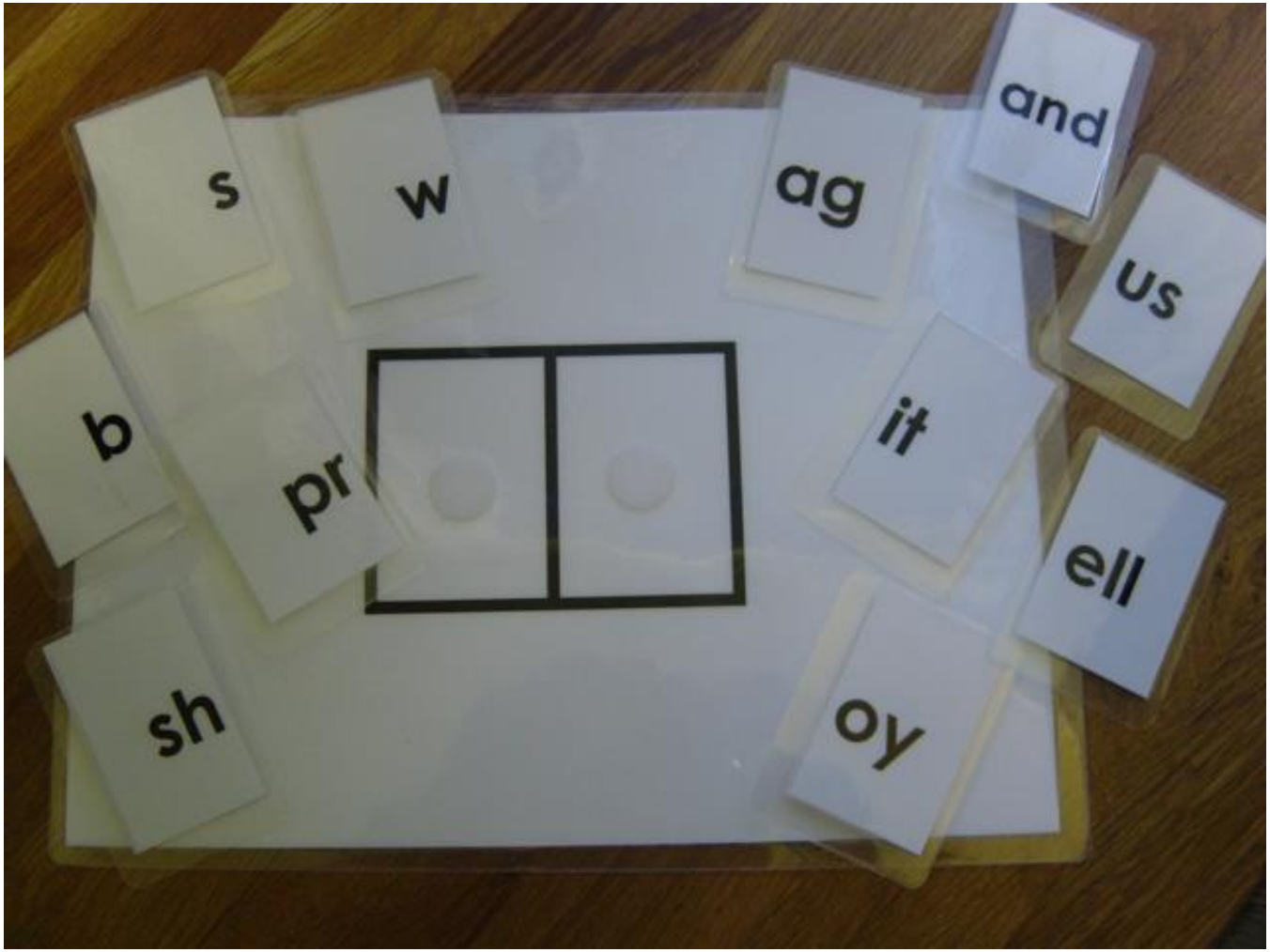
- Children with FXS remember information within a whole, not within parts

- Using parts of words or word families enables the student to read more words by adding first letters to word families

- For example the word family ***and***

  B-and = Band H-and = Hand S-and = Sand

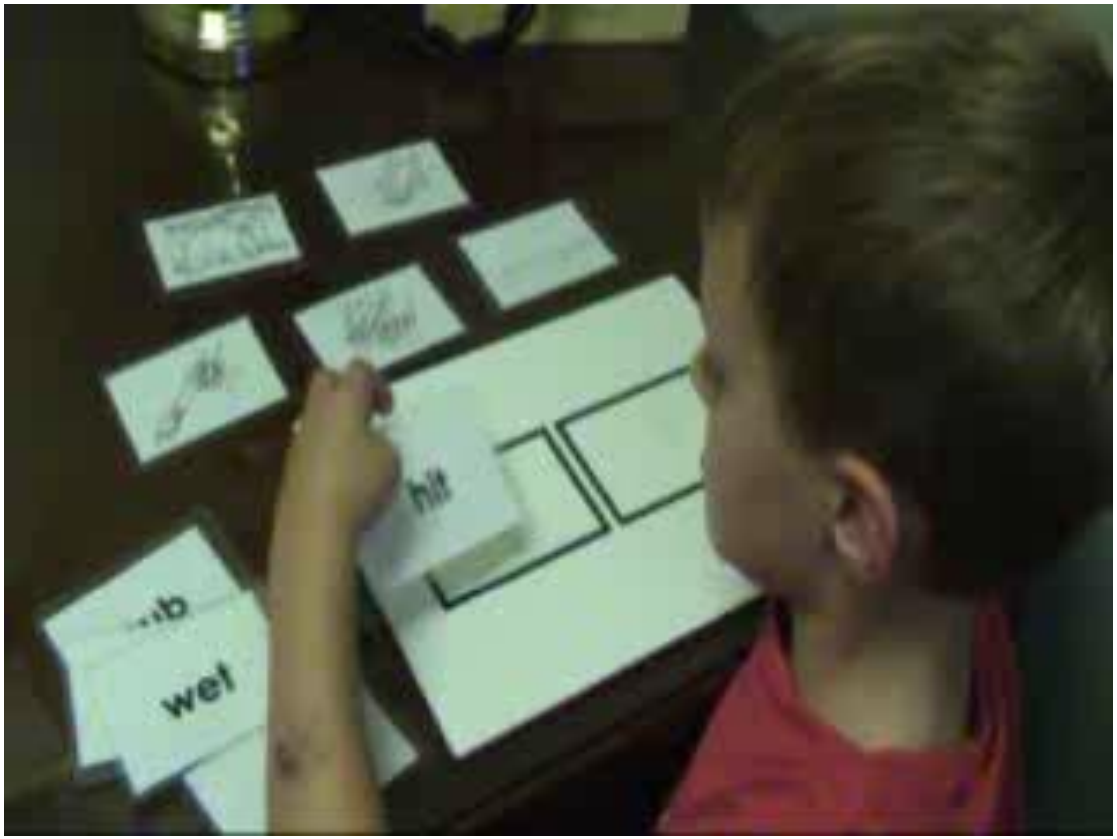
WORD BUILDER-BRADEN



WORD BUILDER-BRADEN

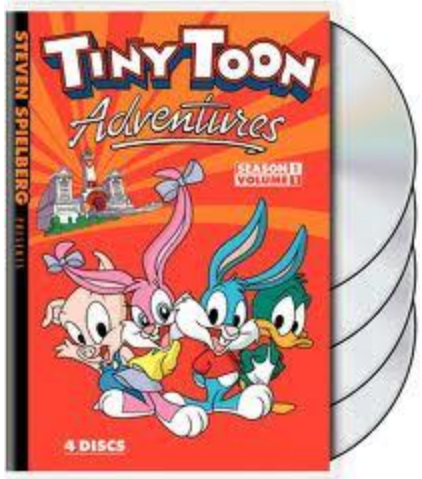
Pairing a picture with a word uses the visual strengths of those with FXS

WORD BUILDER- BRADEN

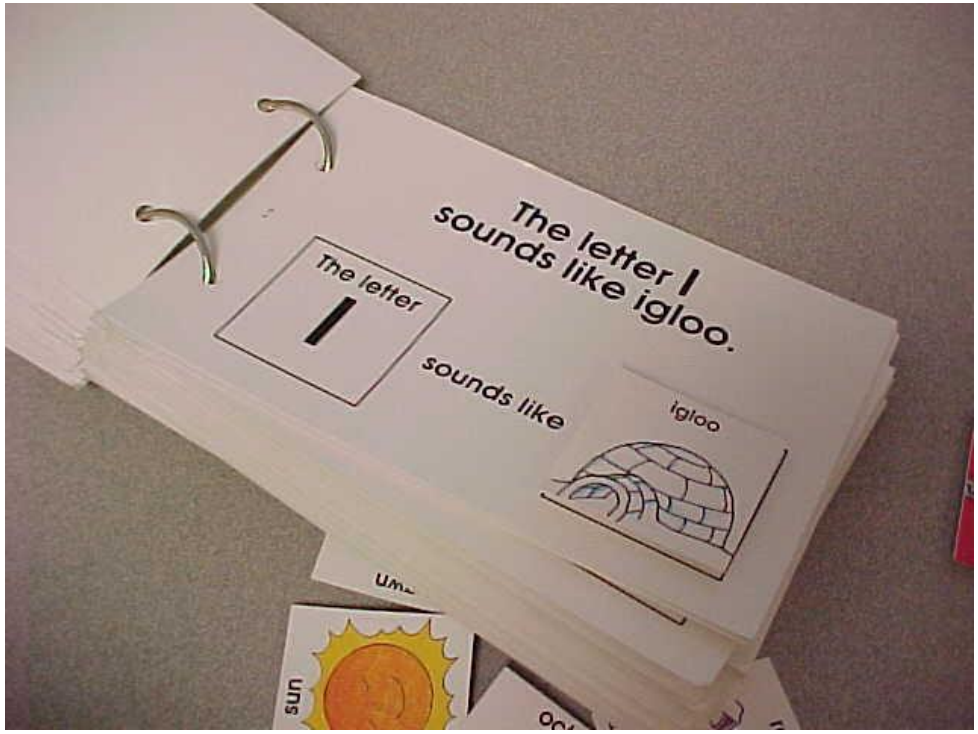


Reading Using High Interests

- Use high strength interests to build word recognition

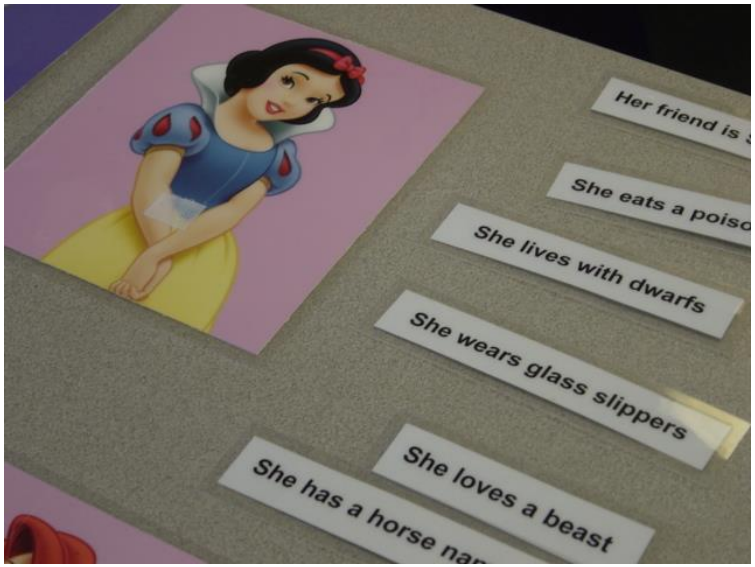


Reading
Joan Green Interactive Reading



Greenhousepub.com

Reading



Marcia L Braden, PhD PC

Why Make It?

Interests + Learning Style = Success

Traditional teaching methods have proven unsuccessful

Why continue to push a square peg into a round hole?

How many times is the avoidance behavior due to the fact that the materials are boring without an association or relevance?

Reading

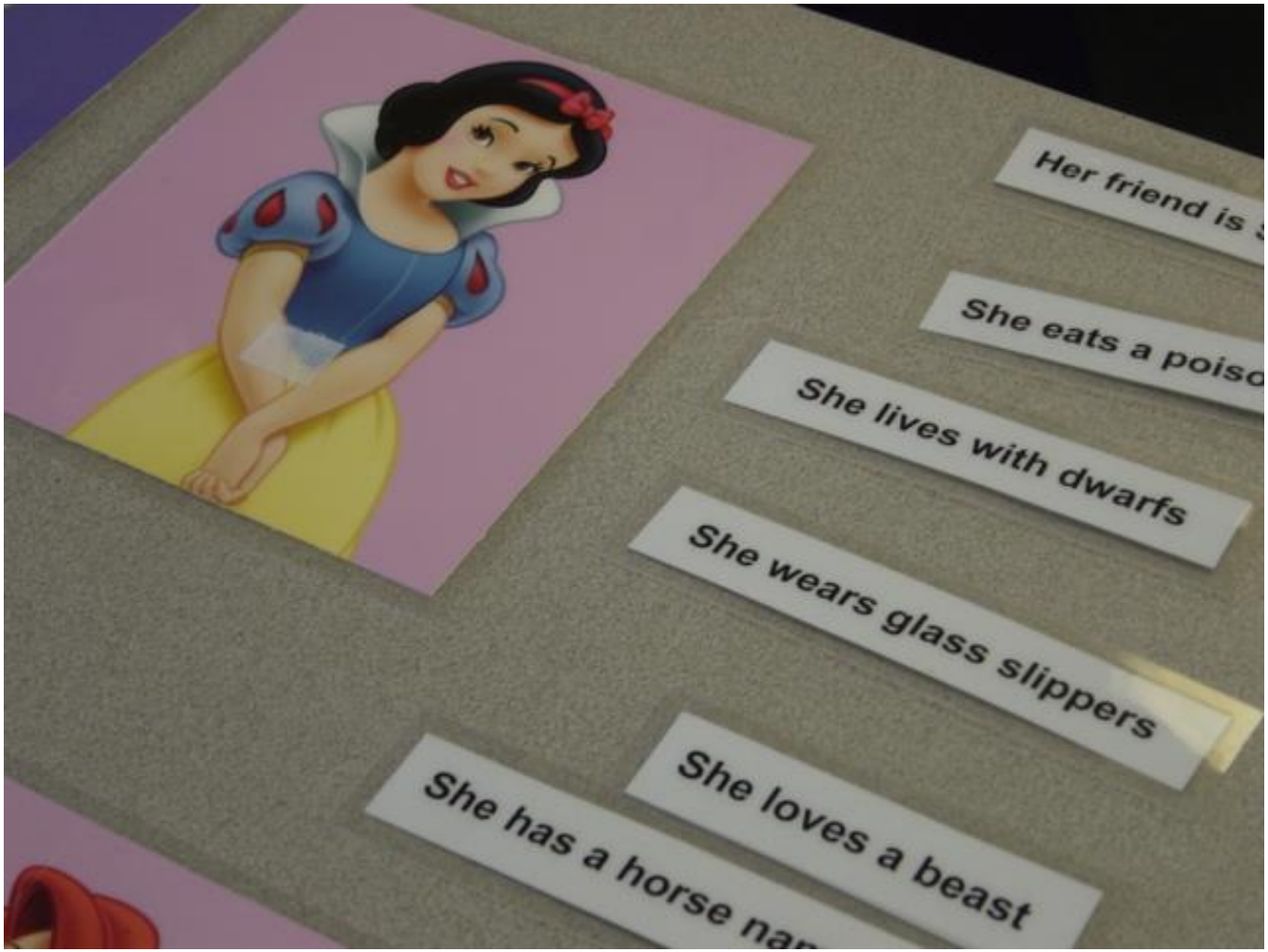
- Matching
  - Symbol to symbol (token boards)
  - Picture to picture
  - Word to picture
  - Phrase to picture
  - Sentences to test comprehension

High interest matching

Matching picture to word

Matching picture to category

Phrase to picture



“Fill-ins”
using high interest vocabulary

Turner is a flat-head _____.

hammer screwdriver wrench

Manny is a _____.

carpentergirl dog

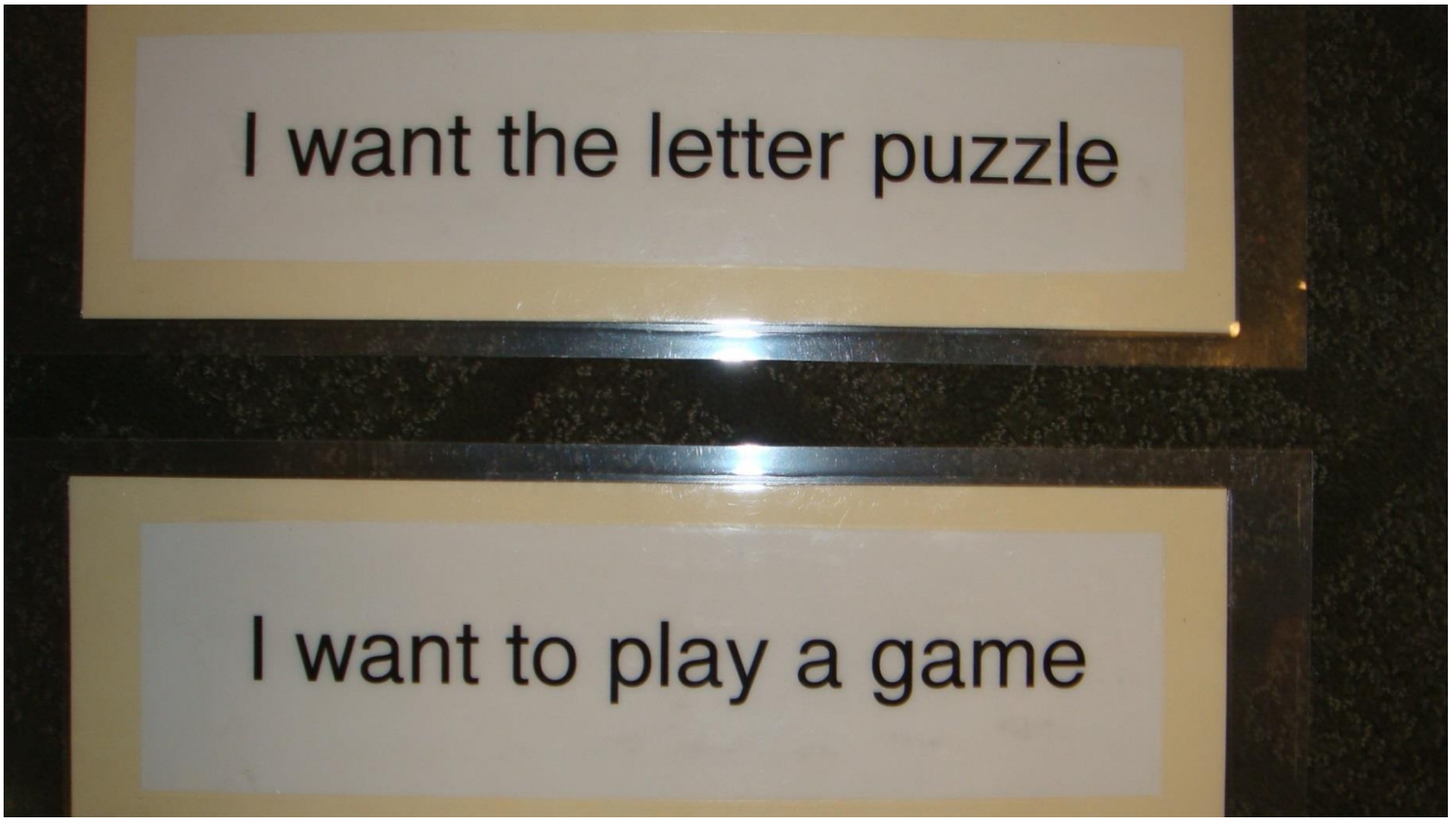
Pat is a _____.

wrench saw hammer

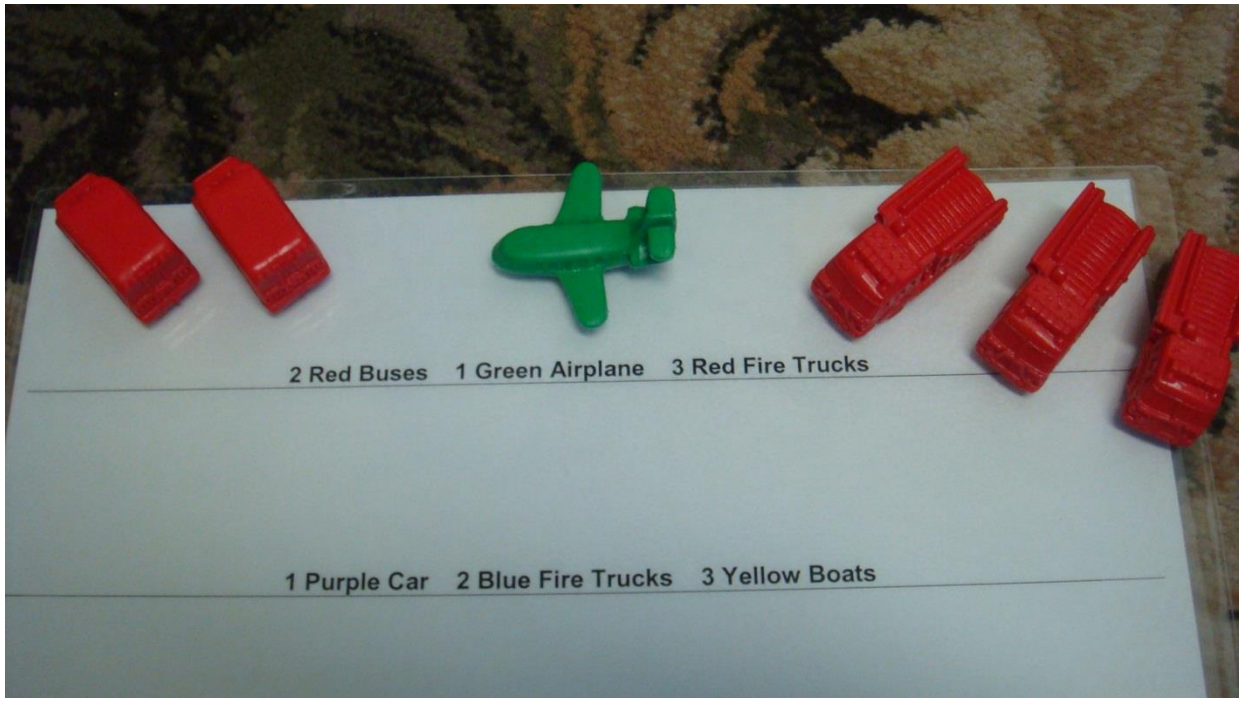
The monkey wrench is named _____.

Rusty Pat Manny

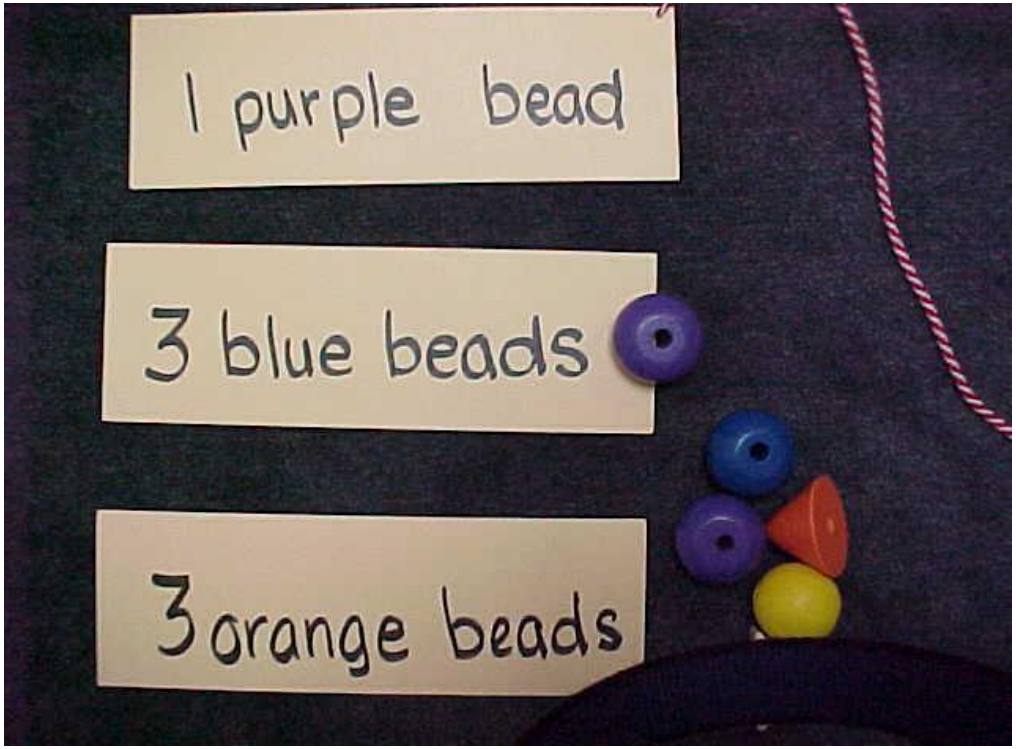
Preferred activities to check for comprehension



Activities to check for comprehension



Activities to check for comprehension



Questions???