

Behavioral Intervention Strategies for Autism Spectrum Disorders



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Diagnosis

- Communication
- Socialization
- Stereotypical Behaviors
- Adaptive Functioning
- Cognitive Skills
- Sensory Integration
- Motor skills
- Attention
- Emotional Regulation
- Academic skills



Coexisting Problems

- Hyperactivity
- Disruptive Behavior Disorder
- Perseverative Behaviors
- Anxiety
- Sleep Disorders
- Seizure Disorder



Positive Behavior Supports (PBS)

- Positive Behavior Supports (PBS) are intended to design systemic behavior support systems which will allow children to focus on instruction and be successful in school.

- PBS is a systems approach to discipline that emphasizes
 - prevention of problem behaviors through proactive instruction of desired behavior, regular reinforcement of appropriate behavior, and monitoring and correction of problem behavior
 - on-going collection and use of data for decision-making
 - application of more intensive and individualized behavior support for students who do not respond to prevention efforts (Lewis & Sugai, 1999).

- In summary, it is an attempt to catch the child being good rather than waiting for a child to misbehave before intervening.

Behavioral Intervention Techniques

Crisis Management

Interrupt/diffuse/protect

Quick fix

May actually reinforce the behavior.

Danger of burnout/stress

Punishment

Does not teach approp. behavior & may teach aggression.

Does not address the underlying function/purpose of the behavior.

Effects will not typically generalize.

Does not lead to self-management/self-control (rather focus is on adult having control).

Reduction-Oriented

In non-crisis mode can prompt individual to use alternative skill.

Ignore problem behavior & redirect to task at hand.

Always respond with a Neutral affect.

Keep words to a minimum.

Best time to interact around a behavior is when the behavior is not happening.



Establishing the Behavioral Perspective: Points to Consider

- Autism is composed of behavioral excessiveness and deficits
- Behavioral interventions should operate independent of an individual's diagnosis
- Therefore, It is not productive to look for behavioral interventions that are autism specific...Instead organize behavioral interventions individually.



Functional Behavioral Assessment (FBA)

■ ABC's

- A=Antecedent
- B=Behavior
- C=Consequences

Iceberg Metaphor



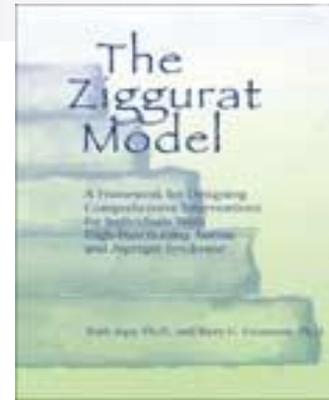


Key Assumptions of FBA

- Behavior may be impacted by factors outside of immediate antecedents and consequences. (*...the tip of the iceberg*)
- Behavior may results from biological factors
- Behavior may result from skill deficits



FBA: The Ziggurat Model

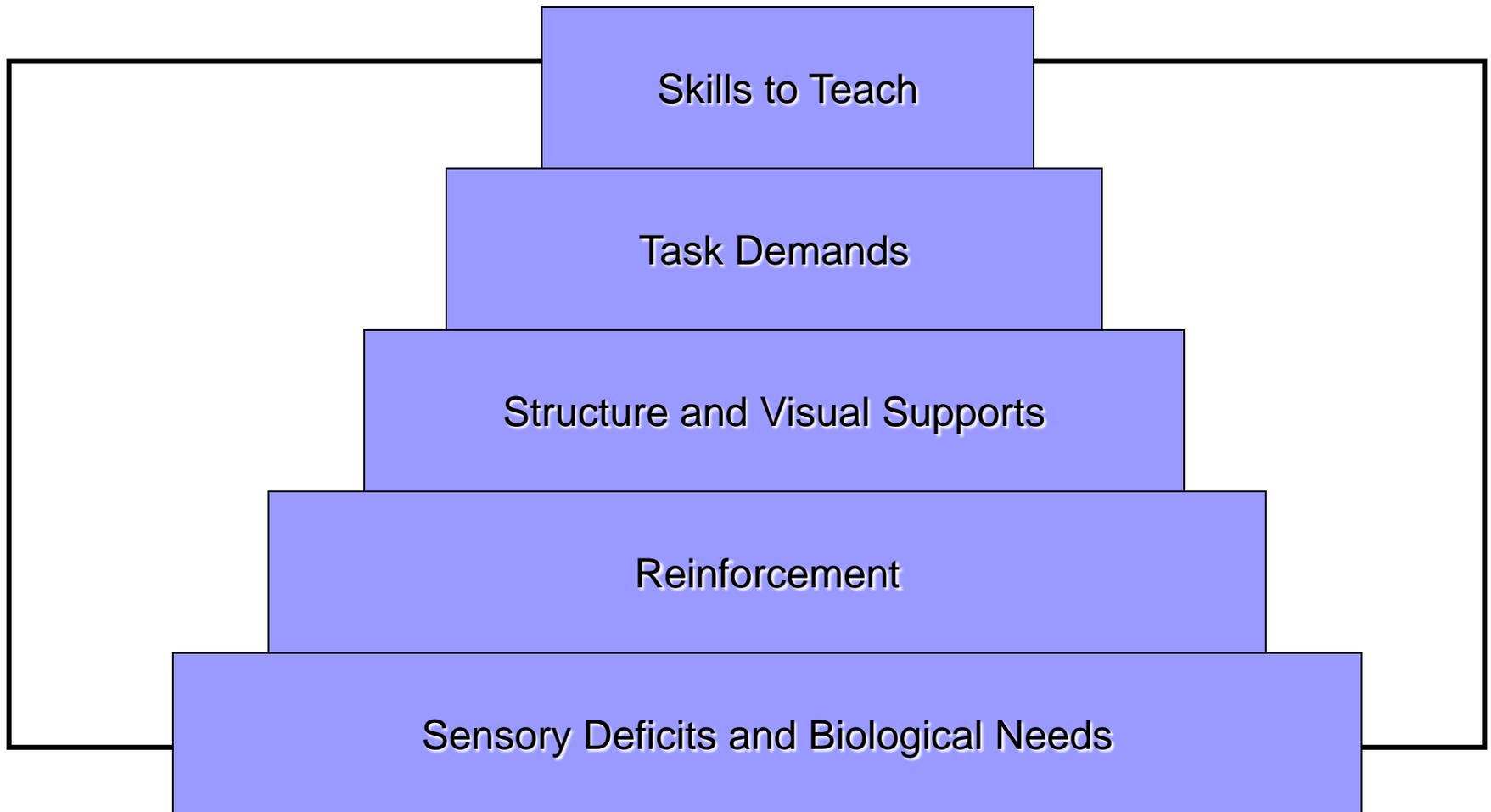


■ The Ziggurat Model

- The Ziggurat Model is consistent with practices emphasizing the use scientifically based research approaches and response to intervention (RTI).
- Allows for the incorporation of positive behavioral interventions and supports (PBIS)
- Provides a framework for designing comprehensive interventions for individuals of all ages with higher functioning Autism and Asperger's Syndrome.
 - Checklist is completed individually or as a group
 - Assesses areas of socialization, restricted patterns of behavior/interest, communication, sensory, cognition, motor and emotional functioning.
 - Worksheet helps guide intervention strategies and documentation



The Ziggurat Model



Iceberg Example

Antecedents →

- *recess
- *low structure
- * After lunch

Behavior

“Loner” on the playground

- Wandering the perimeter
- Flapping hands
- Looking at bugs
- Talking to self

→ Consequences

- * Isolated from peers
- * Opportunity to engage in stereotypic behs.

Underlying Characteristics

- *Difficulty joining/starting/ending conversation
- *Mindblindness
- *Unique interests/intense pre-occupations
- *Strong need for routine/sameness
- * Difficulty understanding nonverbal communication
- *Withdraws into complex inner worlds
- *Displays repetitive motor movements
- *seeking activities that provide movement
- *abnormal sensitivity to sound and visual stimuli
- *Less involved in group activities
- *Easily stressed
- *Has athletic skills deficits
- *Poor problem-solving skills
- *Poor motor coordination
- *Difficulty making friends
- *Difficulty joining an activity



Underlying ASD Characteristics that Impact Behavioral Challenges

- Impaired Theory of Mind/Mindblindness
- Weak Central Coherence
- Executive Dysfunction
- Sensory Integration
- Co-morbid Disorders



Impaired Theory of Mind

- Difficulty understanding the thoughts, feelings, and beliefs of others
- Difficulty predicting the actions of others
- Difficulty using words to describe their own feelings/behaviors
- Difficulty understanding non-literal language (e.g., sarcasm, inferred meanings)



Weak Central Coherence

- Tendency to focus on details and miss the bigger picture
- Difficulty understanding social situations

Weak Central Coherence





Executive Dysfunction

- Skills such as :
 - Behavior inhibition
 - Planning/Problem Solving
 - Self-Regulation
 - Mental Flexibility (adjusting to change)



Top 10 Situations that Trigger Insistence on Sameness

1. Annoying Behaviors
2. Activity Interrupted
3. Losing a game
4. Object breaks
5. Event cancelled
6. Event delayed
7. Materials run out
8. Item misplaced
9. Sequence changed
10. Momentary separation



Sensory Integration

- Our sensory system is constantly, efficiently processing information from our environment and our body.....in such a way that most of the time this goes unnoticed.
- Takes place at an unconscious level in which our brain is able to modulate sensory input during an activity.
- Example: Bike riding



Sensory Integration Dysfunction (SID)

- Is a neurological disorder causing difficulties with processing information from the five classic senses (**vision**, **auditory**, **touch**, **olfaction** and **taste**), the sense of movement (**vestibular system**), and/or the positional sense (**proprioception**).
- For those with SID, sensory information is **sensed** normally, but **perceived** abnormally.



Signs of Sensory Integration Dysfunction

- Overly sensitive to touch, movement, sights or sounds.
- Easily distracted
- Activity level that is unusually high or low.
- Physical clumsiness or apparent carelessness.
- Impulsive, lacking in self control.
- Difficulty making transitions from one situation to another.
- Inability to unwind or calm self.



Areas of Sensory Integration Disorder

- Auditory
- Visual
- Touch/Tactile
- Oral Sensory
- Taste/Smell
- Vestibular
- Proprioceptive
- Motor



Impact of Sensory Integration Differences

- Distress in response to sensory stimuli
- Difficulty concentrating in noisy environments
- Low/High pain tolerance
- Sudden change in behavior
- Failure to attend to sensory stimuli
- Low energy level
- Anxious and/or depressed
- Irritable
- Cries



Sensory Integration

UNDER-RESPONDER

Poor awareness & low sensitivity to stimulation. Misses environmental cues. Slow processing (acts as if does not hear, misses gestures & cues, sedentary)

SEEKER

Heightened awareness with low sensitivity to stimulation. Will seek out input (frequently and intensively moving, jumping, spinning, touching)

OVERWHELMED

Heightened awareness, high sensitivity but lacks active response. Can become easily overwhelmed (complains of things “bothering”, frequently anxious/upset, overreacts to small changes in the environment)

ACTIVE-AVOIDER

High awareness, with high sensitivity and active responses. Will actively avoid (searching out escape areas, covering ears/eyes, aggression to protect self)



Sensory Exercises

■ Auditory

- charades

■ Visual

- Completion of a dot to dot by mirror

■ Tactile

- Identify object by touch

■ Oral/Taste

- Gum/candy

■ Vestibular

- Walking with magnifiers



Sensory Exercises cont...

■ Motor

- Copy sentence in cursive w/ non-dominant hand.
 - The quick, brown fox jumped over the lazy dog.

■ Articulation

- State the following sentence w/ marsh-mellows in mouth
 - “The rain in Spain falls mainly on the plain.”



Behavioral Intervention

- If underlying concerns are not addressed there is little chance that learning will take place.....
 - These challenges affect how students/individuals engage, respond and behave in the educational environment
 - Understanding this relationship can help with identifying effective interventions.
- Improving the lifestyle and well-being of a person → Happy person → well behaved person



INTERVENTIONS



S.A.F.E. Program

- Support Autism for Everyone (SAFE)
 - Plan implemented by a school in Indianapolis for ASD students transitioning from elementary to middle school.
 - Team is made up of 10-12 staff members who were counselors, secretaries, nurses, general-ed teachers, spec-ed teachers and administrators.
 - Staff was trained on
 - characteristics of individuals on the autism spectrum
 - Common/specific strategies that work for these kids
 - The individual students within their buildings (parents were invited to provide input on their child)
 - Team members wore a bright colored lanyard with puzzle pieces on it so the student could identify team members within their building.
 - A puzzle piece was also hung on the team members door.
 - Students were also given a SAFE card to use
 - A worksheet was available that provided a visual guide to help the student work through the situation by writing/drawing/or circling information.
- <http://www.iidc.indiana.irca/HatsOff/hatsOffWarren.html>



Organization of the Environment to Support Behavior and Learning

■ Guiding Principles

1. Provide **order, structure & routine**
2. **Predictability day after day**- incorporate change gradually
3. Utilize **visual supports** extensively in all environments



Organizing the Classroom

■ Resource Room

- Individual work areas (used for one-on-one instruction and independent work)
- Small group areas
- Large group areas
- “Quiet”/Sensory area
- Academic area
- Computer area

Quiet/Sensory Area

Computer

Interactive Group Area

Small Group Area

Indiv. Work Stations

Small Group Area

Large Group Area

Teachers Desk

Small Group Area



Ten Strategies to Incorporate in the General-Ed Curriculum for Students with ASD

1. Establish a **visual schedule** early and implement consistently throughout the day...in all settings/classrooms.
2. Prepare student for any **schedule changes** (visually represent on visual schedule)
3. Set clear **expectations and boundaries**
4. **Clarify Information** by asking questions
5. Use a **timer**



Ten Strategies to Incorporate in the General-Ed Curriculum for Students with ASD

6. Use **motivators**
7. **Teach peers** how to interact appropriately
8. Develop a **social/emotional plan** implemented daily (or as often as possible)
9. Provide a “**safe place**” as a retreat
10. Present both **academic and social material more than once**



Visual Supports

- Visual Supports provide opportunities for increased **independence** to.....
 - Learn more quickly
 - Decrease aggression/frustration/anxiety
 - Increase receptive/expressive communication
 - Make choices
 - Complete tasks
 - Cope with changes
 - Transition
 - Learn organizational skills
 - Understand/interpret information
 - Increase social awareness/understanding
 - Access general education curriculum



Visual Supports allow individuals with ASD to better understand....

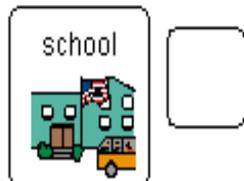
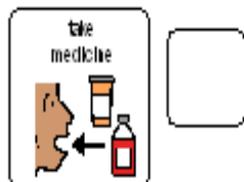
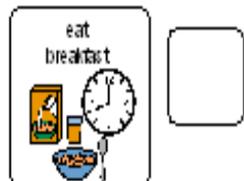
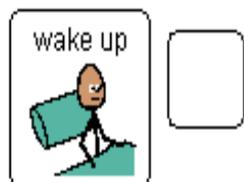
- **What** to do
- **What** will happen
- **When** and **where** activities will occur
- Complete **tasks/activities**
- **How** and **when** to **transition**
- **What** and **how** to **make choices**
- **How** to express **emotions**
- **How** to **socially interact**



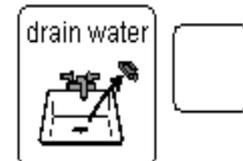
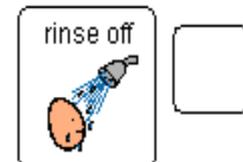
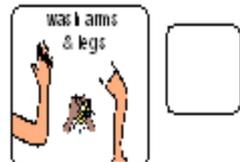
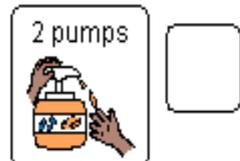
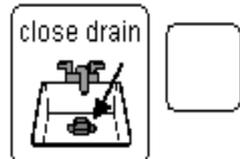
Visual Schedule

- Picture/Photograph Schedules
- Object Schedules
- Written Schedules

Morgan's Morning Schedule



Bathing



turn water on



apply soap



wash hands



rinse hands



turn water off



dry hands



pull down
underwear



go to
bathroom



get toilet
paper



wipe



pull up
pants



flush



wash hands



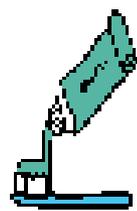
dry hands



wet
toothbrush



put toothpaste
on brush



brush
teeth



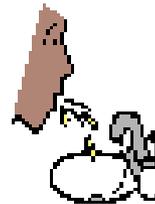
brush
tongue



rinse mouth



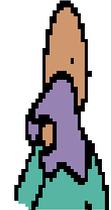
spit in sink



rinse
toothbrush



wipe face





How to determine what kind of schedule to use?

- Assess the individual's communication strengths/needs....
 1. HOW does the individual understand what is happening in the environment?
 2. WHAT does the individual attend to in the environment?
 3. WHEN does the individual understand? WHEN are they confused?
 4. WHAT resources are available to create a visual schedule?



Resources for Visual Schedules

Boardmaker program (printable black & white and color pictures on a CD)

www.mayer-johnson.com

Websites:

www.usevisualstrategies.com

www.do2learn.com

Book: Golden Ideas for Golden Students by Kathy Kelchner & Joane Walvoord

(includes most commonly used visual schedules/pictures within the classroom setting. Ready to print from a CD).

www.goldenchildresources.com



Visual Supports: TIMERS

□ Time Timer

www.timetimer.com



□ Time Tracker

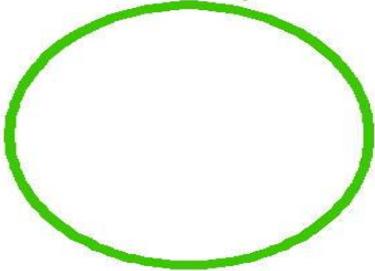
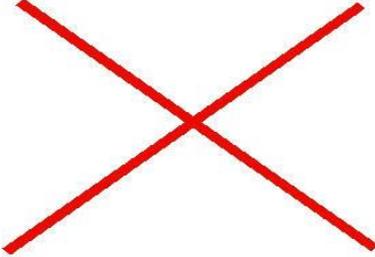
www.youngexplorers.com

www.amazon.com





Visual Supports: Behavior

● Red and ● Green Choices	
Green Choice:	Red Choice:
Green Consequence: 	Red Consequence: 

www.redandgreenchoices.com
© 2006 Green Irene

www.redandgreenchoices.com

Begin by reinforcing the green behavior. This may diminish the opposite red behavior naturally. If further assistance is needed, then introduce a (natural) red consequence. Let the student know you are there to help them through situations calmly and appropriately. Ask the student how you can help, or if they want a red/green picture. Provide explanations, expectations and choices along with behavioral principles...
Positive Reinforcement: contingent presentation of a stimulus immediately following a response, which increases the future rate/probability of the response
Consequence: any stimulus presented dependent upon a particular response



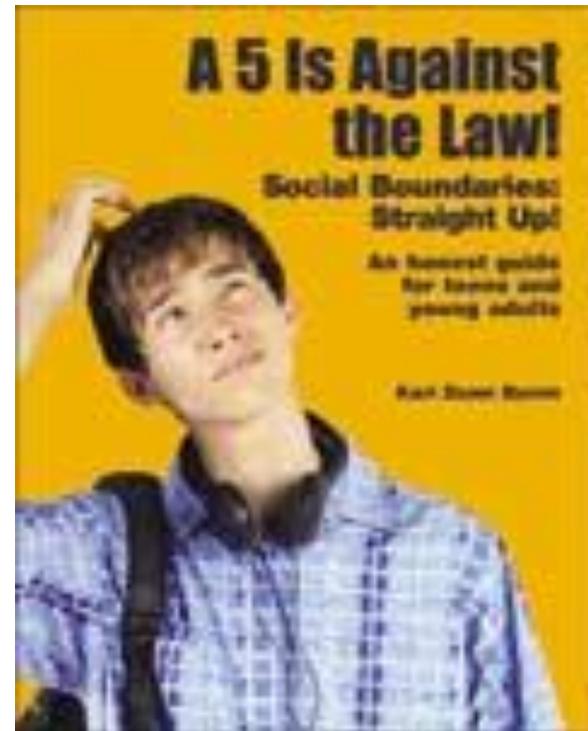
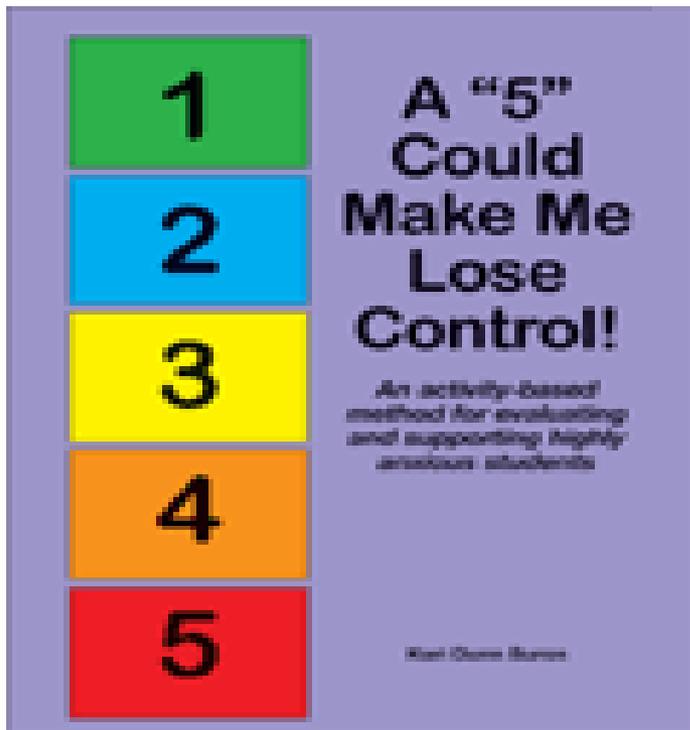
Visual Supports: Behavior

- **The Incredible 5 point Scale** (by Karon Buron & Mitzi Curtis)
 - Designed to assist students with ASD in understanding social interactions and controlling their emotional responses.
 - “The scales are visual and they reduce abstract ideas to simple numbers, thus matching some of the learning characteristics of students with ASD...it’s like talking in numbers rather than socially and emotionally laden words.”
 - Very versatile and could be used with neurotypical students as well.

The Incredible 5 point Scale

(Kari Dunn Buron & Mitzi Curtis)

www.5pointscale.com





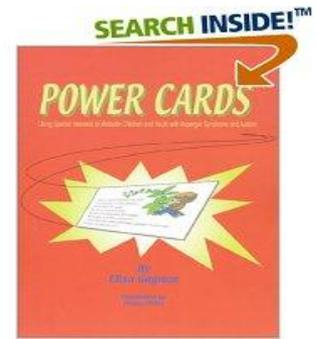
Visual Supports: Behavior

■ Power Cards

- Uses Special Interests or “Heroes” to Motivate
- The Power Card strategy consist of:
 1. Presenting a short scenario, written in the first person, describing how the child’s hero solves a problem.
 2. A small card (Power Card), which recaps how the child can use the same strategy to solve a similar problem.

■ POWER CARD:

1. The Power Card is the size of an index card, trading card, bookmark or business card.
2. It contains small picture(s) of the hero or special interest.
3. The card also shows the steps to the solution discussed in the brief scenario.



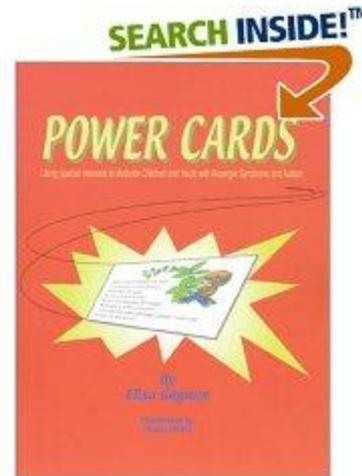


POWER CARD



By Elisa Gagnon

Can be found at www.amazon.com or through
www.asperger.net

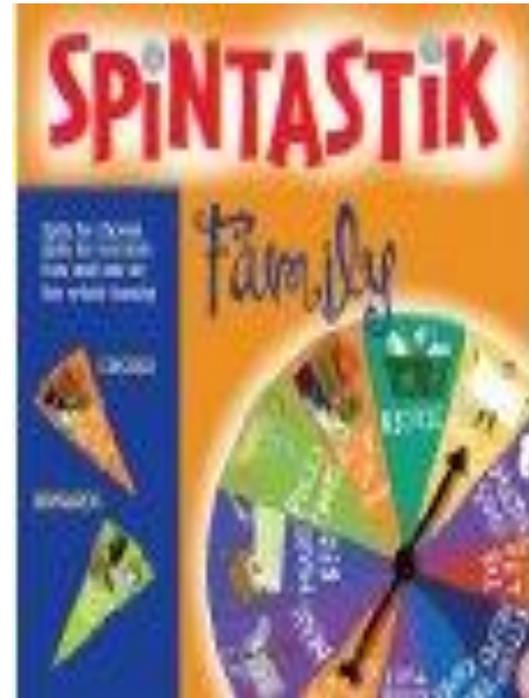




Visual Supports: Behavior

■ Spintastik

- promotes positive techniques to incorporate household chores/responsibilities and rewards for the whole family.
- Visual and tactile components
- Game format







Social Skills

Teaching “What to Do”

Prepare for the social situation

Provide information about what the individual is expected to do.

Teach the individual what is expected in a specific social situation.

This may involve teaching strategies, as well as creating supports to help the individual remember what has been taught.



Social Skills

- **The Hidden Curriculum** (by Brenda Smith Myles, Melissa L Trautman and Ronda L. Schelvan)
 - Set of rules that”is never taught but everyone knows” Richard Lavoie



The Hidden Curriculum

Rules that everyone knows and no one is taught

Don't write on the bathroom walls, especially when the adult is in the bathroom.

For boys, don't talk to others in the restroom when urinating.

When walking up the steps, stay on the right side.

When taking a shower in gym class, do not sustain eye contact or watch others in the shower.

If you do something funny, it is only funny once. If you do it repeatedly you look silly and goofy.

When a girl says, "Do these pants make me look fat?", the answer is always "NO"...even if she does!

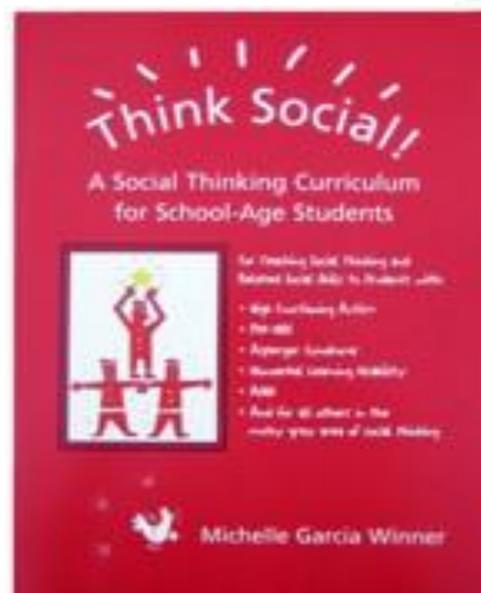
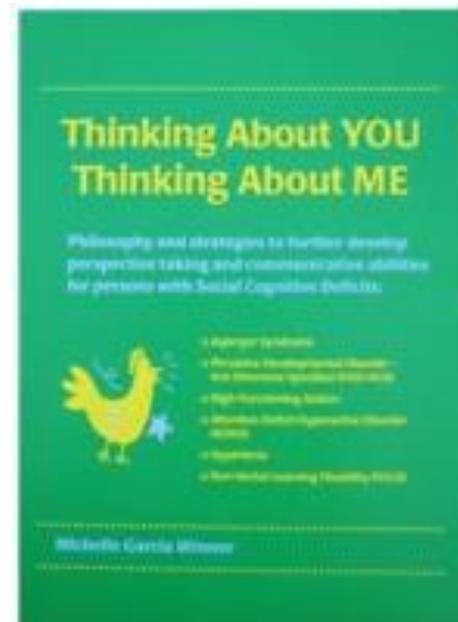
Personal space "rules" change between girls and boys when they become boyfriend and girlfriend.



Social Skills

- Michelle Garcia Winner

www.socialthinking.com





Social Skills

■ The Social Contract

- To be used for inclusion within the regular classroom

- Designed to assist the ASD individual function in the regular classroom setting.

- Poster with pictures of the classroom students engaged in various actions or rules for the classroom.
- A written explanation is included below each picture.
- Each student within the classroom sings the contract as a means of showing they will help support the student while he/she is in the classroom.



Promoting Social Skills in the Classroom

- Have the child practice asking and responding to questions with peers (e.g., have notecards with question on one side and appropriate response/answer on the other side).
 - Provide two separate sets of cards that have both students names and various comments/compliments/statements to use when interacting with others. Have the child choose a combination each day and help them use the statements on the card with the chosen student(s).
- When possible make reinforcers a shared activity with a peer (e.g., cooperative play, playing ball, computer game requiring turn taking).



Sensory Integration

- Providing sensory experiences throughout the day in all settings...
 - May be needed by a person to **adaptively interact** with the environment (“make it through the day”)
 - Helps organize the environment in order to **decrease stress** on a fragile sensory system.



Sensory Strategies: Visual

- Limit the amount of visual material hanging from the ceiling or walls.
- Store manipulatives inside containers.
- Organize and label all materials to identify where they belong.
- Put pictures on containers for students with poor visual memory.
- Use picture templates of where items belong in places.
- Tape a number or letter line onto students desk/notebook.
- Provide primary lined paper or graph paper to help with spacing.
- Keep amount of visual information on worksheets to a minimum.
- Use a lamp instead of overhead fluorescent lighting.
- Use a touch screen instead of computer mouse.
- Allow student to sit with back to teacher (i.e., look at solid wall)
- Have student write notes and use peer notes as well.



Sensory Strategies: Auditory

- Minimize verbal directions.
- Use ear plugs or head phones.
- Allow time for students to listen to favorite music.
- Use more visuals with pictures or words.
- Use social stories (or power cards) about what might happen or sounds that can be heard in the room.
- Desensitize a student to an area by slowly integrating him/her on numerous visits.
- Seat them away from noisy items within the classroom (e.g., pencil sharpener, computers, clock)



Sensory Strategies: Tactile

- When a student says a touch “hurts” or pulls away, acknowledge their pain and stop touching.
- Experiment with types of clothing that are comfortable (i.e., terry cloth, all cotton, several times washed, no labels/tagless).
- Provide easy access to small hand fidgets (i.e., squishy balls, soft, textured)
- Allow student to sit in bean bag chair or on yoga ball or sit disk/cushion.
- Refer to occupational therapist for additional suggestions (e.g., weighted vest, utensils, brushing)



Sensory Strategies: Smell

- Have a scented lamp, candle, lotions, liquid soap, scented markers or stickers available to smell to calm student.
- Be aware that if you have a scented object, the student may act adversely to that particular smell
- Use minimal amount of perfume or cologne
- Be aware of soaps or detergents used...use scent free laundry products



Sensory Strategies: Proprioceptive

- Engage student in up and down movements (i.e., jumping rope, bouncing a ball, trampoline) to wake up student.
- Back and forth movements (i.e., swinging, sitting in rocking chair) may help calm student.
- Use stress balls, theraputty and fidget toys
- Allow chewing on crunchy, chewy items (i.e., bubble gum in freezer, licorice sticks, pretzels, carrots, chewy tubes)
- Designate an area in the room to stomp feet or pace.
- Never take physical education or recess away from a student (i.e., need deep pressure activities like running and jogging)



Sensory Strategies: Vestibular

- Create heavy work activities (e.g., take down chairs in computer lab, take out garbage at lunch, take a pile of books/encyclopedias to library).
- Slowly move from extreme positions (i.e., sitting on floor to standing)
- Slow down our own movements.
- Use bands across front legs of chair.
- Allow frequent breaks through the day
- Have student jump on mini-trampoline or ride a stationary bike.
- Play games using repetitive alternating and rhythmic movements.
- Play on merry go round, ride roller coasters, hand upside down, play team sports, swim, twist chains of a swing and untwisting, go sledding, slide down water slides.



Additional Resources

- Indiana Resource Center for Autism (IRCA)

www.iidc.indiana.edu/irca

Provides lots of articles for educators, parents and professionals

- www.sensory-processing-disorder.com

- Behavioral:

www.interventioncentral.com



Additional Resources cont...

Autism Asperger Publishing Company www.asperger.net

Recommended Books:

1. The Comprehensive Autism Planning System (CAPS) for Individuals with Asperger Syndrome, Autism and Related Disabilities: Integrating Best Practices Throughout the Student's Day (Shawn Henry & Brenda Smith Myles \$30.00)
2. Learning with a Visual Brain in an Auditory World (Ellyn Lucas Arwood & Carole Kaulitz \$30.00)
3. Asperger Syndrome and Sensory Issues: practical solutions for making sense of the world (Brenda Smith Myles, Katherine Tapscott Cook, Nancy E. Miller, Louann Rinner & Lisa A. Robbins \$22.00)
4. The Hidden Curriculum: practical solutions for understanding unstated rules in social situations (Brenda Smith Myles, Melissa L. Trautman & Ronda Schelvan book \$20.00, DVD \$30.00)
5. Simple Strategies that Work! Helpful hints for educators of students with asperger syndrome, high-functioning autism and related disabilities (Brenda Smith Myles, Dian Adreon & Dena Gitlitz \$20.00)



Additional Resources cont...

6. Power Cards: Using special interest to motivate children and youth with asperger syndrome and autism (Elisa Gagnon \$20.00)
7. The Incredible 5 point Scale: Assisting student with autism spectrum disorders in understanding social interactions and controlling their emotional responses (Kari Dunn Buron & Mitzi Curtis book \$19.00 DVD \$30.00)
8. A 5 Could Make Me Lose Control! An activity-based method for evaluating and supporting highly anxious students (Keri Dunn Buron & Mitzi Curtus \$22.00)
9. A 5 is Against the Law! Social Boundaries: Straight Up! An honest guide for teens and adults (Kari Dunn Buron \$20.00)
10. Think Social! A social thinking curriculum for school age students (Michelle Garcia Winner \$80.00)



Sensory Integration Resources

- *Starting Sensory Integration Therapy: Fun Activities That Won't Destroy Your Home or Classroom* by Bonnie Arwine (\$20.00)
- *The Out-of-Sync Child Has Fun, Revised Edition: Activities for Kids with Sensory Processing Disorder* by Carol Stock Kranowitz (\$15.00)
- *The Sensory-Sensitive Child: Practical Solutions for Out-of-Bounds Behavior* by Karen A. Smith (\$15.00)
- *The Everything Parent's Guide to Sensory Integration Disorder* by Terri Mauro (2006)
- *Parenting a Child with Sensory Processing Disorder: A family guide to understanding and supporting your sensory-sensitive child* by Christopher Auer (2006)
- *Toilet Training for Individuals with Autism & Related Disorders* by Maria Wheeler (\$20.00)