

# Understanding Autism and Emotional Regulation

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# Webinar Norms

- Please mute yourself to reduce distractions for everyone in the session.
- Enter Questions into the Chat and we will gather the questions as we proceed.
- Be careful not to share any information that may identify an individual when the session is being recorded.



# Today's Agenda

- Introductions
- Who is with us?
- Autism 101
- Emotional Regulation and Autism
- Resources

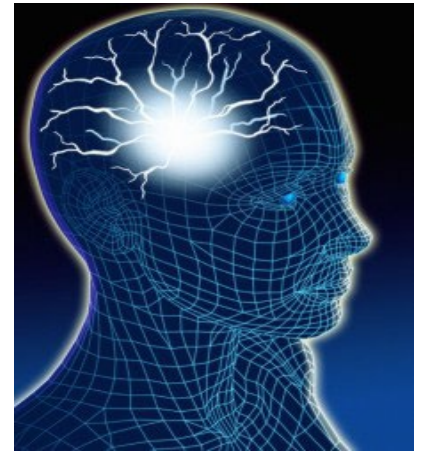
# Participant Survey

- Please Click on the [Link](#) I have put in the chat and let me know:

# Let's Start with an Example!

- Meltdown Cycle

# Autism *IS*...



- Neurodevelopmental
- First described by Leo Kanner in 1943
- A spectrum
- Treatable, *not curable*
- A communication disorder
- Usually diagnosed by 3 for Classical Autism, 8 for higher functioning
- Is 4.5 times more common in males than females
- Knows no racial, ethnic, or socio-economic boundaries

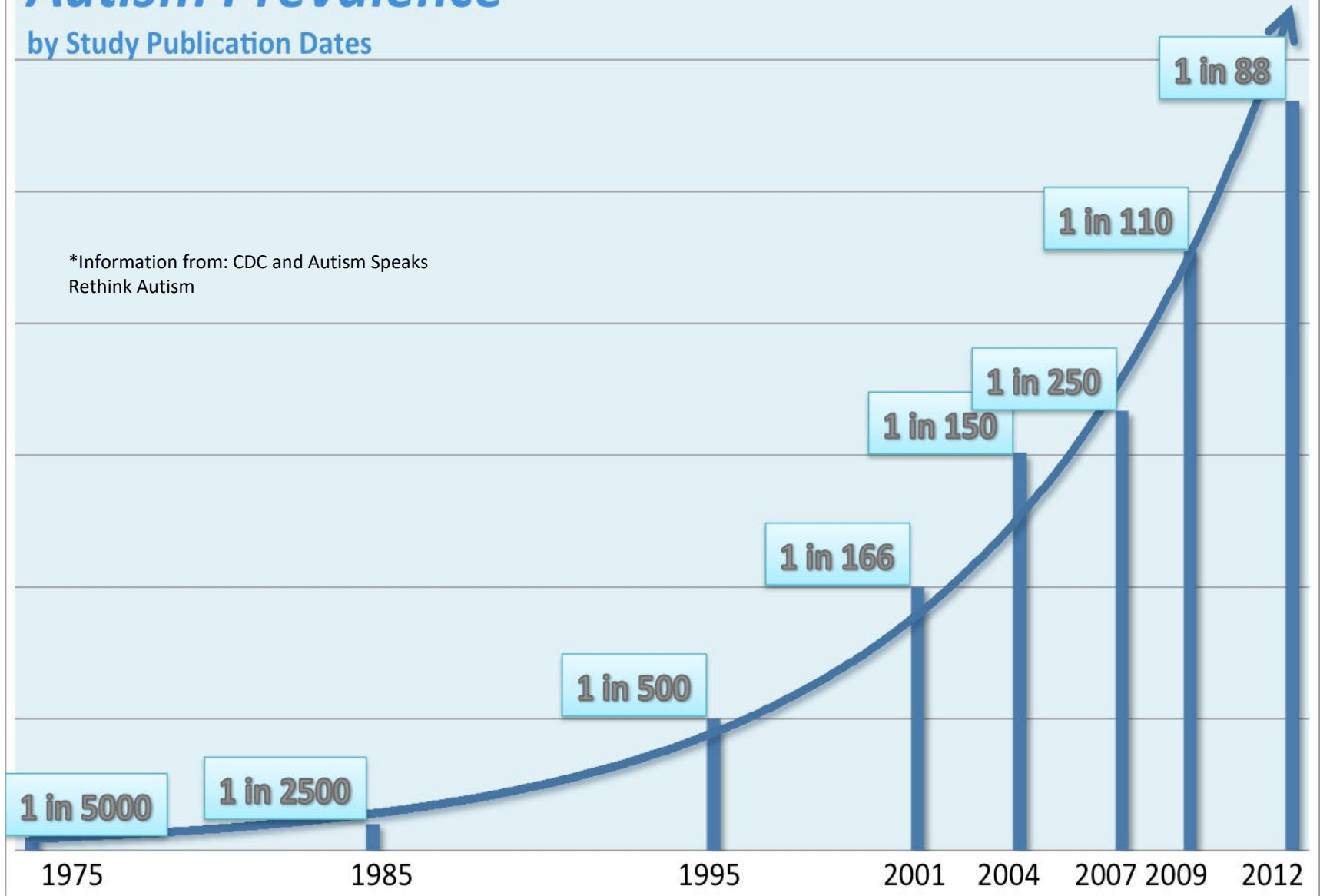
# Autism *IS NOT*...

- A mental/emotional illness or conduct disorder
- Curable
- Diagnosable by any type of medical procedure
- Simply a behavior disorder
- The same set of behaviors in all individuals

# Autism Prevalence

by Study Publication Dates

\*Information from: CDC and Autism Speaks  
Rethink Autism





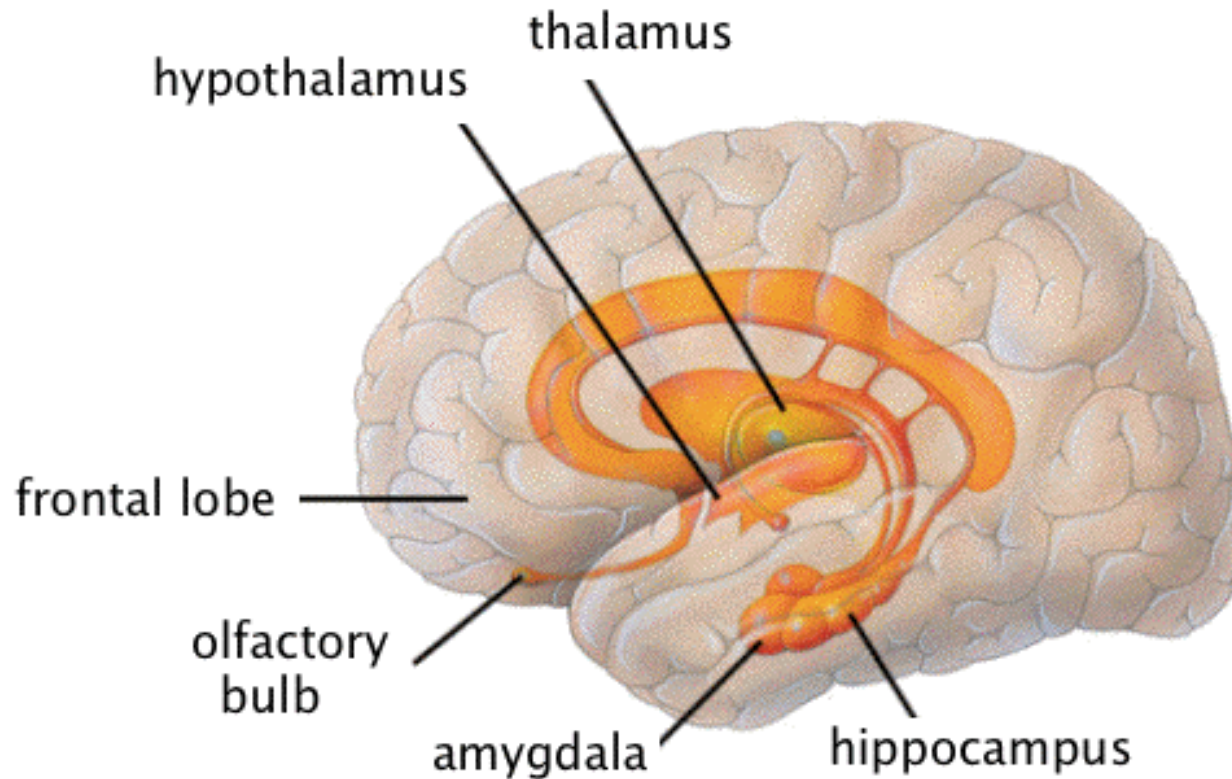
# Current State

- 1 in 59 Births; 1 in 37 Boys
- Based on Data from three states
- Better awareness and testing only explains some of the increase
- No single cause accounts for all of the increase
- This indicates multiple causes
- Current research leaning towards pre-disposition of baby for ASD that must be met with environmental triggers while in the womb or at time of birth.

*-Centers for Disease Control  
-Autism Speaks*



- When neurotypical people look at peoples' faces, regions in the limbic system “light up” and reward that person.



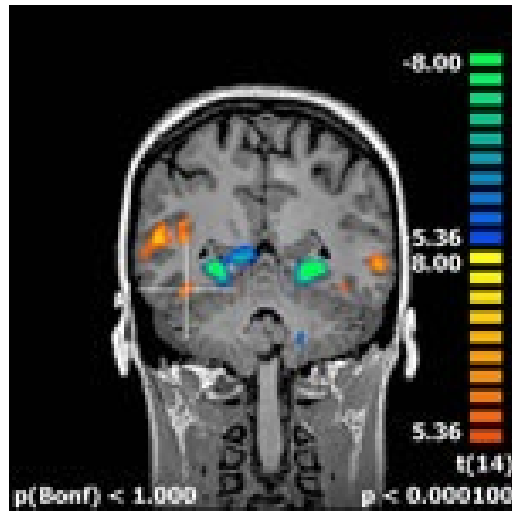
- Emily Rubin, Marcus Autism Center

# Shared Gaze/Joint Attention

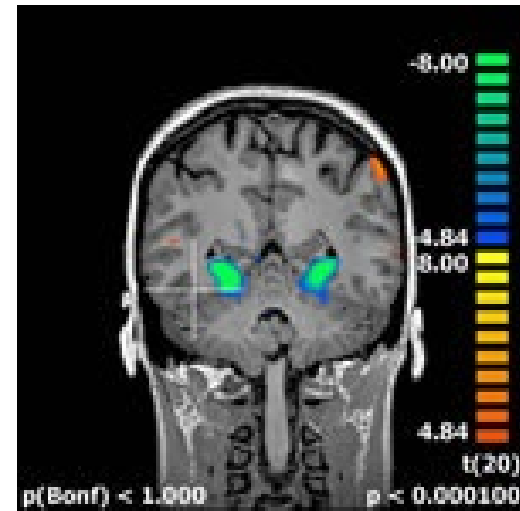


<https://youtu.be/mqwZlj5w0xg>

# Unique neurological differences



**Neurotypical**



**Autism**

**FMRI scans of processing while looking at faces**

Individuals with autism process social stimuli (e.g., faces, speech sounds) in regions of the brain typically reserved to process images and sounds that are non-biological or non-social. Schulz, R.T. et.al. (2003)

# Autism Continuum

Measured I.Q.



Severe

Gifted

Social- Emotional Interaction



Aloof

Active but Odd

Communication



Non-verbal

Verbal

Motor Skills



Awkward

Agile

Fine Motor



Uncoordinated

Coordinated

Sensory

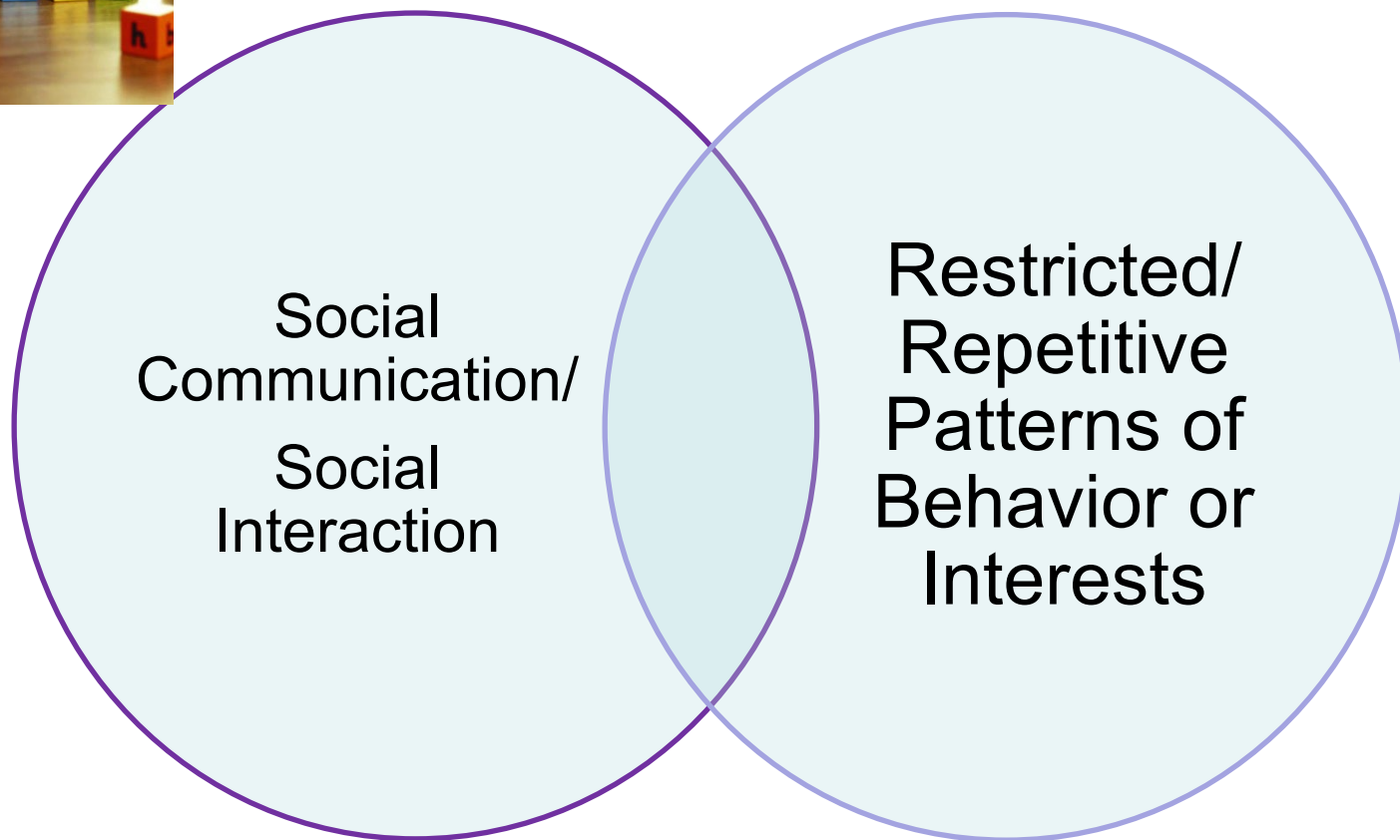


Hypo

Hyper

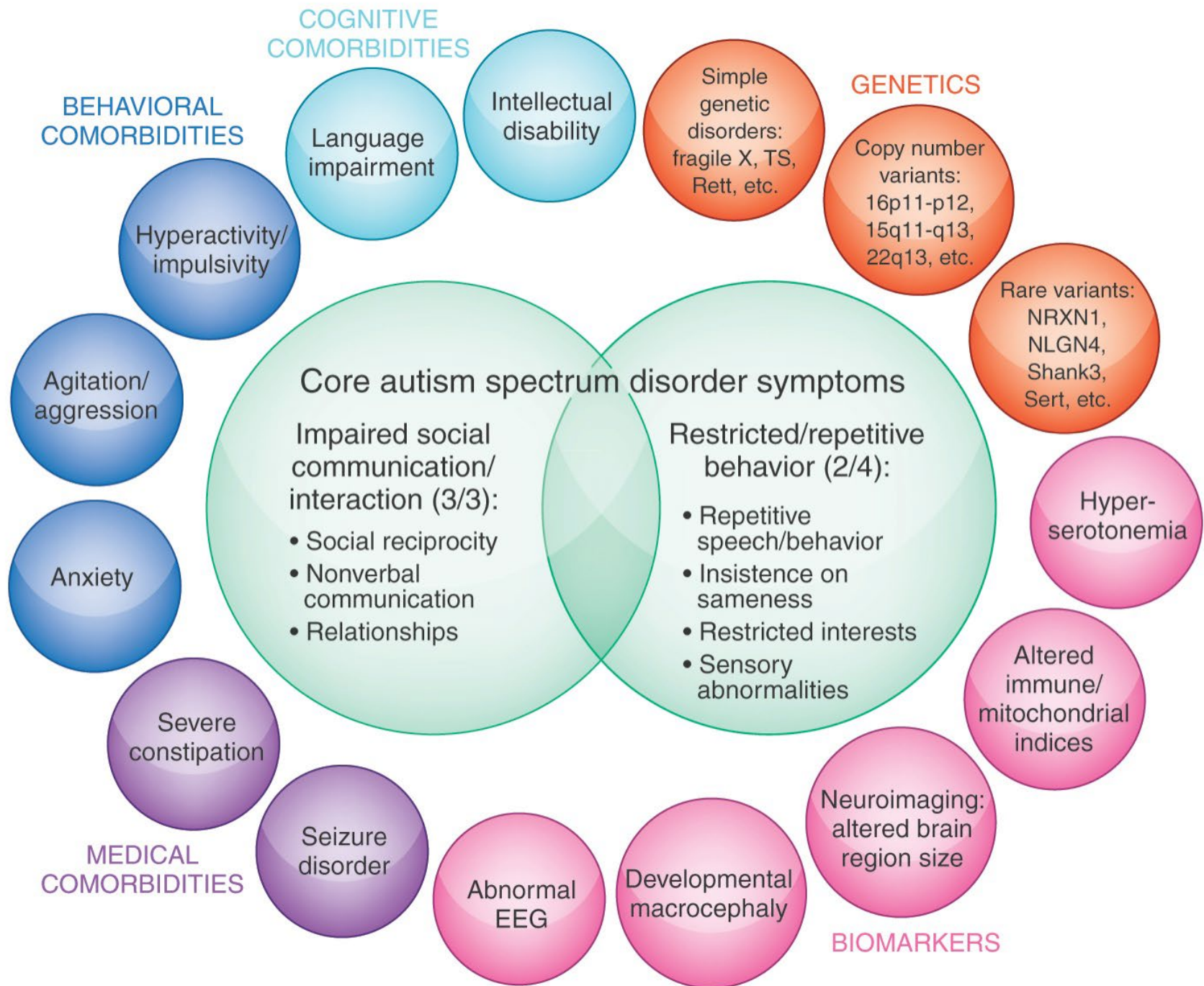


# Autism Spectrum Disorder



**Severity Level: 1, 2, or 3**

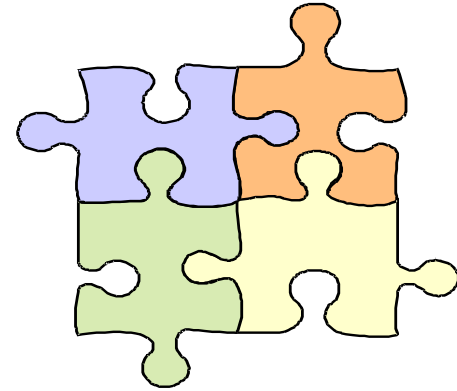




# *Disturbances of the capacity to relate appropriately to people, events or objects*

Difficulty with:

- perspective of others
- relationships
- understanding/expressing shades of emotion
- understanding/following of social “rules”/expectations.
- change; Insistence on Sameness;
  - may look Obsessive-compulsive, rigid, perfectionist
- emotional regulation.





# Three core Differences...

Theory of Mind	Central Coherence	Executive Function
<ul style="list-style-type: none"><li>• Theory of mind deficit- an inability to recognize others have thoughts, feelings and intentions different to one's own, and to intuitively guess what these might be</li><li>• This makes it difficult to conceptualize and appreciate thoughts and feelings of others</li><li>• Children, from about 4 years of age usually understand that others have thoughts, knowledge, beliefs, desires that will influence their behavior</li></ul>	<ul style="list-style-type: none"><li>• The ability to focus on both details as well as wholes</li><li>• Weak central coherence- an inability to bring together various details from perception to make a meaningful whole; hyper focus on the details- seeing things in pieces not wholes, difficulty getting “the big picture”, knowing what is relevant or redundant, making connections and generalizing skills or knowledge, lack of awareness of</li></ul>	<ul style="list-style-type: none"><li>• Defined as the way in which people monitor and control thoughts/actions</li><li>• ANALOGY: EF is to intelligence as the Air Traffic Controller is to the airport.</li><li>• A broad category that includes processes like working memory, planning, cognitive flexibility, and inhibitory control.</li><li>• Affects higher-order processes that enable us to plan, sequence, initiate, and sustain our behavior towards a goal, incorporate feedback, and make adjustments along the way</li></ul>



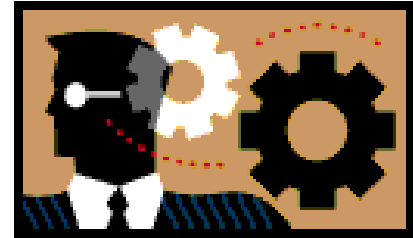


# You Need a Theory of Mind...

- To take another person's perspective
- To accurately interpret nonverbal communication
- understand and be motivated to do what's expected
- To be embarrassed
- To control your behavior
- To follow rules and routines
- To lie for the purpose of making yourself look better
- To interact socially



# Difficulty with Theory of Mind



Difficulty taking another person's perspective

Egocentric view

Difficulty understanding how own behavior impacts others

Difficulty understanding and predicting environment

Insistence on control, sameness, and routine



# Central Coherence



***What is this a picture of?***



# Executive Function Characteristics



Can have difficulty with:

- problem solving
- organization
- self monitoring
- maintaining task focus
- transitioning
- Slower processing time



# Other Common Issues

- Sensory Sensitivity
- Anxiety
- Literal Processing of Language



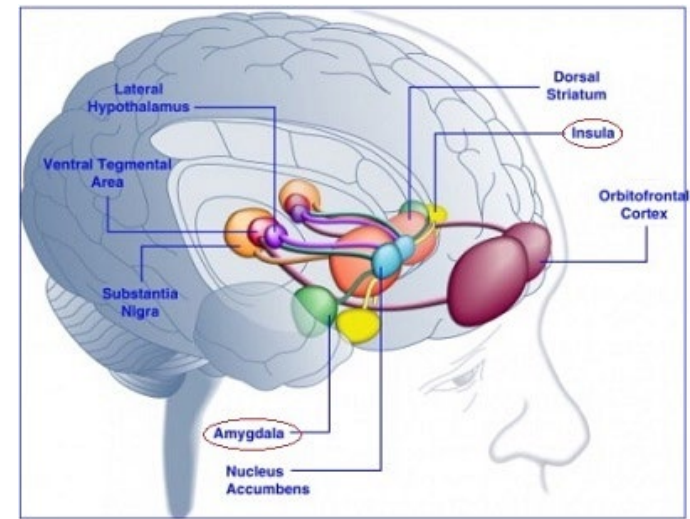
## SENSORY DYSFUNCTION

- Can be hyper or hypo sensitive to sounds, smells, textures, light, etc.
- Difficulty filtering sensory input to decide what is salient
- Sensory systems can overload and individuals may need time to “decompress”
- Hypo sensitive individuals may seek sensory input.

## BEHAVIORS RELATED TO SENSORY DYSFUNCTION

- Hyperactivity, Attention and organization difficulties
- May need to take breaks
- Repetitious Actions/ Stimming
- Anxiety and irritability
- Risk taker- jumping from the top of steps provides strong sensory input
- Poor writing skills- may be sensitive to feel of paper on hand. May do better using electronics to write.

# Anxiety and Autism



- Anxiety is a major – frequently debilitating –problem in the autism community.
- By adulthood, almost half of people with autism have been diagnosed with an anxiety disorder such as a panic disorder, a phobia, or obsessive-compulsion. Studies suggest many more may struggle with chronic but undiagnosed anxiety.
- Delays in how the brain processes danger and safety may underlie the chronic anxiety that plagues so many people with autism.
- “Among adults with autism, these anxiety disorders frequently prove more disabling than the direct symptoms of autism”

» **Top, D. N., Stephenson, N.K., South, M. and Kirwan, C.B. (2015).** *Right Place, Wrong Time: Delayed Amygdala and Insula Activation in ASD during Classical Fear Conditioning and Extinction.* Proceedings of the International Society for Autism Research, Salt Lake City, UT, May 2015.



# Literal Processing of Language

- Most Individuals with Autism
  - Process stimuli differently in concrete/object portion of the brain
  - Usually Convert language to visual images.
  - May take many idioms literally at first and might need you to clarify.
    - “We should take a walk in their shoes”
    - “Give it your best shot”
    - “You hit the nail on the head”
    - “I want you to think outside the box”
  - Will often hold you to the schedule, agenda, or regiment you proposed and resist any change.
    - Eg. “You said we meet every Tuesday at 9. Why are you changing the meeting!?”



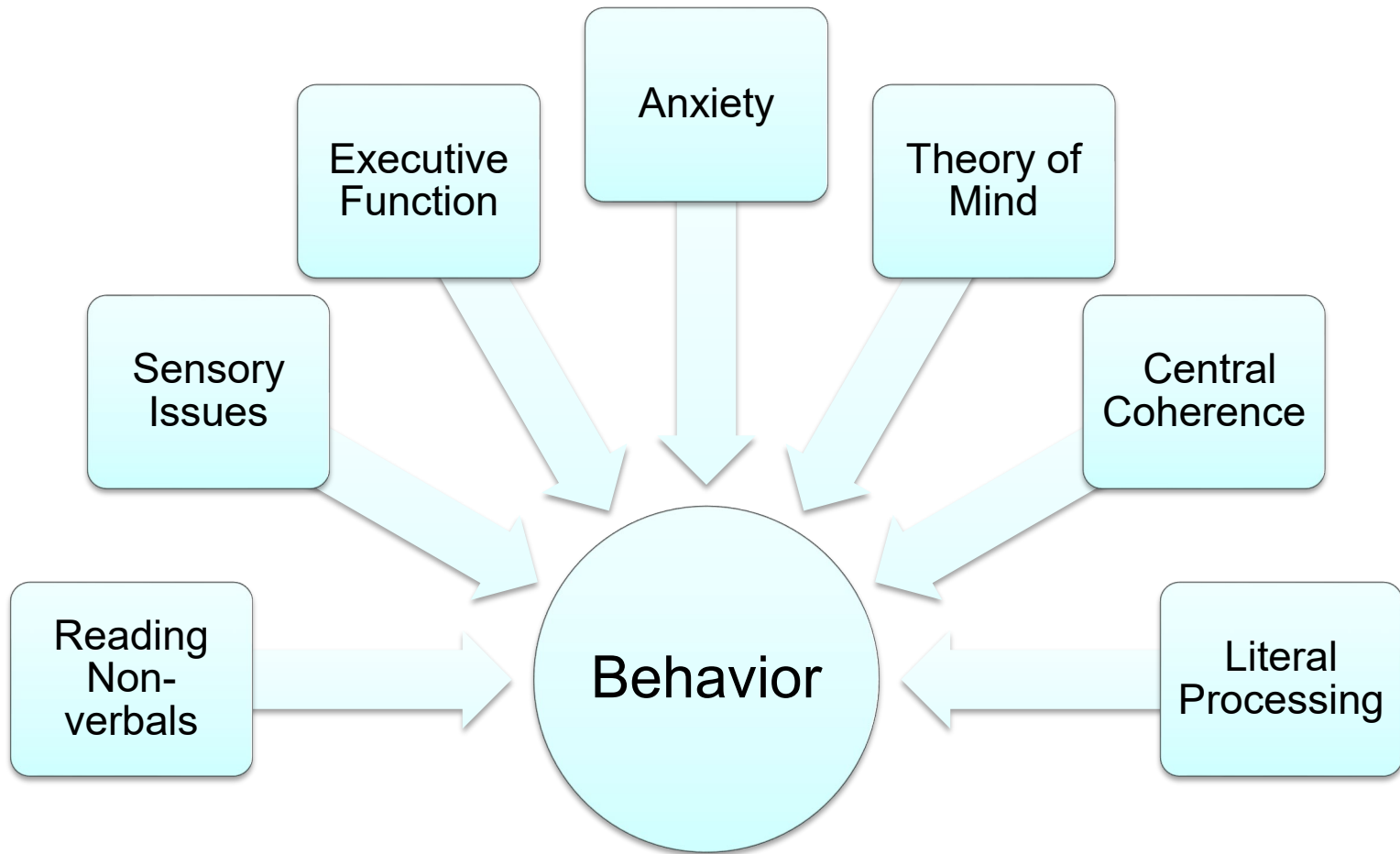


Temple Grandin reminds us...

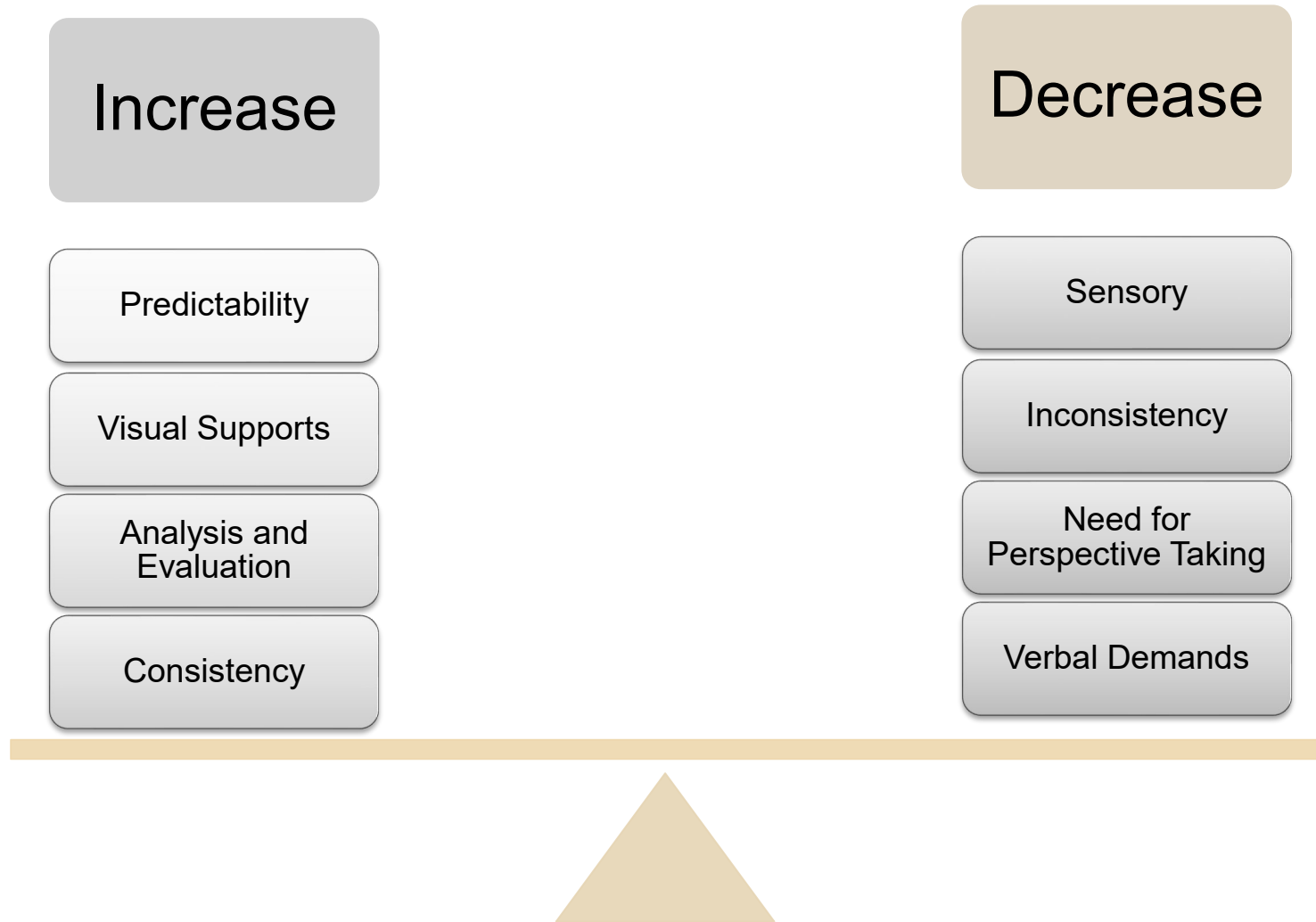
If I don't see it, I don't hear it.



# Bringing It All Together



# General Strategies



# Struggle vs Strengths: Gifts of Neurodiversity

- [60 Minutes Autism Episode](#)
- [Microsoft Hiring Program](#)

# Struggle vs Strength

1. Rigid Routines

2. Literal  
Processing of  
Language

3. Social Skills

4. Logical  
Thinking

1. Will follow procedures  
and protocols accurately

2. Will catch errors in  
language that can cause  
medical errors.

3. Not as distracted by  
office politics or drama

4. Can make decisions  
without cloud of emotion

# Emotion Regulation

Emotional regulation is a core process underlying attention and social engagement and is essential for optimal social-emotional and communication development...and for development of relationships for children with and without disabilities.

*(Prizant & Meyer,  
1993)*

# Emotion Regulation

- You need emotional regulation to be able to regulate emotional arousal and support adaptive behavior.
- You need emotional regulation to be available for learning and engagement.

# Students who are well regulated...

...can process verbal and nonverbal information.

...can attend to most relevant information .



...are most available for learning.

...can remain socially engaged with others.

...can actively participate in everyday activities.



# Behavior Escalation and De- Escalation Agenda

- Basic Assumptions about Behavior/Prevention
- Key assumptions about Effective Support of Students
- De-escalation Strategies

# Behavior

- Assumptions
  - Every Behavior Occurs for a Reason
  - Most Behaviors have a Communicative Intent
  - Reinforcement over Punishment
- Prevention over Reacting
  - Communicating Expectations
  - Predictability

# Level 1- No Behavior

## Prevention

- Rules and Routines
- Proxemics
- Routine/ Functioning Fine
- Reinforcement- “Catch them being Good!”

# Escalation Curve

Bruno & Pontello (2020) Solving the Autism Puzzle Piece by Piece: Strategies for Educators and Parents

## The 5 "S" Stages



# Level 2 –Simmering Stage

## Supportive Reponses

- Indications
  - Change in Behavior
  - Fidgeting, Sensory needs increase
  - Begin asking information seeking questions
  - Ask you to confirm routines

# Simmering Stage= ***Supportive Responses***

- Empathy Statements
  - Mirroring Technique
- Back up to easier task
- Reassurance
- Indicate the endpoint of the task
  - We're almost done. We stop at 10 am
  - The bus is almost here
  - The Buzzer always stops after one minute
- Answer Information Seeking Questions

# Level 3

## Stand Off

- Indications
  - REFUSAL
  - Student is becoming less Rational
  - Ability to make choices is only possible when you are Rational!
  - Reacting not Choosing

# Level 3

## Stand Off

- They are losing control so you must take control
  - Use directives rather than empathy
  - Give simple directives
  - Limit Setting
- Ignore the first words. Listen for cause and emotion
- Remove student or remove audience if necessary
- Use as many visual/non-verbal cues as possible
- Avoid using questions
- Antiseptic Bouncing- See if you can redirect
- Sensory
  - Deep Pressure
  - Fidget
  - Moving Around



# Level 4- STORMING

- Tantrum vs Meltdown
- Attempt to keep student and self safe
- Remove class if still in a room
- Use blocking techniques as much as possible
- Be aware of your escape route
- Keep yourself between student and exit
- Better to have student attack objects than people
- Time and Space

# Sorrow

- You and the student are likely emotionally and physically exhausted
- Crying, Sleeping, Apologizing
- Be reassuring
  - “We all have bad days”
  - “Sometimes it can be overwhelming when things change”
  - “I’ve been trying to get SSD to get me a new laptop anyway”
- Rapport Building

# Smiling- Back in Control of Self

- Check by asking them to follow a simple request
- NOW is the time to teach!
- Think about Replacement Behaviors/ Fair Pair
- Identify Chain and work on interrupting at early stage

# Trauma and Behavior

***Students who have experienced Trauma recognized anger in faces Three Times Faster than children in the same studies who did not have a history of trauma.***

# Summary

- All Behavior Occurs for a Reason
- When Words fail, we go to Behavior
- For each stage of the escalation curve there is an appropriate response

# What skills are necessary to regulate?

- Self-Awareness of Body State and Language of Emotions
- Seek assistance and/or respond to others' attempts to provide support for emotional regulation when faced with stressful, overly stimulating, or emotionally dysregulating circumstances (referred to as mutual regulation)
- Remain organized and well-regulated in the face of potentially stressful circumstances (referred to as self-regulation)
- Recover from being “pushed over the edge” or “under the carpet” into states of extreme emotional dysregulation or shutdown, through mutual- and/or self-regulatory strategies (referred to as recovery from dysregulation.)

# *Developmental profile of Emotional Regulation*



## **Behavioral**

- Simple motor/sensory actions motor strategies that the child engages in to regulate his/her arousal level, remain alert, and/or self-soothe.
- Looking at ones hands, seeking oral input, rocking, spinning, etc.

## **2**

## **Language**

- More sophisticated language strategies that the child uses that regulate his/her arousal level.
- Self-talk, child repeatedly saying or signing “okay” after falling down, selecting the picture icon for “mad” from his/her cx book



## **Metacognitive**

- Involves a persons ability to reflect on and talk about cognitive processes that support organization, decrease anxiety, and regulate attention and arousal. Metacognitive strategies allow for greater social problem solving.

# Self-Regulated or Co-Regulated?

- This is often the frame that many of us are missing as we feel stuck in where to go with teaching Emotional Regulation



# Self Regulation

- Self-regulation refers to emotional regulatory capacities internal to an individual.
  - Tolerating social and sensory experiences
  - Developing behavior strategies to regulate arousal.
  - Using language strategies to guide behavior
  - Using metacognitive strategies to plan and complete activities.



# Co or Mutual Regulation

- Mutual regulation refers to those that occur in the social environment.
  - Expressing emotional states in socially appropriate ways.
  - Responding to assistance by others.



- Effective emotion regulation is not automatic for most individuals with ASD,
- It must be taught.

# Fostering “The 3 E’s”

1. Emotional Identification
2. Emotional Understanding
3. Emotional Regulation



# Language

If the only 3 words I have for emotion is

- MAD
- SAD
- GLAD

How should I react when I feel

Frustrated?

Confused?

Bored?

# 1. Identifying Emotions

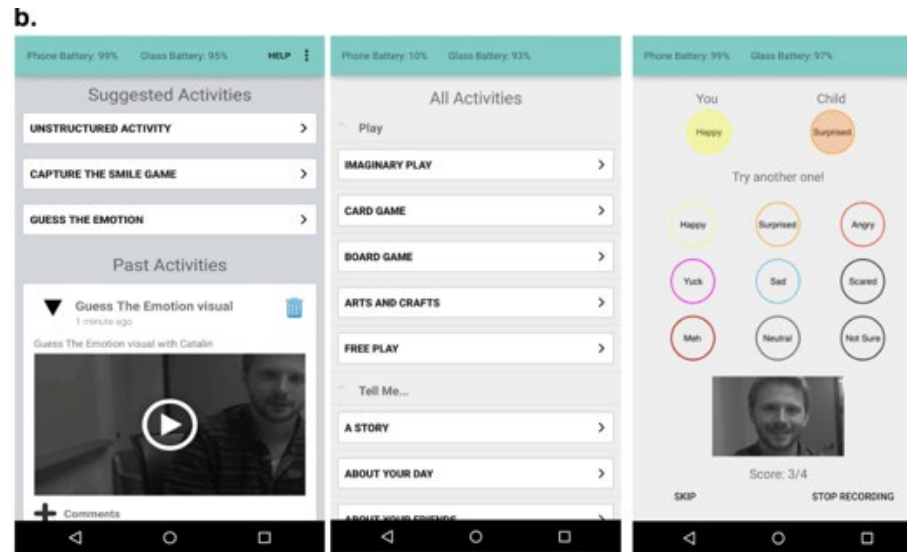
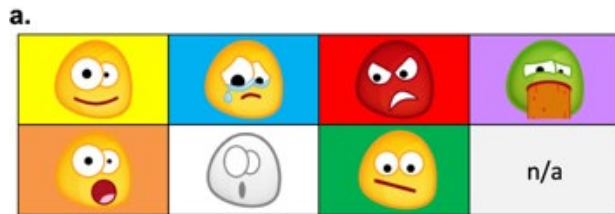


- Collect pictures from magazines, students, website- google images.
- Label each emotion.
- Use charts for each emotion.
- Take pictures of students and have them label their own emotions.
- Identify emotions when they are occurring (“right now you are sad, you are crying”) provide mirror.

# 8 Core Emotions

- Happiness,
- Anger
- Surprise,
- Neutral
- Sadness
- Disgust
- Fear
- Contempt

Ekman, P. et al. Universals and cultural differences in the judgments of facial expressions of emotion. *J. Pers. Soc. Psychol.* **53**, 712–717 (1987)



(Superpower Glass)

# Make a List

## Afraid

Afraid  
Anxious/Worried  
Cautious  
Frightened  
Terrified  
Uncertain

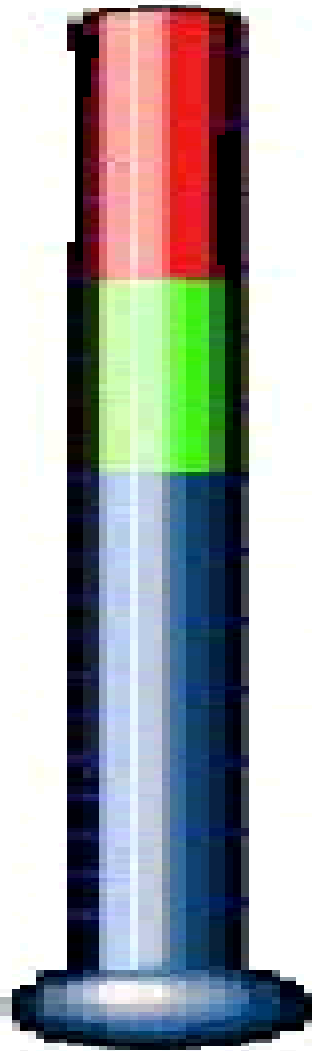
## Miscellaneous Emotions

Bashful  
Bored  
Disgusted/Grossed out  
Embarrassed/Sheepish  
Guilty  
Hopeful  
Indifferent  
Innocent  
Jealous/Envious  
Love struck  
Pleading  
Self-conscious  
Shocked  
Shy





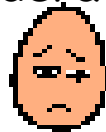
# 2. Emotional Understanding



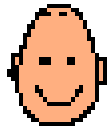
High Stress



Moderate Stress



Low Stress





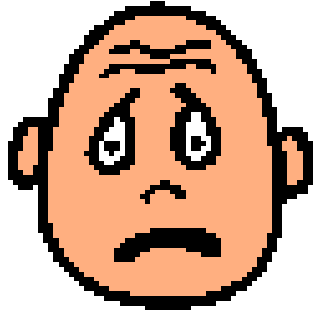
# Define each Level with Student

High Stress= “about to blow, angry, etc.”

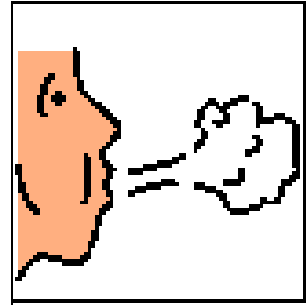
Moderate Stress= “anxious, feeling, sad,  
frustrated, etc.”

Low Stress= “doing my work, getting along  
with others, happy, etc.”

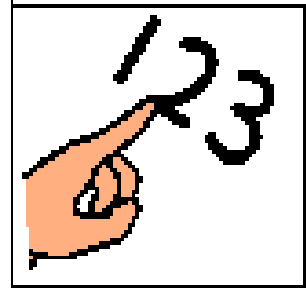
# 3. Emotional Regulation



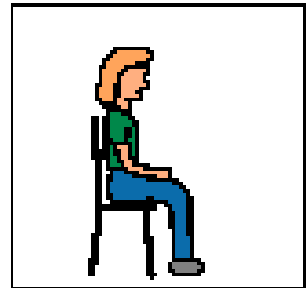
I am feeling anxious.  
I need to calm down.  
What can I do?



I can take a deep breath.



I can count to five.



I can go to a quiet place.



# Teach 'what to do' at each level:

Low Stress= squeeze toys, seat push ups

Moderate Stress= listen to relaxing music,  
break time

High Stress= “walk no talk”, break time

## Preventive Strategies

- Teaching programs
- Environmental manipulations
- Premacking
- Sensory strategies

## Reactive Strategies

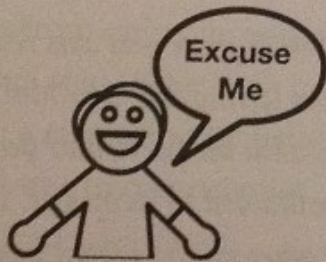
- Consoling
- Consequating
- Redirecting
- Ignoring



Wait for the teacher to finish speaking.



Raise your hand without waving.



Get attention by using the expression, "Excuse me."



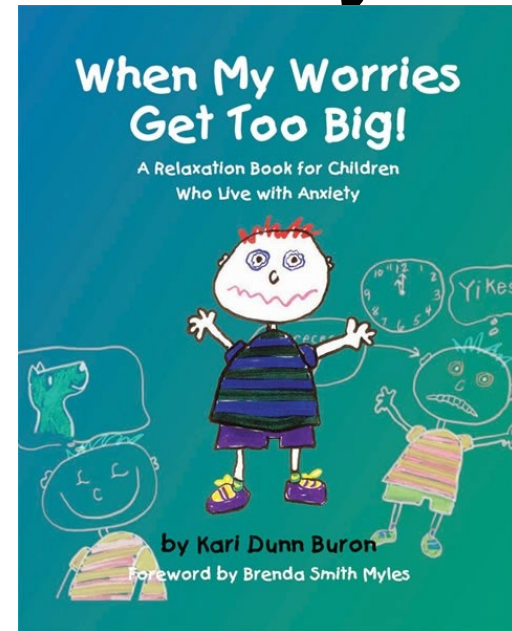
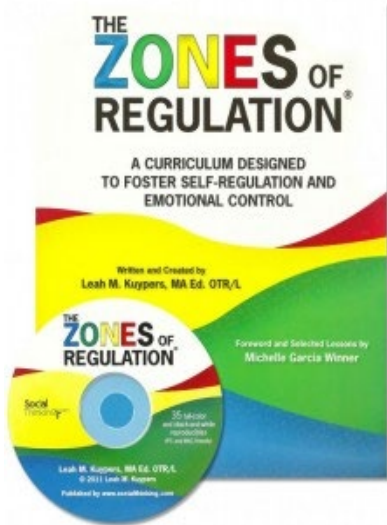
Wait for the teacher to call on you.

## Asking An Adult for Help..... Teaching Visual

Successful Problem Solving for High-Functioning Students with ASD;

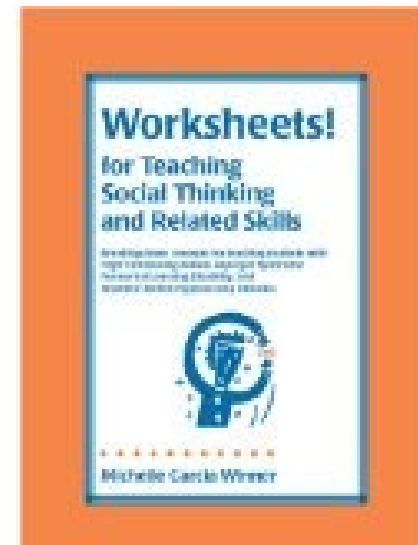
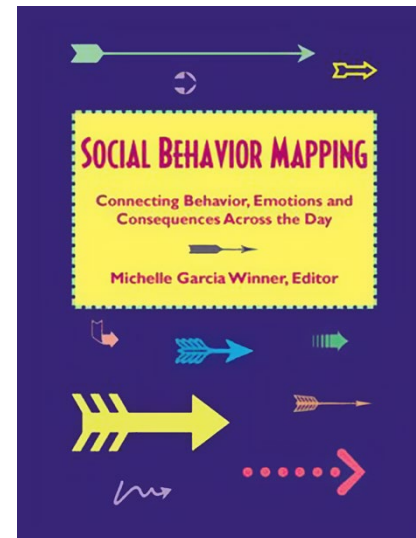
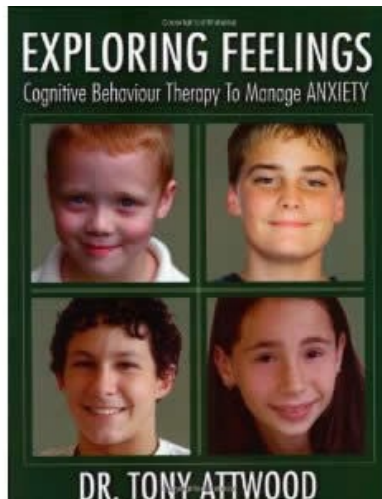
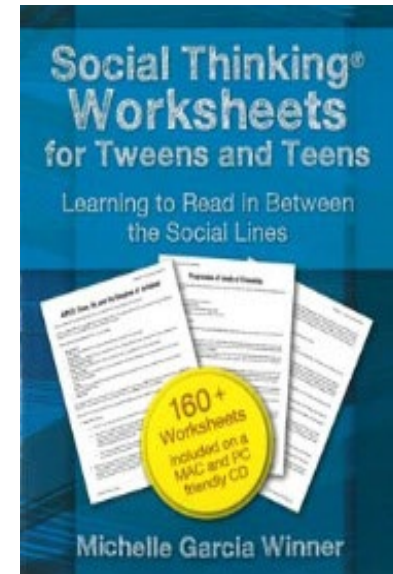
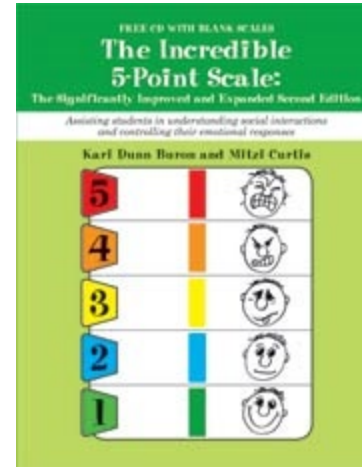
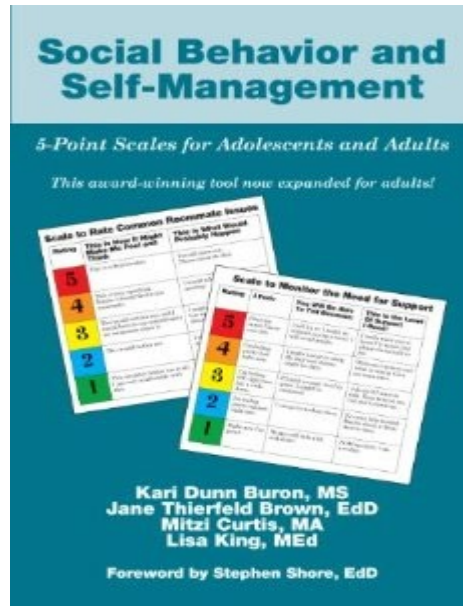
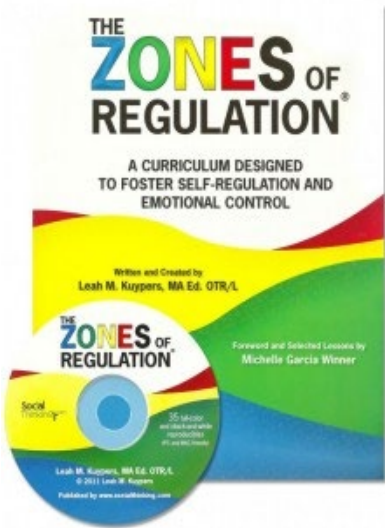
Mataya, Kerry and Owens, Penney

# Teaching Materials- Elementary





# Teaching Materials- Secondary





# Zones of Regulation

Leah Kuypers

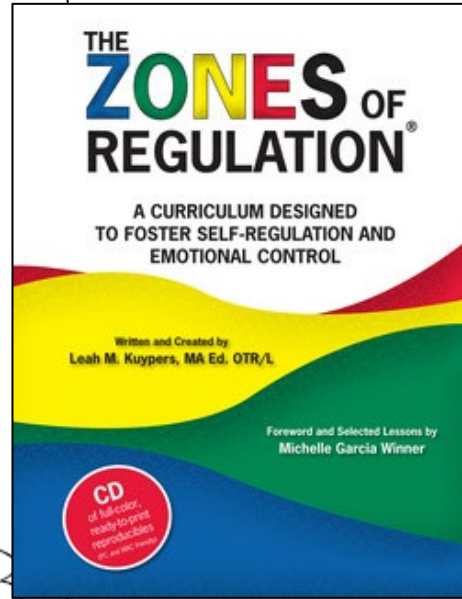
## Understanding Different Perspectives

When I am in the **GREEN ZONE** and it is expected...

Other kids might feel  around me.

Other kids might be thinking  or 

Other kids might say  or 



# Purpose of the Zones

- Teach students how to react to others' facial expressions and recognize a broader range of emotions
- Increase perspective about how others see and react to their behavior
- Provide insight into events that trigger dysregulation
- Teach when and how to use tools and problem solving strategies

# The ZONES

- What -
  - 18 lessons
    - Curriculum includes worksheets and visuals from accompanying CD.
    - 30 – 60 minutes in length
    - Lead-in, learning activity, and wrap-up
- Who –
  - Verbal students kindergarten – 12<sup>th</sup> grade
- How to group–
  - Based on individual student needs.
  - Similar cognitive abilities.
  - Students benefit from both individual and group lesson formats.

# The ZONES...

- Teaches emotion recognition
- Teaches students to identify meaningful measurement of emotion
- Is Concrete and visual
- Includes opportunities for practice
- Extends a student's repertoire of responses

# The Zones

## Blue

Underaroused

Low states of alertness

## Green

Well regulated

Available for learning

## Yellow

Heightened level of agitation

Some control over behavior

## Red

Extreme Dysregulation

Not in control

# Tracking My Tools

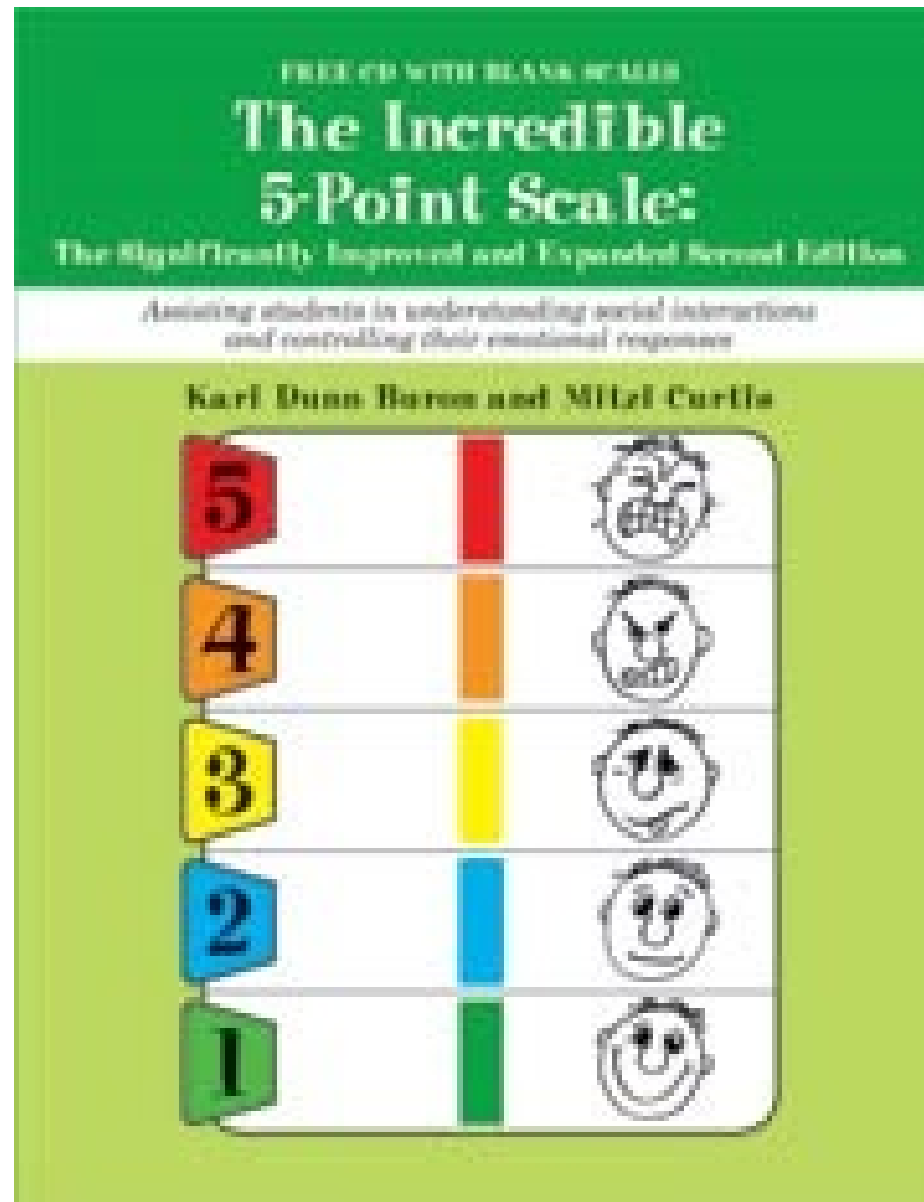
Jane Doe

**Tools I Can Try:**

**Did It Work?:**

Deep breaths	Yes	[Marked]											
	No	[Marked]											
Size of the problem	Yes	[Marked]											
	No	[Marked]											
Take a walk	Yes												
	No	[Marked]											
Talk to an adult	Yes	[Marked]											
	No	[Marked]											
Count to 10	Yes	[Marked]											
	No	[Marked]											
Wall push-ups	Yes	[Marked]											
	No												
Weighted blanket	Yes												
	No	[Marked]											
Safe spot	Yes	[Marked]											
	No												
Green Zone calming book	Yes												
	No												
Math in head	Yes	[Marked]											
	No												

# The Incredible 5 Point Scale



## Charle's 5 Point Scale

Rating	Looks like	Feels like	I can try to
5	<p>Not Talking</p> <p>Red face and sweaty</p> <p>Throwing things</p> <p>Kicking people or objects</p> <p>Breaking and tearing up things</p> <p>Biting objects</p>	<p>Really, really angry</p> <p>Can't think about anything else</p>	<p>Have people give me my space</p> <p>Have people give me quiet so I can calm down</p>
4	<p>Yelling, saying mean words</p> <p>Slams doors</p> <p>Runs in the halls</p> <p>Pulls school work or art work off of the walls</p>	<p>Very, very frustrated</p>	<p>Walk to a safe place</p> <p>Stop talking so I don't say mean things</p>
3	<p>Frowning</p> <p>Loud and grumpy voice</p> <p>Saying hurtful, mean words</p> <p>Sticking out tongue</p> <p>Walks or runs out of the room without permission</p> <p>Ignoring people that are talking to me</p>	<p>Frustrated</p> <p>Overwhelmed</p>	<p>Take 3 deep breaths</p> <p>Slow my breathing</p> <p>Rub my hands</p>
2	<p>Starting to frown</p> <p>Eyebrows go together</p> <p>Grumpy voice</p> <p>Saying short rude comments</p>	<p>Nervous</p> <p>Starting to get worried</p>	<p>Squeeze a squishy toy</p> <p>Take a sensory break</p>
1	<p>Smiling</p> <p>Nice voice</p> <p>Friendly words</p> <p>Walking</p> <p>Working</p> <p>Playing</p>	<p>Happy</p> <p>Great</p>	<p>Have fun</p> <p>Enjoy it!</p>



## iSocial Remote Group Therapy for Social Competence

- Developed by Dr. Janine Stichter and colleagues
- 18 Peer reviewed studies established Effectiveness
- 32 Sessions with a scaffolded instructional design
- Addresses Children and youth with HFA/AS and their unique constellation of core deficits in social cognition:
  - Theory of Mind (ToM)
  - Emotion Recognition
  - Executive Functioning (Solomon, Goodlin-Jones, & Anders, 2004)



## SCI Curriculum and Delivery

A comprehensive intervention specifically designed to meet the content and instructional needs of the targeted population

[isocl.net](http://isocl.net)

### Cognitive Behavior Intervention

Phenotypic Specific Instruction Targets

*Recognizing Facial Expressions*



*Sharing Ideas*



*Turn Taking in Conversation*



*Recognizing Feelings & Emotions*



*Problem Solving*



Scaffolded Instructional Design

# Summary

- Autism is a Social Communication Disorder
- Visual and Object-Centered Brain
- Emotions are Not Easily understood in this brain
- Behavior is Communication
- When we increase emotional language we increase emotional regulation
- Supporting Emotional Regulation increases success in life

# Resources

- SCERTS
- “Feeling Book” (Communication Crossroads)
- SETBC.org
- “Navigating the Social World: A Curriculum for Individuals with Asperger’s Syndrome, High Functioning Autism and Related Disorders” by Janette McAfee
- iSocial (isocl.net)

# Thank you!

## Questions?

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