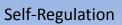


Leah Kuypers M.A. Ed., OTR/L

Occupational Therapist, Creator, Consultant www.zonesofregulation.com

The Big Picture

- Understanding Self-Regulation
 - -Development
 - -Components
 - -Viewing behavior
- How to Build Regulation Skills: The Zones of Regulation[®]
 - Background info
 - Increasing awareness
 - Tools
 - Implementing
 - Assessment/Data Collection



The ability to adjust level of alertness **AND** direct how emotions are revealed behaviorally in socially adaptive ways in order to achieve goals. -Adapted from work of Clair Kopp

Encompasses:

- Self-control
- Resiliency
- Self-management
- Anger management
- Impulse control
- Sensory Regulation



-Bronson, 2000



Development of Self-Regulation

• Initial Behavior Strategies





- Sensory-motor strategies
- Progress into Language Strategies
 - Words and symbols to regulate arousal
 - Organize actions
- Express emotional state
- Negotiate concerns

-Greenspan, S. (1997) -The SCERTS Model, Prizant et al. (2006)

Development of Self-Regulation

- Final level- Metacognitive Strategies
 - Internalizing a dialog
 - Reflect on cognitive processes that support organization, decrease anxiety, modulate attention and arousal
 - Recognize another's perspective and social conventions
 - Support/guidance (verbal techniques, sensitivity, expectations) from caregivers is key in development of these strategies -The SCERTS Model, Prizant et al.

Milestones of Self-Regulation

- By 2 years of age:
 - Children are able to delay actions when requested by caregivers
 - Begin to behave according to caregivers' or social expectations without external motivators
- By 3 years of age:
 - Express emotions- a hallmark of co-regulation
- During Pre-School years:
 - Gain greater flexibility
 - Begin to use rules to guide behavior
 - Produce strategies to reduce tension and able to reflect on behavior



Milestones Continued

- Kindergarten: Year to get on all students on level playing field
- 2nd Grade: Shift in responsibility to students' managing their own needs with greater independence



 Brain continues to develop into midtwenties



Brain's Potential Effects on Behavior

- **Deep Limbic System:** Bonding and mood center. Associated with negative thoughts.
- **Basal Ganglia:** Controls body idling speed. Associated with anxiety and concentration.
- **Prefrontal Cortex:** Supervisor of the brain where executive functioning occurs.
- **Cingulate:** Gear shifter- makes you get stuck on certain thoughts/behaviors.
- **Temporal Lobes:** Understanding language and facial recognition. Associated with temper flare-ups and rapid mood shifts.

Research on Self-Regulation

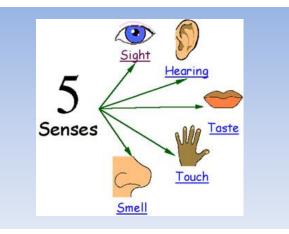


- Higher academic achievement is more likely when interventions include self-regulation components -Blair & Razza, 2007
- Self-regulation abilities have a stronger correlation with school readiness than IQ or entry-level reading or math skills -Blair, 2002. 2003; Normandeau & Guay, 1998
- Research shows that teachers can have a positive effect on students' self-regulation skills
 -Burchinal, Peisner-Feinberg, Bryant, & Cilfford, 2000

Components of Self-Regulation

- 1. Sensory Processing and Modulation
- 2. Executive Functioning
- 3. Emotional Regulation
- 4. Social Cognition







Hidden Senses



- Vestibular Sense
 - Processes movement and the body's relationship to gravity
- Proprioceptive Sense
 - Provides information on body's position in space and amount of force needed to grade movements

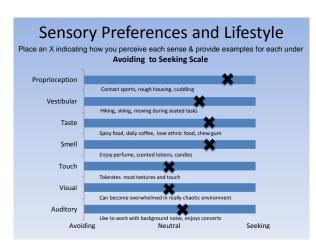
Sensory Processing

- Information is registered through the senses
- Central nervous system orients to and interprets sensory input
- Determine if response is needed
- Influences our level of arousal



Modulating our Senses

- Each sense is set differently to what feels "just right"
- "Just-right" will vary person to person
- Some senses may be hyper-responsive meaning a very little amount of a sensation can be over-stimulating so person "avoids"
- Other senses can be hypo-responsive meaning it takes a lot of a sensation before a person feels "just-right" so person "seeks"
- Sensory Diet/Lifestyle set up by an OT can help with modulating the students' senses





Executive Functioning

- Umbrella term that describes the cognitive process involved in the conscious control of thoughts and actions -Leibermann et al., 2007
- EF skills have been closely linked to academic success in school-age children -Bull & Scerif, 2001; Gathercole et al., 2005; Kibby et al., 2004; Zametkin & Ernst, 199.



Executive Functions Effecting Regulation

- Attention shifting: Swiftly switching back and forth between mental tasks
- Flexibility: Consider multiple options, revise plans, adapt to change
- Working Memory: Reflect on past experiences and code new information to help predict what you may experience

EF's Effect Regulation Cont.

 Self-Talk: Internal speech used to guide behavior



I think I can I thi

- -Impulse Control: Thinking before acting
- Planning: Seeing the end result and problem solving the hurdles along the way.

Emotional Regulation



- Monitoring, evaluating, and modifying the intensity and temporal features of one's emotional response
- Involves processes both *Intrinsic* and *Extrinsic* that are responsible for controlling the emotional reactions in order to meet one's goals

Emotional Regulation

- Physiological state/arousal level colors our perceptions and experiences
- Involuntary emotions elicited, then modulated by executive functions to account for:
 - social perspective taking
 - motivation
 - objectivity
- Children learn it is socially appropriate to replace negative emotional states with positive ones

Social Cognition & Theory of Mind



The ability to understand that others' thoughts, feelings and experiences differ from yours.

Critical in being able to regulate your behavior to social demands, sustain play and have meaningful conversation.

Uta Frith and Simon Baron Cohen

Social ThinkinCir^{com}

- Curriculum designed to teach students how the social world works rather than simply state social skills and rules
- Explores concept of *thinking about others* in the shared environment to help guide interactions and behavior
- Students learn to regulate their own behavior based on the other peoples' thoughts and expectations
- Leads to generalized social skills, competency and independence
 Michele Garcia Winner, 2005
 Michele Garcia Winner, 2005

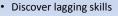
Integration of Social Thinking[®] Concepts in Zones Curriculum

- Expected vs. Unexpected related to Zones
- Good thoughts vs. uncomfortable thoughts
- Your behavior changes my thoughts and feelings
- Social Behavior Maps
- Size of the Problem
- Superflex®



Understanding Behavior

- "Kids do well if they can!"
- "The demands placed upon us outstrips our capacity to cope."
- Collaborative Problem
 Solving



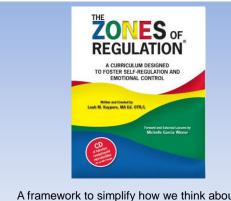
Ross Greene www.livesinthebalance.org



Our Well of Coping Capacity



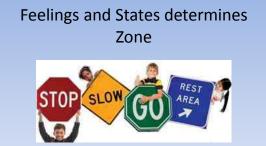
- Reservoir always changing
- Some more abundant then others
- Some days better than others
- Empathize, support and teach rather than punish, shame and demean



A framework to simplify how we think about and manage our feelings and states.

The **ZONES** Framework

What it IS	What it ISN'T
A teaching tool	A discipline model
A thinking framework	A behavior approach
 A way to nurture development of skills 	 A way to shame for negative behavior
Supportive in nature	Punitive in nature



Expression of Zone determines if Expected or Unexpected Graphic credit to Attention Magazine, Oct. 2012

Goals of The **ZONES** Curriculum

- To teach the students:
 - Identify their feelings and levels of alertness
 - Effective regulation tools
 - When and how to use tools
 - Problem solve positive solutions
 - Understand how their behaviors influence others' thoughts and feelings
- And ultimately...
 - Independent Regulation!

What Was Needed:



- A tool to help students regulate their emotions as well as sensory needs
- Strategies to address lagging skills in executive functioning and social cognition
- A systematic, visual way to classify the different ways we feel
- A simple, concrete tool that is easy to refer to and understand

Incorporated Ideas From:



- The Incredible 5-Point Scale, by Kari Dunn Buron & Mitzi Curtis
- Cognitive Behavior Management Theory
- Social Thinking[®], by Michelle Garcia Winner
- Systemitizing Theory, by Simon Baron-Coen
- Central Processing Theory, by Uti Frith
- The Alert Program[®], by M.S. Williams & S. Shellenberger

Evidence Based Practice v.s.

Practice Based on Evidence

- Zones Concept is grounded by science and based on immense evidence:
 - Central Coherence Theory
 - Theory of Mind
 - Systemizing Theory
 - Self-Management
 - Cognitive Behavior Management
 - Executive Functioning
 - Social Thinking
- Literature Review on <u>www.zonesofregulation.com</u>
- Featured as a "Promising Practice" in Attention Magazine (October, 2012) and in AOTA's SISIS
 Outlituting Evidence evidence in a the second secon
- Qualitative Evidence and positively reviewed by experts

Four **ZONES** used to describe levels of alertness and feelings:



-Blue Zone: sad, sick, tired or bored.

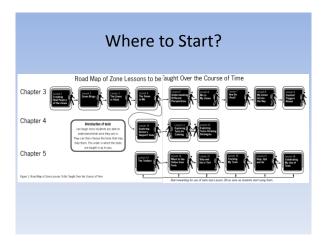
-Green Zone: in control, calm, happy, ready to learn.

-Yellow Zone: more intense emotions & states but able to maintain control, worried, frustrated, silly, excited, scared, overwhelmed -Red Zone is out of control, elated, angry, wild, or terrified.

Important Points



- There is no "bad" zone
- All of the zones are expected in different times and circumstances
- Learn to manage one's zone according to personal goals, social context and environmental demands
- Create a culture where everyone experiences the Zones
- You can be in more than one zone at a time
- Some emotions can fall into more than 1 zone

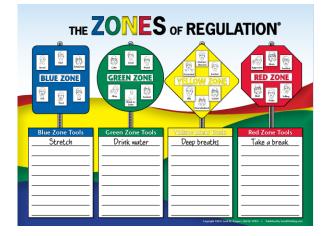


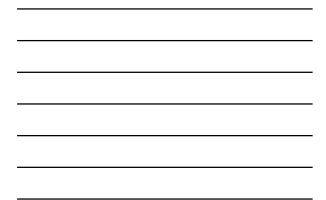


Lesson 1 and Adaptations: Introducing Students to The Zones

- Become familiar with The Zones
- Increase emotions vocabulary
- Increase recognition of facial expressions







Using Children's Literature

- Match character to corresponding zone
- Make connections:
 "Tell me about a
 - time you felt …" – "Show me how …





Teaching Zones to Younger Children

- 2 basic emotions per Zone
- Pair 2-3 tools for each Zone
- Create a routine to follow





"What Zone Are You In?" The Friend Ship by Erica Bland Songs to encourage social communication and emotional regulation in young children

Available on Amazon, iTunes & http://thefriendshipforkids.com/



<image>

Assessing students' awareness



Zones Flip Book for Desk

Is it *Get Back to Green* or *Manage the Zone* one is in?

- We CAN'T change the way students feel, we CAN help them manage those feeling states
- Talk about the expected Zone for the social and environmental context
- Compare the Zone student is in verse the Zone of the Context
- Help student problem solve tools to manage their Zone to keep those around them comfortable and meet their goals.
- NEVER make them feel bad about the Zone they are in. Support them in controlling the feelings they have.

Supporting Students in Managing their Zones

- 1. Check your Zone
- 2. Is it expected or Unexpected?
- 3. What is a (yellow) zone tool to manage it?

OR

- 1. What Zone is Expected here?
- 2. What Zone are you in?
- 3. Can you think of a tool to help you in your Zone so everyone is comfortable and you meet your goals?



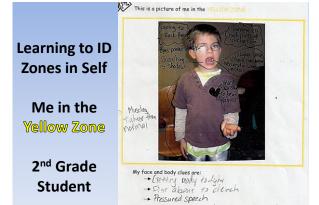
Exploring Emotions & Zones in Others





- Pairing facial expressions with emotions
- Gain awareness of how others perceive people in the different Zones
- Understand how one's behavior can change/affect others' feelings and Zones



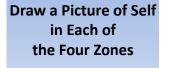


→ Pressured Speech I feel in the vertice when: three is a problem that I think" is big

Building Awareness

- Voice tone, rate, volume
- Heart rate and breathing
- Thinking abilities and patterns
- Facial expressions
- Body language
- Gestures/actions
- Muscle tension

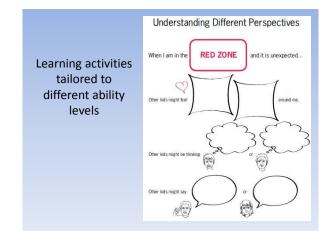




Me in the Blue Zone

8th Grade Student





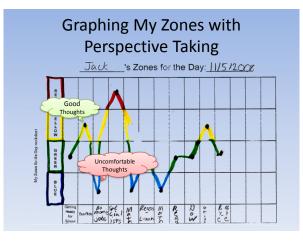


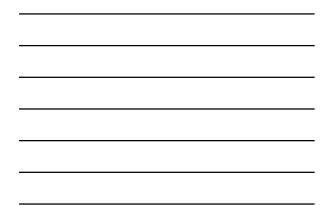
Social Behavior Maps (SBM)

- Manage your Zone to match what is "expected" for that environment/context
- Allows students to reflect on how their actions affect others' feelings and perspectives and consider likely outcomes based on behaviors
- Create a SBM for the different Zones
 - How the Blue, Green, Yellow and Red Zone can be "expected" vs. "unexpected"
 - Map out use of tools vs. staying in unexpected zone

Expected Behaviors	How they make others feel	Positive outcomes for you	How you feel about yourself
		÷ _	
Unexpected Behaviors	How they make others feel	Negative outcomes for you	How you feel about yourself



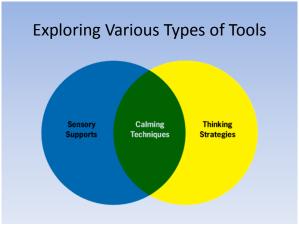




Data Driven Services



- Compare graphs over course of time
 - Does student's day become more regulated?
 - Look at antecedents to dysregulation (i.e. always in math)
 - Notice what is working (i.e. consistently managing self well in P.E. and recess)
 - Help to inform us what we could do different in future



Understanding **ZONES** Tools

-Blue Zone tools help wake up our bodies, feel better, and regain focus.

-Green Zone tools help us stay calm, focused and feeling good. These are often proactive strategies.

-Yellow Zone tools help us regain control and calm ourselves.

-Red Zone tools help us stay safe and start to calm down.

Tips for Handling an **Unexpected Red Zone**

- Pre-teach Red Zone tools
- Safety is first priority
- · Limit verbals

S

- This is not a teachable moment
- · Validate the student's feelings
- Evoke some of the emotion in yourself
- · Give them time and space
- Process later using STOP, OPT and GO Solution Finder (Reproducible GG)

	ZONE	S T	ools	Worl	kshe	et
Reflecting on	Name of Tool	Circle the	zone or zor	es you think t	the tool wou	ld help in.
•	Belly Areather	Blue	Green	Yellow	Red	None
how sensory	Pirink Water	Blue	Green	Yellow	Red	None
supports,	Drink of fluids	Blue	Green	Yellow	Red	None
••	More than 5 deep	Blue	Green	Yellow	Red	None
thinking	My Calmingsen	Blue	Green	Yellow	Red	None
strategies and	Drink medicine	Blue	Green	Yellow	Red	(None)
•	Ldzy CLS" Breathing	Blue	Green	Yellow	Red	None
calming	Break	Blue	Green	Yellow	Red	None)
tochniquoc	Talk to Adult	Blue	Green	Yellow	Red	None
techniques	listen to music	Blue	Green	Yellow	Red	None
can help us	Take a break	Blue	Green	Yellow	Red	None
	Excersise regulariy	Blue	Green	Yellow	Red	None
		Blue	Green	Yellow	Red	None

Sensory Supports

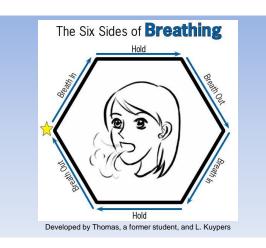




-Siegel and Byrson











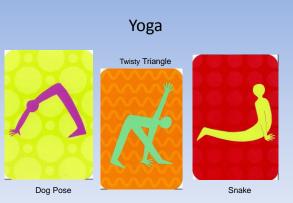












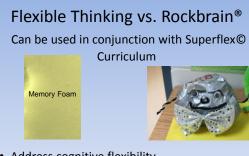
Pictures from The Kids' Yoga Deck by Annie Buckley

Size of the Problem

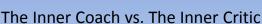
- Big picture thinking and objectivity
- Perspective taking
- Egocentric versus exocentric application

Big vs. Little Problems	Size of the Problem		Huge
we w	Remember the size of your reaction has to match the size of the problem? Hear big should your reaction by ? Utilit hoteser	Big Problem	
22 w upp w upp 24 1 Marit In the framework and the framework (the first 1/2 / 2/2/2), and 1/2	Annual and a second sec	4	5





- Address cognitive flexibility
- Increase perspective taking
- Make visual and able to manipulate





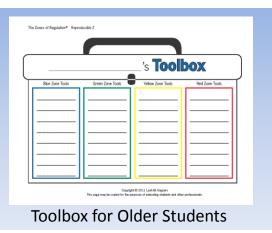
Help student recognize +

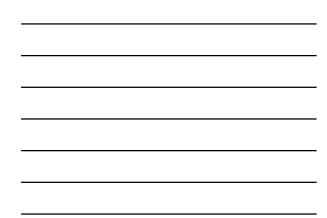
Superflex Curriculum Madrigal and Winner, 2008 www.socialthinking.com

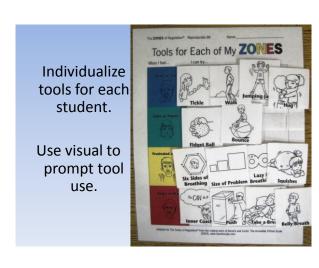
- & thought patterns
- "I hear your Inner Critic.
 What can your Inner
 Coach say back?"

Adaptations for younger students:

- Give + and self-talk a name
 - Mr. Happy and Mr. Mean
- Draw a picture of each
- Include speaking bubbles















We all work on Self-Regulation!



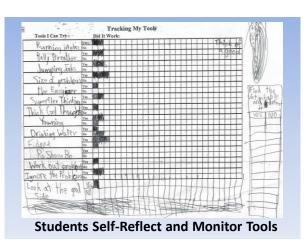
Consider your Zone tools that help you self-regulate:

- Sensory supports
 - -Exercise, oral, fidgets, music
- Emotional Regulation
- -Calming strategies
- Executive Functioning
 - -Organization strategies
 - -Thinking strategies
- Social

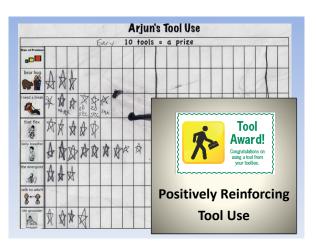


	When To Use My Yellow Zone Tools
	(hervisian) (hervi
Learning to use	How my body feels:
our	In the Yellow Zone,
tools as soon as we	I look: tense, fists clenched, angry face.
move into the less	I feel: annoyal, prestrated, mind is racing
regulated states.	
	1 act: louder voice, infriendly words









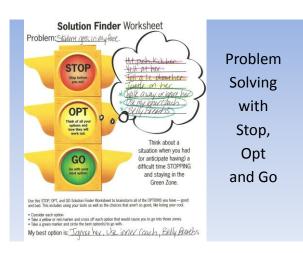
Caution! Triggers Ahead

- Link success with expected Zone
- Recognize personal triggers
- Work to problem solve triggers
- Build foresight and perspective taking



Overcoming Triggers

- Accommodate and provide supports
 - i.e. visuals, seating
- Modify the task
 - i.e. differentiate the assignment, scaffold task to meet student within their zone of proximal development
- Establish Skills
 - Address underlying deficits that are interfering



Applicable to... Nearly Everyone!

- Learning activities provided for:
 - Preschool & elementary age students
 - -Upper grade level students
- Can be adapted to reach nonverbal students or ones with lower cognition
- Used successfully with adults

Putting the Zones into Practice

- Collaboration with parents and professions is essential!
- Relevant for a multi-disciplinary team
 - SLPs: social cognitive skills, EF, emotional awareness, communication
 - OTs: self-regulation skills, EF, social skills, learning and management of tools
 - Psych Field: Emotional awareness, tools
 - Teachers and Aides: Daily implementation, reinforcement, generalization
 - Counselors/Social Workers: Bridge between Sp. Ed. & Reg. Ed, individual intensive instruction

What Our Role Can Look Like

- School Wide
 - Work with admin to see what student body's needs are
 - Inservice/Educate staff on concepts and strategies to enhance the social emotional skills of all students
 - Help foster a supportive culture with common language
 - Consult on problems
 - Provide resources for staff
 - Work with team on rolling it out



What Our Role Can Look Like



- Whole class
 - Push in lessons for regular education classrooms
 - Student generalizes skills with teacher reinforcement
 - Supportive culture: we all work on self-regulation
 - Common way for teacher to approach behavior needs for all students
 - Ongoing coaching and consulting with teacher

What Our Role Can Look Like

- Small groups
 - Students with similar needs together learn and practice critical skills
 - Builds a supportive community
- Individual therapy
 - Intensive intervention
 - Significant individualization to meet needs
- Assist in carry-over between home/community/school environment



How Does The Zones Mesh with Other Strategies/Approaches?

- The Zones is not a stand alone concept
- Best when infused with what student already knows and can build from
- Integrate into the Positive Behavior Support Plan and RTI
- Incredible 5-Point scale, Second Step and Alert Program can be used in conjunction

		Feels Like	Looks Like	Taals ta Help	What Adults Can Do
5	Red Zone	Out of Control	Going all over the place, throwing stuff, can't think, impulsive, yelling, swearing/unfriendly words, intense tone, clench fists, angry face, body tense, brain gets stuck, think a problem is big, negative thoughts	Blanket, sour, think about the size of the problem, inner coach, flexible thinking, sensory area	Give space, limit talking
4	Low Red	Engine High, Excited/Escalated/	Negative toughts, think a problem is big, brain sets stuck, voice sets loud, throw thinss, name	Blanket, sour, think about the size of the problem, inner coach.	Give space. limit talking
	High Yellow	Need to Calm Down	calling, stronger refusal to do things	flexible thinking, give space, sensory area	
з	Yellaw Zane	Excited/Starting to Escalate/A bit Anxious/Silly	Practing a title fater, stomach fiels a little workd, fett by figdt with handles, wander off/don't pay attention, lips bacome smaller, big wysc or eyr cill, say "sagh", heart tinds fast, branthing is bawier or holding your brash, higher pith voice, arms moving faster/body seems more loads, tinks a problem is big, brain gets stuck, gooff, ticking crouching papile when thy don't work to be, refusion to do things	Blanket, sour, think about the size of the problem, folding art, inner coach, flexible thinking, sensory area	Ask what they can do to help, offer tools, distract
2	Green Zone	Calm/Regulated	Calm, relaxed muscles, focused, normal voice volume and friendly, smiling or neutral face, heart beating normal, breathing is regular	sour, keeping hands busy, folding art, flexible thinking, inner coach	Stay supportive, "nice job staying at a 2", check in
1	Blue Zone	Sleeping/Tired	Could be asleep, really relaxed muscles, brain is moving slow, quieter voice/maybe mumble, eyes partly closed, long face, heart beating slow, breathing slower	Walk, Chew Gum, sour, inner coach, flexible thinking	Offer tools, check in, give space then check back in

Assessment and Data Collection

- Observation
- Interview
- Behavior Rating Inventory of Executive Function® (BRIEF)
- Sensory Processing Measure (SPM) or Sensory Profile
- Behavior Assessment System for Children, Second Edition (BASC-2)
- Social Skills Rating System (SSRS)
- ILAUGH Model-informal social cognitive assessment by Michelle Garcia Winner)
- SCERTS Model- Informal measure examining regulation abilities and mutual vs. self-regulation (Prizant et al)
- Self-Regulation Data Collection (available on www.zonesofregulation.com)

SCER!	à
	SAP-OBSERVATION FORM: Conversational Partner Stage (page 5 Emotional Regulation
Child's nam	
Otr 1 Otr 2 Otr 3	5 SELF-REGULATION
	 Demonstrates availability for learning and interacting
	SR1.1 Responds to sensory and social experiences with differentiated emotions
	SR1.2 Monitors attentional focus of a social partner (= JA1.1)
	SR1.3 Shows reciprocity in speaker and listener roles to share experiences (= JA4.1)
	SR1.4 Demonstrates ability to inhibit actions and behaviors
	SR1.5 Persists during tasks with reasonable demands
	SR1.6 Demonstrates emotional expression appropriate to context
	Uses behavioral strategies to regulate arousal level during familiar activities.
	SR2.1 Uses behavioral strategies to regulate arousal level in solitary and so had activities
	SR2.2 Uses behavioral strategies modeled by partners to regulate arousal level
	SR2.3 Uses behavioral strategies to engage productively in an extended activity
	3 Uses language strategies to regulate arousal level during familiar activities
	SR3.1 Understands and uses early emotion words (= JA2.1, MR1.1)
	SR3.2 Understands and uses advanced emotion words (= LA2.3, MR1.2)
	SR3.3 Understands and uses graded emotions (= JA25, MR1.3)
	SR3.4 Uses language strategies to regulate arourablevel during solitary and social activities
	SR3.5 Uses language strategies modeled by partners to regulate arousal level
	SR3.6 Uses language strategies to engage productively in an extended activity
	4 Uses metacognitive strategies to regulate arousal level during familiar activities
	SR4.1 Uses internalized rules modeled by adult instruction to guide behavior (SU1.3)

Using The Zones Proactively!



- Everyone stands to benefit from learning about self-regulation
- Creates a culture of understanding and acceptance
- Incorporate regulation & mindfulness strategies into daily routines
- Routinely allows for practice and reflection on tools when in a calm state
- Aides in problem solving positive solutions
- Promotes independent regulation



Useful Websites...

- www.zonesofregulation.com
- www.5pointscale.com
- www.socialthinking.com
- www.executivefunctiontherapy.com (Sarah Ward) •
- www.rti4success.org
- . www.livesinthebalance.org (Ross Greene)
- www.jillkuzma.wordpress.com
- ٠ www.kimochis.com
- www.mscd.edu/extendedcampus/toolsofthemind/
- www.thegraycenter.org
- www.spdfoundation.net
- ٠ www.braingym.org
- www.autisminternetmodules.org
- www.alertprogram.com

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