The Zones of Regulation®

A Framework to Address
Self-Regulation & Emotional Control

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

Self-Regulation

The ability to adjust level of alertness AND direct how emotions are revealed behaviorally in socially adaptive ways in order to achieve goals.

Encompasses:
– Self-control
– Resiliency
– Self-management
– Anger management
– Impulse control
– Sensory Regulation

-Adapted from work of Clair Kopp

-Bronson, 2000
Development of Self-Regulation

• **Initial Behavior Strategies**
  - Motor actions
  - Sensory-motor strategies

• **Progress into Language Strategies**
  - Words and symbols to regulate arousal
  - Organize actions
  - Express emotional state
  - Negotiate concerns

- 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

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 mid-twenties

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.

Jordan will self-regulate with 100% accuracy across 3 environments with 1 or less prompt 4 out of 5 trials.

Goal ideas offered in the Zones of Regulation curriculum book.
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, Petriner-Fennberg, Bryant, & Clifford, 2000

Components of Self-Regulation

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

5 Senses

- Sight
- Hearing
- Taste
- Touch
- Smell
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
### Sensory Preferences and Lifestyle

<table>
<thead>
<tr>
<th>Sensory Preference</th>
<th>Avoiding</th>
<th>Neutral</th>
<th>Seeking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprioception</td>
<td>✗</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vestibular</td>
<td>✗</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taste</td>
<td></td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Small</td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Touch</td>
<td>✗</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual</td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Auditory</td>
<td></td>
<td>✗</td>
<td></td>
</tr>
</tbody>
</table>

**Avoiding to Seeking Scale**

- **Proprioception**: Contact sports, rough housing, cuddling
- **Vestibular**: Hiking, skiing, moving during seated tasks
- **Taste**: Spicy food, daily coffee, love ethnic food, chew gum
- **Small**: Enjoy perfume, scented lotions, candles
- **Touch**: Tolerates most textures and touch
- **Visual**: Can become overwhelmed in really chaotic environment
- **Auditory**: Likes to work with background noise, enjoys concerts

**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**
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

– 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 Thinking®

- 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
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 outstrip our capacity to cope.”
- Collaborative Problem Solving
- Discover lagging skills

Our Well of Coping Capacity

- Reservoir always changing
- Some more abundant than 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**
- A teaching tool
- A thinking framework
- A way to nurture development of skills
- Supportive in nature

**What it ISN'T**
- A discipline model
- A behavior approach
- A way to shame for negative behavior
- Punitive in nature

Feelings and States determines Zone

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-Cohen
• 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 www.zonesofregulation.com
- Featured as a “Promising Practice” in Attention Magazine (October, 2012) and in AOTA’s SISIS
- 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
Where to Start?

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 ... looks on you.”

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/

Visuals for Students to Check-In
Assessing students' awareness

Check In

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

Learning to ID Zones in Self

Me in the Yellow Zone

2nd Grade Student
Building Awareness

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

Draw a Picture of Self in Each of the Four Zones

Me in the Blue Zone
8th Grade Student

Learning activities tailored to different ability levels
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

<table>
<thead>
<tr>
<th>Expected Behaviors</th>
<th>How they make others feel</th>
<th>Positive outcomes for you</th>
<th>How you feel about yourself</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unexpected Behaviors</th>
<th>How they make others feel</th>
<th>Negative outcomes for you</th>
<th>How you feel about yourself</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graphing My Zones with Perspective Taking

Jack’s Zones for the Day: 1/15/2005

Good Thoughts

Uncomfortable Thoughts
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

Exploring Various Types of Tools

- **Sensory Supports**
- **Calming Techniques**
- **Thinking Strategies**

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
- 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)

Reflecting on how sensory supports, thinking strategies and calming techniques can help us

Sensory Supports
Yoga

Dog Pose
Twisty Triangle
Snake

Pictures from The Kids' Yoga Deck by Annie Buckley

Size of the Problem

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

Winner of the Mom’s Choice Award

Yoga

Michelle Garcia Winner, 2005

www.socialthinking.com
Flexible Thinking vs. Rockbrain®
Can be used in conjunction with Superflex® Curriculum

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

The Inner Coach vs. The Inner Critic

Help student recognize + & - 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

Toolbox for Older Students
Individualize tools for each student.

Use visual to prompt tool use.

Zones Poster with Visuals of Tools

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

Learning to use our tools as soon as we move into the less regulated states.

Students Self-Reflect and Monitor Tools
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
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

- **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

- **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

Zones with 5-Point Scale

<table>
<thead>
<tr>
<th>Zones with 5-Point Scale</th>
<th>Score</th>
<th>Low</th>
<th>Medium Low</th>
<th>Medium High</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Joyful</td>
<td>Low</td>
<td>Low</td>
<td>Medium Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Biased/Out of control</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
</tr>
<tr>
<td>2. Content</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Biased/Out of control</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
</tr>
<tr>
<td>3. Engaged</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Biased/Out of control</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
</tr>
<tr>
<td>4. High</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Biased/Out of control</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
</tr>
<tr>
<td>5. Chronic</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Biased/Out of control</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
</tr>
<tr>
<td>6. Relaxed</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Biased/Out of control</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
<td>Noisy</td>
</tr>
</tbody>
</table>

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)
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

Find The ZONES on the Web

- www.zonesofregulation.com
- Training info & schedule
- Purchase books/products
- Research
- Free Share Page
- Email Sign-up
Useful Websites...

• www.zonesofregulation.com
• www.5pointscale.com
• www.socialthinking.com
• www.executivefunctiontherapy.com (Sarah Ward)
• www.ri4success.org
• www.livesinthebalance.org (Ross Greene)
• www.jillkuzma.wordpress.com
• www.kimochis.com
• www.mscd.edu/extendedcampus/toolsofthemind/
• www.thegraycenter.org
• www.spdfoundation.net
• www.braingym.org
• www.autisminternetmodules.org
• www.alertprogram.com

References and Resources

Buckley, A. The kids yoga deck

References and Resources Continued

Sautter, E. & Wilson, K., (2011). Whole body listening Larry at school/home.
Segal, D. & Byson, T. P. (2011). The whole-brain child