

Learning Environments That Promote Self-Regulation

Presenter's Guide

Building:

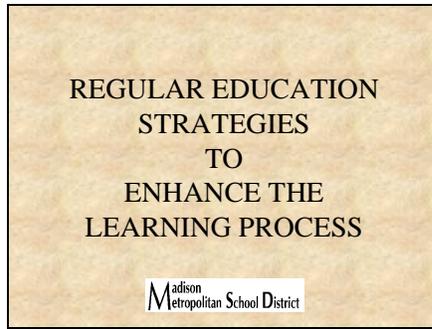
Date of Last Update: 10-26-05

Materials needed: Brochure and Copies of Participants Handouts (Packet for each participant)

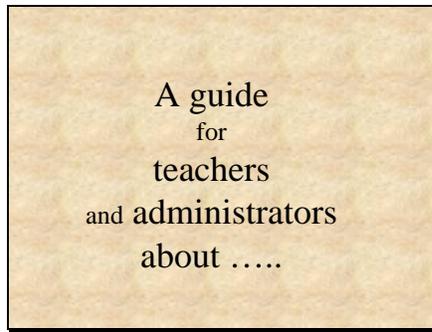
Optional Props: Alternative seating devices (sit/move cushions, ball chair)
Squeeze toys and fidgets
Full spectrum lamps
Boom box, head sets and samples of different music

Contributors: Developed by the following MMSD staff:
OT / PT Environmental Design Committee
OT/PT Behavior Management Committee
Teaching and Learning, Educational Services
Program Support Teachers and Staff

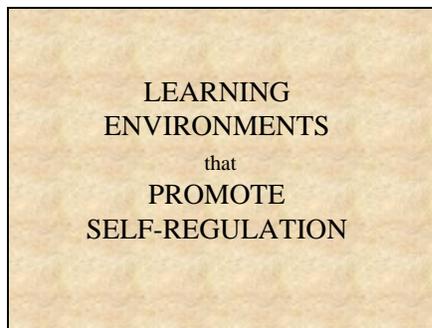
Slide 1



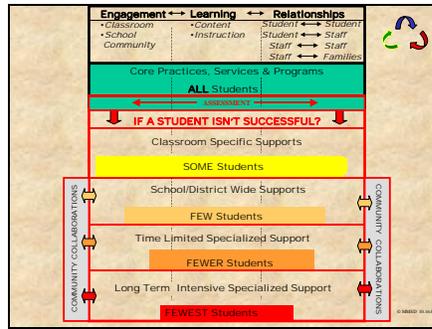
Slide 2



Slide 3



Slide 4



This presentation is about strategies and interventions that teachers may choose to use with students in the green or yellow areas of the Educational Framework.

Slide 5

Wisconsin Teacher Standards

- Standard #3 - The teacher understands how pupils differ in their approaches to learning and the barriers that impede learning and can adapt instruction to meet the diverse needs of pupils, including those with disabilities and exceptionalities.

The strategies in this presentation will assist teachers in achieving the Wisconsin teacher standards #3, #5 and #6.

Slide 6

Wisconsin Teacher Standards

- Standard #5: The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self motivation.

Slide 7

Wisconsin Teacher Standards

- Standard #6 - The teacher uses effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

Slide 8

Basic Assumptions

- Recognize that a child's classroom behavior is the result of previous discipline, the child's intrinsic personality and learning style, and the environment.



Slide 9

Basic Assumptions

- Recognize that some children are less prepared for the behavioral requirements of the learning environment



Slide 10

Basic Assumptions

- Recognize that some children need help to learn self-control (self-regulation) and focus.

A small photograph of a young child with their hands covering their eyes, suggesting a need for self-regulation or focus.

Slide 11

Purpose of This Presentation

- Provide some basic information on brain function and how it relates to self-regulation.
- Show how brain function and self-regulation relates to student behavior, student learning and teaching practices.

Slide 12

Purpose of This Presentation

- Provide proactive strategies that promote self-regulation and appropriate behavior which will enhance learning for all students.

Slide 13

WHAT IS SELF-REGULATION?

Self-Regulation is the ability

- to attain alertness,
- to sustain alertness, and
- to change alertness

appropriate to the task or situation.

Another term that is often used in the same context is arousal modulation.

Slide 14

How do we achieve alertness that is appropriate to the task?

- our **bodies take in** information through our senses.
- our **central nervous system (CNS)** **interprets, sorts** and **organizes** the incoming streams of data from all our senses
- our **CNS sends messages back** to our bodies.

Slide 15

Why do we need to be able to appropriately self-regulate?

- The ability to self-regulate sets the stage for our interactions with the world around us.
- The response from our CNS may result in:

Slide 16

a “low” energy state



Slide 17

a “ready” energy state



Slide 18

or a high-energy state.



Slide 19

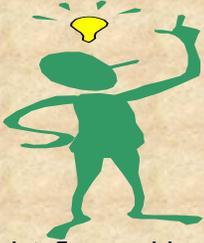
Coma ↔ Sleep ↔ Low Energy
(Neuronal messages to relax muscle groups)



Our minds and bodies are under-responsive to sensory inputs. We are sleepy, lethargic and find it difficult to engage in the world around us.

These states can be seen as being on a continuum and people can move between states. (The handout “Supports for Self-Regulation Skills” should be distributed at this time. Allow several minutes for audience to look at the handout). This handout talks about how inputs/interventions may enhance focus or make focus difficult.

Slide 20



↔ Ready to Focus and Learn ↔
(Good balance of messages between muscles and brain)

Slide 21



**High Energy
Fight/Flight/Overwhelmed**
(Neuronal messages to prepare muscle groups for action)

Our minds and bodies are over-responsive to sensory inputs, often labeled “sensory defensive”. We are anxious, irritable and volatile. We are ready to protect ourselves. It is difficult to calm down.

Slide 22

How can we recognize sensory defensiveness in the classroom?

Behaviors that may suggest possible defensiveness include:

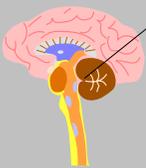
- Student avoids messy work and classroom situations that include touching others or being touched (Tactile)
- Student is difficult to calm after recess/physical education (Movement)
- Student puts hand over ears during fire drills. Student looks up and orients to every noise (Auditory)
- Student is sensitive to bright lights (Visual)

Slide 23

Where in the Brain
does self-regulation happen
and why is it important?

Slide 24

Levels of Regulation



1st Level of regulation
(Brain stem, reticular activating system, cerebellum)

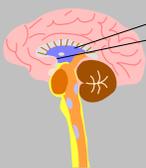
- **SUB-CONSCIOUS**
- Controls respiration, temperature, sleep/wake cycles, muscle tone, state maintenance (homeostasis), monitoring body and environment for survival

Emphasis at this level of regulation is on survival. Behavior is motivated by a subconscious feeling of danger or a threat to survival and the responses are a reflection of that subconscious feeling. The ability to control these responses is not at a cognitive or language mediated level.

Slide 25

Levels of Regulation

2nd Level of Self-Regulation
(thalamus/hypothalamus)



- organizes adaptive movements
- coordinates centrally processed movement patterns
- visual searching
- suck/swallow/breath coordination
- selective attention
- visual focusing

Slide 26

Levels of Regulation

3rd Level of Self-Regulation
(cortex)



- requires higher level cognition for problem-solving and self-conscious monitoring
- recognition of own level of alertness
- language for organizing, planning and sustaining focused attention
- formulation, execution and evaluation of strategies

Slide 27

What do you need for learning? (basic requirements)

- Feel safe – 1st level and often sub-conscious; will not be able to learn academics, social skills and appropriate behaviors when in this state
- Have your basic needs of sleep, food, liquids met (homeostasis). – 1st level and often sub-conscious
- Perception of relevance to your own personal needs .– 2nd and 3rd levels of self-regulation



Slide 28

SENSORY STRATEGIES

- Think about yourself and the times that you have been in one of those states.....
- Think of the things you did to bring yourself down, up, or keep yourself at an alert/productive level.
 - (Sensory Motor Preference Checklist for Adults)
- Have your students been in a lethargic or anxious state? What preceded that "state"?

Hand out the "Sensory-Motor Preference Checklist (for Adults)"
Take several minutes to look over the hand out. This checklist was developed to help adults recognize what strategies they use to increase or decrease their own alertness.

Slide 29

How do we help students reach optimal alertness in the classroom?

Teachers provide acceptance for sensory strategies that students use to modify their arousal states.

Teachers are aware that the sensory inputs or strategies used by one student might work differently for another student.

Slide 30

How do we help students reach optimal alertness in the classroom?

Teachers help students identify:

- how they are responding to various sights, sounds, movements, tastes, textures, smells
 - (e.g., Teacher acknowledges noise in hallway and offers quiet spaces to work away from door.)

Slide 31

How do we help students reach optimal alertness in the classroom?

Teachers help students identify:

- when they are in a low energy state or a high energy state
 - (e.g., "Let's take a stretch break to help us wake up." or "Let's all do chair push ups to help us settle down after recess.")

Slide 32

How do we help students reach optimal alertness in the classroom?

Teachers help students identify:

- what sensory systems help them get to an optimal state
 - (e.g., "Listening to music helped you calm down yesterday. Would you like to listen to that music with head-phones while you work today?")

Slide 33

What are strategies that teachers can try?

- Input into the joints and muscles (proprioceptive) can help bring over-excited or under-excited sensory systems to the middle ground. These are often called heavy work activities and can include movement and proprioceptive input.



Slide 34

Why Use Heavy Work Activities?
(movement and muscle/joint input)

- Heavy work activities are readily available in the classroom setting and are effective in a short period of time.
- Heavy work activities can reduce sensory defensiveness.
- **Heavy work activities may influence students at the 1st level of regulation when language input may not.**

This goes back to the first diagram of the brain which talks about the subconscious level.

Slide 35

Options for Heavy Work Activities
(movement and muscle/joint input)

- Allow students to get up and move to different areas during work time.
- Incorporate stretches or jumping into daily routines with the class or individuals.
- Have students do seated chair push ups.



Many experienced teachers have used these kinds of strategies for years.

Slide 36

Options for Movement and Muscle/Joint Input

Allow different seating options



These seat cushions are relatively inexpensive and may already be available in your building to try with students. The ball chair has been sold in office supply stores for the general population.

Slide 37

Options for Movement and Muscle/Joint Input



- Have students help move mats at the end of PE class.
- Have students stack chairs in the corner of the room to make floor space.

Slide 38

Options for Movement and Muscle/Joint Input

- Offer manipulatives that provide firm tactile and resistive input.
- Avoid light touch.



Options to provide input into muscles and joints of the hand and arm.

- ✓ The green pen vibrates
- ✓ The numbered golf tees meet resistance when pushed into heavy foam
- ✓ Many squeeze toys are widely available and provide resistance

Slide 39

Options for Movement and Muscle/Joint Input

- Allow students to spend more time on the floor or standing when concentration is required.
- Have students open heavy doors and hold them open for class.
- Have students push the lunch cart or carry bins of lunch boxes to cafeteria.



Additional strategies.

Slide 40

Options for Oral Input

- Drink through straws, sports bottles, etc. This activity is calming and helps prepare eye muscles for close work.
- Offer chewy foods and tangy/flavorful snacks.



Oral inputs are also helpful for self regulation.

Slide 41

Options for Auditory Input

- Place student's desk away from door or window
- Use quiet voices
- Allow students to exchange classes several minutes prior to bell if needed

Auditory distractions can be very disruptive for some students.

Slide 42

Options for Auditory Input

- Offer access to tape recorder/computer with headset
- Different music can increase or decrease alertness.
- Headsets can be used as a way to decrease noise in general



Slide 43

Options for Auditory Input



- Provide areas that allow students to get away and reduce noise level (the tent for younger students, study carrel for older students).

Slide 44

Options for Tactile Input

- Provide a small manipulative to put in student's pocket (worry stone).
- Allow students to fidget with a straw, pencil, or small toys.



Slide 45

Options for Tactile Input

- Have lotion available and encourage student to rub hands together.
- Help student be aware of possible irritating clothing, tags, etc.
- Allow students to use tools for "messy work" (brush vs. fingers for finger painting).



Slide 46

Options for Visual Input

- Reduce visual clutter in work spaces.
- Open window shades or close window shades.
- Consider visual presentation of work sheets—Is there too much on a page?
- Offer a secluded area to work (i.e., study carrel).

If students are visually distracted you can close the window shades. Opening shades to provide more light and stimulation will have an alerting effect.

Slide 47

Options for Visual Input

- Have objects to watch in your classroom like “oil and water” toys or a fish tank.
- Explore full spectrum lighting.

The slide contains two small images. The left image shows a lava lamp with a blue and yellow glow, sitting on a desk. The right image shows a desk lamp with a white shade and a silver base, positioned over a desk with various items.

Lava lights and fish tanks can be very calming.

Slide 48

Options That Are Multi-sensory

The slide contains two small images. The left image shows a blue sensory bin filled with various colorful objects like beads, buttons, and small toys. The right image shows a box of dominoes with the word 'DOMINOES' printed on it.

For example small lights can provide visual and muscle/joint input as well as touch input. (or pick another item from the box as an example)

Slide 49

Options That Are Multi-sensory



The tent screens out visual and auditory distractions. The tubes provide muscle/joint input as well as auditory input.

Slide 50

Consider the use of a sensory break room when classroom choices are not sufficient

- The major focus of both the classroom strategies and the sensory break room is achieving self-regulation, improving alertness and, in some cases, preventing inappropriate behavior that might lead to suspension.
- A sensory break room is not a time-out room.

The sensory break room is meant to provide the sensory input that a student may need to increase control of their behavior.

Slide 51

A sensory break room could be equipped with larger pieces of equipment like an exercise bike, a weighted blanket, and swinging equipment that would not be appropriate in a classroom.



Slide 52

Use a sensory break room when classroom choices are not sufficient

- Student uses sensory break room for 15 minute maximum.
- An adult must accompany the student and be trained in the use of the equipment in the room.
- Children who are being destructive or out of control would not benefit.
- This room should be available to all children.

Slide 53

How do we help students reach optimal alertness in the classroom: a summary

- Teachers/staff help students identify when they are not in an optimal state/level for learning.
- Teachers/staff help students identify what inputs help them get to an optimal state/level for learning.

Slide 54

How do we help students reach optimal alertness in the classroom?

- Classrooms and schools need access to supports and equipment that allow students to use different strategies to achieve an optimal state of self-regulation for learning.
- Students should have access to these supports, strategies, and equipment on an as needed basis or at a scheduled break time. They should not be withheld or used as a reward.

Slide 55

References

- **The Differentiated Classroom, Responding to the Needs of all Learners**, Carol Ann Tomlinson, ASCD, Alexandria, Virginia, 1999,G
- **How Does Your Engine Run?**, (Williams & Shellenberger, page1-16, Therapy Works, Inc. 1994)
- **Sensory Secrets: How to jump-start learning in children.**, Catherine Schneider, OTR, published by Concerned Communications)
- www.AlertProgram.com

Slide 56

References

- **Making it Easy: Sensorimotor Activities at Home and School** Haldy and Hack. Tucson, Arizona: Therapy Skills Builders (1995)
- **Sense Abilities: Understanding Sensory Integration**. Trott, Laurel and Windeck. Tucson, Arizona: Therapy Skill Builders (1993)
- **Sensory Ideas** (web site)
- **Answers to Questions Teachers Ask About Sensory Integration** Kranowitz, Szkut, Balzer-Martin, Haber, Sava. Las Vegas, Nevada. Sensory Resources (2001)
many heavy work suggestions were taken from this book

Slide 57

References

- **Out of the Mouths of Babes**, Frick, Frick, Oetter, Richter. Hugo, MN: PDP Press. (1996)
- **The Out of Sync Child**, Kranowitz, C. New York, NY: Berkley Publishing Group. (1998)
- **The Out of Sync Child Has Fun**, Kranowitz, C. New York, NY: Berkley Publishing Group. (2003)

Slide 58

Staff Resources

- Other resource teachers and support staff within the district
- Building principal
- Teachers within your building
- Occupational therapists and physical therapists in your building

Slide 59

Contributors

Developed by the following MMSD staff:

- OT & PT Environmental Design/Adaptations Committee
- OT/PT Behavior Management Committee
- Teaching and Learning
- Educational Services Program Support Teachers & Staff

Slide 60

Madison Metropolitan School District

The Madison Metro School District does not discriminate in its educational programs, related activities (including School-community Recreation) and employment practices as required by applicable local, state and federal laws.

December 2004

