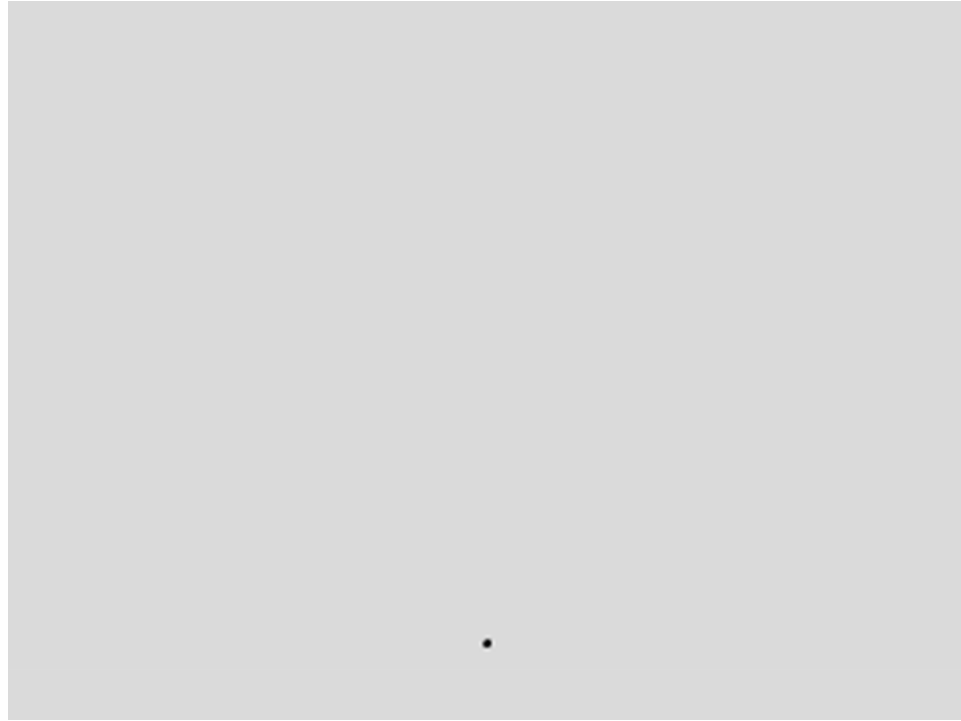


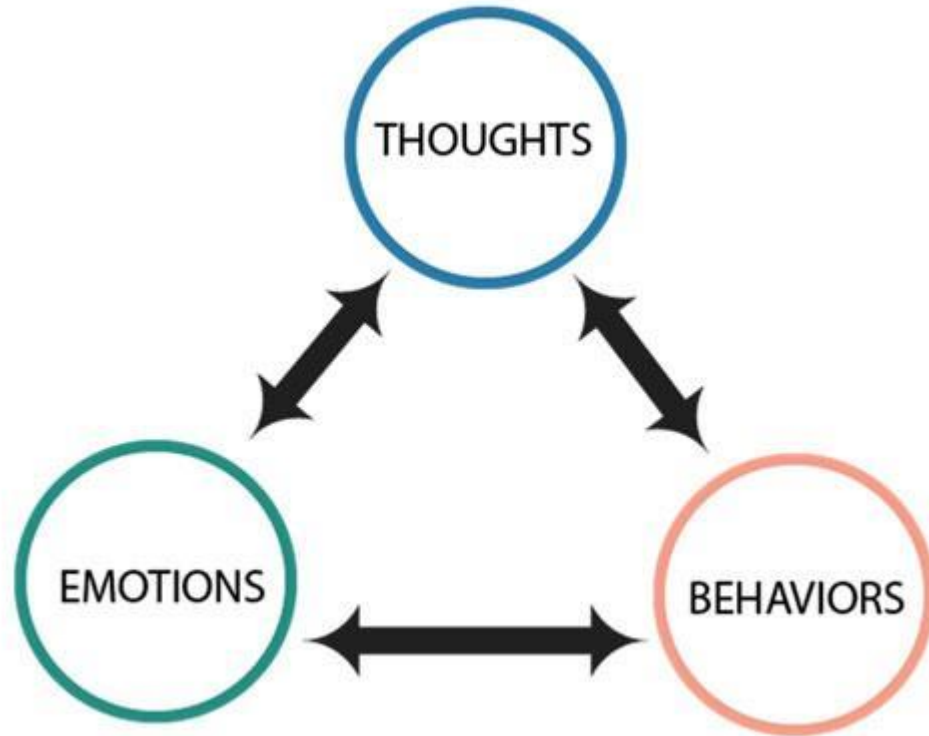
Brain & Behavior: How to Create a Classroom Environment that Supports Learning

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Loch Raven Technical Academy
October 5, 2022

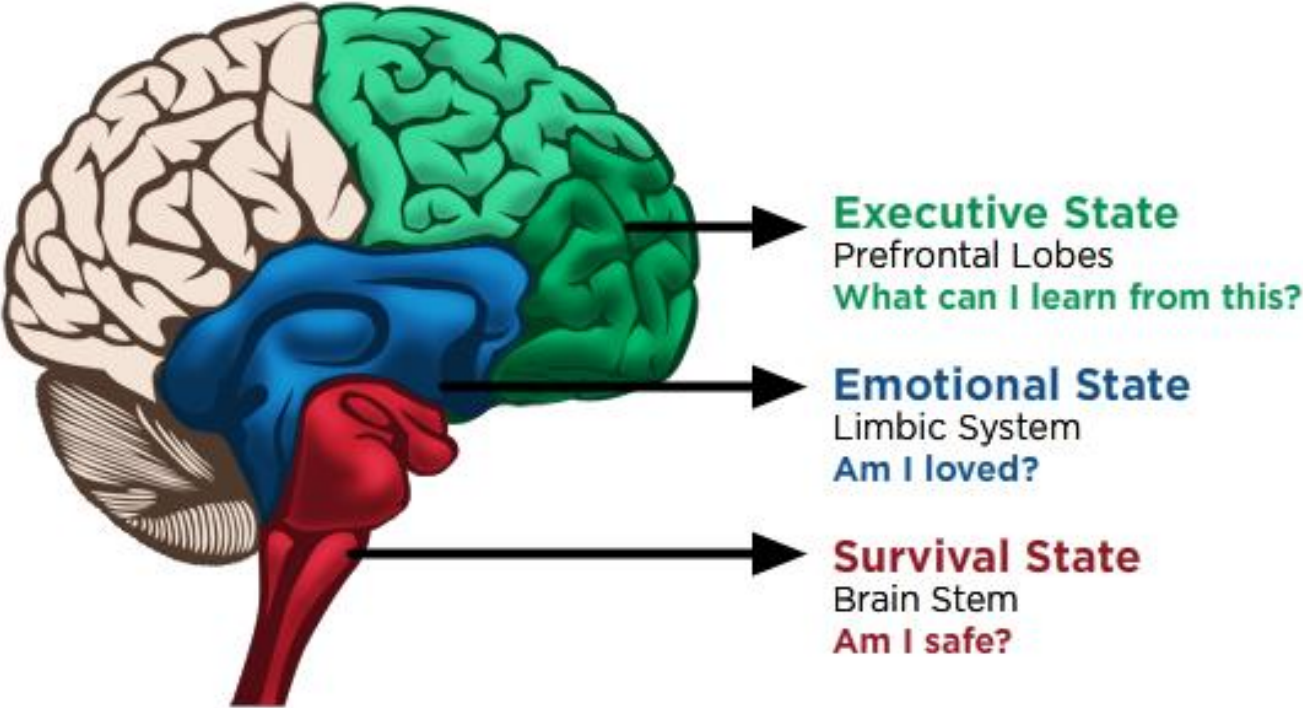
Mindfulness Moment



Cognitive Triangle



Brain State Model



Survival State: Safety

Thought: Am I Safe?

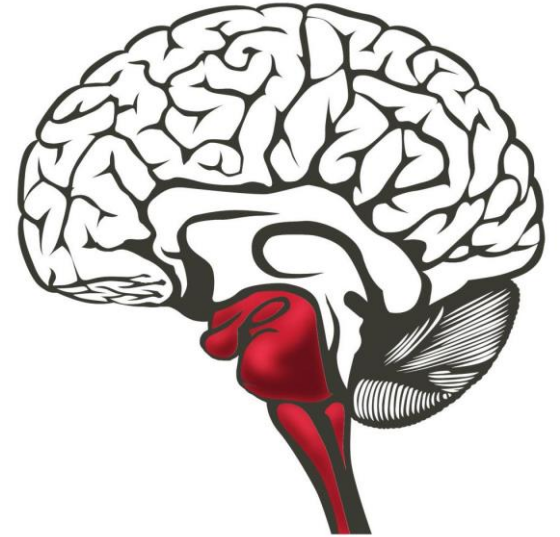
Trigger: Threat (e.g., mismatch instruction level)

Response: Self Defense (e.g., fight, flight, freeze, fawn)

Emotions: Angry, Irritated, Insecure, Afraid

Behaviors commonly seen in the classroom:

Physical Aggression	Tantrums Frustration Fits
Withdrawing Surrendering	Elopement Escape/Avoidance



Emotional State: Connection

Thoughts: Am I loved?

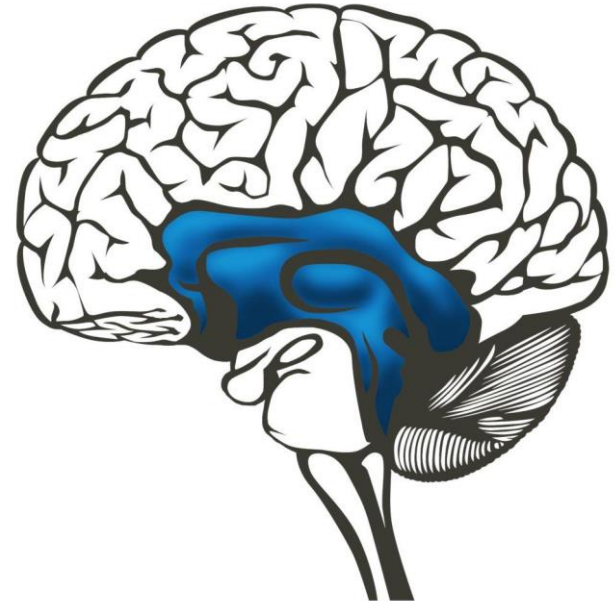
Trigger: World is not going my way

Response: Negative Self-Talk

Emotions: Worried, Embarrassed, Sad, Envious

Behaviors commonly seen in the classroom:

Attention Seeking Clinginess	Relationship Resistance Social Exclusion
Naming-Calling Blaming	Perfectionism Procrastination



Executive State: Problem-Solving

Thoughts: What Can I Learn?

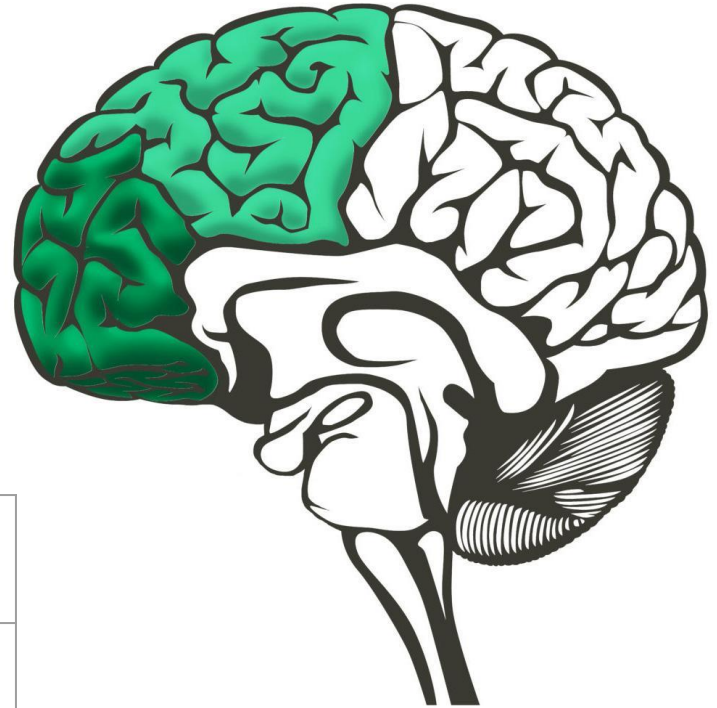
Trigger: Curiosity, Reflection, Needing Help

Response: Problem-Solving

Emotions: Optimistic, Creative, Confident

Behaviors commonly seen in the classroom:

Willingness Receptive to Relationships	Problem-Solving Conflict Resolution
Managing Emotions Empathy	Setting Goals Achievement



Creating an Environment of Respect and Rapport

Nurturing the Survival State

Noticing

Assertiveness

Routines

Composure

Safe Space



Nurturing the Emotional State

Rituals

Encouragement

Jobs

Empathy

Choices

School/Classroom Family



Establishing & Maintaining Relationships with EACH student is essential!

Managing Student Behavior

Nurturing the Survival State

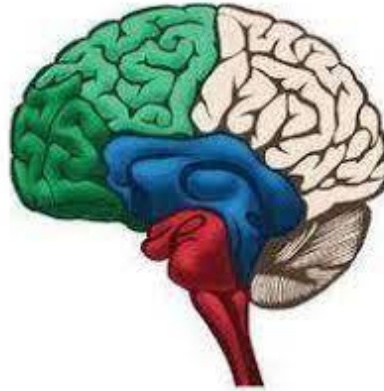
Noticing

Assertiveness

Routines

Composure

Safe Space



Nurturing the Emotional State

Encouragement

Empathy

Choices

Accessing Executive State

Solutions

Positive Intent

Consequences: Natural & Logical

Establishing a Culture for Learning

Nurturing the Executive state

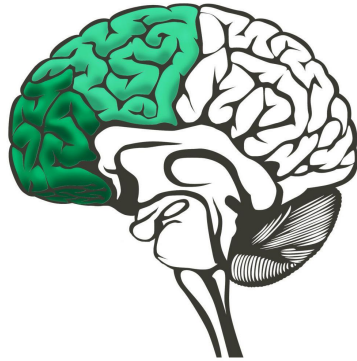
Solutions

Positive Intent/Impact

Academic Integration

Consequences

Executive Skills



Tips to Create a Culture of Learning

Establish high expectations

Encourage positive peer relationships

Student voices are valued in classroom

Create a safe space to fail

Model expected behaviors

Give feedback often

Avoid only celebrating grades

Managing Classroom Procedures & Organizing Physical Space

1. Fostering the Development of Future Thinking
1. Plan Backward to Execute Forward
1. Make Time Visible

Working Memory - Two Types Essential for Learning

Non-Verbal Working Memory - makes it possible to retain and remember content without words.

Verbal Working Memory - makes it possible to retain, remember, and speak about content with words.

Nonverbal Working Memory drives “*If...Then*” thinking which allows for Verbal Working Memory (Self-Directed Self-Talk).

Situational Awareness/Intelligence

<p>Space Navigate the Room</p>	<p>Time Get on the Timeline</p>	<p>Objects Organization</p>	<p>People Read the person: ROLE</p>
<p>Kind of Space?</p> <p>What's going on?</p> <p>It is Expected or Unexpected?</p> <p>Pathways used to Navigate to different areas within the space?</p>	<p>Time of day ?</p> <p>What is happening at this Moment in Time?</p> <p>Sequence of Actions/Pace?</p> <p>What is coming up? Predictable?</p>	<p>Organization of the Space?</p> <p>Location of objects: in sight? Out of sight?</p> <p>Purpose/Priority of Objects</p> <p>Necessity & Relevancy</p>	<p>Face</p> <p>Body</p> <p>Appearance</p> <p>Mood</p> <p>Pace</p> <p>Saying-Tone</p>

Fostering the Development of Future Thinking

NonVerbal Working Memory & Situational Awareness = Mental Trial & Error without Risk of Error

Make an Image: What will it look like?

What do I look like? - Self-Projection into the future

- Episodic Future Thinking
 - Semantic vs. Episodic

How am I moving to achieve this?

- Mental Time Travel (Temporal-Spatial) helps with Time Management

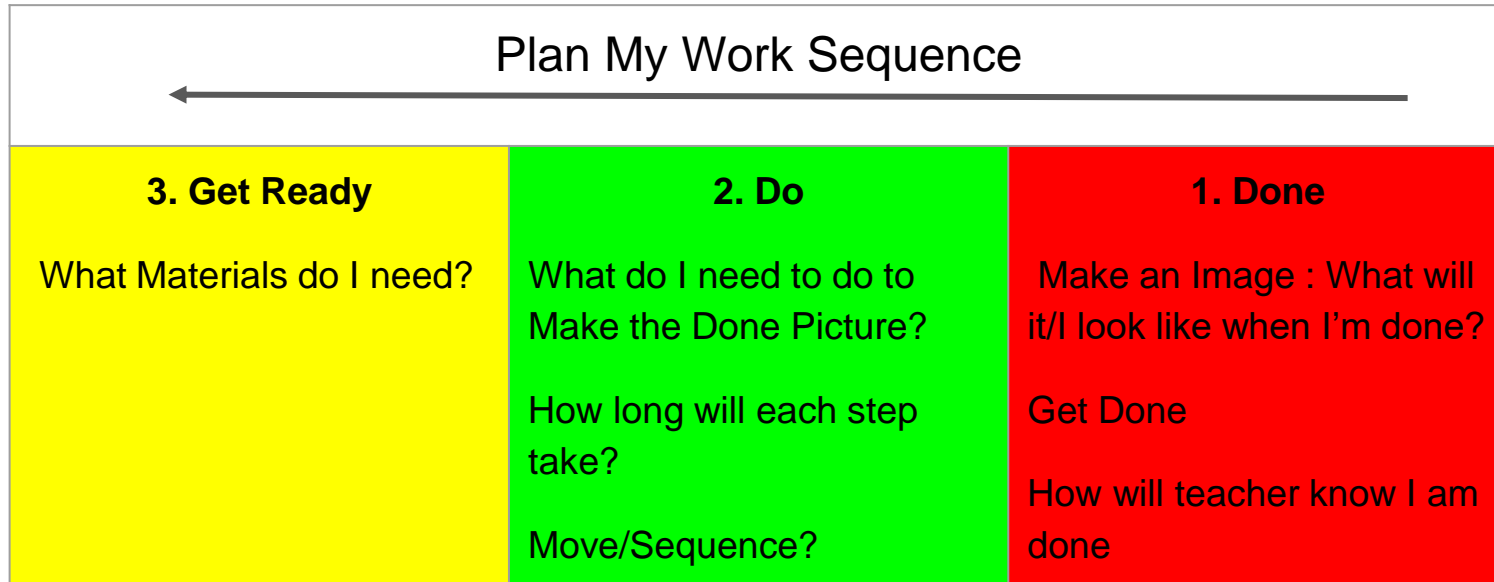
How will I feel? - Emotional Physiological State

If..Then Thinking

Self-Directed Self-Talk

Strategies to Reduce Prompt Dependence

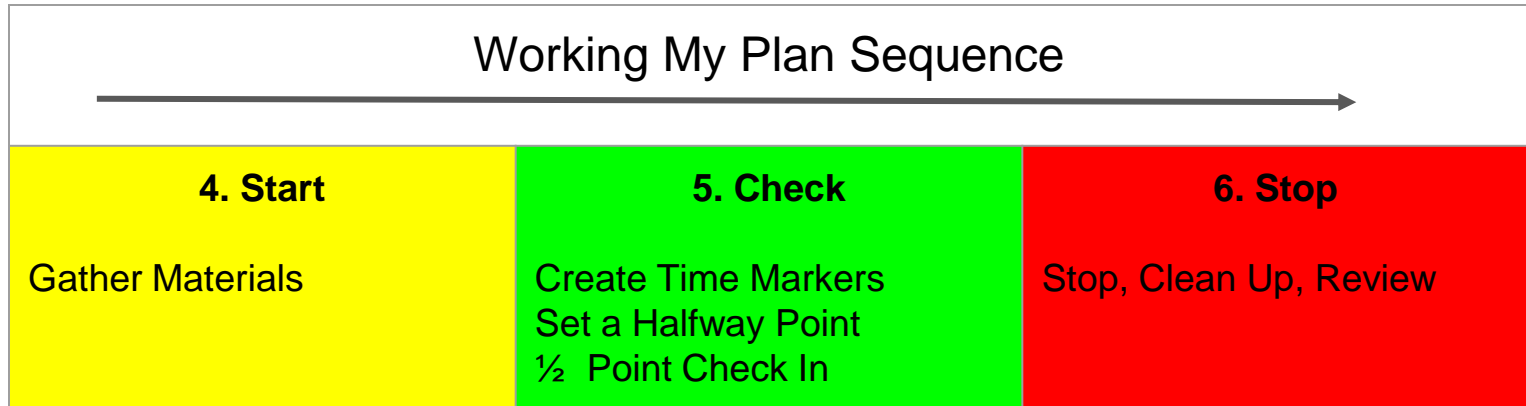
Teaching Students How to Plan Backward



Strategies to Reduce Prompt Dependence

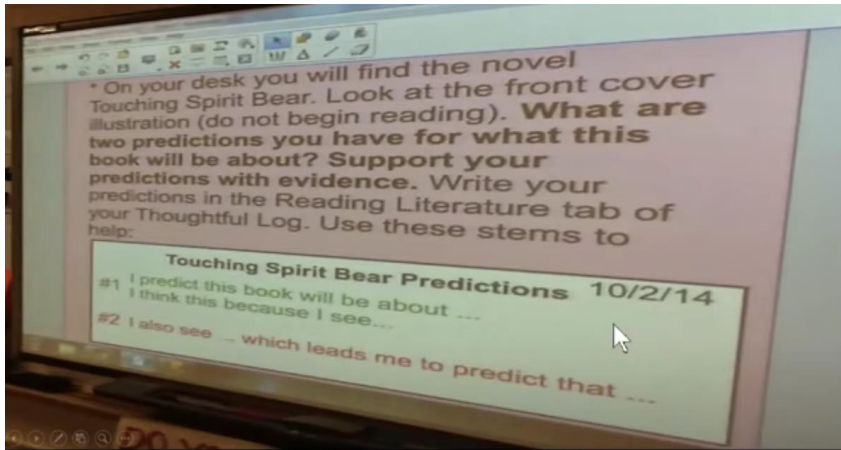
After Planning Backwards they Execute Forward

Ask Students: “Walk/Talk me Through Your Plan” to prompt Future Thinking & Gestures

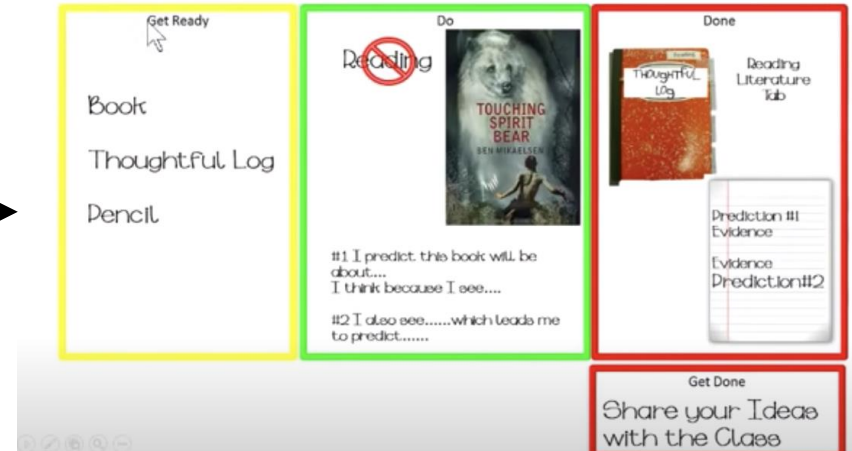


How Does This Look in the Classroom?

Too Much Verbal Language

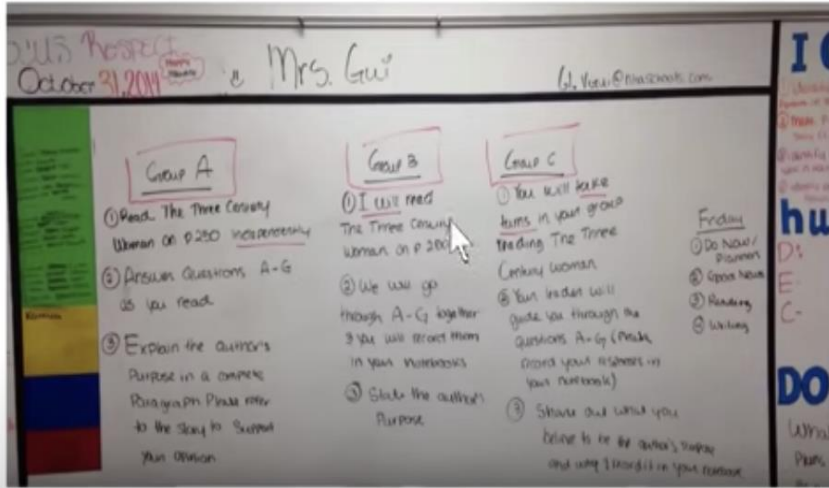


Supports NonVerbal Working Memory

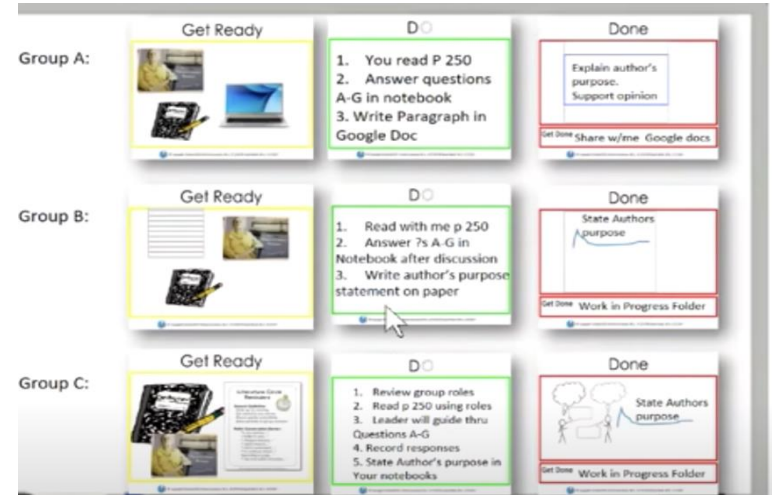


How Does this Look in the Classroom? - Differentiated Instruction

Verbal Memory Overload




Supports NonVerbal Working Memory



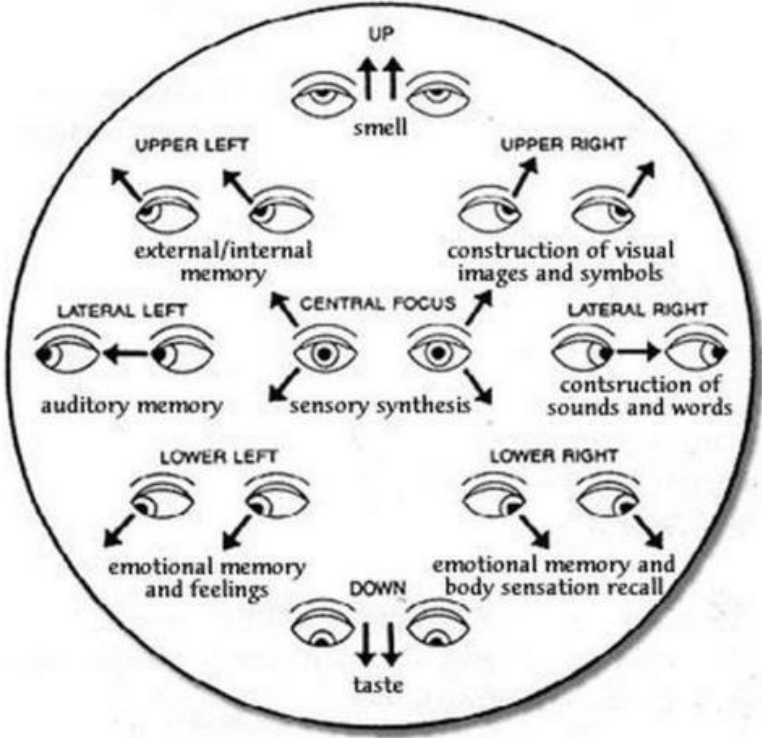
What Does this Look like in the Classroom?

Today: Use LINC strategy to make Vocabulary Flash Cards.

Get Ready <ul style="list-style-type: none">- Study Guide- 5 Note Cards- iPad- Pencil- Colored Pencils	DO <p>Read the Rights Workshop Study Guide</p> <ol style="list-style-type: none">1. Search2. Consider3. Describe4. Compare5. Make6. Relate7. Explain8. Highlight9. Create <p>Front of Card: <input type="checkbox"/> Term <input type="checkbox"/> Reminding Word</p> <p>Back of Card: <input type="checkbox"/> Definition <input type="checkbox"/> Picture</p>	Done <p>Make 5 Notecards using LINC</p> <p>TEB-SEA R-VI-HEAT</p>  <p>Share: tell a friend how Store: Social Studies NB</p>
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Eye Movement & Brain Function



Making Time Visible - Development of the Time Horizon

How Far into the Future can they Anticipate?

2 Year Olds: **NOW**

3-5 Year Olds: 5-20 minutes

K-1st Grade: **Several Hours**

3rd - 6th Grade: 8-12 Hours

6th - 12th Grade: 2-3 Days

17-23 Year Old: 2-3 Weeks

23-35 Year Olds: 3-5 Weeks

Students are NOW vs. NOT NOW

If a Student has ADHD the development of the Time Horizon is delayed by 30%.

So a Middle Schooler with ADHD may actually anticipate time similar to a 3rd or 1st grader.

MAKE TIME VISIBLE!

Making Time Visible - Digital vs. Analog

Digital Time = Verbal Working Memory

It does not demonstrate the PASSAGE of Time.



Analog Time = NonVerbal Working Memory

It demonstrates the PASSAGE of Time



Make Time Visible - Time Markers

Time markers are the equivalents of spatial cues - trigger an implementation intention (self) not the goal (outcome)

Instead of: "It is 10:05. You have until 10:30 to work on your Science Lab. Make sure to write your hypothesis, the list of materials and methodology."

Demonstrate the passage of time so students can pace themselves.

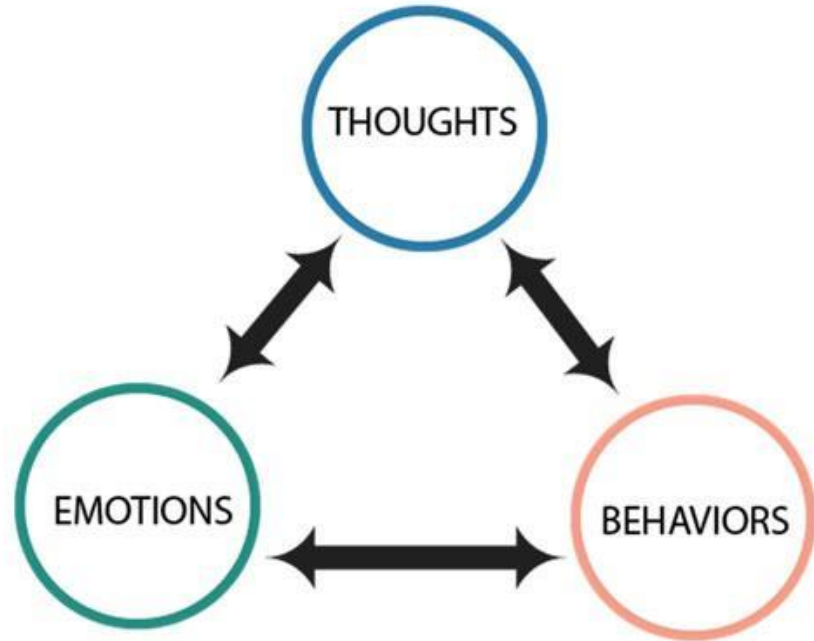


What does this Look like in the Classroom?



Barriers to Success - Cognitive Distortions

1. **Assumed Intent** - teacher thinks the child is misbehaving deliberately to upset them, the classroom or another student
1. **Magnification** - in the teacher's mind, the situation is much worse than it is.
1. **Labeling** - the teacher uses negative or derogatory words to describe the child, their behaviors, or symptoms of their emotional/behavioral disorder.



Proactive Protective Factors

Composure

Self-Regulation

Coping Strategies

Self Care

Routines/Environments that are structured, consistent, and predictable.



Optimistic Closure

Share 1 thing you learned

Share 1 thing you will try to implement in your practice

Challenge: Complete a thought log and strategies sheet for a week.

Possible Benefit: Increase the awareness of your thoughts, emotions, and behaviors. Develop self-regulation skills and implement coping strategies during the school day to reduce stress.

Possible Risk: You learn more about yourself.

The background of the slide is a light cream color with a repeating pattern of question marks in various colors including blue, green, purple, orange, and pink. The question marks are of different sizes and are slightly blurred, creating a soft, textured effect.

Questions or Comments