

Executive Function Skills

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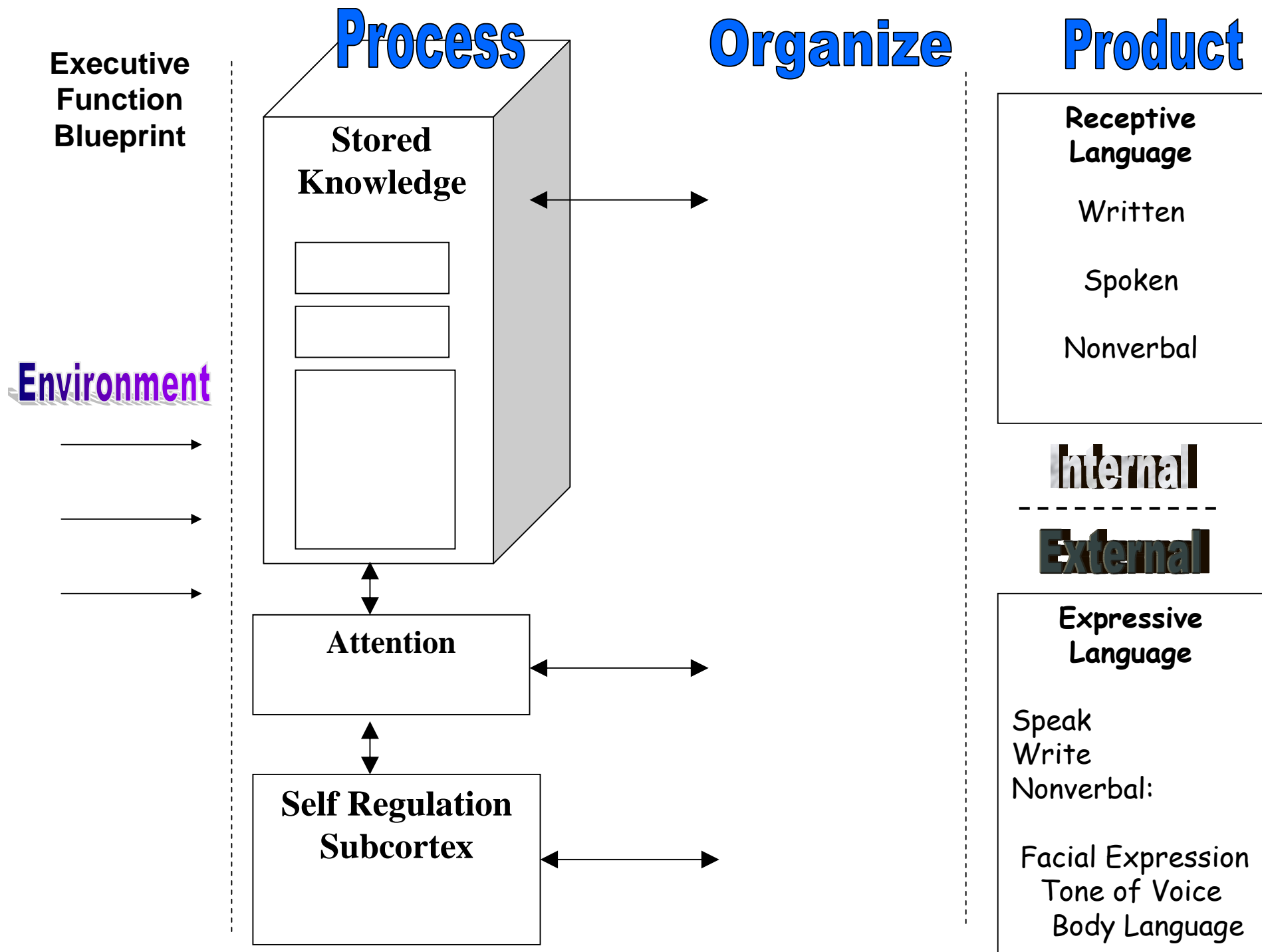
Executive Functions- They are the skills on an Executive

Senior executive /CEO Position

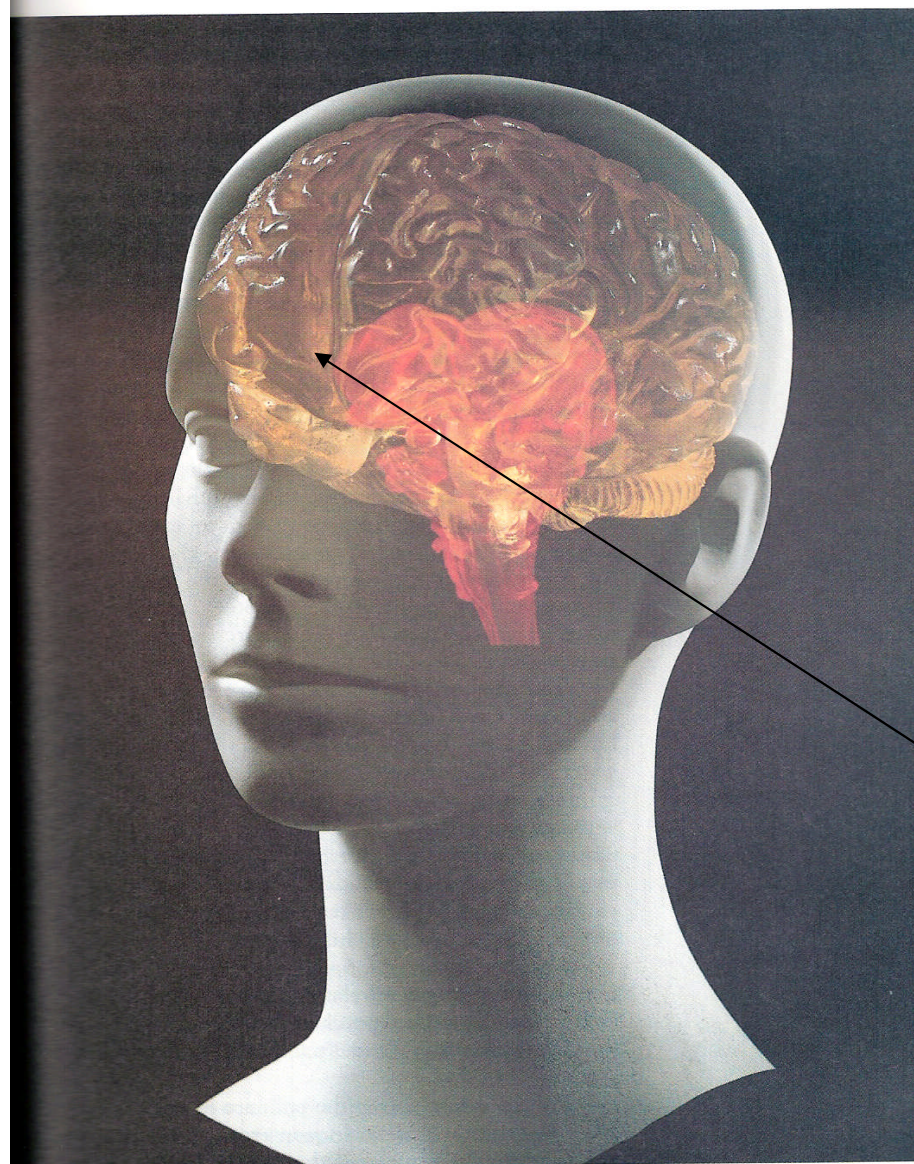
Company seeks highly experienced Chief Executive Officer:

Candidate must possess the following skills and abilities:

- Highly organized, self motivated, Strategic thinker, Impressive self presentation
- Excellent self starter who takes initiative and can self evaluate
- Can meet fast pace demands for producing and analyzing projects and products
- Strong knowledge of the industry
- Capable of learning and predicting new ideas and trends in the industry and incorporating this knowledge into the current goals of the company
- Skillful at drawing upon past experiences to guide future decision making processes
- Excellent problem solving abilities
- Demonstrated ability to set company goals, develop plans to meet goals and accomplish short and long term plans for the company
- Demonstrated ability to “think on one’s feet” - reacting quickly, efficiently and flexibly in the face of sudden changes and unexpected stumbling blocks
- Exceptional communication skills
- Possess exceptional emotional control: including stress management, anger management, emotional labeling and emotional sensitivity. Can manage without pause the line between authority and autonomy
- Strong social relationship skills – capable of taking perspective and collaborating with others; talented at conflict resolution



The Subcortex



- **Emotion**
- **Memory**
- **Basic Drives:**
 - Hunger/Thirst
 - Sleep/Wake
 - Sexual
 - Bio-Rhythm

Prefrontal lobe –
planning, initiation,
anticipation, impulse
control – higher order
thinking

The Subcortex – Low Road Processing



Low Road Processing
Involves
the shutting down
of the higher processes
of the mind.

It Leaves the individual in a state of:

**Intense
Emotions**

**Impulsive
Reactions**

**Rigid and Repetitive
Responses**

**Lacking in
Self
Reflection**

**Being Unable to
Consider Another's
Point of View**

The Frontal Lobe - High Road Processing



**A Form of Processing
that involves:**

- **Higher**
- **Rational**
- **Reflective thought
processes of the mind**

High Road Processing Allows for:

Mindfulness

**Being flexible in
our responses**

**An Integrated
Sense of Self
Awareness**

Attention

- **Selection**
- **Capacity**



- **The human brain can only attend to so much information at one time.**
- **Typically this is about 7 (+ or – 2) pieces of information.**
 - In a child, the capacity to hold information is less as their attention systems are still developing.
 - As a result, at any one time, less information is processed and remembered than an adult

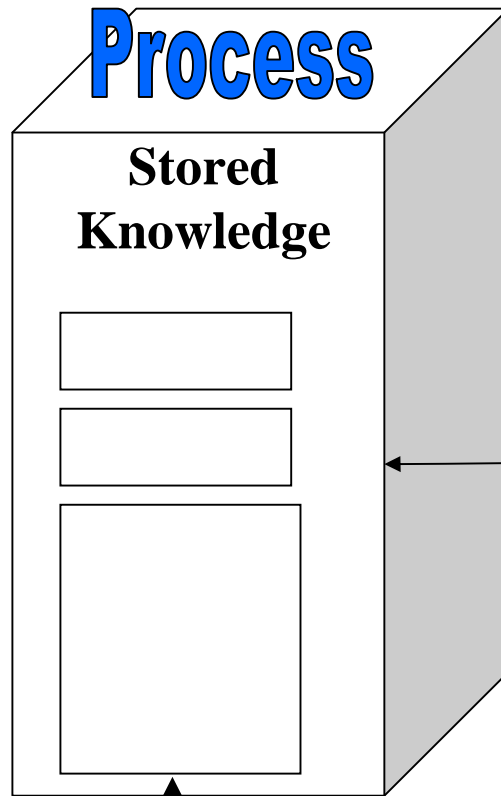
Attention Capacity – The Blocks in the Box

Knowing the box can overload, the goal is to:

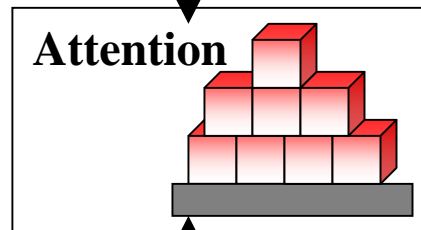
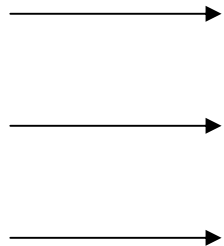
- a. Always make as much room as possible in the box to process information
 - reduce distractions
 - avoid overloading the box
- a. To reduce overload when communicating with children:
 - Avoid conversations during the state of overload. It only contributes to the problem

Executive
Function
Blueprint

Environment



HOW do we add 'salient'
knowledge?



Attention: Blocks in the Box Theory



Types of Memories

- **Semantic Memory:** (Cortex): Memory for events and data
- **Memories for Emotions** (Subcortex)
- **Episodic Memory:** A memory that is unique and personal (autobiographical)

Episodic Memories


- Requires 3 different elements be encoded together
 1. Individual bits of Data from an experience
 2. The emotions from the experience
 3. The ultimate meaning extracted from the experience
- *** Remember – to create episodic memories one has to use their executive function skills.

Some Ways We Use Episodic Memories¹

- Recall positive outcomes following hard work
- Recall prior recovery from difficulties & setbacks
- Reviewing past decisions & their impact
- Recall similar experiences for empathizing
- Make decisions based on 'gut' feelings and intuition
- Review situations to avoid making future mistakes
- Develop Future Goals
- Realistically appraise the passage of time
- Anticipate Difficulties
- Be realistic about ones strengths and limitations

Left Brain/Right Brain

CAT

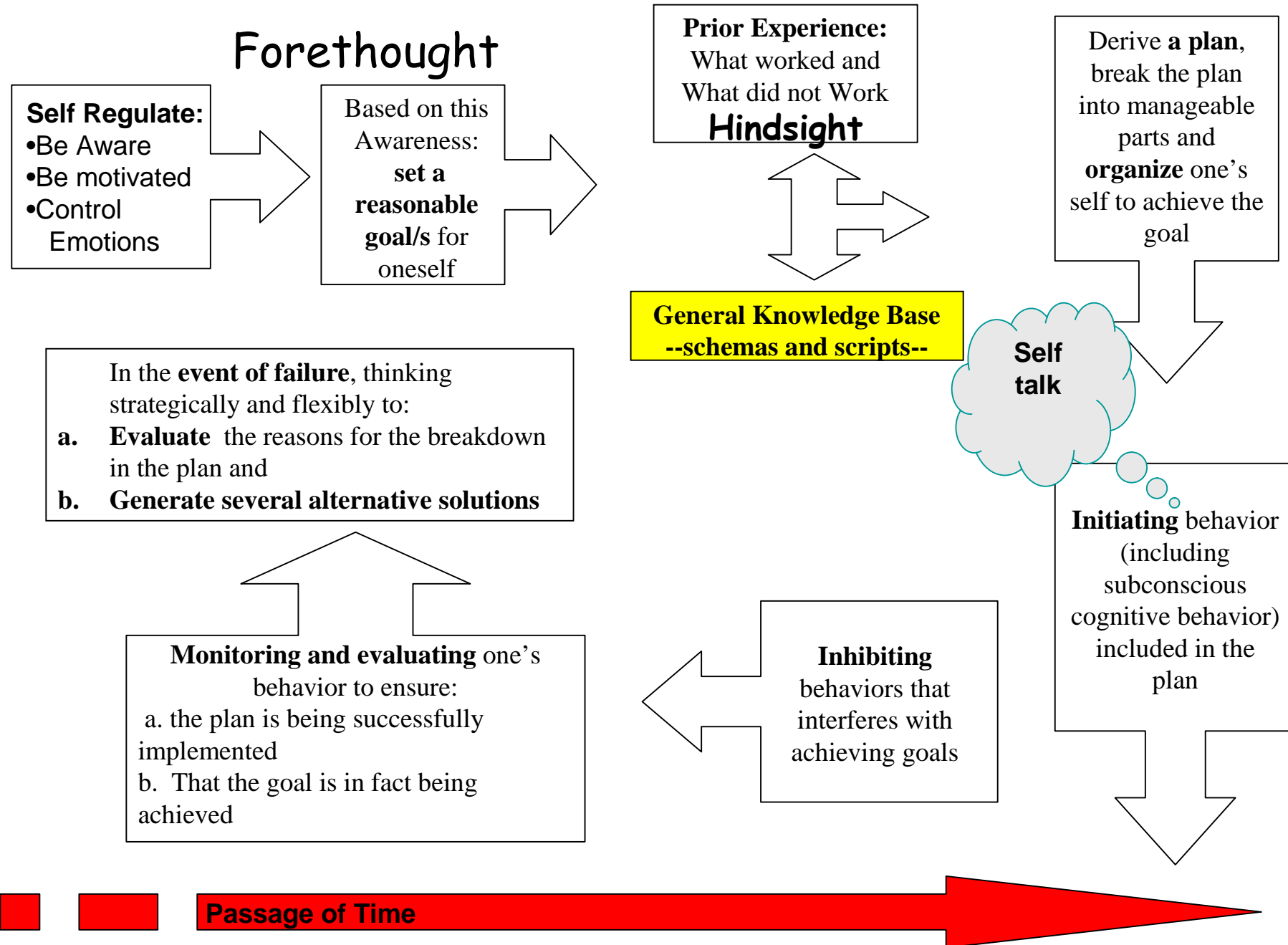
Left Brain	Right Brain
Story/Narratives	
<p>Phonologic Representation: “kuh-a-t”</p> <p>Verbal definition: a small, furry domestic mammal which says meow, purrs, can claw and used a litter box.</p> <p>Limited Memory: 7 +/- 2</p> <p>----Rote Memory “Google Search Engine”</p>	<p>Orthographic representation: CAT</p> <p>Visual Image:</p>  <p>Unlimited Memory ---memory for generalizing “Web Page”</p>

Cognitive Routine

Novelty

Notes on Novelty and Storing Data

The CEO's 'Executive Functions' Flowchart:



3 Primary Layers of Executive Functions

1. Self – Regulation

- Awareness
- Motivation
- Initiation
- Emotional control
 - Self awareness,
 - self monitor,
 - metacognition



3 Primary Layers of Executive Functions



Organization/Integration

- Integrate details into a bigger picture
- Organize and store information so it can be traced back and retrieved over time

(Episodic Memory)

3 Primary Layers of Executive Functions

3. Higher Order Reasoning Skills

- Analyze
- Draw a conclusion
- Solve a problem
- Predict an outcome
- Reason
- Evaluate



Working definition of EF skills

Executive Function is the ability to **integrate** a present **awareness** with future **anticipation** and past **experience** to develop a reasonable **plan** (accounting for **space**, **time** and **people**) for present **action**.



Development of Executive Functions

1. **Continuous** rather than stage wise
2. Are strongly influenced by:
 - experience
 - **teaching**
 - expectations in the environment



Developmental Tasks Requiring Executive Function Skills – by Age

Preschool

- Run simple errands (e.g., “Get your shoes from the bedroom”).
- Tidy bedroom or playroom with assistance.
- Perform simple chores and self-help tasks with reminders (e.g., clear dishes from table, brush teeth, get dressed).
- Inhibit behaviors: don’t touch a hot stove; don’t run into the street; don’t grab a toy from another child; don’t hit, bite, push, etc.

Developmental Tasks Requiring Executive Function Skills – by Age

Kindergarten

- Run errands (two to three step directions).

Grade 2

- Tidy bedroom or playroom.
- Perform simple chores, self-help tasks; may need reminders (e.g., make bed).
- Bring papers to and from school.
- Complete homework assignments (20-minute maximum).
- Decide how to spend money (allowance).
- Inhibit behaviors: follow safety rules, don't swear, raise hand before speaking in class, keep hands to self.

Developmental Tasks Requiring Executive Function Skills – by Age

Grades 3–5

- Run errands (may involve time delay or greater distance, such as going to a nearby store or remembering to do something after school).
- Tidy bedroom or playroom (may include vacuuming, dusting, etc.).
- Perform chores that take 15–30 minutes (e.g., clean up after dinner, rake leaves).
- Bring books, papers, assignments to and from school.
- Keep track of belongings when away from home.
- Complete homework assignments (1 hour maximum).
- Plan simple school project such as book reports (select book, read book, ‘write report).
- Keep track of changing daily schedule (i.e., different activities after school).
- Save money for desired objects, plan how to earn money.
- Inhibit/self-regulate: behave when teacher is out of the classroom; refrain from rude comments, temper tantrums, bad manners.

Developmental Tasks Requiring Executive Function Skills – by Age

Grades 6—8

- Help out with chores around the home, including both daily responsibilities and occasional tasks (e.g., emptying dishwasher, raking leaves, shoveling snow); tasks may take 60—90 minutes to complete.
- Baby-sit younger siblings or for pay.
- Use system for organizing schoolwork, including assignment book, notebooks, etc.
- Follow complex school schedule involving changing teachers and changing schedules.
- Plan and carry out long-term projects, including tasks to be accomplished and reasonable timeline to follow; may require planning multiple large projects simultaneously.
- Plan time, including after school activities, homework, family responsibilities; estimate how long it takes to complete individual tasks and adjust schedule to fit.
- Inhibit rule breaking in the absence of visible authority.

Developmental Tasks Requiring Executive Function Skills – by Age

High school

- Manage schoolwork effectively on a day-to-day basis, including completing and handing in assignments on time, studying for tests, creating and following timelines for long-term projects, and making adjustments in effort and quality of work in response to feedback from teachers and others (e.g., grades on tests, papers).
- Establish and refine a long-term goal and make plans for meeting that goal. If the goal beyond high school is college, the youngster selects appropriate courses and maintains grade point average (GPA) to ensure acceptance into college. The youngster also participates in extracurricular activities, signs up for and takes Scholastic Aptitude Tests (SATs) or American College Tests (ACTs) at the appropriate time and carries out the college application process. If the youngster does not plan to go to college, he or she pursues vocational courses and, if applicable, employment outside of school to ensure the training and experience necessary to obtain employment after graduation.
- Make good use of leisure time, including obtaining employment or pursuing recreational activities during the summer.
- Inhibit reckless and dangerous behaviors (e.g., use of illegal substances, sexual acting out, shoplifting, or vandalism).

Executive Dysfunction

What does dysfunction “look” like?

- Loses/breaks everything
- Yells out answers in class/ difficulty sitting in seat
- Talks to you when you are on the phone
- Messy room, desk, locker
- Coat & shoes dumped on hallway floor
- Forgets water bottle, permission slip, etc.
- Takes things without asking
- Uses the last of something & does not tell
- Does not read directions
- Doesn't know practice is cancelled
- Starts a building project on kitchen table at 6pm
- Leaves front door open, lights on etc.
- Has to go to CVS at 9pm on a school night – can't wait
- Need so use the washroom 5min into a long car trip
etc., etc., etc.

Executive Dysfunction

What does dysfunction “look” like?

Significant Impairment (Clinical):

The person who is seemingly bright and capable but is struggling academically/professionally, socially and personally (practical & family life).

Features:

Distracted, daydreaming, off-task, disengaged, forgetful, chronically late, inappropriate, impulsive, ridged, driven by immediate gratification, emotionally volatile, easily frustrated, difficulty setting/identifying goals, disorganized, indecisive, procrastinating, unmotivated, lacks follow through, does not learn from mistakes, does not learn from punishments, insensitive & lacking empathy for others, misinterprets social situations.....

Degree: Must consistently impair function/prevent success

Toolbox of Strategies



The Visual Schema Strategy:

Visualize the Future → Picture the Outcome → Match the Mental Picture

- We **SEE** the final product/outcome/place behavior...
.....DO THEY?
- Talk less...
- Use Language that evokes visual imagery
- Right Brain vs. Left Brain



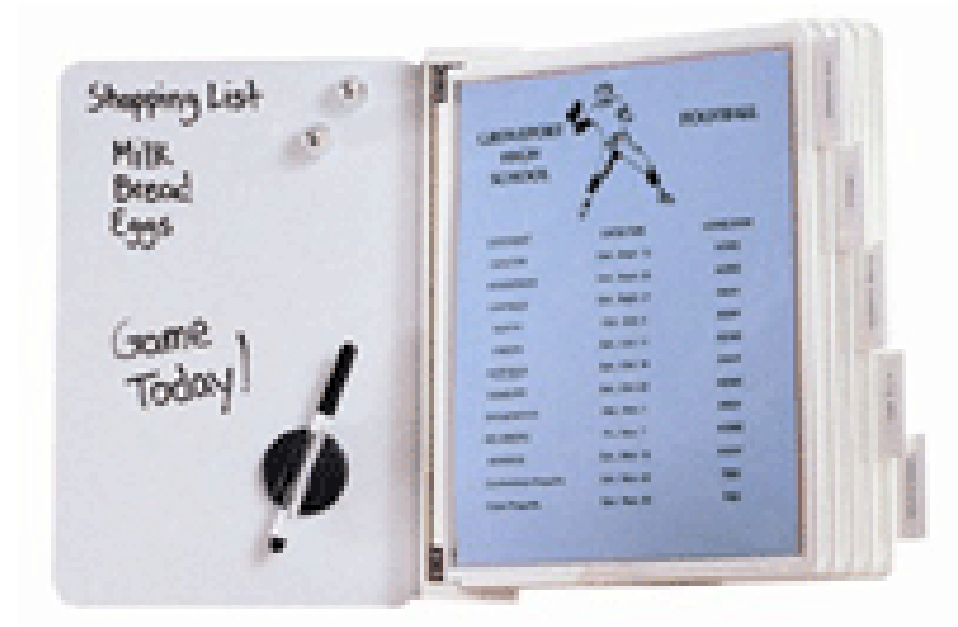
Strategies

The Visual

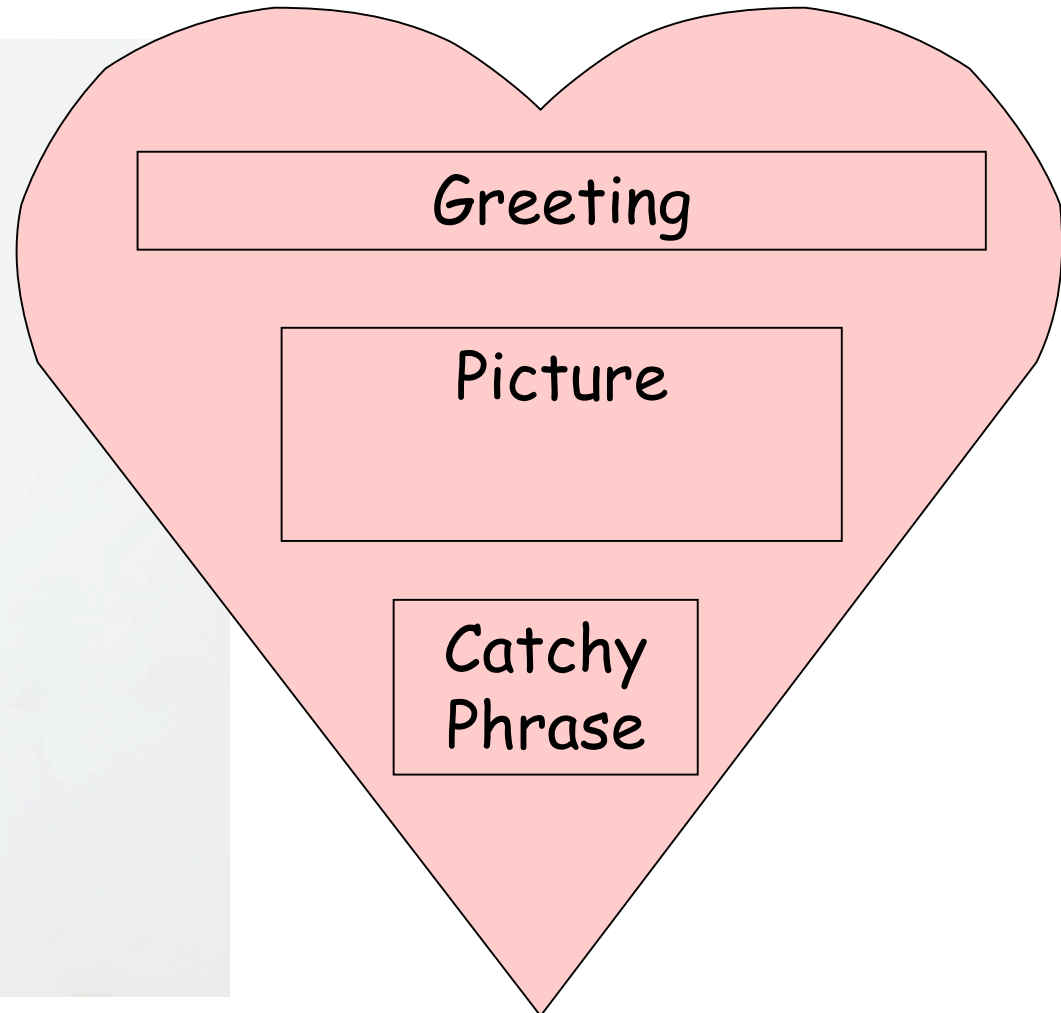
Schema Strategy

Organizing tools for the House

- www.onlineorganizing.com



"Let's Make Valentine Cards for our Mom and Dad!!!"





Pictures

Name of
Event/
Picture

Pictures

Big Picture

Name of Recipient

Additional Information

Read the Room and Follow the **STOP** signs

Space

Read the Room

What is the
space telling you
about:

.What's going
on?

Time

Get on the Timeline

What is the time telling
you about the:

- Pace
- Time of day
- What is happening at
this Moment in Time
- What is coming up?

Objects

Read the Object

What does the object



People

Read the Person

What are they telling
you?

Face
Body
Appearance
Mood
Pace
Saying

Teach Forethought: Predict the Outcome

- What will it look like if.....
- How do you see yourself?
- If everything goes your way....what will it look like?
- What time will it be when....?
- It is 4:00, How do you see yourself at 4:15?
- Predict the Outcome
- It's a Glitch...What is your new plan?
- If.....Then.....

Create Visual Episodes

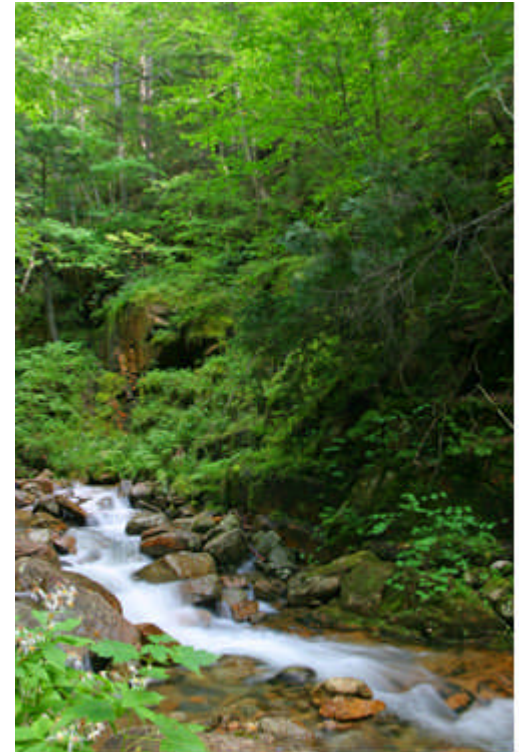
- Looks Like: The Data or Scheme/Script
- Feels Like: The Emotion
- Means= Episodic Memory

Lynn Meltzer

The View or the Trees:



Label the Trail



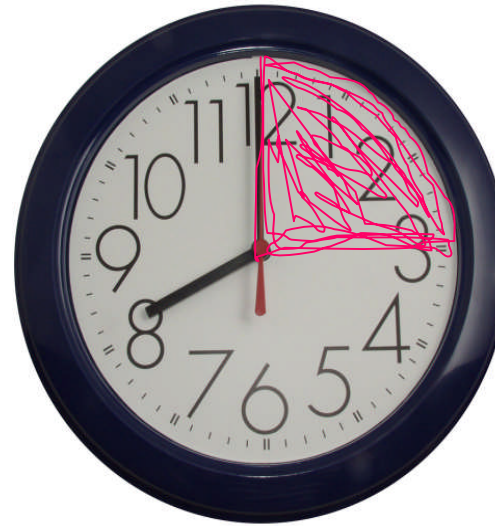
Time Strategies



Teaching Time:

- Sense and Feel the Passage of Time
- Pace

Sense, See and Feel Time



Time Timers



www.timetimer.com



Time Tools



**Timex Men's Watch
Vibrating Easy Set Alarm**

Time Tools

- Walmart.com
- Timex.com
- Overstock.com
- Ebay
- Amazon

Timex i-control Twist
and Pull Watch



Shower Clocks

- **Forma® Stainless Steel Suction Clock** is water-resistant and rustproof. It's compact size makes it ideal for use in the shower or on a mirror. Five strong suction cups adhere the clock to any clean, non-porous surface such as tile, glass or fiberglass



Allocate your time:

- Teach the Allocation of Time – Appeal to The Frontal Lobe's Planning Abilities: Avoid the Subcortex
- Break task down by object: (See it, Say it, Shift it)
- Break task down by number:

Look Forward
Look Back
Set the Time
Stay on Track



Sequence:

When and Under What Condition will that Happen?

- What do people typically do at this “moment in time”?
Do What YOU need to DO!
- Time factors that Influence Events:
i.e. under certain conditions
 - **WHEN** can you talk to me about that?
 - **WHEN** do kids usually have sleep overs?
- **Time has Passed...Has the Pace Changed?**

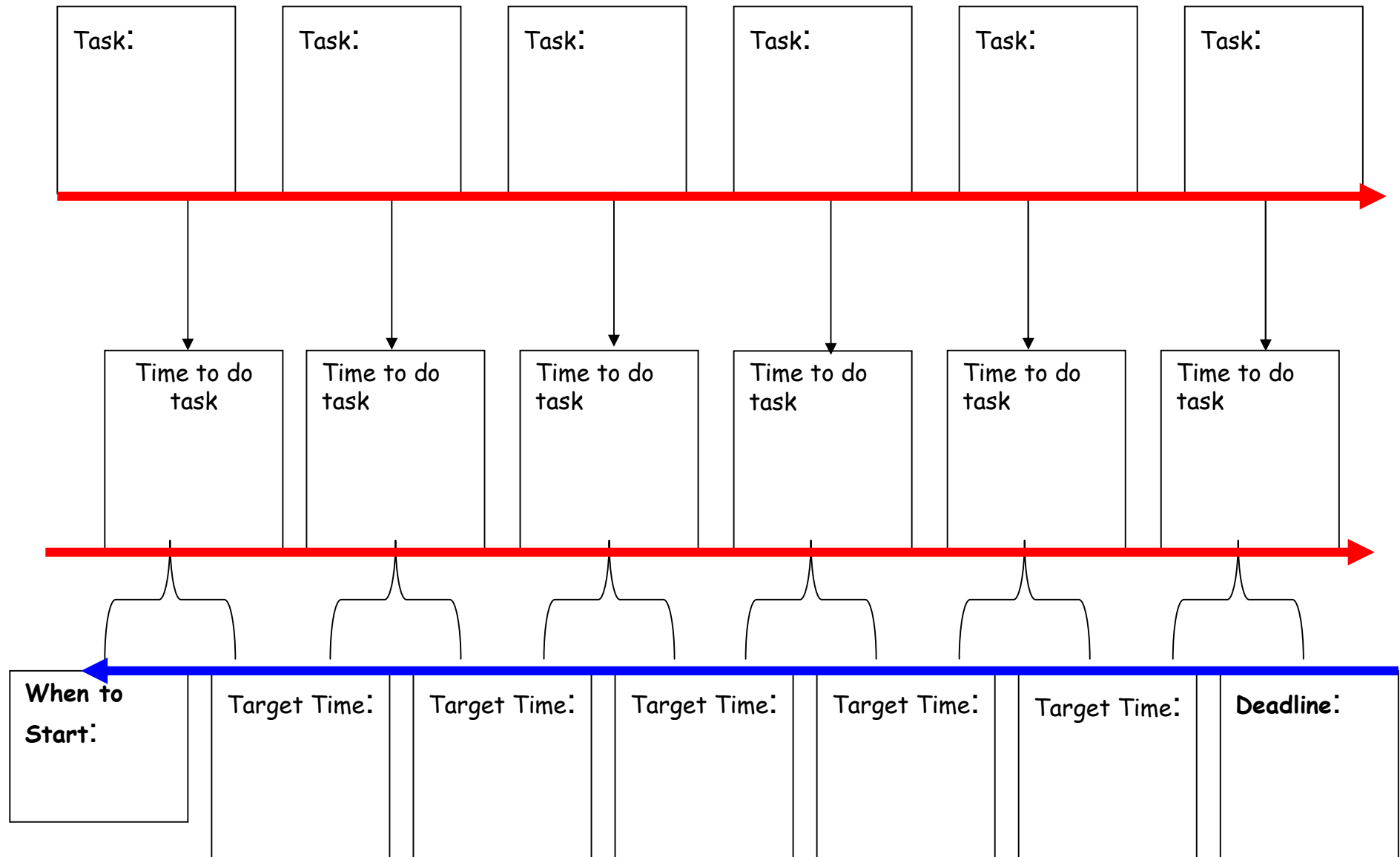
Allocate your time:

- Teach the Allocation of Time – Appeal to The Frontal Lobe's Planning Abilities: Avoid the Subcortex
- Break task down by object:
(See it, Say it, Shift it)
- Break task down by number:

Organization of Space: For working

- Permanent Desk
 - Desktop file box,
 - Organize Hanging File Folder Labels by (use a label maker):
 - School subjects
 - Extracurricular activities
 - Team practices and games
 - Clubs
 - Community service and or job





Task:

Original Estimate: _____

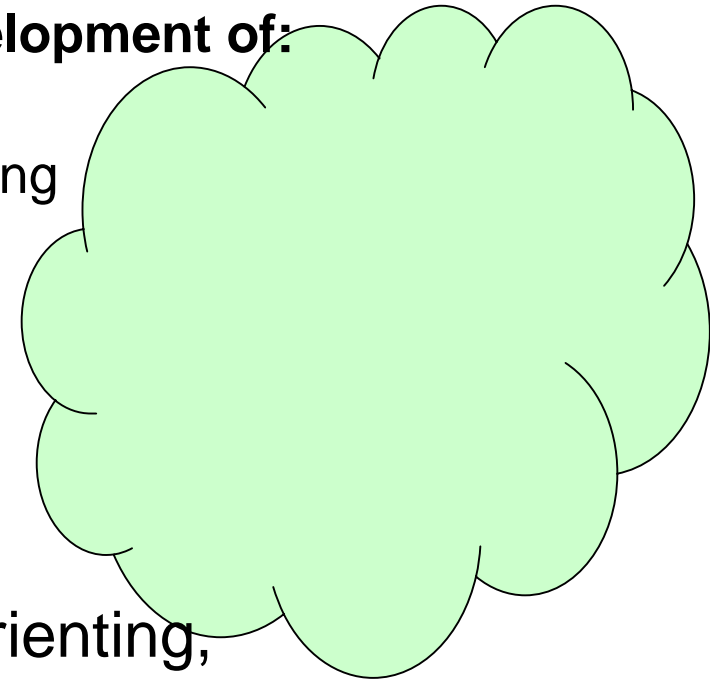
Actual: _____

Strategies

Teach Internal Self Directed Talk

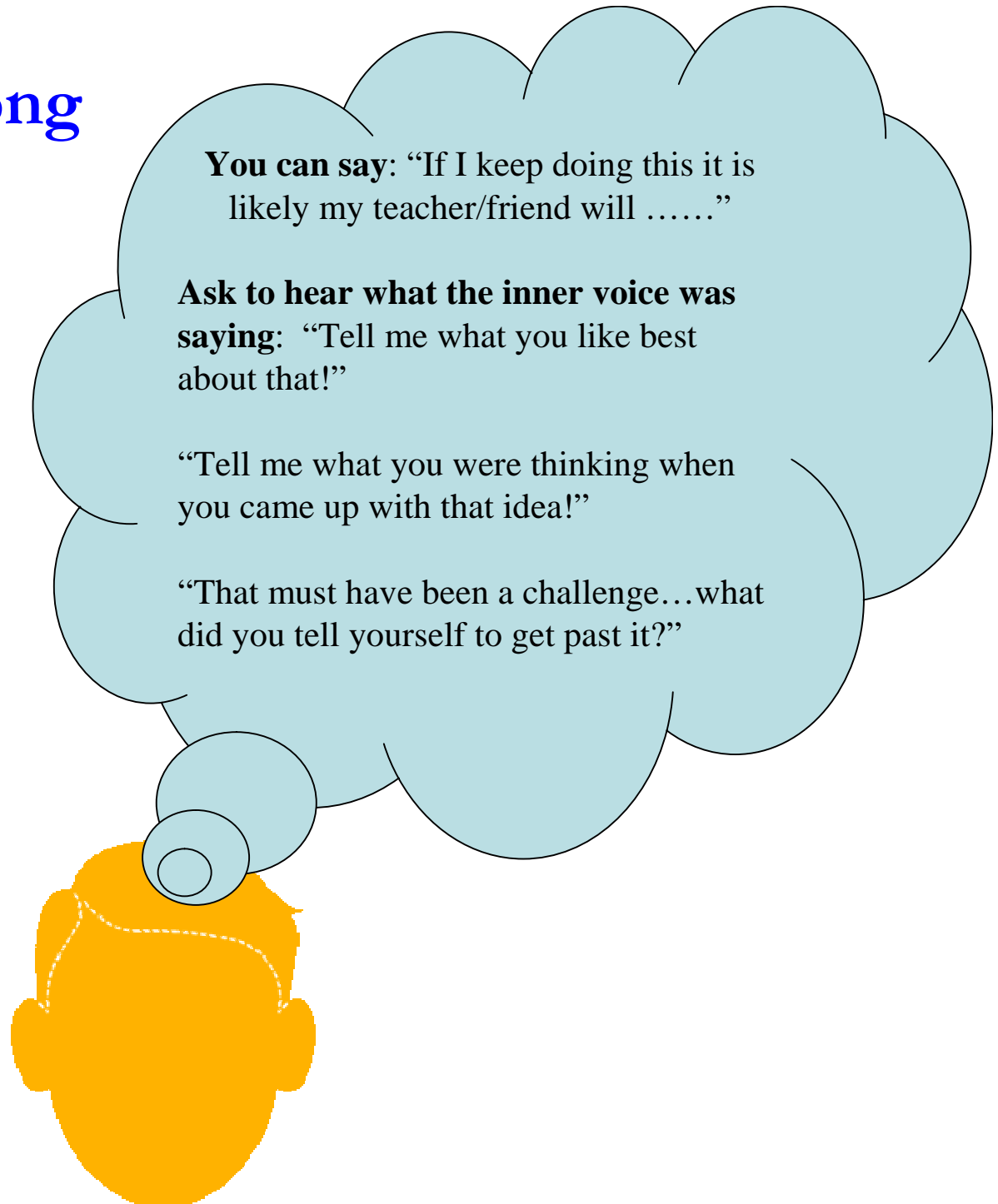
Internalization of speech facilitates the development of:

- Working Memory and Speed of Processing
 - rules
 - problem-solving strategies,
 - self-monitoring,
 - self instruction
 - metacognition
- Serves the Cognitive Functions of Orienting, organizing and structuring behavior



Talk to Myself Along The Way

- Teach Self Directed Talk
- “What are you going to tell yourself?”
- The Importance of Learning Declarative Language



Strategies:

Use Declarative
Language:

Humph.....

Declarative Language

- The type of language used when one is communicating what the mind is producing. I
- It is the ability to communicate without knowing where the conversation might go.
- Requires lots of integration of information by the brain
- Allows us to learn and process 'online' in a more integrated way

Declarative Language

- Comment on a shared experience
- Compare and Contrast
- Think back and reminisce
- Brainstorm
- Plan and prepare
- Integrate ideas
- Repair misunderstandings

Don't cue to do – cue to know what to do

- -“How are you going to know when to be ready?”
- -“How are you going to stop yourself from...?”
- -“What is your goal?”
- -**“What do you want it to look like?”**
- -“How long do you think it will take?”
- -“How much did time did it take last time?”
- -“How are you going decide where to set that up?”
- -“How are you going to know what you need?”
- -“How are you going to know what is most important?”
- -“How are you going to decide what to do first?”
- -**“How will you know when you are done?”**
- -“How will you continue when you are tired?”
- -**“How did that work out?”**
- -“How long do you think that took?”
- -“How did you manage/know how to do it?”
- -“Would you do anything differently?”
- -“Have you done anything like this before?”
- -“Was that harder or easier than....”

Practice

Situation	Instead of....	Try.....
Student wants to watch American Idol at 8:00pm but never does homework.	If you don't get your homework done you can't watch!	At 8:00, if everything goes your way, how do you see yourself?
Student needs to get off the computer and keeps saying "Just one more level, just one more level!"	There is always one more level! You have to get off now! I am tired of telling you. I need the computer! You've been on too long.	What does a reasonable stop place look like? What will we both see on the screen? After Dinner how do you see yourself?
Child is goofing around downstairs and not brushing their teeth.	Go upstairs and brush your teeth. Rinse with mouthwash. Your friends will think your breath is horrible!	If you were on the timeline, what do you see yourself doing right now? What do you look like? Where are you? Match the picture.
Student is sitting on the couch. It is 3:30 and need to leave the house at 4:00 for LaCrosse Practice.		
The student needs to clean up a large mess from an activity (cooking/ craft project/ Legos).		
Student will not stop yelling or using a raised voice during an inappropriate time (bedtime/ religious service/ restaurant)		

Additional Reading

- Kids are worth it! Revised Edition : Giving Your Child the Gift of Inner Discipline, by Barbara Coloroso
- Executive Skills in Children and Adolescents : A Practical Guide to Assessment and Intervention, by Peg Dawson and Richard Guare
- Organizing From the Inside Out for Teens, by Julie Morgenstern
- The Explosive Child: A New Approach for Understanding and Parenting Easily Frustrated, Chronically Inflexible Children by Ross Greene
- The Organized Student: Teaching Children the Skills for Success in School and Beyond
- Executive Function in Education: From Theory to Practice (Hardcover) by [Lynn Meltzer](#)
- Autism Aspergers: Solving the Relationship Puzzle--A New Developmental Program that Opens the Door to Lifelong Social and Emotional Growth by [Steven E. Gutstein](#)

Want more information?

Check out my website:

www.executivefunctiontherapy.com