

63RD CONFERENCE ON EXCEPTIONAL CHILDREN

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From A to Z Successfully: Improving Executive Skills in Children



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He doesn't try.

He is not prepared for class.

Do you know this child?

He couldn't find his way out of a paper bag.

He can't get his work done.

He has no self control.

He loses everything.

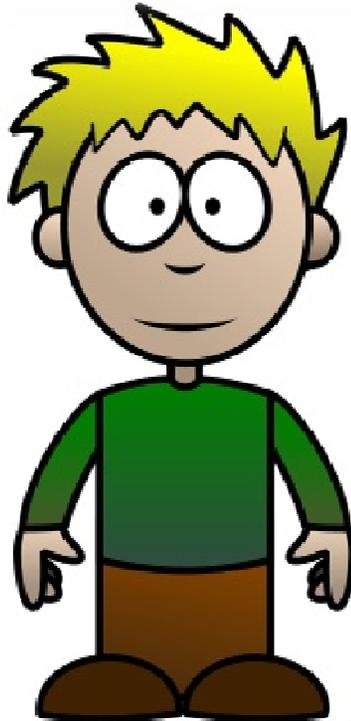
He annoys his friends.

He makes off the wall comments.

He doesn't turn in his work.

He never follows directions.

He's lazy!





I think he's
Developmentally Delayed.

I think he has a
Learning Disability!

I think he has ADHD!

I think he's a great kid.
But, believe me he's a
**challenge in the
classroom!**

I think he's on
the Spectrum.



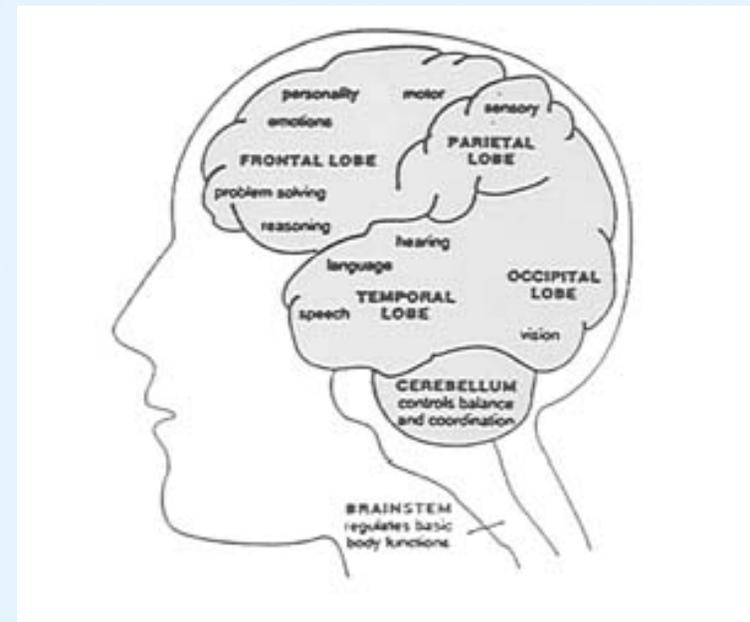
Current brain research says this student has Executive Skills Deficits.



What are Executive Skills?

- From the Neurosciences Literature
- The brain-based skills required to execute or perform tasks.

(Dawson & Guare)





People use Executive Skills:

- to analyze situations
- formulate and act on a plan
- adjust actions as required to accomplish a task

Horowitz, 2007

To get from Point A.....Point B, without falling apart.



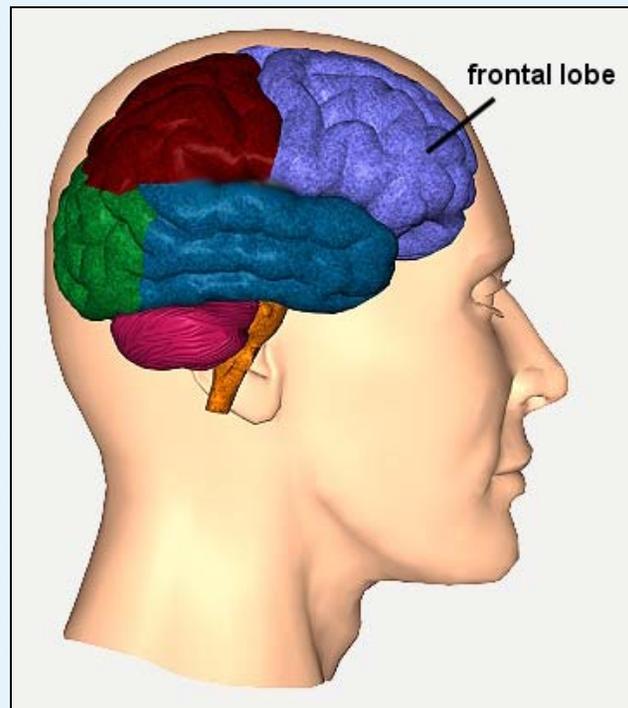
**Executive Skills are like a conductor
for a mighty orchestra.**





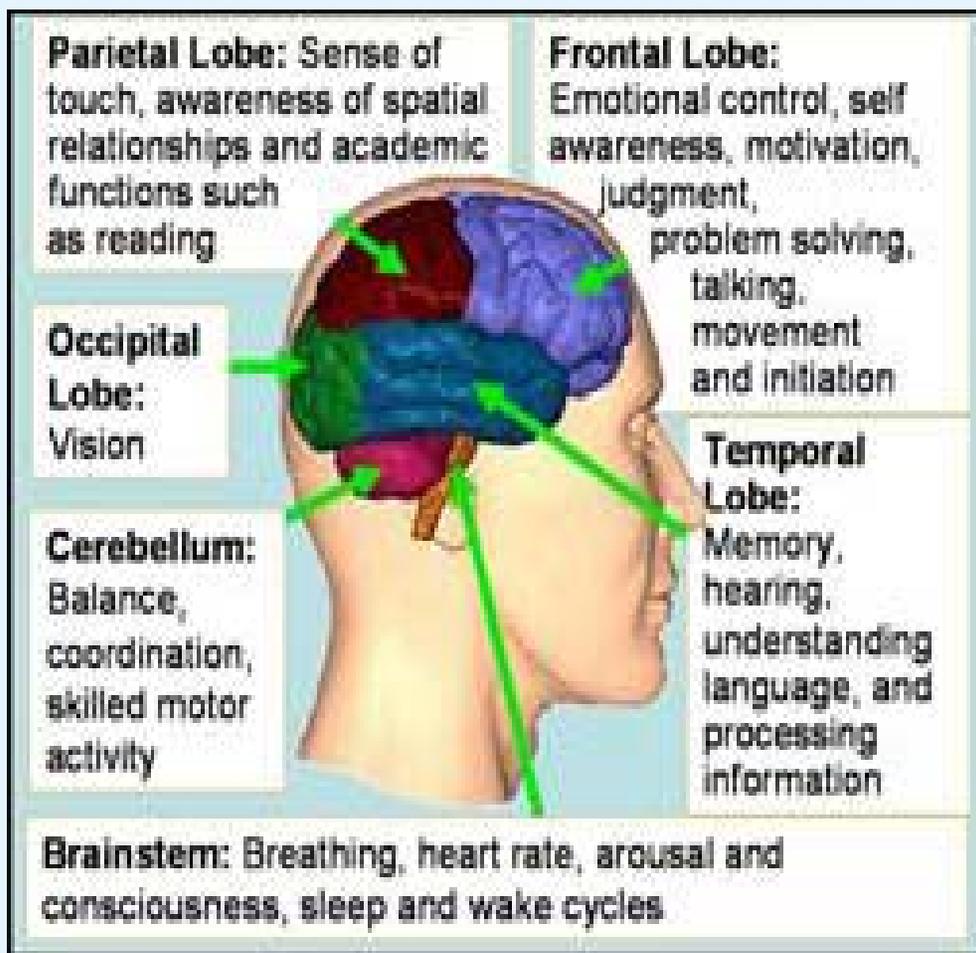
Executive skills are localized in prefrontal structures of the frontal lobe.

(Pennington and Orzonoff, 1996)





The Prefrontal Cortex sends out information to:





Functions of the Prefrontal Cortex

- **Integration and association (Highest order)**
- Flexible behavior
- **Using past experiences to plan and modify behavior**
- Making decisions based on reward
- **Selecting and regulating appropriate responses and behaviors**
- Mediating affect and emotion
- **Incorporating past experiences and sensory input with internal impulses and emotions**
- Initiating, selecting and organizing relevant behaviors
- **Storing and managing verbal and visual working memory**
- Sustaining attention
- **Providing temporal memory and organization**
- Accessing episodic long-term memory
- **Making inferences and decisions**
- Evaluating outcomes and new learning by association while engaged in task or behavior

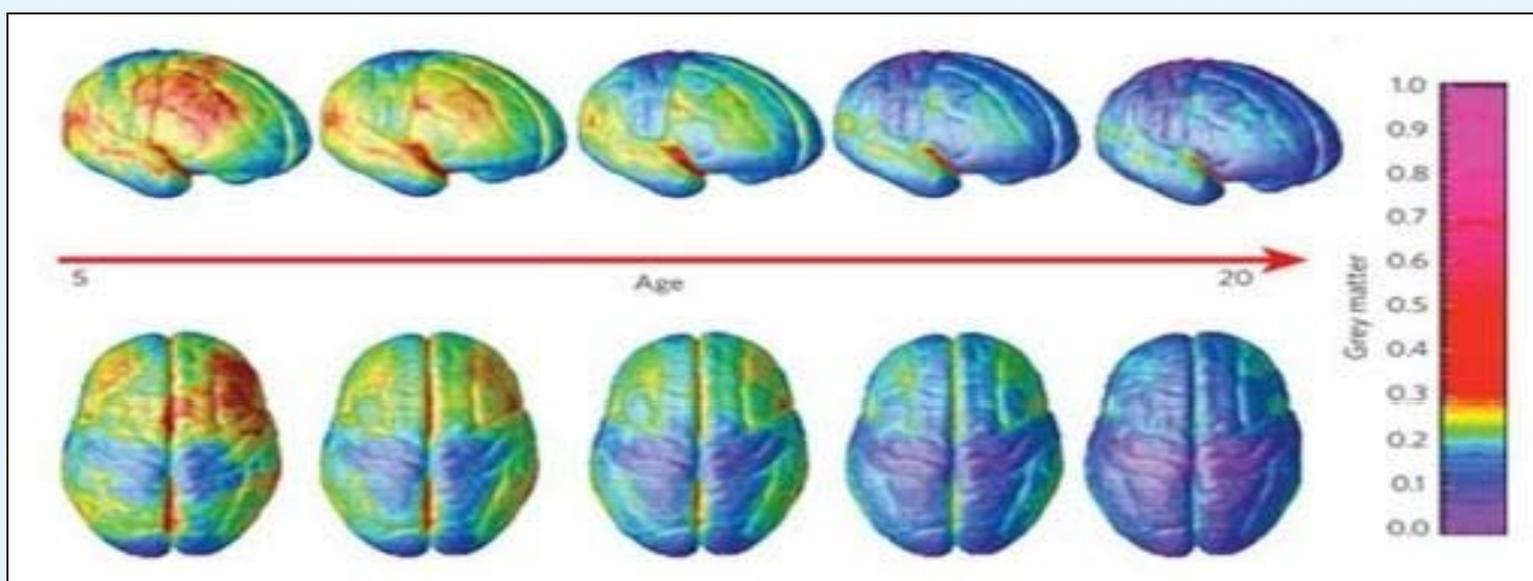


**So...are executive function skills
fully developed at birth?**



No
Way!

The Development of the Frontal Lobe



- Begins before birth and continues until early adulthood.
- Growth spurts occur between:
 - 5-7 years
 - 9-12 years
 - in adolescence.



Why is it important for educators to understand Executive Functioning?

- Explains behaviors in terms of brain function
- Explains behaviors with a developmental framework



Frontal lobe functioning impacts all that we do.





Executive skills involve both thinking and doing:

Thinking (Cognition)	Doing (Behavior)
Working Memory	Response inhibition
Planning/prioritizing	Emotional Control
Organization	Sustained Attention
Time Management	Task Initiation
Metacognition	Goal-directed Persistence
	Flexibility

Dawson & Guare



Who has needs in the areas of Executive Functioning?





Autism and Executive Functions

Impaired executive function components associated with autism:

1. Inability to engage in goal-directed behavior
2. Inability to adjust behavior to meet environmental demands
3. Inability to perform multiple tasks simultaneously
4. Inability to spontaneously adapt to changes in task requirements
5. Inability to demonstrate flexible attention
6. Difficulty with task planning
7. Preservative errors in task execution



Asperger's and Executive Functions

Impaired executive function components associated with Asperger's:

1. Rigid thinking with focus on detail
2. Poor recognition and understanding of nonverbal cues
3. Poor inhibition for verbalization
4. Difficulty generalizing rote learning
5. Poor motor planning/general disorganization
6. Poor problem solving and reasoning
7. Difficulty adapting to change
8. Poor self regulation
9. Impaired social interaction



ADHD and Executive Functions

Impaired executive function components associated with ADHD:

1. Failure to attend to details/careless mistakes
2. Difficulty sustaining attention
3. Inability to follow through on instructions/completing tasks
4. Difficulty organizing tasks
5. Easily distracted
6. Forgetful
7. Impulsive in verbal and motor responses
8. Poor self regulation of social behavior



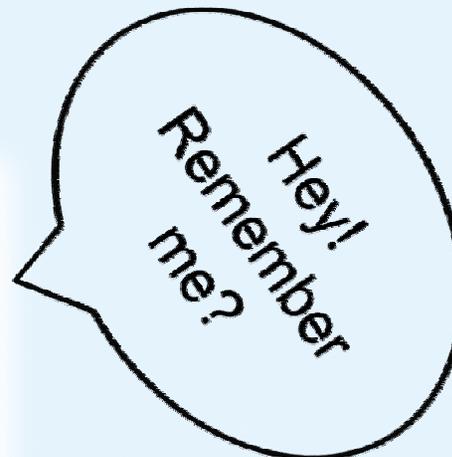
Learning Disabilities and Executive Functions

Impaired executive function components
associated with LD:

1. Difficulty with organization of materials and projects
2. Difficulty planning and completing tasks
3. Trouble sequencing and communicating details
4. Difficulty turning in assignments, even when they are completed.
5. Difficulties initiating and generating ideas independently
6. Difficulty retaining information while doing something with it.



Question: So, a student walks into the classroom and appears to be having deficits in Executive skills functioning. What do you do?





Answer: Determine executive skill strengths and weaknesses through formal and authentic testing.





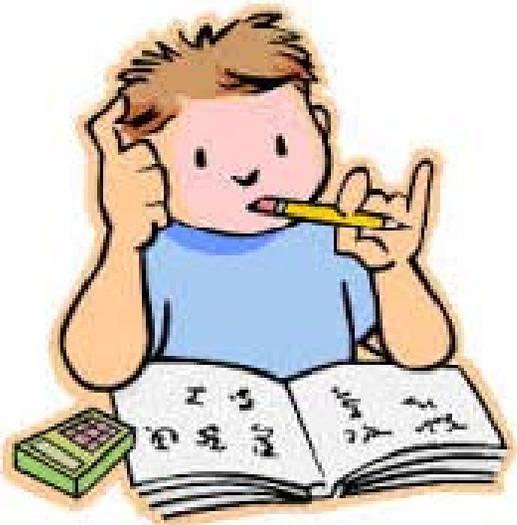
Assessing Executive Functions

Standardized Tests for Executive Functioning

- Comprehensive Executive Function Inventory (CEFI)
- Test of Everyday Attention for Children (TEA-Ch)
- Woodcock-Johnson III Test of Cognitive Abilities (Analysis-Synthesis, Concept Formation, Numbers Reversed subtests)

Behavioral Rating Scales for Executive Functioning

- Behavior Rating Inventory of Executive Function-Preschool (BRIEF-P)
- Behavior Rating Inventory of Executive Function (BRIEF)
- Behavior Rating Inventory of Executive Function-Self Report (BRIEF-SR)
- Informal Assessment of Executive Function Skills



So... Now What?

Strategy Based Remediation

Content

The What

- Curriculum
- Specialized programs

Process

The How

- Strategies



Dawson and Guare's Ten Principles for Improving Executive Function

1. **Teach deficit skills**
2. Take developmental level into account
3. **Move from the external to the internal**
4. External includes changes to the environment, the task and interaction
5. **Use the child's fight for control-Include the student in plans**
6. Modify tasks to match effort capacity
7. **Use incentives to augment instruction**
8. Provide just enough support for success
9. **Keep supports in place until mastery**
10. Stop supports, supervision, and incentives gradually



Success Map Technique

11. Teach students to use the “Success Map” technique which explicitly teaches:

- Awareness and Naming (the Behavior Strategy)
- Planning (Determining a plan of action)
- Visualization (Successful completion)



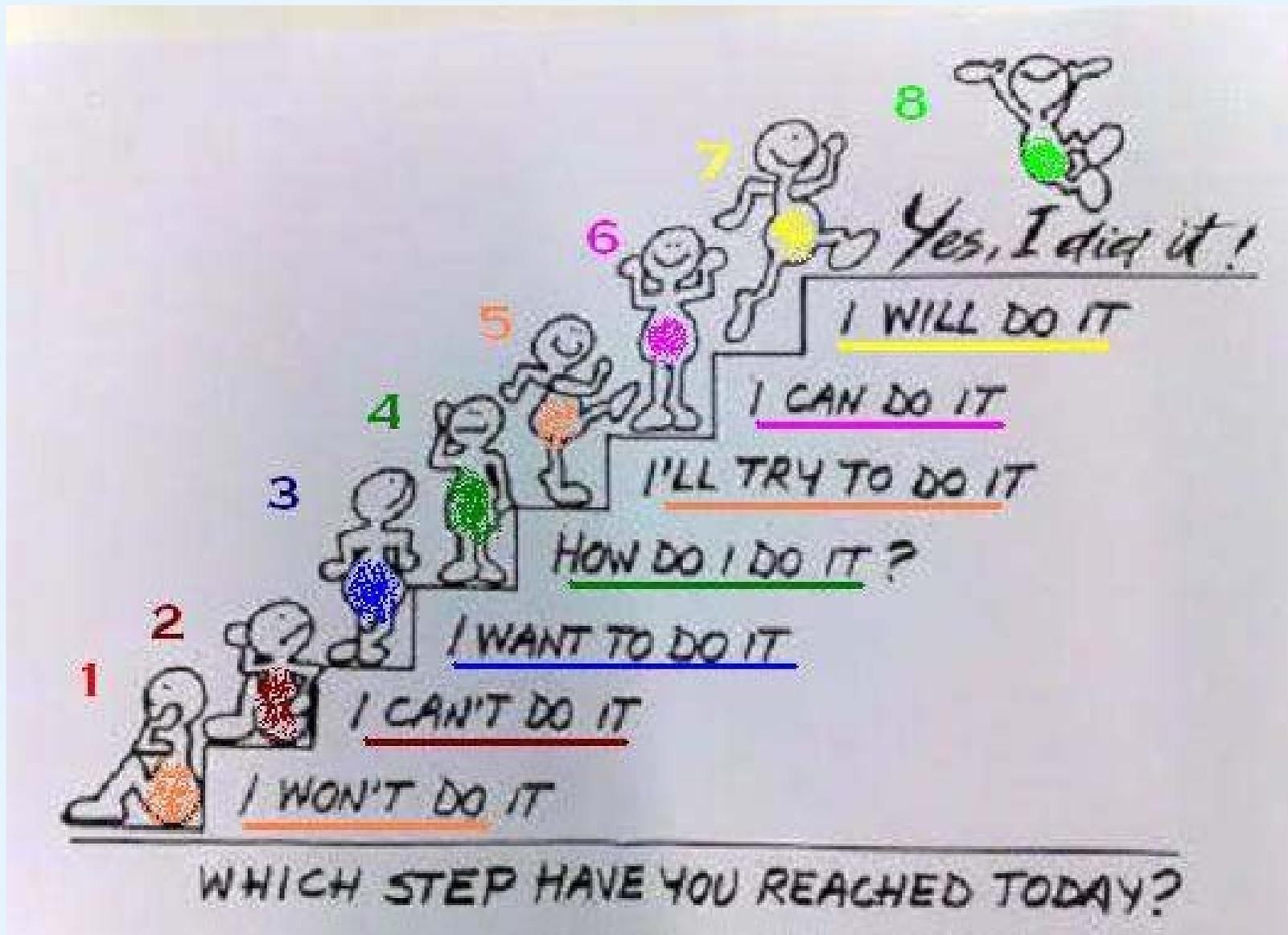


Executive Skills STRATEGIES





**I WON'T DO IT
I CAN'T DO IT
I WANT TO DO IT
HOW DO I DO IT ?
I'LL TRY TO DO IT
I CAN DO IT
I WILL DO IT**





One at a time!



Strategy Framework

Behavior	Modification/Accommodation	Strategy
Identify the Target Behavior (include student)	Determine related classroom and/or home modifications or accommodations	Determine direct strategy to be taught and plan for teaching it.

Plan for monitoring and reinforcement:



Modifications/Accommodations



- Changing the environment to adjust for executive skills limitations.
- Providing supports, controls, schedules
- Moving towards independence from the beginning



Modifications/Accommodations

Changing the Physical or Social Environment

- Type teacher to whom a student is assigned
- Seat in classroom
- Number of students in room
- Design of classroom

Changing the Nature of the Task

- Shorter assignments
- Multiple choice
- Choice in activities
- Copies of notes
- Assignments broken down
- Scoring rubrics



Modifications/Accommodations

Changing the Ways Cues are Provided

- Verbal reminders
- Visual cues
- Schedules
- Lists

Changing the Way Adults Interact with Students

- Level of supervision, support, cueing
- Modeling the active use of executive skills
- Talk through and coach the use of executive skills.

Dawson & Guare



Motivating students and reinforcing use of Executive Skills

- Try motivating, rather than imposing penalties (Talk to kids in terms of what they can do, not what they are doing)
- Help students learn to self talk to motivate use of executive skills
- Determine rewards and consequences that are understandable, manageable, and meaningful
- Write a behavior contract
- Have a system to fade reinforcement at the onset

Dawson & Guare

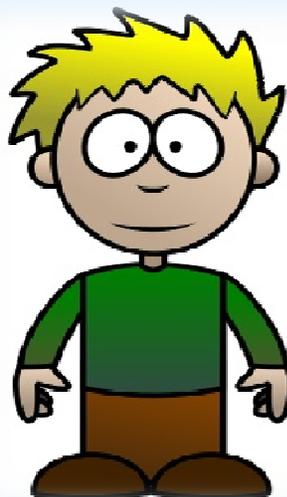


Success Map for Teaching Strategies

Being Deliberate

Name the Strategy

Include the student...he will be the one using it.



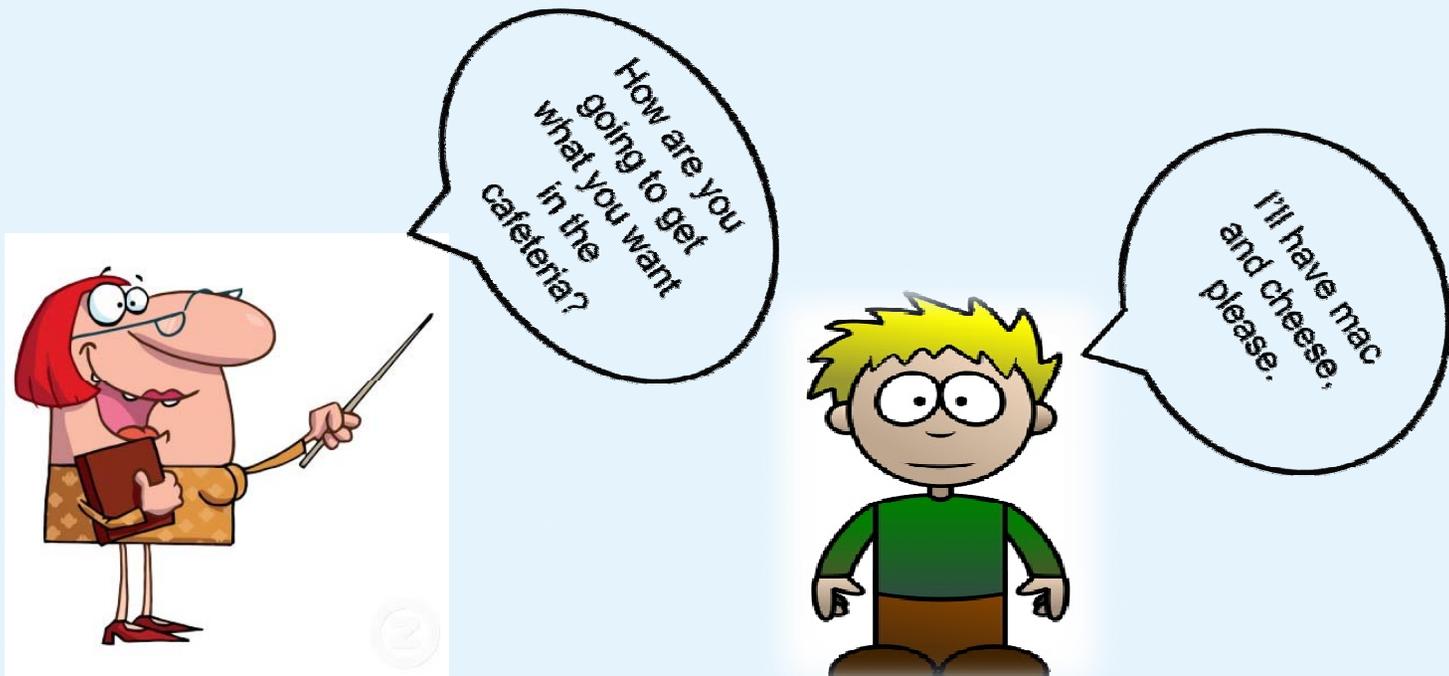


Success Map for Teaching Strategies

Being Deliberate

Make the strategy come alive.

Use social stories, role plays, pictures, books, modeling.

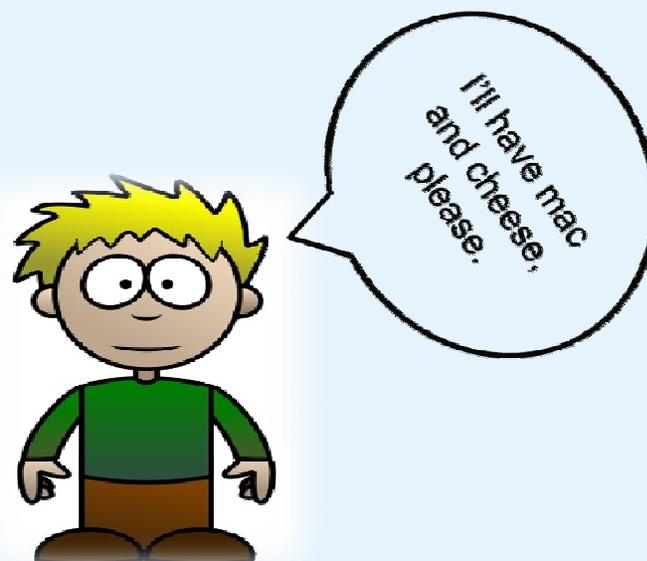




Success Map for Teaching Strategies Being Deliberate

Give opportunities to practice the strategy.

In one-on-one and small group, have student practice using the strategy.
Reinforce successful use.





Success Map for Teaching Strategies Being Deliberate

Fade support.

As the student begins to use the strategy, fade support and reinforcement.



Way to go!



I'll have
pizza and
corn, please!



Success Map for Teaching Strategies

Being Deliberate

Monitor.

Monitor the use of the strategy and reinforce, as planned.



I love the way
you are using
your strategy to
make choices.



I want to play
soccer at
recess.



IEP Goals/Objective Operatives

Use the Common Core Standards as a guide to goal setting.

- To verbalize
- To visualize
- To answer questions
- To ask questions
- To sequence
- To predict
- To explain
- To plan
- To complete a task
- To define
- To recall
- To categorize
- To list
- To set goals



Improving Executive Skills

The Bottom Line



References

Dawson, P & Guare, R. (2010) Executive skills in Children and Adolescents-A Practical Guide to Assessment and Intervention, Second Edition. New York: The Guildford Press.

Dawson, P. & Guare, R. (2012) Coaching Students with Executive Skills Deficits. New York: The Guildford Press.

Dawson, Peg & Guare, Richard (2009). Smart but Scattered. The Revolutionary “Executive Skills” Approach to Helping Kids Reach Their Potential.

Gottschall, C.P. & Rozendaal, C.L. (2011). Executive Functions Training-Elementary. Illinois: LinguiSystems, Inc.

Richard, G.J. & Fahy, J.K. (2005). The Source for Development of Executive Functions, Illinois: LinguiSystems, Inc.

Institute for Human Adjustment, University of Michigan www.dyslexiahelp.umich.edu

National Center for Learning Disabilities www.nclld.org

All Kinds of Minds www.allkindsofminds.org

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Executive Skills Functioning Self-Assessment Rating Scale

This Self Assessment is for training purposes only.

It is a compilation of many different scales from a variety of sources listed in the Bibliography.

Working Memory	Seldom	Sometimes	Frequently
Holding facts in mind while manipulating information and completing a task. Accessing facts stored in long term memory.			
1. Difficulty remembering details			
2. Difficulty following directions (particularly oral)			
3. Forgetful			
4. Difficulty completing tasks			
5. Difficulty with multi-step tasks			
6. Loses focus/easily distracted			
7. Does not remember what was just heard or read			
8. Overwhelmed/frustrated by too much information			

Comments: _____

Planning and Prioritizing	Seldom	Sometimes	Frequently
The ability to create a roadmap to reach a goal			
1. Difficulty setting long and short term goals			
2. Difficulty developing a timeline for projects			
3. Becomes overwhelmed juggling responsibilities			
4. Difficulty knowing where to start			
5. Not prepared			
6. Difficult time judging how long something will take			
7. Gets caught up in the details and misses big picture			
8. Has good ideas, but does not follow through			

Comments: _____

Organization	Seldom	Sometimes	Frequently
The ability to arrange things according to a system			
1. Difficulty organizing “stuff”			
2. Messy			
3. Loses things needed or work that has been done			
4. Difficulty expressing ideas			
5. Difficulty maintaining a sequence			
6. Late			
7. Careless			

Comments: _____

Time Management	Seldom	Sometimes	Frequently
The ability to estimate how much time one has, how to allocate time, and how to stay within time limits and deadlines			
1. Difficulty working efficiently			
2. Difficulty developing timelines for projects			
3. Difficulty following a schedule			
4. Difficulty estimating time			
5. Late			
6. Difficulty deciding what to focus on first			

Comments: _____

Metacognition	Seldom	Sometimes	Frequently
The ability to stand back and take a bird’s eye view of oneself in a situation; the ability to self monitor and self evaluate			
1. Difficulty time thinking abstractly			
2. Difficulty problem solving			
3. Difficulty taking another person’s perspective			
4. Unaware socially			
5. Unaware of how behavior impacts others			
6. Difficulty handling criticism			
7. Unaware of errors in work/difficulty checking over work			
8. Difficulty talking through situations			

Comments: _____

Response Inhibition The capacity to think before acting.	Seldom	Sometimes	Frequently
1. Interrupts, speaks out of turn, speaks without thinking			
2. Procrastinates while doing other non-task related things			
3. Rushes through without reading directions			
4. Inconsistent			
5. Risk taker			
6. Jumps to conclusions			
7. Acts without thinking			
8. Difficulty with delayed gratification			

Comments: _____

Emotional Control The ability to manage emotions to achieve goals	Seldom	Sometimes	Frequently
1. Overacts			
2. Difficulty calming down and working			
3. Explosions or angry outbursts			
4. Cries easily			
5. Frequent mood changes			
6. Impatient			
7. Low frustration tolerance			

Comments: _____

Sustained Attention The capacity to maintain attention to a situation or task in spite of distractibility, fatigue, or boredom	Seldom	Sometimes	Frequently
1. Easily sidetracked			
2. Short attention span			
3. Becomes overwhelmed juggling responsibilities			
4. Difficulty completing work			
5. Overwhelmed by length/complexity of tasks to be done			
6. Rushes through work			
7. Difficulty noticing details			
8. Forgets assignments or materials to complete them			

Comments: _____

Task Initiation The ability to begin projects without procrastination, in an efficient or timely fashion	Seldom	Sometimes	Frequently
1. Difficulty starting work			
2. Difficulty following multi-step projects			
3. Becomes overwhelmed juggling responsibilities			
4. Stares at work, but does not begin it			
5. Completes work late			
6. Procrastinates			
7. Appears to be working			

Comments: _____

Goal-Directed Persistence The ability to have a goal, follow through to the completion of the goal, and not be distracted by competing interests	Seldom	Sometimes	Frequently
1. Difficulty following through on goals			
2. Difficulty seeing connection between work and long term goals			
3. Difficulty beginning a task			
4. Difficulty getting back on task if interrupted			
5. Difficulty completing tasks			
6. Difficult time with delayed gratification			
7. Gives up			
8. Easily diverted from a plan or schedule			

Comments: _____

Flexibility The ability to shift to a different thought or action according to changes in a situation	Seldom	Sometimes	Frequently
1. Difficulty with transitions			
2. Does not tolerate change in plans, schedule, or strategy			
3. Perseverates on thoughts, ideas, activities			
4. Frustrated by interruptions			
5. Difficult time continuing after an interruption			
6. Abandons tasks when they do not go as planned			
7. Does not address problems that arise			
8. Feels anxious about change			

Comments: _____



Executive Skills Strategies

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Executive Skill	Deficits	Accommodations	Strategies
Working Memory	<ul style="list-style-type: none"> • Looks like he is daydreaming • Difficulty remembering details • Forgetful • Short attention span • Puts hand up to answer, but forgets what he wanted to say • Difficulty sequencing events to complete • Difficulty completing activities/abandons activities • Forgets how to do a task in the middle of it. • Difficulty taking notes 	<ul style="list-style-type: none"> • Simplify directions • Provide preferential seating • Provide purposeful checks for understanding • Provide structure to tasks • Provide copies of notes • Provide rubrics for assignments 	<ul style="list-style-type: none"> • Checklists • “How to” lists • Outlines • Visualization and Association • Verbal rehearsal • Chunking of information • Mnemonic strategies • Flash cards • Visual calendars, organizers, planners • Method of Loci • Exercises to improve WM
Planning/Prioritization 6 Ps of Planning: Proper prior planning prevents poor performance. (Bizmove.com)	<ul style="list-style-type: none"> • Unprepared for class • Difficulty developing a time line for projects • Overwhelmed when juggling assignments • Trouble with main idea or determining important information • Difficulty setting goals • Difficulty determining the most important thing to do first and following through • Starts working at last minute 	<ul style="list-style-type: none"> • Post materials checklist outside the classroom door • Provide schema for timelines • Provide guided “highlighting” activities • Develop a behavior plan for being prepared 	<ul style="list-style-type: none"> • Check lists • “How to” lists • Organizers/binders • Color coding • Calendars/day planners • Schedule planning time • Plan for tomorrow, tonight • Think in sequence-Use key words to remember • Put plan in writing • First ten minutes: look over the plan for the day

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<p>Organization</p>	<ul style="list-style-type: none"> • Unprepared for class • Frequently comes late to class • Does sloppy or incomplete work • Doesn't turn in work that has been done • Loses or misplaces things • Work area, book bag, notebooks are messy • Has good ideas, but cannot follow through • Written work is difficult to follow • Misses the main idea, gets bogged down in details. • Lacks study skills 	<ul style="list-style-type: none"> • Develop a plan to check for organization of materials (Binder checks) • Provide a reward system for punctuality • Divide work into chunks for neat, well thought through answers • Provide time to plan before beginning an activity then signal for the student to begin • Make use of word processor when writing so that organizing/revising becomes part of the process • Check for understanding of main idea. 	<ul style="list-style-type: none"> • Checklists, "How to" lists • Reflect on why punctuality is difficult. Get rid of obstacles. • Develop a plan to be on time • Use planning time to organize thoughts and the activity • Chunking • Use word processor and the writing process for written assignments. • Self questioning strategies • Take a study skills class
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Time Management	<ul style="list-style-type: none"> • Difficulty working efficiently • Difficulty following a schedule • Frequently late to class • Difficulty trying to decide what to do first • Difficulty developing a timeline for projects • Has hard time estimating time • Difficulty learning to tell time • Doesn't turn in work on time • Wastes time 	<ul style="list-style-type: none"> • Provide a syllabus for semester projects • Provide daily visual or written schedules • Give transition warnings • Have student verbally state an estimate of working time before starting • Grade work turned in and then increase amount expected • Provide timers 	<ul style="list-style-type: none"> • Use schedules, day planners, calendars • Use timers and watches • Plan in terms of increments of time • Write a "task schedule" to complete an assignment • Verbally estimate time it will take to do the task • Practice sequencing skills • Self reward for staying on schedule
Metacognition	<ul style="list-style-type: none"> • Difficult time talking through situations, even when concrete • Difficult time thinking abstractly • Difficulty recognizing and discussing strengths and weaknesses • Difficulty knowing how he/she learns best • Easily frustrated • Loses sight of goals • Difficulty accepting corrective criticism • Difficulty finding careless mistakes • Not aware of other people's feelings and perception 	<ul style="list-style-type: none"> • Model "talking through" stories, problems, projects • Provide visuals/outlines for talk throughs • Provide one to one opportunities to practice talking through • Use social stories • Before turning in assignments for a grade, let child grade his own paper and correct errors • Use three pluses and a wish 	<ul style="list-style-type: none"> • Practice talking through stories, situations, projects • Make talk throughs a habit • Goal setting rubrics • Ask for help • Use feeling rubrics to judge frustration levels • Use feeling rubrics to determine how others feel • Use social stories • Role play • Check your work with a teacher's eye • Self monitoring rubrics • Self assessments before, during, after



Response inhibition	<ul style="list-style-type: none"> • Calls out • Interrupts • Acts wild/"out of control" • Jumps to inappropriate conclusions • Is a risk-taker or dare devil • Needs immediate feedback (delayed gratification is difficult) 	<ul style="list-style-type: none"> • Model conversational rules and guidelines • Social stories • Visual signals • "Call out" cards 	<ul style="list-style-type: none"> • Social stories • Role plays • Social groups • Visual reminders • Verbal rehearsal • Stop-Wait Cues
Emotional Control	<ul style="list-style-type: none"> • Tends to over-react • Impulsive • Can have angry outbursts • Can have mood changes • Angry • Fearful • Cries easily • Low frustration tolerance • Worries • Meltdowns • Impatient 	<ul style="list-style-type: none"> • Model appropriate self-regulation • Verbalize problem solving in stressful situations • Write social stories with the student • Use emotional rating scales or thermometers • Be attuned to the student's emotional state to avoid meltdowns and rage • Provide a safe, calm place to de-escalate • Allow student to take an emotional break from the frustrating situation. 	<ul style="list-style-type: none"> • Role plays • Social groups • Emotional rating scales and thermometers • Visual cues • Verbal rehearsal • Self calming techniques (breathing, eyes closed, counting)



Sustained Attention	<ul style="list-style-type: none"> • Easily distracted • Difficulty staying with tasks and completing assignments 	<ul style="list-style-type: none"> • Provide signals to redirect • Provide periodic checks to ensure on task behavior • Preferential seating • Break work up into smaller units, then increase the amount required 	<ul style="list-style-type: none"> • Use listening strategies • Create a success map for completing the assignment • Chunk assignments and reward for staying with the task • Self checks for understanding and on-task behavior • Ask questions during verbal lessons
Task Initiation	<ul style="list-style-type: none"> • Has difficulty getting started • Looks like he/she is getting ready to work, but isn't • Procrastinates 	<ul style="list-style-type: none"> • Provide structure and routine • Provide a schedule for tasks • Stay close to the student until the task is begun • Reward beginning task 	<ul style="list-style-type: none"> • Get the pencil moving strategy • Work first/then cues • Self reward getting started on a task

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<p>Goal-Directed Persistence</p>	<ul style="list-style-type: none"> • Difficulty following through on goals set • Hard time seeing connection between work and long term y goals • Difficulty beginning a task • Difficulty getting back on task if interrupted • Difficulty completing tasks • Difficulty with delayed gratification • Gives up • Easily diverted from a plan or schedule • Behavior implies they don't care 	<ul style="list-style-type: none"> • Model goal setting and follow through • Guided talk through of student's goals and periodic checks for follow through • Provide written "task schedule" for completion • Provide cues for student beginning a task • Separate how you feel about the student's work from feelings about the student 	<ul style="list-style-type: none"> • Set goals • Develop a plan and timeline for meeting goals • Self reward for beginning and sticking with a task to completion • Have a plan for continuing work if interrupted (stand up and stretch, eyes shut) • Talk through goals and tasks that have to be done to complete. Write them down.
<p>Flexibility</p>	<ul style="list-style-type: none"> • Resists change • Difficulty with open ended questions and assignments • Gets upset with changes to schedule or routine. • Difficulty with transitions • Difficulty generating creative strategies to solve problems 	<ul style="list-style-type: none"> • Maintain a structured learning environment • Prepare student for schedule changes • Validate frustration, but emphasis that a change is not a bad thing • Provide social stories and visual cues for unexpected change 	<ul style="list-style-type: none"> • Practice flexibility exercises (generating multiple responses to situations) • Visual /written schedules • Self talk • Social stories • Role play • Participate in "structured chaos" activities

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