



# **Executive Function: The Gateway to Success!**

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# OBJECTIVES

Participants will:

- Understand the connection between executive functioning and being successful in education, work, relationships, and life
- Understand how executive functions manifest into observable management areas and are foundational to everything we do
- Discuss and practice addressing executive disfunction with multiple strategies

# PLANNING A TRIP - ACTIVITY

- You receive an email inviting you to attend your family reunion that is happening in 6 months at an out of state location. You, your partner, and 3 children decide to attend. You have a dog and 3 cats.
1. **Make a list** of all the things that need to be done to plan and take this family reunion trip.
  2. **Type in chat** the top 5 to-do **actions** and possible **barriers** to following through.



# IN THE WORLD BEYOND SCHOOL...

What are the characteristics of a successful independent learner and productive citizen?

*At home?*

*At work?*

*In College?*

*In relationships?*

(TYPE IN CHAT)

# SUCCESS IN SCHOOL

Top 10 Skills as identified by a survey of 8,000 teachers (Elliot & Grisham, 2006)

- Listen to others
- Follow the steps
- Follow the rules
- Ignore distractions
- Take turns when you talk
- Ask for help
- Get along with others
- Stay calm with others
- Be responsible for your behavior
- Do nice things for others

# PREPARES YOUNG PEOPLE FOR SUCCESS IN ADULTHOOD

Common list of soft skills employers want:

- Social skills, interests, involvement
- Communication skills
- Interpersonal abilities
- Problem solving
- Teamwork
- Adaptability/flexibility



# EXECUTIVE FUNCTIONS DEFINED

- **Cognitive processes** that enable individuals to engage in **goal-directed or problem-solving** behavior  
(Council for Exceptional Children, 2011)
- Allow us to **organize our behavior** over time and **override immediate demands** in favor of longer-term goals  
(Dawson & Guare, 2010)

# EXECUTIVE FUNCTIONS (Dawson & Guare)

Executive Function	Definition	Signs of Difficulty	Executive Function	Definition	Signs of Difficulty
<b>Emotional Control</b>	Regulates emotion to be appropriate to situation	Easily upset or excited, overreacts, frequent mood changes	<b>Working Memory</b>	Holding information in mind while performing other tasks	Forgets assignments, materials, classroom procedures, remembers only part of directions
<b>Inhibit</b>	Delays certain activities or response for sake of others	Distractible or impulsive, cannot delay gratification	<b>Shift</b>	Smoothly transitioning from one task to another	Difficulty coping with changes in routine, thinking "outside of the box"
<b>Goal Setting/ Planning</b>	Setting goals and identifying steps to take	Sets unrealistic goals, starts work at last minute, fails to anticipate consequences	<b>Self-Monitor</b>	Assessing progress toward goal or effect on others	Doesn't notice how others react to behavior, asks for help rather than trying first, avoids problem-solving games
<b>Organize</b>	Establishing order in a place or activity	Scattered, disorganized approach to solving problems, materials			
<b>Initiate</b>	Begin a task or activity	Trouble getting started, may appear defiant			



# EXECUTIVE FUNCTIONING...

Is **sharply reduced** when:

- executive functioning capacity must be devoted to managing “lower level” (cognitive) skills and responses which are not automatic or fluent thus the capacity for “higher level” (metacognitive) functions is taken; (takes up mental desk space)
- executive capacity itself is reduced due to some sort of higher-level disability or to lack of fluency with executive strategies.

[UDL Guidelines](#)

# EFFORTS TO EXPAND EXECUTIVE CAPACITY...

In two ways:

- by **scaffolding lower level skills** so that they require less executive processing; and
- by **scaffolding higher level executive skills and strategies** so that they are more effective and developed.

[UDL Guidelines](#)

# NEURONS THAT FIRE TOGETHER, WIRE TOGETHER

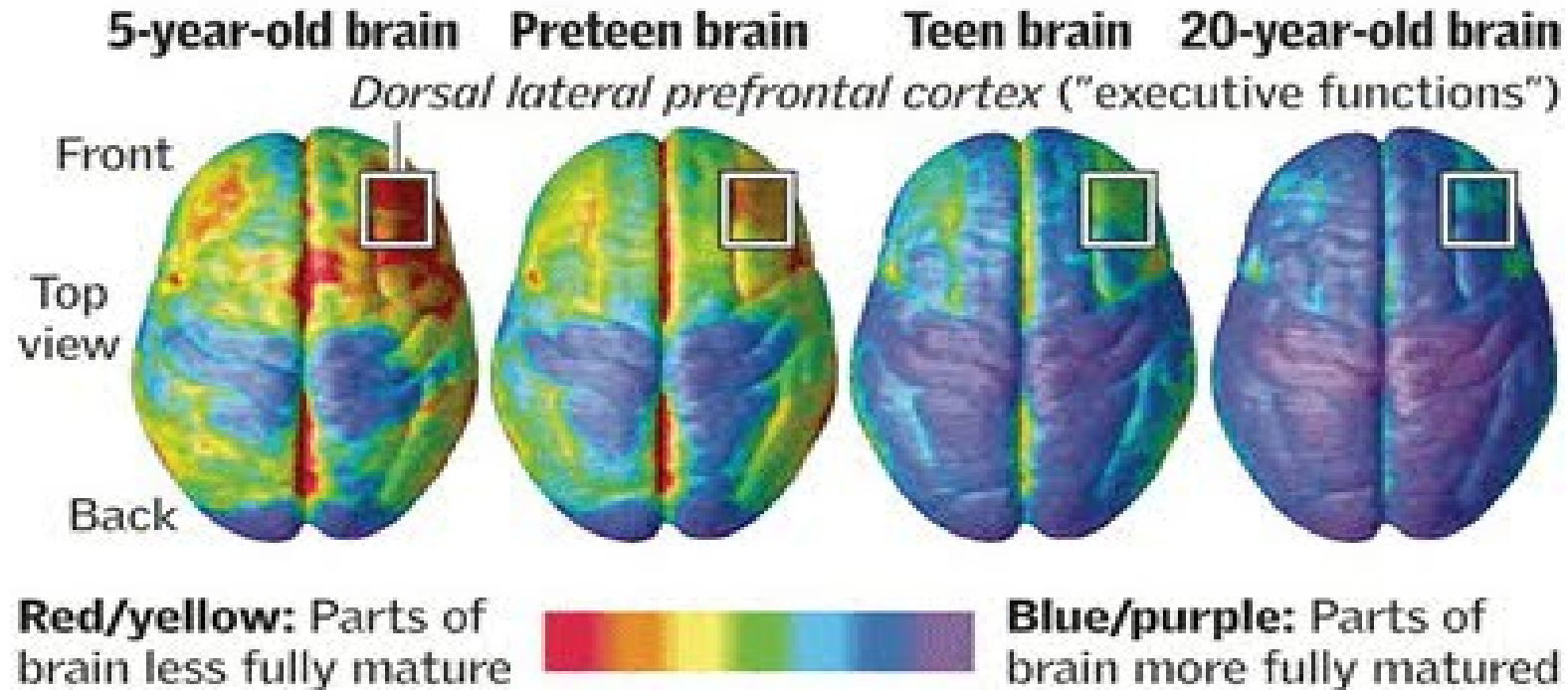
- ALL BRAINS can develop executive function skills
- Brain pathways only get better at something by doing it repeatedly
- Myelin sheaths grow in the brain by DOING

## ***THIS MEANS...***

- Our planning and teaching must be intentional
- Strategies need to match challenges
- Repetition of strategies must be planned



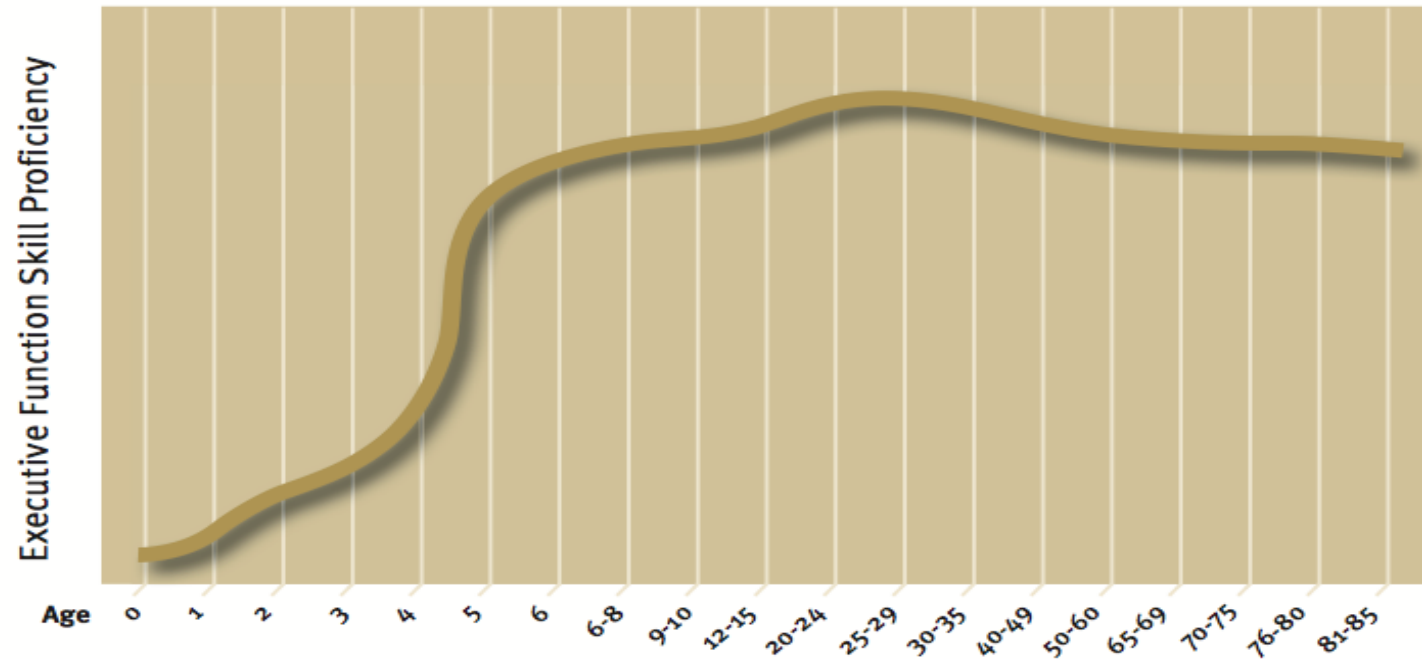
# HOW DO EXECUTIVE FUNCTIONS DEVELOP?



*Sources: National Institute of Mental Health;  
Paul Thompson, Ph.D., UCLA Laboratory of  
Neuro Imaging*

**Thomas McKay** | The Denver Post

## Executive Function Skills Build Throughout Childhood and Adolescence



A range of tests measuring different forms of executive function skills indicates that they begin to develop shortly after birth, with ages 3 to 5 providing a window of opportunity for dramatic growth in these skills. Growth continues throughout adolescence and early adulthood; proficiency begins to decline in later life.

Source: Weintraub et al. (In Press).<sup>99</sup>

## RESOURCE: LEARN MORE ABOUT EF DEVELOPMENT

“Executive function and self-regulation skills are like an air traffic control system in the brain—they help us manage information, make decisions, and plan ahead. We need these skills at every stage of life, and while no one is born with them, we are all born with the potential to develop them.”

### [A Guide to Executive Functioning](#)

Center on the Developing Child, Harvard University

# WHO STRUGGLES WITH EXECUTIVE DYSFUNCTION?

➤ Difficulties with Executive Functioning are associated with learning challenges and a greater likelihood of behavior problems, and they are a prominent feature of many emotional and behavioral disorders (EBDs); neurodevelopmental disorders (e.g., attention deficit hyperactivity disorder (ADHD); autism spectrum disorders (ASD); and specific learning disabilities that interfere with children's education. [Executive Functions: Implications for Education](#)

➤ “Some children may need more support than others to develop these skills.”

“Adverse environments resulting from neglect, abuse, and/or violence may expose children to toxic stress, which disrupts brain architecture and impairs the development of executive function.” [Developing Child – Harvard University](#)

➤ Temporary Executive Dysfunction can be the result of concussions and other head injuries

**HOWEVER, the good news is...**

**Executive Function skills are malleable**, meaning they can change and are influenced by both positive and negative experiences. For example, stress, poverty, and disadvantage are associated with worse Executive Function skills. **However, supportive caregiving, high quality early education, and even practice can help improve Executive Function skills.**



# HOW EXECUTIVE FUNCTIONS MANIFEST

- Self Management
- Time Management
- Materials Management
- Information Management



## MANIFESTATION AREA: SELF-MANAGEMENT

- Taking responsibility for your own behavior, actions, and well-being
  - Self-regulation
  - Sensory regulation
  - Social competence
  - Impulse control

### *Executive Functions:*

Emotional Control

Inhibitory Control

Initiating

Shifting

Self-Monitoring

# MANIFESTATION AREA: TIME-MANAGEMENT

- Ability to use time effectively and productively
  - Understand the abstract concept of time
  - Chunk routines/projects into pieces and know how long each piece will take
  - Know when to start, how long to work, when to stop

## *Executive Functions:*

Goal Setting

Planning

Initiating

Working Memory

Shifting

Self-Monitoring

# MANIFESTATION AREA: MATERIALS-MANAGEMENT

- Ability to manage the “stuff” of school
  - Having the right materials at the right time
  - Knowing everything has a place
  - Remembering to keep things in their place

## *Executive Functions:*

Organizing

Initiating

Working Memory

Shifting

Self-Monitoring

# MANIFESTATION AREA: INFORMATION-MANAGEMENT

- Ability to acquire, retain, and use information
  - Can take notes
  - Can organize facts, information
  - Can manipulate information in creative ways

## *Executive Functions:*

Goal Setting

Organizing

Initiating

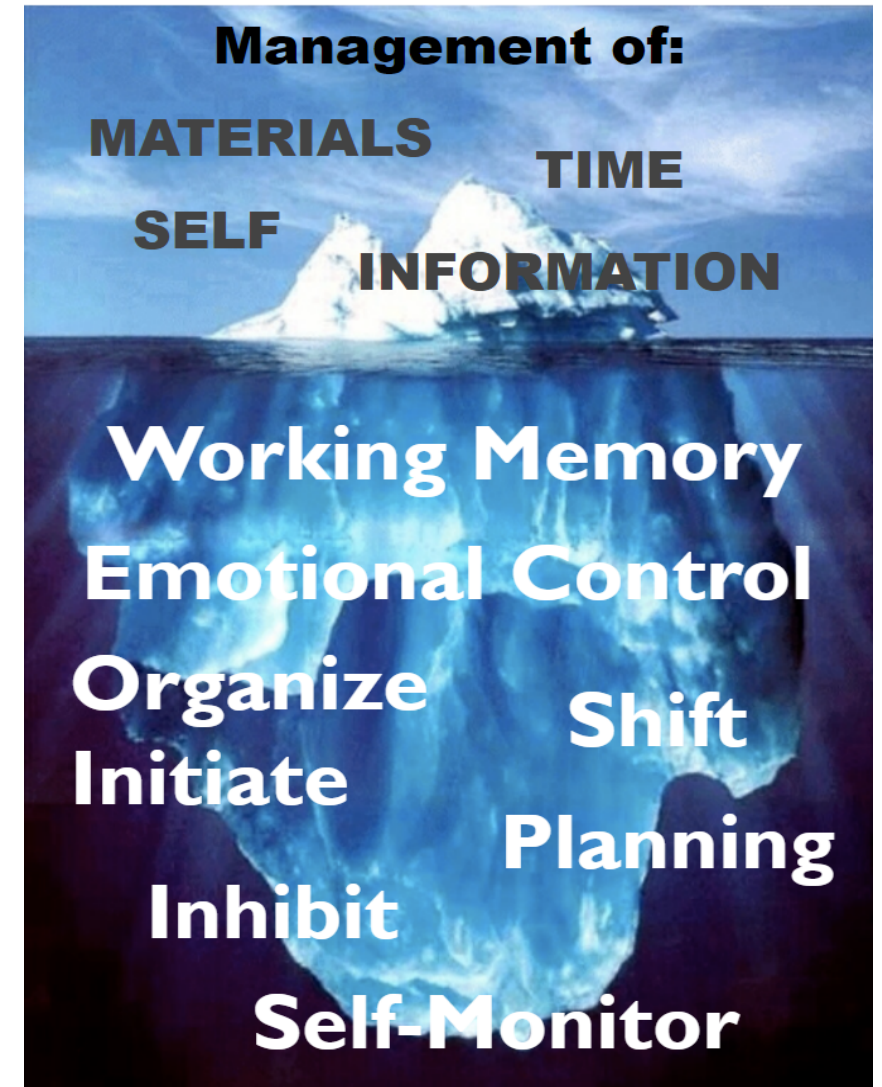
Working Memory

Shift

Self-Monitoring

# WHAT YOU SEE ON A DAILY BASIS...

*might really be impacted by what is happening below the surface.*



# ASSESSING EXECUTIVE FUNCTION

## “Can’t do, or won’t do?”

Be an Executive Function detective: find out what the child is capable of, and under what circumstances.

- Informants can include parent, teachers, past teachers, coaches, student (observation, work samples, interview)
- Be comprehensive using standardized and informal assessments

Assessment Approach	Informal Method	Formal Method
Indirect	<ul style="list-style-type: none"> <li>• Interviews of parents and teachers</li> <li>• Review of school records</li> <li>• Interpretation of parent and teacher ratings and self-reports</li> </ul>	<ul style="list-style-type: none"> <li>• Parent behavior ratings</li> <li>• Teacher behavior ratings</li> <li>• Self-report ratings</li> </ul>
Direct	<ul style="list-style-type: none"> <li>• Child interview</li> <li>• Systematic and nonsystematic behavioral observations</li> <li>• Interpretation of standardized tests</li> <li>• Administration and classroom work samples</li> </ul>	<ul style="list-style-type: none"> <li>• Individually administered standardized tests</li> </ul>



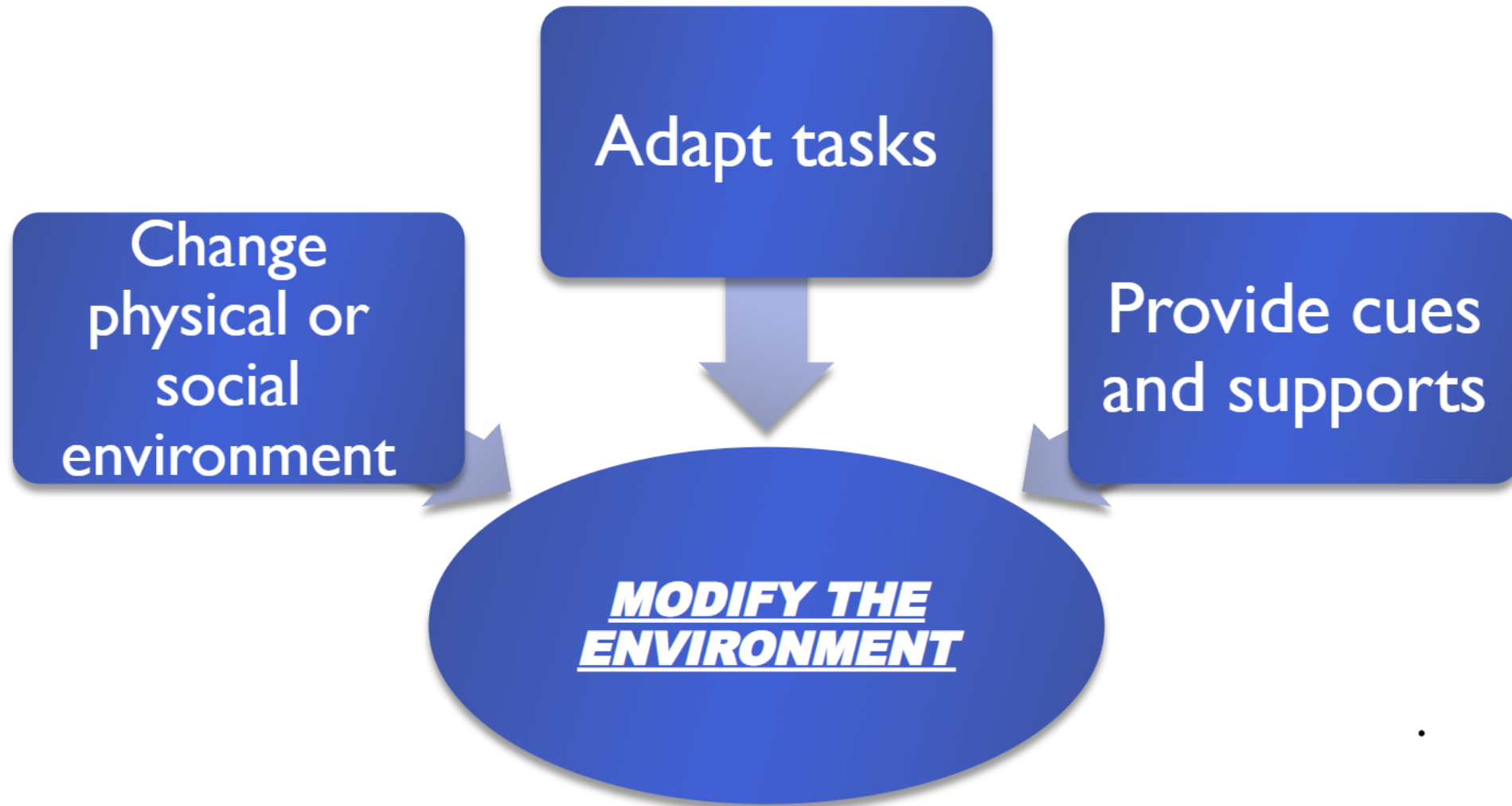
# CONSIDERATIONS WHEN TEACHING EXECUTIVE FUNCTION SKILLS

- Consider the developmental progression of skills:  
**What is an age-appropriate expectation?**
- Consider whole group, small group, individual:  
**Could this support help everyone?**

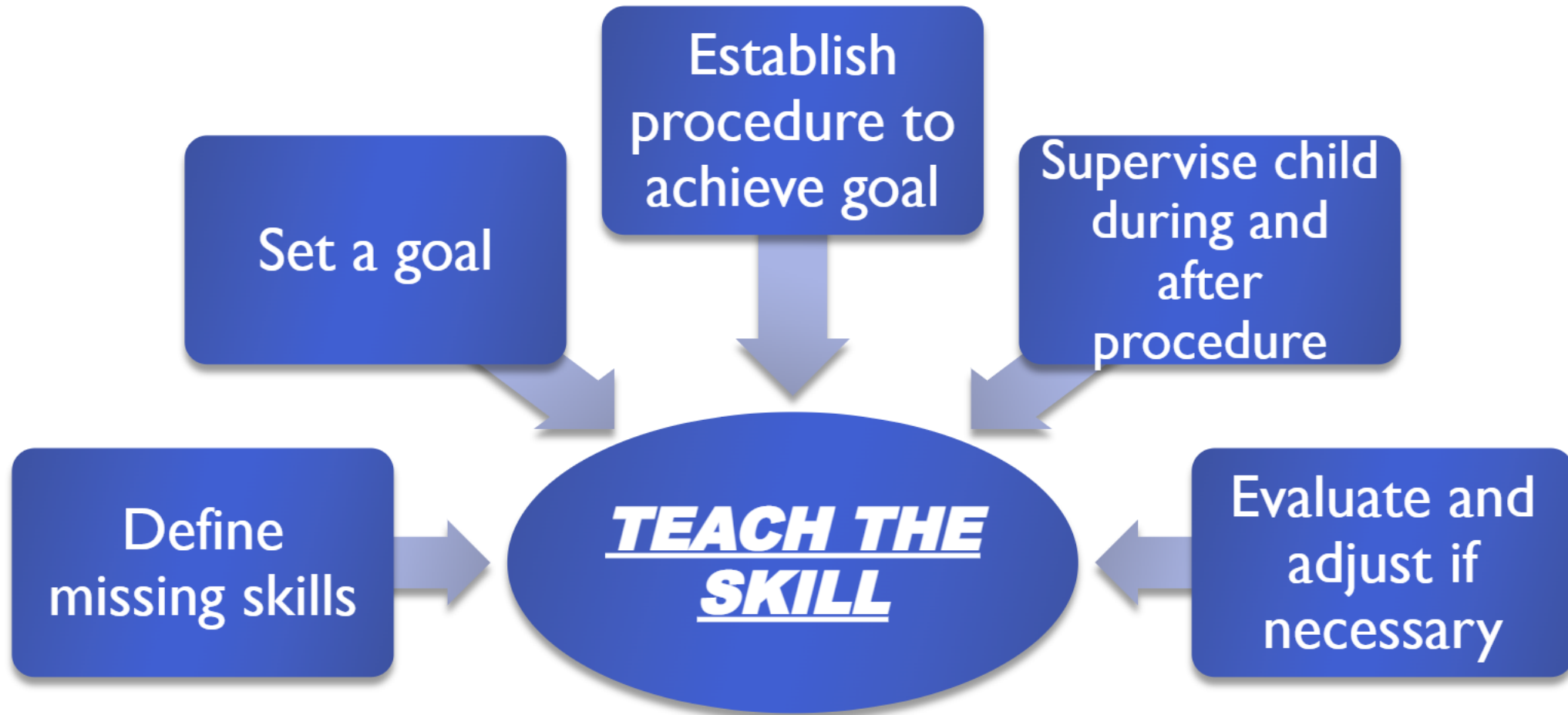
# HOW TO MANAGE EXECUTIVE FUNCTION CHALLENGES

- Modify the environment
- Teach the skill
- Use incentives

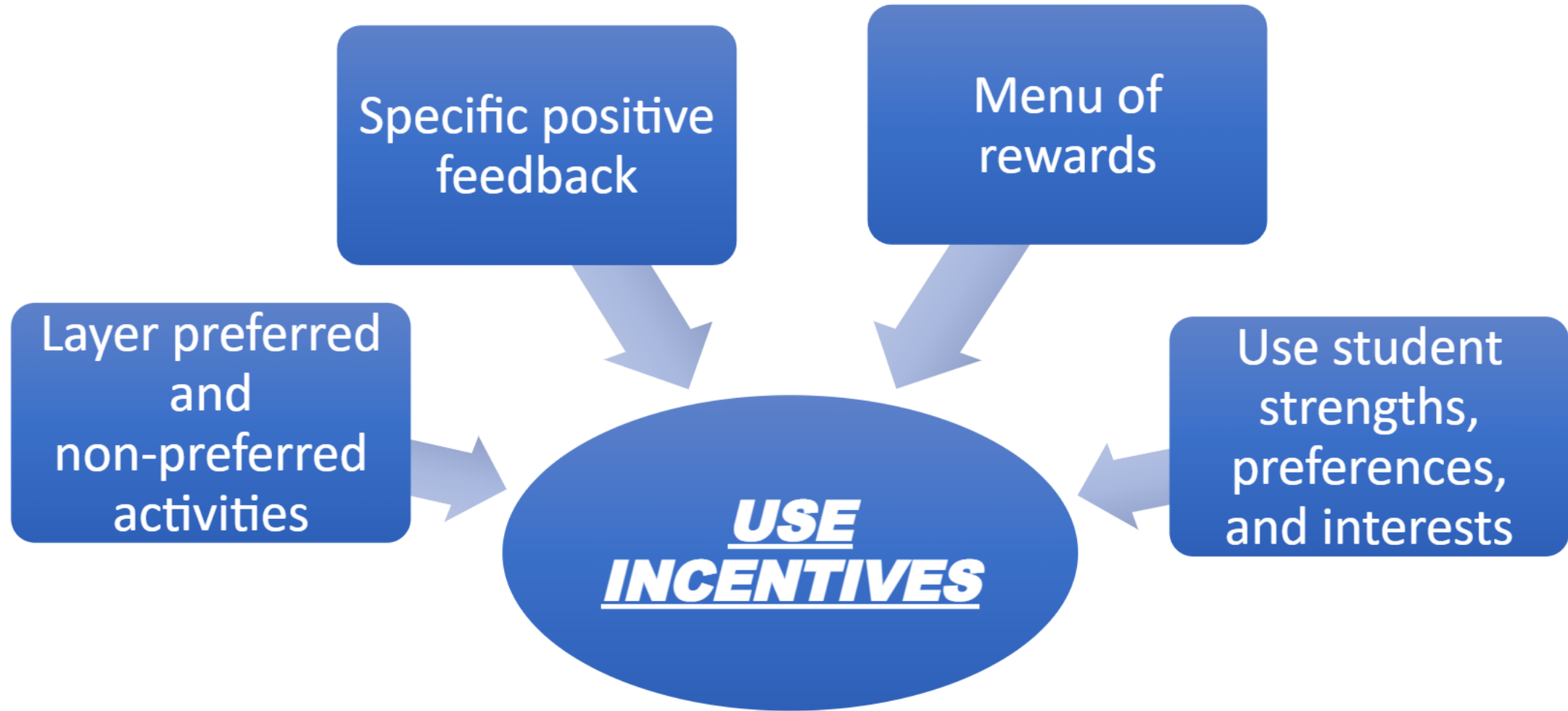
Dawson & Guare, 2010



*Dawson & Guare (2010)*



***Dawson & Guare (2010)***



*Dawson & Guare (2010)*

# REVIEW & REFLECT - ACTIVITY

Think back to the Family Reunion activity where you listed what you would need to do.

Which method would have been effective in bridging barriers to make the to-do list more effective?

- Modify the environment
- Teach the Skill
- Use Incentives



# Executive Function Student Profile

## Executive Functioning Student Profile

Student \_\_\_\_\_ Grade \_\_\_\_\_ School \_\_\_\_\_ Year \_\_\_\_\_ Teacher/s \_\_\_\_\_

Executive Function Areas	What Need to be Taught EXPLICITLY (Missing skill/s)	Strategies (Including Environmental)	Tools/Supports	Plan of Action (including Incentives)
Time Management				
Materials Management				
Self Management				
Information Management				

Notes:



**Thank you!**

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<https://www.sst8.org>