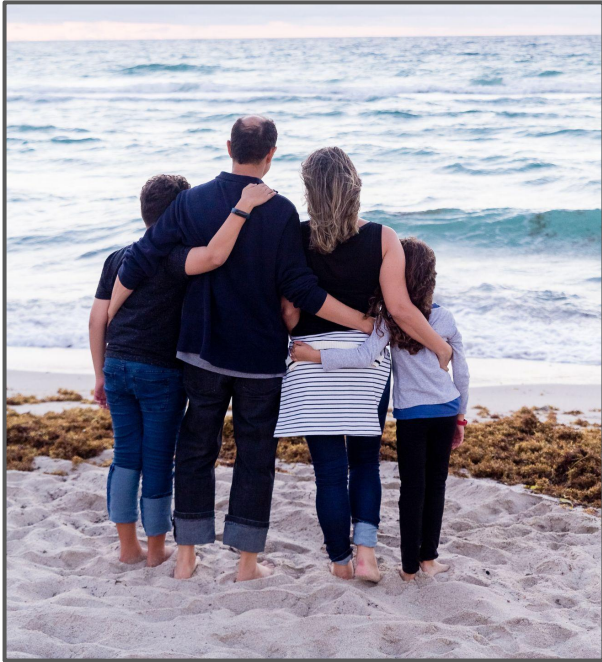




# **Systems to Support Children with Executive Function Challenges**

**Presented By:**  
**Kathleen Downing, MAT**

# Welcome



I'm very happy to be with you today to present some information that will make your child's life less frustrating and your whole family's life more peaceful. It will take some time and teamwork but can have life-long results. By the end of our talk, you'll have a better understanding of executive functions, your child's abilities, and your role in helping them become more independent and successful.

# Teacher • Mentor • Coach



- Master's Project/Thesis on Supporting Student's EF at home
- Son diagnosed at 9 with TS and other comorbid conditions
- Michigan TAA volunteer for 17 years
- 15+ years General Ed, Intervention, & Special Ed Teacher
- Currently teaching high school students with autism
- EF Consultant - systems for struggling students and families

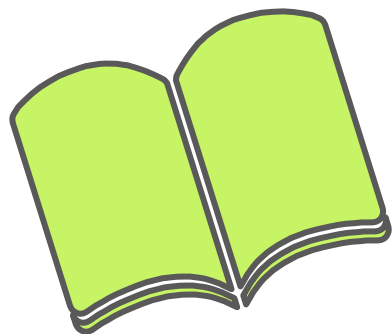
# Goals for Today

I can identify the appropriate EF level of my child.

I can set up an appropriate hub system in my home.

I can motivate my child to use that system.

# What is Executive Function?

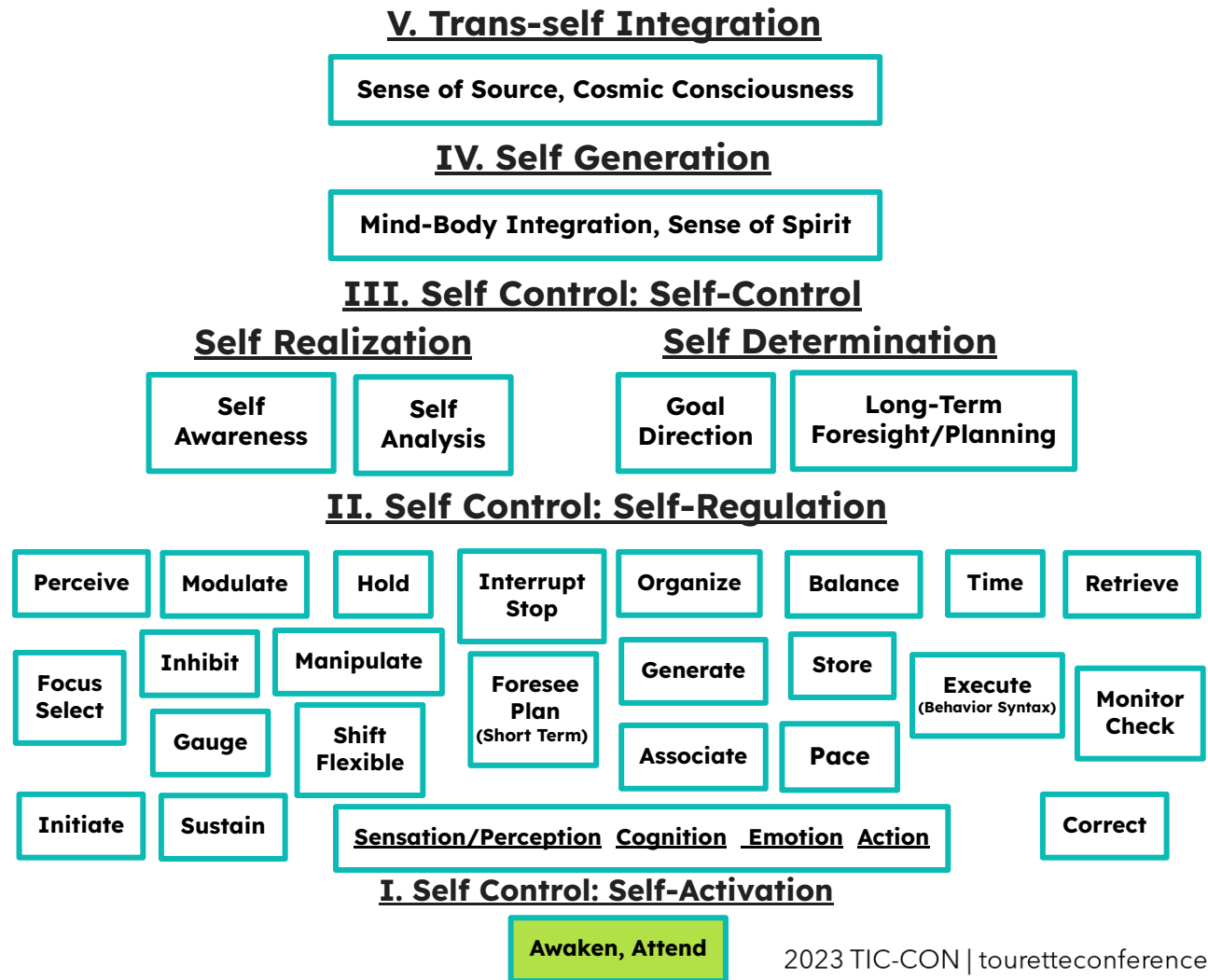


According to the Merriam-Webster Dictionary, executive functions are **“The group of complex mental processes and cognitive abilities (such as working memory, impulse inhibition, and reasoning) that control the skills (such as organizing tasks, remembering details, managing time, and solving problems) required for goal-directed behavior,”** however, there is no one agreed upon definition.

(Merriam-Webster. (n.d.). Executive function. In Merriam-Webster.com dictionary. Retrieved May 8, 2023, from <https://www.merriam-webster.com/dictionary/executive%20function>)

# McCloskey Model of Executive Functions

Figure 1. Adapted from  
McCloskey, G., Perkins, L.  
A., & Van Divner, B. (2008).



# Awaken • Attend

## Healthy Food



**Limit Sugar  
< 25g a day**  
(Staff, 2017)

## Exercise



**60 min a day  
sports/dance**

*(How Much Physical Activity  
Do Children Need?, 2022)*

## Mindfulness



**Reduces anxiety  
& depression  
Helps sleep**  
*(Mindfulness for Your  
Health, 2022)*

## Good Sleep



**Ages 6-12: 9 to 12 hours  
Ages 13-18: 8 to 10 hours**

*(Do Your Children Get Enough  
Sleep? | CDC, n.d.)*

# Neural Network Diagram of Domains and EFs

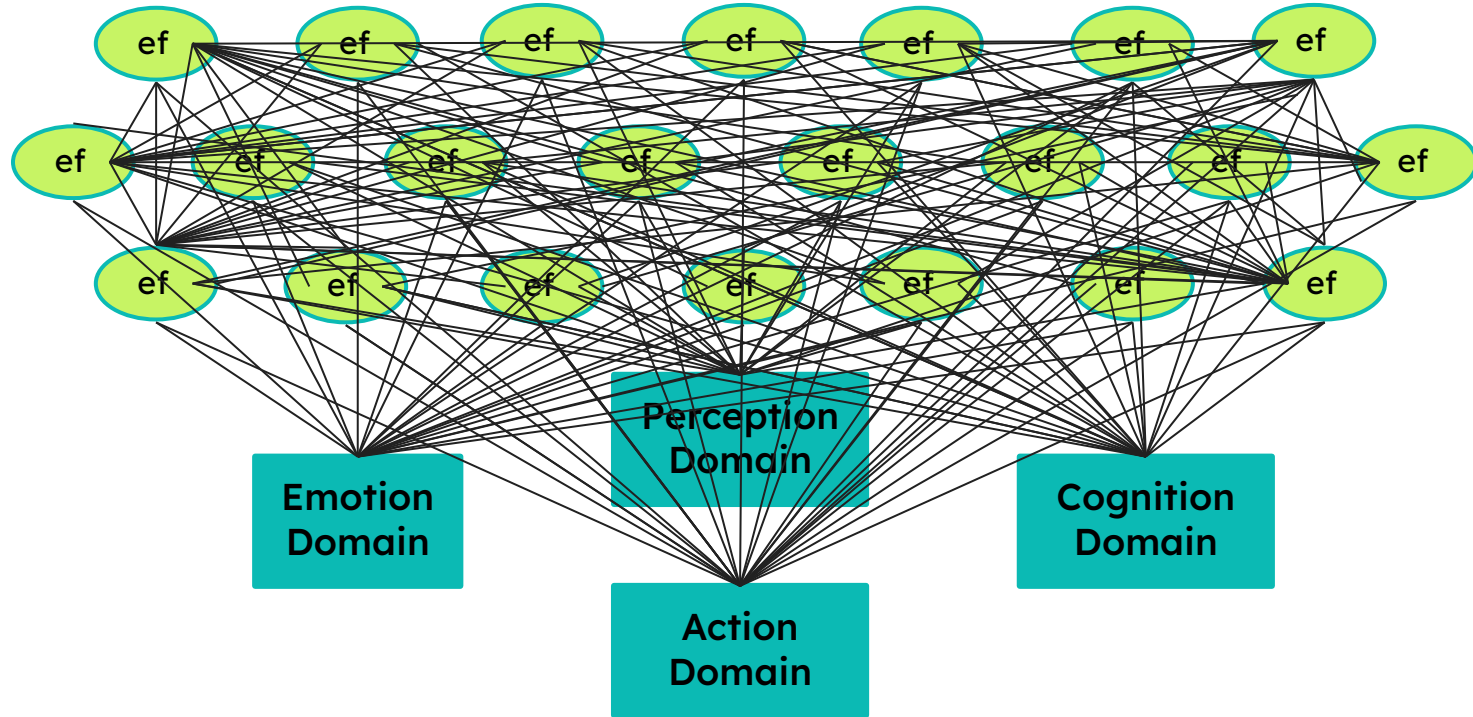


Figure 2. Adapted from McCloskey, G., Perkins, L. A., & Van Divner, B. (2008).



# Highly Varied Skills



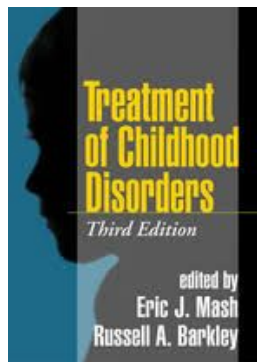
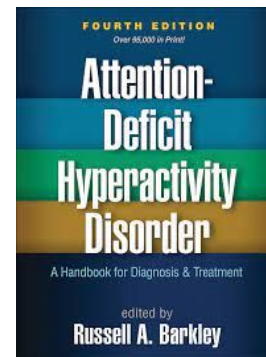
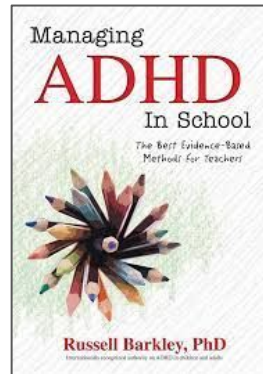
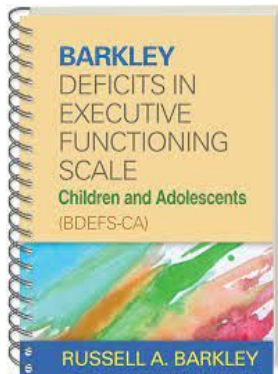
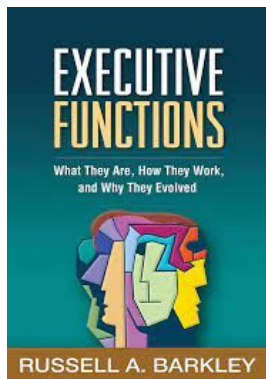
**“Executive function challenges are often mistaken for disobedience, laziness, defiance, or apathy.”**

– Chris Zeigler Dendy (Gerten, 2022)

# Student Example & Change of Perception

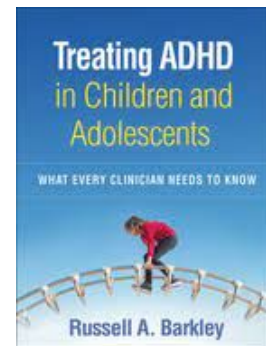


# 30% Theory



## Russell Barkley

Figure 3. (Leading Edge Seminars, 2020)(Adhd Videos, 0:00 to 2:17, 2014)



# Chronological vs. Executive Function Age

<b>Age</b> (Grade)	<b>EF Age</b> (Grade)
<b>6</b> (1st grade)	<b>4.2</b> (Pre-K)
<b>10</b> (4th grade)	<b>7</b> (1st grade)
<b>12</b> (6th grade)	<b>8.4</b> (3rd grade)
<b>15</b> (9th grade)	<b>10.5</b> (4th grade)
<b>18</b> (12th grade)	<b>12.6</b> (6th grade)
<b>21</b> (College Jr.)	<b>14.7</b> (9th grade)
<b>24</b> (Adult)	<b>16.8</b> (12th grade)

Table 1. (Leading Edge Seminars, 2020)

# Fundamental Supports

Externalize information to take the load off executive processes: break down large tasks, use visuals

Externally represent time: visual timers, phone alarms, 5 minute warnings

Explicitly teach necessary skills where they will be used: “hubs” in the home and school environments

External rewards: breaks, snacks and larger rewards upon task completion

# Practice, Practice, Practice



**“The best way to strengthen executive function skills, at any age, is through practice!”** (*A Guide to Executive Function - Center on the Developing Child at Harvard University, 2019*)

# Hub System at Home



# The Process for Each Hub

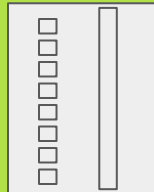
1

**Analyze**  
Each  
Activity  
& Hub



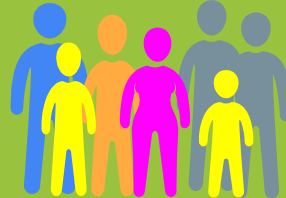
2

**Create**  
and  
**Place**  
**Visuals**



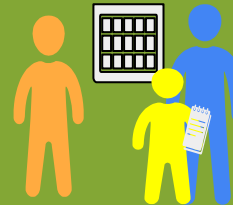
3

**Teach**  
**Everyone**  
**Steps**  
**Together**



4

**Supervise**  
Until  
Mastered



5

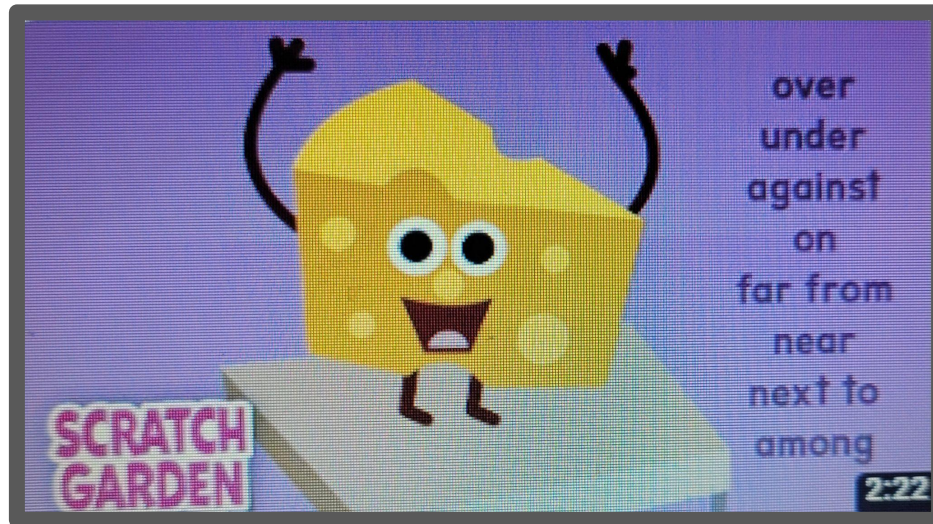
**Reward**  
**Effort**





# Common Vocabulary

**Basic concepts** like in, on, over, next to, between, etc. must be understood before someone can be expected to follow directions. Make sure all caregivers use the same vocabulary to improve children's learning.



## Scratch Garden Prepositions 1, 2 & 3

(Scratch Garden, 2016)

# 1. Analyze

## Task Analysis: Kitchen/Homework Hub

What needs to be done?	Break down of task (how, where)	How much time?	Visual Support
Take off shoes	<ol style="list-style-type: none"><li>1. <b>Take off</b> shoes with two hands</li><li>2. Place shoes <b>in</b> closet <b>on</b> orange tape</li></ol>	2 min	Orange tape in closet
Hang up coat	<ol style="list-style-type: none"><li>1. Hold by hood with two hands</li><li>2. Hang up on <b>1st hook, next to</b> the door</li><li>3. <b>Pull out sleeves</b> if inside coat</li></ol>	1 min	Color code or label hook
Place backpack on table	<ol style="list-style-type: none"><li>1. <b>Gently</b>, with two hands, place backpack <b>on</b> kitchen table</li><li>2. <b>Unzip</b> it and <b>open</b> it up</li></ol>	2 min	Placemat for backpack placement
Take lunch box to sink	<ol style="list-style-type: none"><li>1. Walk lunch box to the sink</li><li>2. Lay it to the <b>left</b> of the sink</li><li>3. <b>Unzip</b> it and take out garbage</li><li>4. Throw garbage away in garbage can</li></ol>	2 min	Mark space to lay lunch box

(Clean Clear Designs, 2023)

# 1. Analyze

## Task Analysis: Kitchen/Homework Hub

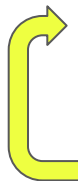
Put planner/ binder on table	<ol style="list-style-type: none"><li>1. Take <b>out</b> planner from backpack</li><li>2. <b>Open</b> planner to today's date</li></ol>	2 min	Move sticky note next to assignment
Get out homework and set up materials	<ol style="list-style-type: none"><li>1. <b>Look</b> at planner and take <b>out</b> homework</li><li>2. Take <b>out</b> pencil case</li><li>3. <b>Check</b> to see if pencils <b>need sharpening</b></li><li>4. <b>Check</b> to see if you have an eraser</li><li>5. Get <b>out</b> your calculator</li></ol>	2 min	Tri-fold board with homework resources in homework area
Take out old papers and materials	<ol style="list-style-type: none"><li>1. Take <b>out</b> permission slips, old papers, and materials for parents to look at</li><li>2. Put them in the basket</li></ol>	1 min	Basket for adults to check
Hang up backpack	<ol style="list-style-type: none"><li>1. <b>With two hands, hang up</b> backpack <b>on</b> hook <b>near</b> door</li></ol>	1 min	Color code or label hook
Go to bathroom/ wash hands	<ol style="list-style-type: none"><li>1. Go to the bathroom</li><li>2. <b>Close</b> the lid</li><li>3. <b>Flush</b> the toilet</li><li>4. <b>Wash</b> your hands</li></ol>	5 min	Toileting routine and/or washing hands visuals

# 1. Analyze

## Task Analysis: Kitchen/Homework Hub

Have a snack	<ol style="list-style-type: none"><li>1. <b>Chose</b> healthy snack</li><li>2. Walk it to the table</li><li>3. Get a cup</li><li>4. Fill it 2/3s with water (<b>line on cup</b>)</li><li>5. <b>Sit down (<u>where</u>)</b> to eat and drink</li></ol>	15 min	Visual timer Fill line marked with tape
Free time	<ol style="list-style-type: none"><li>1. Choose something fun for 30 minutes</li></ol>	30 min	Visual choice board Visual timer
Do homework or reading	<ol style="list-style-type: none"><li>1. <b>Sit down or stand</b> in homework spot</li><li>2. Complete homework in <b>15 minute</b> chunks (adult support in immediate area)</li></ol>	15 min	Visual timer set for 15 minutes at a time Sticky notes, fold paper, highlighters
5 minute break	<ol style="list-style-type: none"><li>1. Movement break of any kind</li></ol>	5 min	Visual timer set for 5 minutes
Adult checks	<ol style="list-style-type: none"><li>1. Go over planner and finished homework with an adult</li></ol>	10 min	

Repeat as many times as needed

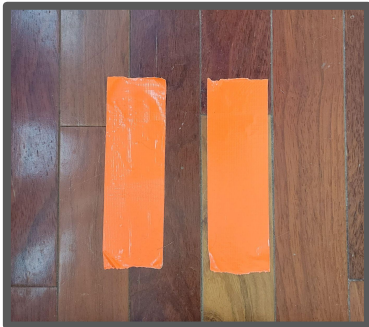


Repeat as many times as needed

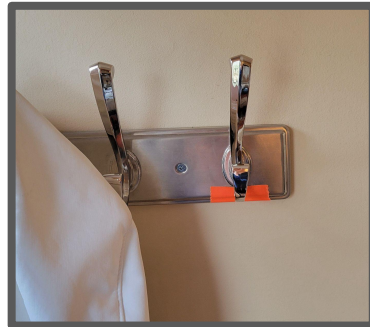


## 2. Create & Place Visuals

Orange tape for placement of shoes in closet



Color code or label hook



Placemat for backpack placement

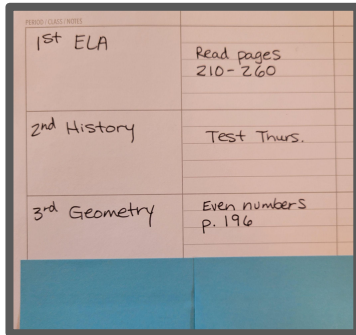


Mark space to lay lunch box



## 2. Create & Place Visuals

Move sticky notes under each assignment



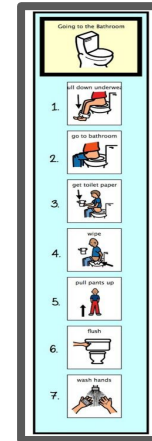
Tri-fold board with homework resources



Basket for adults to check



Toileting and washing hands mini-routines



(Melissa, 2019)

## 2. Create & Place Visuals

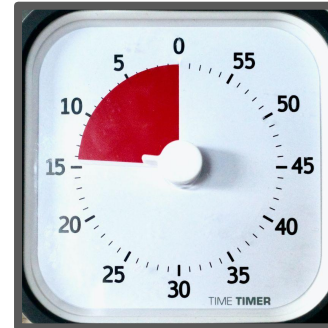
Fill line on cup  
marked with  
tape



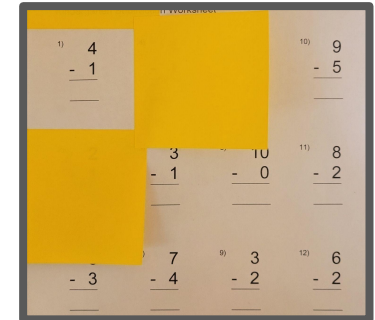
Visual choice  
board



Visual timer set  
15 min at a time



Sticky notes,  
fold paper,  
highlighters



<https://www.teacherspayteachers.com/Product/Behavior-Management-System-Visual-Choice-Board-s-I-am-Working-for-Boards-Autism-1740833>

# 3. TEST : Teach Everyone Steps Together

## Check Boxes

Task	✓
Take off shoes	
Hang up coat	
Place backpack on table	
Take lunch box to sink	
Put planner/ binder on table	
Get out homework and set up materials	
Take out old papers and materials	
Hang up backpack	
Go to bathroom/ wash hands	
Have a snack	

## Velcro

To Do	Done	
Free time	<input type="radio"/>	preferred
Do homework or reading	<input type="radio"/>	non-preferred
5 minute break	<input type="radio"/>	preferred
Do homework or reading	<input type="radio"/>	non-preferred
5 minute break	<input type="radio"/>	preferred
Adult checks	<input type="radio"/>	non-preferred



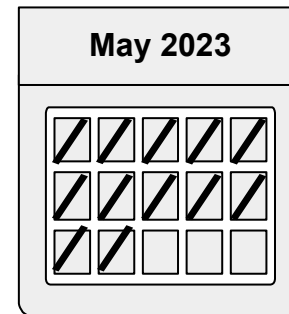
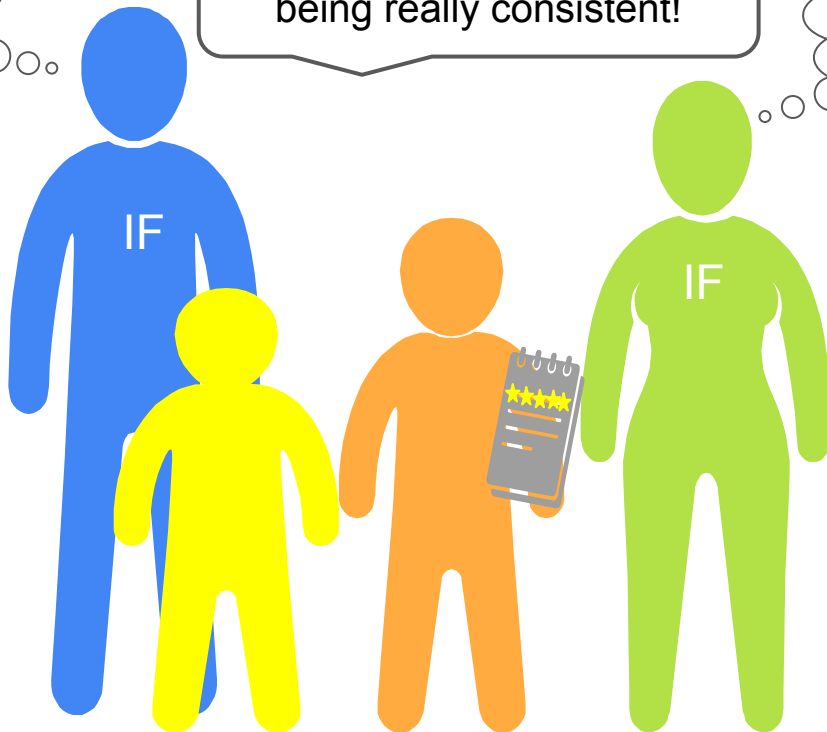


# 4. Supervise until mastered

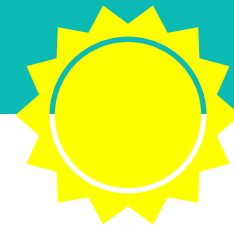
We're good at this Independence Facilitator stuff!

We're working together and being really consistent!

We're all getting better about being intentional.



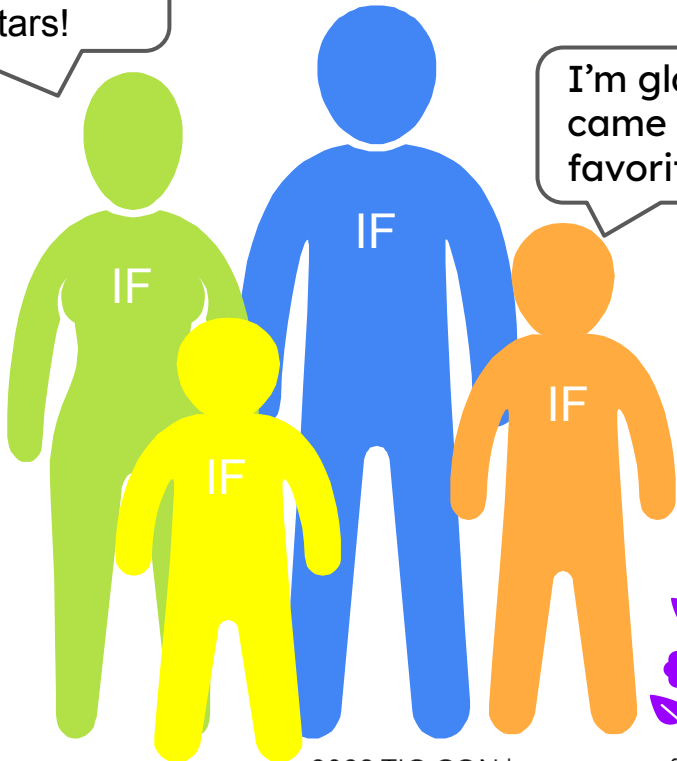
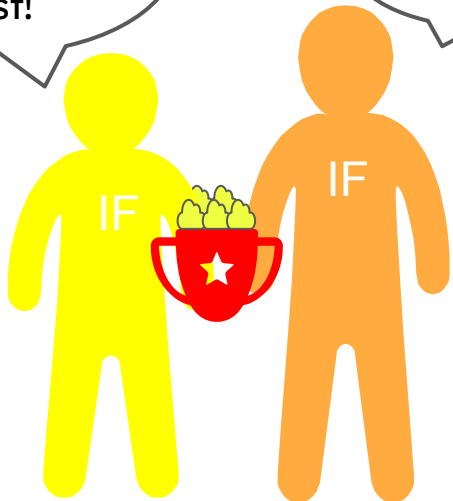
# 5. Reward Effort



I'm SO glad that everyone worked together this week to get all their stars!

I love popcorn!  
I'm glad I tried my best!

Yum! Me too!



I'm glad we came to my favorite park!

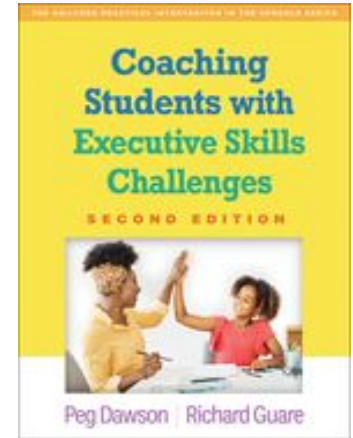
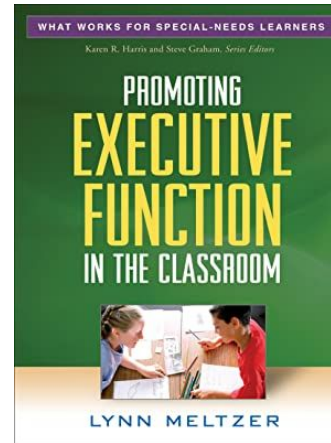
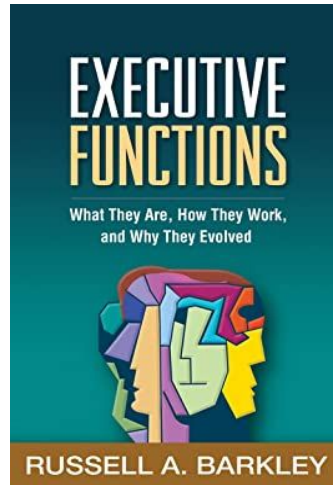
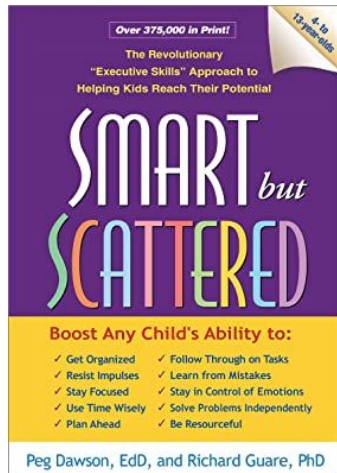
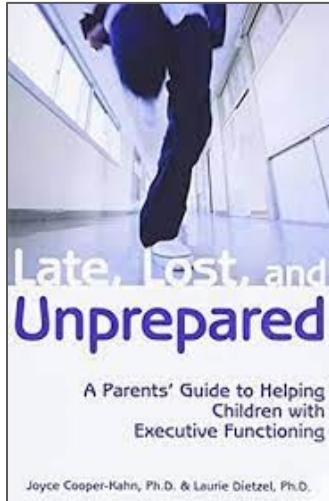
# Review

I can  
identify the  
appropriate  
EF level of my  
child.

I can set up  
an appropriate  
hub system in my  
home.

I can  
motivate my  
child to use  
that system.

# Executive Function Reads



# Thanks!

Any questions?

Consistency

Practice  
Practice  
Practice

Be an  
Independence  
Facilitator!

30%

Teamwork

Kathleen Downing  
Kathleen@cleancleardesigns.com

# Resource: Task Analysis

What needs to be done?	Break down of task (how, where)	How much time?	Visual Support
	1. 2. 3. 4.	min	
	1. 2. 3. 4.	min	
	1. 2. 3. 4.	min	
	1. 2. 3. 4.	min	

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*Smart but Scattered: The Revolutionary “Executive Skills” Approach to Helping Kids Reach Their Potential: 8601200652819:*

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[https://www.amazon.com/Smart-but-Scattered-Revolutionary-Executive/dp/1593854455/ref=sr\\_1\\_1?crid=BLYRI383UAS](https://www.amazon.com/Smart-but-Scattered-Revolutionary-Executive/dp/1593854455/ref=sr_1_1?crid=BLYRI383UAS)

[W&keywords=smart+but+scattered+book&qid=1683768241&srefix=smart+but+%2Caps%2C122&sr=8-1](https://www.amazon.com/Smart-but-Scattered-Revolutionary-Executive/dp/1593854455/ref=sr_1_1?crid=BLYRI383UAS&keywords=smart+but+scattered+book&qid=1683768241&srefix=smart+but+%2Caps%2C122&sr=8-1)

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