

# Executive Functioning

Understanding executive  
functioning & strategies to help  
support students' EF skills.

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# What are Executive Functions (EF)?

Executive functions involve everything that you do every day to manage your own behavior (self-management).



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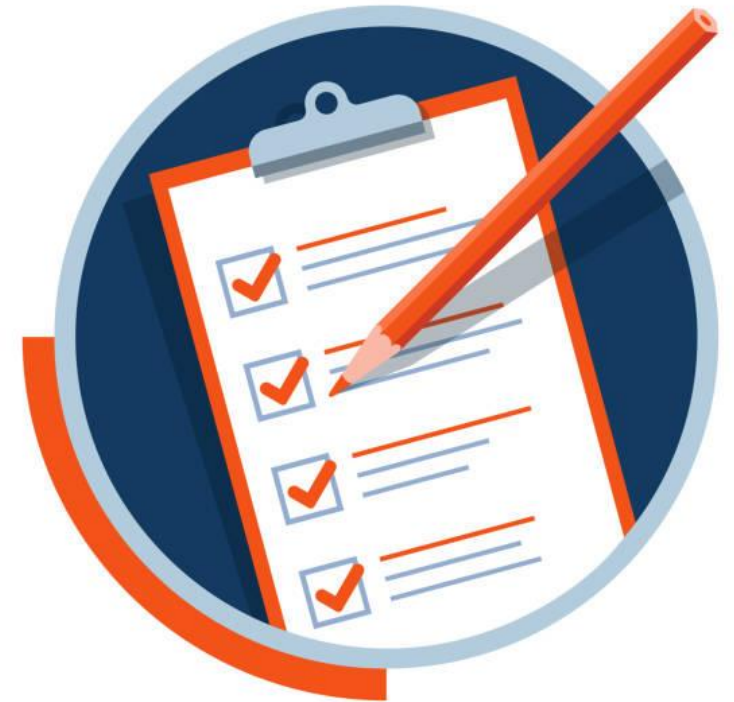
# Development of EF

- Executive functioning is developmental
- Executive functioning skills start forming at 2 years and are fully-formed around 30 years
- Skills develop gradually at different rates for different people



# Areas of Executive Functioning

- Organization
- Planning/Prioritizing
- Task Initiation/ Task Completion
- Working Memory
- Self-Monitoring/Self-Checking
- Flexibility/Shifting
- Emotional Control/ Self-Regulation
- Impulse Control/ Inhibition



# Organization

**The ability to keep track of information or materials; tied to planning, setting priorities, and task initiation.**

## People who struggle with organization may:

- Creating and keeping deadlines
- Making schedules and appointments
- May understand the value of organization but are unable to learn how to keep track of things
- Lose things easily
- Have "messy" spaces (desk, room, etc.)
- Organization skills looks different for different individuals



# Planning/Prioritizing

The ability to create steps to reach a goal and to decide which tasks should be done immediately or which can wait

People who struggle with planning/prioritizing may:

- Be easily overwhelmed by complicated, multi-part tasks
- Struggle to impose structure and order on ideas
- Tend to underestimate a project's complexity and time requirements



# Task Initiation/ Task Completion



**The ability to recognize when it is time to get started on something and begin without procrastinating**  
**People who struggle with task initiation/completion may:**

- Put off projects until the last minute
- Be perceived as lazy or unmotivated
- Procrastinate because they really don't know how to start
- Have difficulty beginning a task, maintaining a task, generating ideas, responses
- Have difficulty problem solving
- Feel so overwhelmed they doing nothing at all





# Working Memory

The ability to hold information in mind, *remember* it, *manipulate* it and *use it* to complete a task.

- ❑ Working memory or **short-term memory** is like a temporary sticky note in our brain. It holds new information in place so the brain can work with it briefly and perhaps connect it with other information

**People who struggle with working memory may:**

- ❑ Be unable to remember and apply crucial information in order to move to the next step of a task
- ❑ Find multi-step direction or tasks difficult
- ❑ Falter when a task requires that they remember a series of directions, generate ideas in response to the directions and then express their ideas
- ❑ Appear that information just doesn't "stick" for them





# Working Memory



# Self-Monitoring



**The ability to monitor and evaluate your own performance**

- People use self-monitoring to help with all kinds of activities, from boiling an egg to solving a math problem.

**People who struggle with self-monitoring may:**

- Not notice that they're not following directions until someone points this out
- Benefit from using checklists and other supports for learning



# Flexibility- Shifting



The ability to move freely from one situation, activity, aspect, problem to another as circumstances demand.

The ability to change strategies or revise plans when conditions change

- **People who struggle with flexibility-shifting may:**

- Not react well to changes in plan or routines
- Not react well or takes a while to warm up to new situations
- Want things done in a specific way and becomes upset if they are changed
- Perseverate on topics and activities
- Have difficulty interacting in unfamiliar social situations
- Not be interested in trying new things
- Have particularly limited varieties in food or toy preferences
- Dictate to others how they are "supposed" to do things

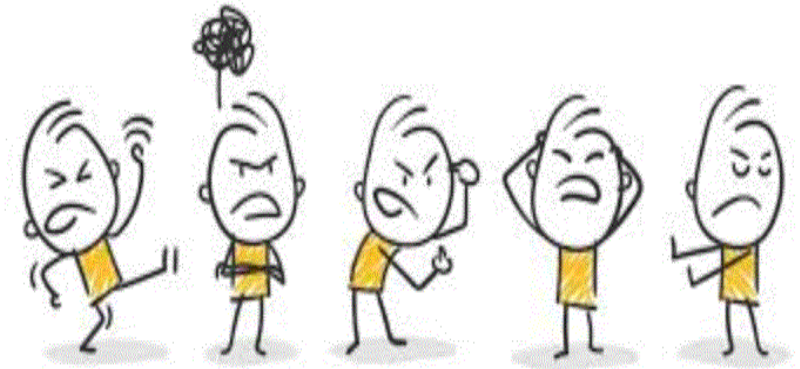


# Emotional Control/Self-Regulation

The ability to behave effectively and adaptively, even when engaged in situations that are disappointing, annoying, frustrating, stressful, anxiety-provoking and so on.

## People who struggle with emotional control/self-regulation may:

- Have trouble accepting constructive criticism
- Can't keep eyes on the goal when unexpected things happen
- Be quick to call the situation as unfair
- Overreact to losing a game or being called on in class
- Have difficulty sticking with school-work when distressed
- Overreact to situations when compared to same-age peers
- Remain upset about a situation for longer than same-age peers
- Be short tempered and has emotional outbursts or mood swings
- React to small problems as though they are major problems





# Impulse Control/Inhibition



**The ability to stop and think before acting; to inhibit, resist, or not act on impulse.**

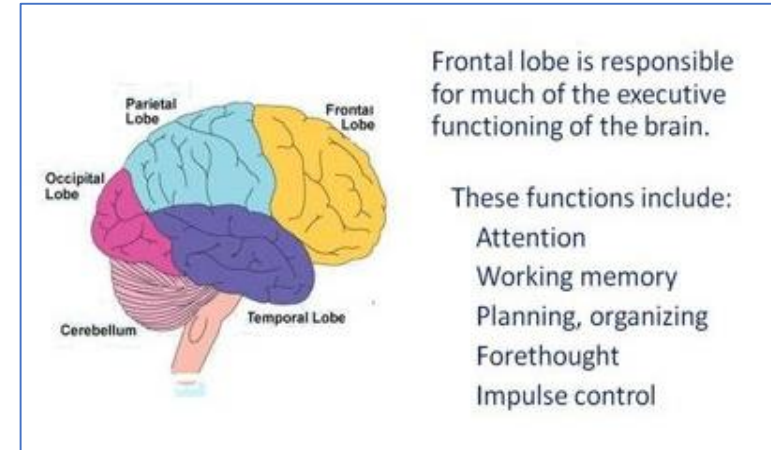
**People who struggle with impulse control/inhibition may:**

- They often say or do things without a moment to reflect first
- Appear to have "no filter"
- Do whatever without considering their obligations or commitments
- Often speed through schoolwork, sacrificing accuracy and completeness along the way



# Factors affecting quality of EF

- Lack of sleep
- Medications
- Stress
- History of trauma
- Traumatic brain injury; other neurological disorders
- Differences in brain development.** Researchers have looked at executive function in the brain. They've found that certain areas of the brain develop more slowly in people who struggle with executive skills. These areas are responsible for working memory and emotional control.
- Differences in Brain Chemicals.** The brains of people with executive functioning issues may not use norepinephrine effectively. Norepinephrine and dopamine are the main chemicals that help the brain maintain focus and [control impulses](#).
- Genes and heredity.** People who have trouble with executive function often have family members who do, too.

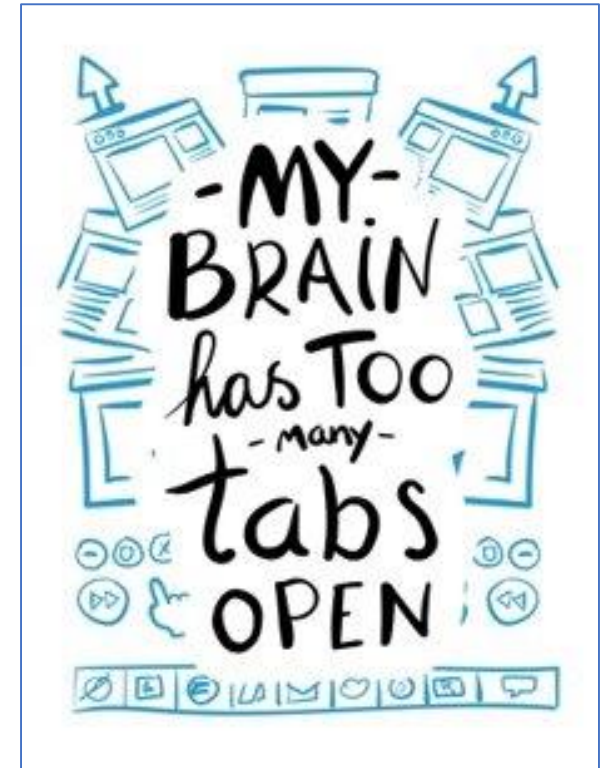


# Students and Executive Functioning

The development of executive functioning skills is impacted for children who have areas of need in learning and/or attention.

- For example, approximately, 90% of children with ADHD and Dyslexia struggle with executive functioning skills.

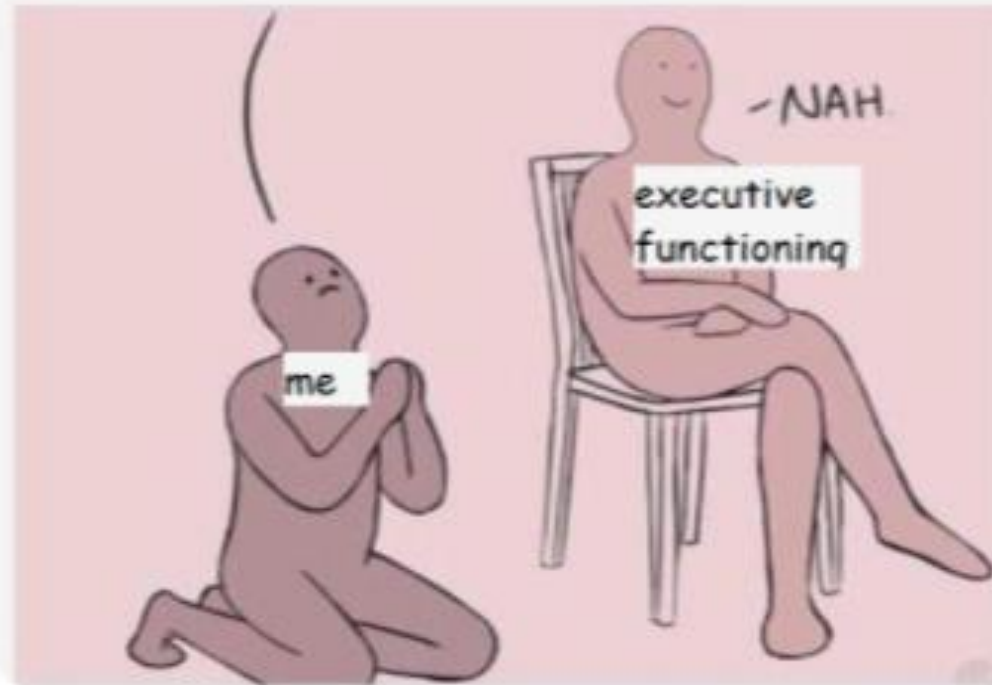
*If the school team has concerns about a student's executive functioning skills, testing is done as part of a full evaluation that looks at many areas of learning and thinking, including a wide range of executive skills.*





# Strategies to Support Executive Functioning

"If you start your work now you'll have plenty of time and you won't be stressing out at the last minute"



# Use your EF skills! Areas of EF include...



ORGANIZATION



PLANNING/PRIORITIZING



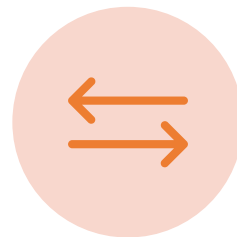
TASK INITIATION/  
TASK COMPLETION



WORKING MEMORY



SELF-MONITORING/SELF-CHECKING



FLEXIBILITY/SHIFTING



EMOTIONAL CONTROL/  
SELF-REGULATION



IMPULSE CONTROL/  
INHIBITION



# Organization and Planning

## Visuals

- Labels
- Color Coding
- Visual Reminders
- Placeholders



# Organization and Planning

## Schedules/Routine

- Keep a semi-consistent routine
- Practice/Plan for changes
- Use visual schedules, scheduling applications and planners

















# Visual Schedules Can Look Like....

Before 9:00am	Wake up	Eat breakfast, make your bed, get dressed, put PJ's in laundry
9:00-10:00	Morning walk	Family walk with the dog Yoga if it's raining
10:00-11:00	Academic time	NO ELECTRONICS Sudoku books, flash cards, study guide, Journal
11:00-12:00	Creative time	Legos, magnatiles, drawing, crafting, play music, cook or bake, etc
12:00	Lunch	
12:30PM	Chore time	A- wipe all kitchen table and chairs. B - wipe all door handles, light switches, and desk tops C - Wipe both bathrooms - sinks and toilets
1:00-2:30	Quiet time	Reading, puzzles, nap
2:30-4:00	Academic time	ELECTRONICS OK Ipad games, Prodigy, Educational show
4:00-5:00	Afternoon fresh air	Bikes, Walk the dog, play outside
5:00-6:00	Dinner	
6:00-8:00	Free TV time	Kid showers x3
8:00	Bedtime	All kids
9:00PM	Bedtime	All kids who follow the daily schedule & don't fight

**MY DAY**

7:00	 Wake up	4:00	 TV Time
8:00	 School	5:00	 Outside Play
2:30	 Field Trip	5:30	 Set Table
3:00	 Snack	6:00	 Dinner
3:15	 Homework	8:30	 Bed Time

<b>First</b>	<b>Then</b>
 <p>book</p>	 <p>play dough</p>

A green arrow points from the 'First' box to the 'Then' box, indicating a sequence of activities.

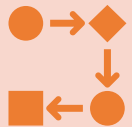
1. iPad
2. Picture game
3. iPad
4. Cards
5. iPad



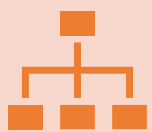
# Planning and Prioritizing



Discuss priorities. Why are they important? How do they affect the day? Make sure they are achievable.



Review steps of a task. What must be completed first before moving on to the next step?



Rank tasks together. Make a “to do” list & have student # tasks in order of importance/choose a few that are most important.




# Starting and Completing Tasks

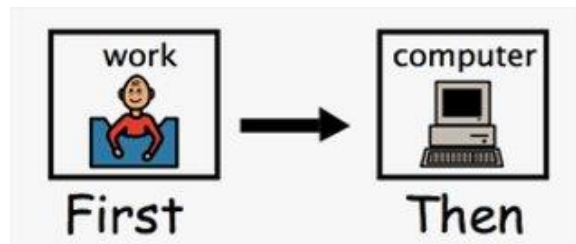
Break large tasks into smaller ones

Use First/Then Language

Use visual supports to show when a task/activity should be completed

Use momentum to get started

1. get bowl and fork	
2. add 2/3 cup water	
3. add macaroni	
4. microwave for 3:30	
5. add cheese sauce	
6. mix with spoon	
7. eat	





# Behavior Momentum

Start with tasks that are easier and then present more difficult tasks

## STEP 1

Give an instruction that your child is highly likely to follow, like "touch your nose".  
Quickly provide praise.

## STEP 2

Quickly give a second instruction that your child is highly likely to follow, like "jump on one foot".  
Quickly provide praise..

## BEHAVIORAL MOMENTUM

**A STRATEGY TO HELP CHILDREN LEARN TO COOPERATE WITH ADULT REQUESTS. JUST LIKE THE ROCK ROLLING DOWN A HILL, GET A CHILD HEADING IN THE RIGHT DIRECTION, behaviorally speaking, AND ITS UNLIKELY THEY'LL REVERSE THEMSELVES!**

## STEP 3

Give a third instruction that your child is highly likely to follow, like "give me a high-five".  
Quickly provide praise.

## STEP 4

Finish by quickly, giving the instruction that you want the child to follow, like "put your pjs in the laundry basket".  
Quickly let your child know what an awesome cooperater he is!

Ready!  
Do!  
Done!

 **READY**

I need....

 **DO**

Steps I need to do....

**DONE** 

Done looks like....

# Working Memory: POP QUIZ!

Are you  
ready?



# Working Memory

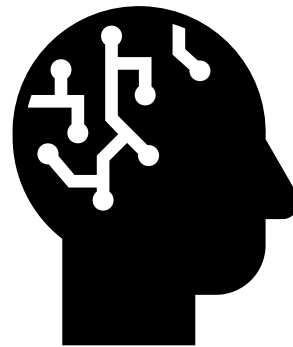
Ask students to repeat instructions, expectations, directions for clarification



Repeated practice and purposeful review



Stick to routines and specific procedures with visual aid





# Working Memory

Pause,  
Paraphrase  
and Summarize.  
Draw it out.



Physically engage  
with material.  
Games/songs  
work great.



Discuss/ Highlight  
key words/ideas.

MOVIE QUOTES	WORLD LITERATURE	CLASSIC TV	POETRY	THE PLANET EARTH	THE '80'S
\$200	\$200	\$200	\$200	\$200	\$200
\$400	\$400	\$400	\$400	\$400	\$400
\$600	\$600	\$600	\$600	\$600	\$600
\$800	\$800	\$800	\$800	\$800	\$800
\$1000	\$1000	\$1000	\$1000	\$1000	\$1000



# Self-Monitoring



Self-monitoring

Goal setting

Journaling

Role-Play

Self-assessment

Checklists

Communication  
Sheets

Reflective Journaling

THINGS I DID  
WHEN I WAS  
HANGRY



# Self-Monitoring/Self-Checking Examples



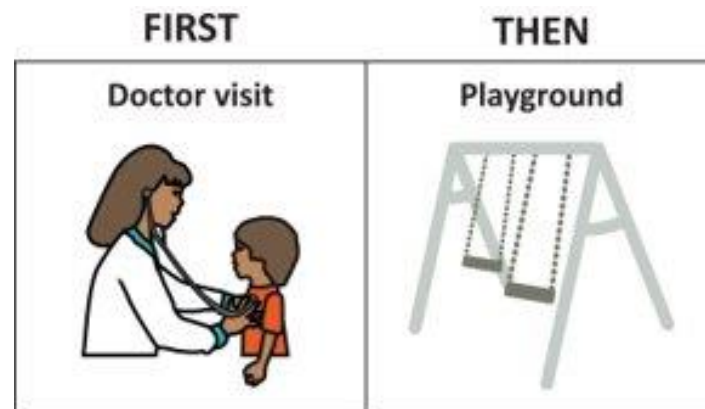
Bedtime Checklist	
Put away toys and other things.	Shower, bathe, or wash up.
Put finished homework in homework folder.	Dry off.
Put homework folder in backpack.	Put on pajamas.
Check calendar for other items to pack (library books, gym clothes, etc.).	Brush teeth.
Check lunch menu to see if you need a packed lunch/snack.	Lay out clothes for tomorrow morning.
Choose and lay out pajamas.	Use bathroom.
Pick a bedtime story.	Double-check or set a wake-up alarm.





# Flexibility/Shifting

- Have a semi-consistent routine but also practice changes
- When possible, prepare students ahead of time for these changes and give specific and clear expectations
- Provide choices when possible
- Provide positive reinforcement when a child adapts to change



# Emotional Control/Self-Regulation



- Teach/offer coping strategies
- Encourage functional communication
- Be a good role model



# Impulse Control

- Write out or draw plans
- Journaling/Self-reflection/Self-evaluations
- Use of visual reminders
- Purposeful teaching/discussion of plans. Includes games like Simon Says, Role Play, Freeze game, etc.
- Keep students accountable and follow through on consequences/rewards



FIRST	THEN
<p data-bbox="1615 879 1742 911">Training</p> 	<p data-bbox="2125 879 2379 911">Lay on the couch</p> 

# Asking for Help and Seeking Support

- Parent groups
- Help from educational team
- Home support services
- Seek help from professionals in the field
- Communicate with your DCBDD or FCBDD case manager or intake department



# Questions, Comments and Resources

- <https://fcbdd.org/>



- <https://www.dcbdd.org/>



Delaware County Board of  
Developmental Disabilities



- <https://www.nationwidechildrens.org/specialties/behavioral-health>





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THANK YOU

## References:

Najdowski, A.C. (2017). *Flexible and Focused: Teaching Executive Function Skills to Individuals with Autism and Attention Disorders*

## Websites:

[What is Executive Functioning](#)

[Executive Functioning 101](#)

[Executive Functioning at Different Ages](#)

Understood.org

## Resources:

[https://www.understood.org/en/school-learning/learning-at-home/games-skillbuilders/8-fun-games-that-can-improve-your-childs-executive-functioning-skills?\\_ul=1\\*2sd8kl\\*domain\\_userid\\*YW1wLVhNYWxWOWZrTU9nSEVFUIVTdS1mMVE](https://www.understood.org/en/school-learning/learning-at-home/games-skillbuilders/8-fun-games-that-can-improve-your-childs-executive-functioning-skills?_ul=1*2sd8kl*domain_userid*YW1wLVhNYWxWOWZrTU9nSEVFUIVTdS1mMVE)

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<https://www.theottoolbox.com/executive-functioning-skills-planning-prioritization/>

<https://www.theottoolbox.com/self-monitoring-strategies-for-kids/#:~:text=One%20of%20the%20big%20executive,happening%20in%20our%20own%20body>

<https://www.fatherly.com/gear/octopus-watch/>

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<https://www.teacherspayteachers.com/Login>

