

## Executive Functioning

### What is executive functioning?

*Executive functions are complex, high level cognitive skills that allow us to wisely use our intelligence. Generally speaking, executive functioning helps us maintain an appropriate problem-solving pattern toward attainment of a future goal. Executive functions are mediated by the prefrontal region of the brain.*

### What, specifically, are the executive skills?

- Planning
- Distinguishing relevant from irrelevant pieces of information
- Initiating cognitive, academic and social behaviors
- Working memory (holding facts in mind while manipulating information, retrieving information from long-term memory)
- Trial and error learning
- Generating hypotheses toward problem-solving
- Using feedback
- Judgment
- Carrying out goal-directed behavior or future-oriented behavior
- Selective attention
- Inhibiting impulses
- Organization

### How does poor executive functioning affect a student?

- Inconsistencies in academic and memory skills
- Can't keep several things in mind and keep the information organized
- May forget one part of a problem while working on another segment
- Difficulty paraphrasing or summarizing
- Cannot recall previously learned material
- Repeats mistakes
- Poor use of time especially to prepare for upcoming events/exams/projects
- Poor test-taking
- May think rigidly with difficulty transitioning trains of thought

**Overall, students with executive deficits have difficulty showing what they know.**

## How to accommodate for EF Weaknesses

### **Impulse Control**

- Use visual cues (e.g. big stop sign on door)
- Develop habits that interfere with impulsive behavior (e.g. put hands in pockets)
- Use of a fidget toy (need rules-can't grab someone else's; can't throw the toy)
- When a student begins to interrupt, ask her to write down comments/questions in a notebook-make sure you give her a chance to talk (if you say "just a minute", make sure it is just that)

### **Initiation**

- For younger kids, use a song to guide them through morning routines.
- Younger kids may need help getting started (e.g. when cleaning their room, go with them to their room and suggest what they should start with; be specific)
- Before starting a seated task, engage in some gross motor activity (quick walk, throw a ball)

### **Planning / Time Management**

- Use timers / Alarms
- Estimate amount of time needed for a task and then write down actual time
- Use calendars (build habit for checking them)
- Request assignments one week in advance to allow for planning homework and studying
- Help break down assignments, projects and tasks into reasonable parts, then set deadlines

### **Cognitive Flexibility**

- Review upcoming changes to schedule or environment (e.g. substitute teacher)
- Allow for a break / place to calm down when child encounters frustration with change
- Teach relaxation breathing
- Provide warnings/signals prior to transitions

### **Organization**

- Email assignments to teacher and self
- Keep a second set of textbooks at home
- Frequently check backpack, notebooks, desk, locker and assignment book
- Establish weekly time to organize desk, etc.
- Color coding of folders
- At home, be sure to establish an organized study space, with all needed materials, dry-erase board / calendar

### **Working Memory**

- Use lists as reminders (words or pictures)
- Use a voice recorder / voicemail messages to record tasks, assignments, reminders
- Note-taking services; Students should be given a copy of class notes
- Help students develop mnemonics or other strategies to help remember a series of steps
- Teach visualization strategies to enhance recall

### **Self-Monitoring**

- Highlight math operation signs
- Proofread aloud
- Proofread by reading backwards
- Double check assignments
- Reread the directions after completing a task and go back to see if you followed them
- Allow students to review assignments and correct errors which are marked