Presentation Companion Slides for CHC EF for K-5 Classrooms
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Companion Slides

Slide 1: Do Now
- Complete the Measure of Teacher Practice Survey

Slide 2: Introduction

Slide 3: AIM Questions

Slide 4: Executive Function - Redefined - as a network of capacitices
- Prefrontal cortex has been identified mainly responsible for EF
- But it does not act alone - it's integrated network beginning from the brain stem, to the limbic system in charge of the emotional reactions -
- Important to feel safe before engaging in more complex behaviors such as planning, self-regulating, and self-monitoring
- EF heavily dependent on the developmental trajectories - situational context - environment (like different types of schools)

Slide 5: Dan Siegel talks about the hand model of the brain
- Importance of this model from a network capacities perspective
- Brain's evolution with the latest being the development of the prefrontal cortex - it is the first to go offline with there the brain goes through flight, fight, fear
- Brain development recognizes the stimulus in the environment
- Difference between weakness and a disability - a disability according to the ADA is a physiological or psychological brain disorder diagnosed by instruments psychometrically validated

Slide 6-11: What is Executive Function

Slide 12: Let's hear what the Harvard's Center on the developing mind has to share based on research

Slide 13: EF over the life span - Executive Function Skills develop over time
- Can be learned - these are not dependent on the genetic composition rather these are learned behaviors
- Brain research shows that the brain is plastic and continues to develop
- Studies on epigenetics show that the brain generates neurons especially when engaging in aerobic exercise
- EF abilities change over the life course - throughout adolescence and through early adulthood
- Can be trained by exposure, modeling, and cueing systems

Slide 14-15: Self-concepts as motivators to practice internalize EF strategies

Slide 16: Why teach EF Skills?

Slide 17: Activity 1 - Let's define some of these network capacities
- Partner Activity - define terms and case studies

Slide 18: EF skills for Specific Populations

Slide 19: EF and Diagnosed Disorder

Slide 20: EF Quiz

Slide 21: Q1 = How do we address executive function weaknesses, preserve students' motivation, persistence, and resilience with the current emphasis on the Common Core curriculum?

Slide 22: UDL well poised for teachers to use to cultivate EF skills

Slide 23-25: PART Acronym: Presence - Attune - Resonance - Trust
- use reframing scripts slide 1 / Slide 23: use reframing scripts slide 2

Slide 24: How can our improved understanding of executive functioning processes help us to optimize our teaching approaches?

Slide 26 & 27: Strategies - explicit strategy instruction benefits all students and especially studenst with learning and attention issues.

Slide 28 & 29: Reading Skills and Salmon Reading
Reading Comprehension: How would you teach your child to understand this passage? What EF skills are needed to ensure proficient understanding?

Slide 30 & 31: Writing Skills and Anlaysis of Writing Assignment

Slide 32: Cultivating EF Networks - Things to remember when teaching EF skills

Slide 33: Q3: How can our current understanding of EF processes help us to refine our approaches to teach goal setting, organization, cognitive flexibility, working memory, and self-monitoring?

Slide 34: A Model for Cultivating Executive Function Skills

Slide 35:

Developmental Tasks through the ages (Dawson & Guare, 2014)

TABLE 1.1. Developmental Tasks Requiring Executive Skills

Age range	Developmental task
Preschool	Run simple errands (e.g., "Get your shoes from the bedroom").
	Tidy bedroom or playroom with assistance.
	Perform simple chores and self-help tasks with reminders (e.g., clear dishes from table, brush teeth, get dressed).
	Inhibit behaviors: don't touch a hot stove, run into the street, grab a toy from another child, hit, bite, push, etc.
Kindergarten–grade 2	Run errands (two- to three-step directions).
	Tidy bedroom or playroom.
	Perform simple chores, self-help tasks; may need reminders (e.g., make bed).
	Bring papers to and from school.
	Complete homework assignments (20 minutes maximum).
	Decide how to spend money (allowance).
	Inhibit behaviors: follow safety rules, don't swear, raise hand before speaking in class, keep hands to self.
Grades 3–5	Run errands (may involve time delay or greater distance, such as going to a nearby store or remembering to do something after school).
	Tidy bedroom or playroom (may include vacuuming, dusting, etc.).
	Perform chores that take 15–30 minutes (e.g., clean up after dinner, rake leaves).
	Bring books, papers, assignments to and from school.
	Keep track of belongings when away from home.
	Complete homework assignments (1 hour maximum).
	Plan simple school project such as book report (select book, read book, write report).
	Keep track of changing daily schedule (i.e., different activities after school).
	Save money for desired objects, plan how to earn money.
	Inhibit/self-regulate: behave when teacher is out of the classroom; refrain from rude comments, temper tantrums, bad manners.
Grades 6–8	Help out with chores around the home, including both daily responsibilities and occasional tasks (e.g., emptying dishwasher, raking leaves, shoveling snow); tasks may take 60–90 minutes to complete.
	Babysit younger siblings or for pay.
	Use system for organizing schoolwork; including assignment book, notebooks, etc.
	Follow complex school schedule involving changing teachers and changing schedules.
	Plan and carry out long-term projects, including tasks to be accomplished and reasonable timeline to follow; may require planning multiple large projects simultaneously.
	Plan time, including after-school activities, homework, family responsibilities; estimate how long it takes to complete individual tasks and adjust schedule to fit.
	Inhibit rule breaking in the absence of visible authority.

Activity 2 - Enter the number or the EF Skill next to the ability definition below
Executive Function Skills

1. Response Inhibition	2. Emotional Control	3. Working Memory	4. Planning Prioritization	5. Metacognition
6. Organization	7. Time Management	8. Sustained attention	9. Goal Directed Persistence	10. Task Initiation
11. Flexibility				

Ability Definition

	The ability to create a roadmap to reach a goal or to complete a task. It also involves being able to make decisions about what's important to focus on and what's not important.
	The ability to stand back and take a bird's-eye view of oneself in a situation. It is also an ability to observe how you problem solve and includes self-monitoring and self-evaluative skills (e.g., asking yourself, "How am I doing?" or "How did I do?").
	The ability to hold information in mind while performing complex tasks. It incorporates the ability to draw on past learning or experience to apply to the situation at hand or to project into the future.
	The ability to revise plans in the face of obstacles, setbacks, new information, or mistakes, or an ability to changing conditions.
	The capacity to maintain attention to a situation or task in spite of distractibility, fatigue, or boredom.
	The ability to begin a task without undue procrastination, in a timely fashion.
	The ability to design and maintain systems for keeping track of information or materials.
	The capacity to have a goal, follow through to the completion of the goal, and not be put off by or distracted by competing interests.
	The ability to manage emotions in order to achieve goals, complete tasks, or control and direct behavior.
	The capacity to think before you act; the capacity to delay or inhibit responding based on the ability to evaluate multiple factors.
	The capacity to estimate how much time one has, how to allocate, and how to stay within time limits and deadlines.

Case Study Analysis
1. Below are 3 students in K-5 experiencing EF issues.   2. Select one of case studies that best suits your situation.   3. Analyze the student's needs and complete the intervention plan graphic organizer

Case Study (1): Lisa, age 9, 4th grader

Lisa, age 9, had a very difficult time starting her homework promptly at the time her parents set for her (right after dinner). Her parents decided they needed to teach this as a skill. Every day when she came home from school, her mother sat down with her and they made out a homework plan. Lisa made a list of all her assignments and she wrote down when she would start each one. She was allowed to build in a break for one TV show. When it was time for her to start her homework, her mother pulled out the Homework Planner *and asked Lisa to take a look at it. Lisa then got out the rest assignment and her mother made sure she got off to a good start before she left to do other things. In the beginning, Lisa's mother praised her for following her schedule and when she completed each activity. As time went on, Lisa was able to make her schedule and follow it all by herself.*

Case Study (2): Sam, a 2nd grader and Joe, a 5th grader

Sam, in second grade, made many mistakes in math. On math computation, he often failed to note the operation that he was supposed to perform; as a result he often added when he should have been subtracting or vice versa. His teacher kept handing papers back with low grades and reminders to "Watch the signs!" When his performance did not improve, she decided that he needed to learn a procedure that would help him to do the problems correctly. She taught him to say to himself as he began each problem, "Am I adding or subtracting?" She and Sam practiced this a lot; she also sent a note home to his parents so that they could use the same process to help him with his homework. With enough practice, he began making fewer mistakes

Joe, in fifth grade, also tended to make careless mistakes in math, but his problem was different from Sam's. When Joe had to solve multistep problems, he stopped after the first step and gave that number as his answer. His teacher also taught him a procedure. Now, when he has to solve a math problem, he first figures out each step and then writes down a notation for that step as a reminder. For instance, he's given the problem, "If you buy 5 candy bars for 60 cents each, how much change should you get back from 5 dollars?" His teacher taught him to say, "First I multiple 5 times 60 cents," then write down an M for multiply on his paper. Then he says, "I take that number and subtract it from 5 dollars," writing an S for subtraction on the paper. As he completes each step, he crosses out the letter describing that step.

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Environmental modifications: These are designed to help children get right to work when tasks are assigned or to begin them at a predetermined time. They include the following:

- Verbally cuing the child to get started.
- Arranging for a visual cue to prompt the child to begin (e.g., a picture taped to the desk)
- Walking the child through the rst portion of the task to get him or her started.
- Noting start and stop times when tasks are assigned/completed.
- Having the child specify when he or she will begin the task
- Cuing the child when the scheduled time arrives
- Alternatively, have the child decide how he or she will be cued to begin the task (e.g., by using an alarm clock)

Coaching the Individual and Instilling Motivation
1. Desired behavior: Begin a task promptly at some future predetermined time
2. Steps to teach the behavior:
   a. Have the child make a written plan for doing the task. This may include writing down the assignment and deciding on a start time. For longer projects, it may mean breaking the task down into subtasks and assigning start times to each subtask.
   b. Have the child determine what cue will be used to remind him or her to begin the task. This could include having a parent or teacher (or sibling or friend) provide the reminder, setting some kind of alarm, or using a naturally occurring event as the cue.
   c. At the point when the child is expected to begin the task, make sure he or she does so promptly, reinforcing the child when he or she does not require additional cues beyond those he or she built into the plan. Gradually fade the supervision.

Keys to success
1. Be diligent about consistency during the initial "habit-building" period. When this intervention breaks down, it's usually because the system wasn't followed consistently in the first few weeks.
2. Fade the cueing system gradually and do not hesitate to restart it if task initiation begins to fall off.
3. If the child is not quickly successful, institute an incentive system.

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Environmental modifications:
1. These are designed to prompt children to use analytic skills to assess how they are performing assigned tasks. They include:
2. Embedding questions designed to elicit metacognition into daily classroom instruction. Here are some examples of questions teachers might ask: "How did you solve that problem?" "Can you think of another way of doing that?" "What can you do to help remember that information?"
3. Building error monitoring into task assignments (e.g., by requiring children to show that they have checked their work when doing math computations or by having them fill out proofreading checklists before handing in writing assignments).
4. Giving children assignments requiring them to use metacognitive skills. For example, they could be asked to give themselves a grade on an assignment and to explain why they feel they deserve that grade. Using scoring rubrics to define what a quality product or assignment will include.

Examples of teaching the skill might include the following:
1. Have children develop error-monitoring checklists and then prompt them to use them, gradually fading the prompts.
2. Teach children a set of questions to ask themselves when confronted with problem situations. Here are some questions they might ask: (1) "What is my problem (problem definition)?" (2) "What is my plan (solution strategy)?" (3) "Am I following my plan (self-monitoring prompt)?" (4) "How did I do (self-evaluation)?" These questions could be written in a list form and publicly displayed.
3. Parents or teachers could then prompt the child to go through the set of questions when problem situations arise.
4. Teach the child to ask him- or herself specific questions in problem situations, with the questions tailored to the specific problem. For instance, if a child tends to invade other children's personal space resulting in annoyance or rejection, he or she might be taught to ask him- or herself, "Did I get too close?" and to move away from the other child if the answer is "yes." He or she might also be taught that the definition of "too close" is "if the child is closer to me than two shoe lengths."

As with many of the skills described so far, the procedure for teaching the child to use metacognitive skills includes (1) defining the skill to be learned, (2) listing the steps the child goes through in using the skill, (3) practicing the skill in a controlled setting, (4) cuing the child to use the skill in the natural environment, (5) reinforcing the child for using the skill either verbally or through the use of an incentive system, and (6) fading the cues and reinforcement.

Keys to success
1. Since the heart of metacognition is self-monitoring and self-evaluation, ensure that the student is an active participant in the checking and evaluation process.
2. This requires that the process be simple enough for the student to understand and eventually apply independently.
3. Encourage or cue the student to use the strategy or think about the monitoring/evaluation process prior to beginning the task and acknowledge strategy use with specific praise or a reward and by explaining what the strategy use accomplished.

Deconstructing the case study

Step 1: What challenges are preventing academic progress?	Name Target Skill
Step 2: What behavior do you want to see improve?	Behavior Objective
Step 3: Analyze the environment. What aspect of the environment will you change?	Environmental Adjustments
	Physical Surroundings:
	Social (if any):
	Task (if any):
	Tools and Cueing systems: (see Sample Scripts page from Handout)
Step 4: How will you get buy-in from the student? Write out your script.	Coaching the Individual
	Define the goal:
	Routines and procedures to teach your child:
	Supportive statements to encourage follow through:
	Monitoring systems to show progress:
Step 5: What are the keys to success to remember?	