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**A**FTER RECESS, as part of the daily routine, the class reconvenes on the rug. Jackson runs from the back of the room where he has been playing with the class hamster to his cubby and slips off his jacket. It drops to the floor. He kicks off one boot. The teacher calls stragglers to join the others on the rug, so he hops to the circle wearing one boot and plops down. The teacher shares the agenda for the afternoon, which includes reviewing the science homework. Looking alarmed, Jackson pops up, and races back to his cubby while kicking off his other boot.

He pulls out his backpack, removes a homework folder, and grabs his assignment. Leaving the backpack open and boots scattered, he races to the homework bin. Realizing his name is not on the assignment, he zooms back to his desk to grab a pencil and sits back down on the rug with the rest of the class.

As the teacher gives instructions for the next activity, Jackson slips his homework underneath him and sits on it. The class is dismissed to their desks, and Jackson, talking excitedly to the boy next to him, stands up and follows the boy to his desk. His nameless homework is left on the floor. When he gets to his desk, his morning work folder and silent reading book are on the floor with assorted bits of paper. As the class starts the next activity, Jackson does not have the materials he needs. Again, he needs to walk about the class to get ready.

Anne has a music lesson Saturday morning at 9:00. Her mom wakes her at 7:30; Anne rolls over and groans, "Ten more minutes." Mom returns ten minutes later and tries again to wake Anne. After two more rounds of "Ten more minutes," Anne finally gets out of bed and heads for the shower. She showers for twenty minutes. Mom knocks on the door to announce the time. She encourages Anne to hustle so they can leave the house in thirty minutes. Anne gets out of the shower, puts on a robe, plops herself on the living room couch, flips open her laptop, and checks her social



media sites. Mom reminds her to get ready for music. Ten minutes later, Anne saunters into her room and stares at a land mine of clothes trying to decide what to wear. She sits on her bed and starts to remove her nail polish. Mom hollers a reminder, "Get dressed!" Finally, ten minutes later, Mom exclaims anxiously, "We have to go...!" Anne responds to this seemingly sudden pressure and shouts, "I'm coming!" She heads into

# Staying

the bathroom in her bathrobe to blow dry her hair. Patience waning, Mom asks about her instrument and sheet music; Anne directs her to the basement. Finally finished with her hair, Anne heads to the kitchen for something to eat.

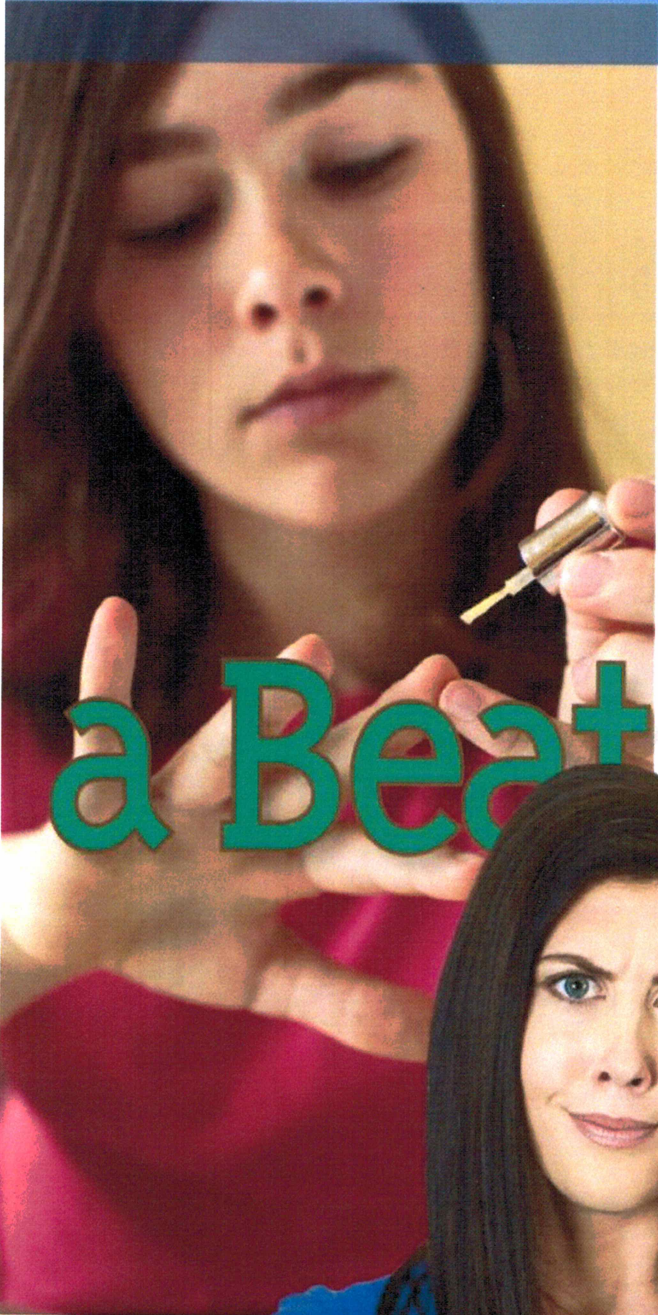
Exasperated, Mom, who is standing at the door holding Anne's instrument, music sheet, and breakfast bar, exclaims, "We need to go now. We are late!" Anne yells back in frustration, "I told you to wake me up earlier!"

As adults, we joke about "senior moments." That moment when you have imagined an item you are going to retrieve and then when you finally that room to get it you draw a blank. "What did I come in here for?" Ack. A senior moment.

What do a student zigzagging about the classroom, a slow-paced teen, and a senior moment all have in common? Challenging executive function skills.

## Weak executive function skills

Individuals with strong executive function skills stay a beat ahead. In contrast, teachers and parents describe individuals with weak



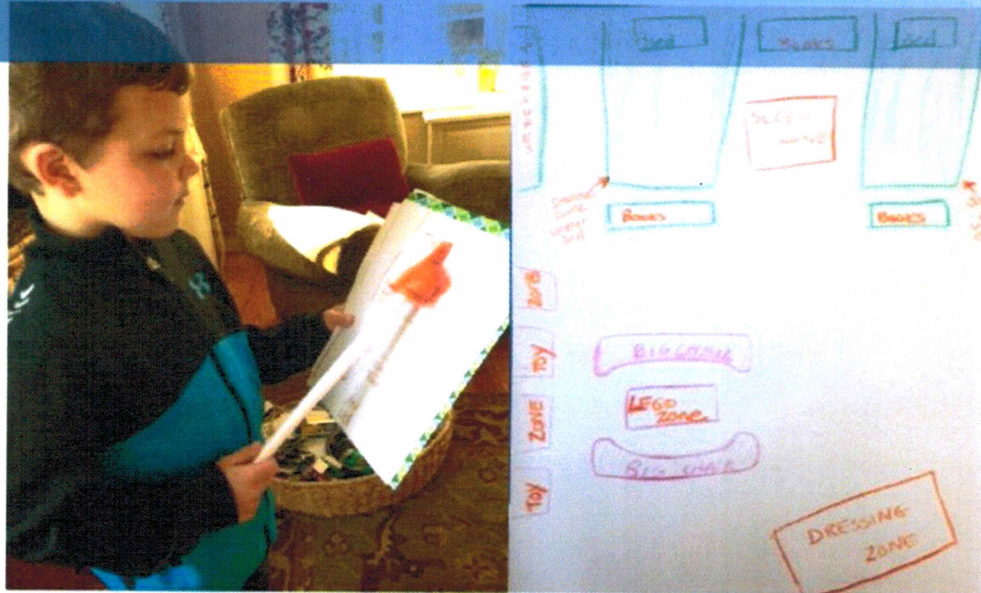
executive function skills as being “a beat” or—as Jackson’s teacher sighs—“twenty-two beats behind.” How do executive skills enable us to stay a beat ahead? Strong executive function skills enable us to imagine and plan a “dry run” of the task in our mind before we begin to carry out the plan. If a task is planned in a different space than where the task will be carried out, then we create an image of the future space in our minds. For example, when a child hears the direction, “Get ready for lacrosse,” he might be downstairs in the family room and imagine walking upstairs into the bedroom, heading over to the dresser, opening the third drawer, and retrieving their uniform. Then he might envision a transition from the bedroom to the mudroom and then the garage, where cleats and gear bags are stored.

The imagery is a mental anchor that allows the child to better resist distractions and maintain a pace so as to reach a goal. When forethought guides children’s actions, they can carry out tasks more successfully. Small glitches, such as looking for a missing item, can also be

# a Beat Ahead



handled more smoothly. However, when children with weak executive function skills hear the instruction “get ready,” they hear the words, but do not pre-imagine the task or the steps to be ready. Even if they respond, “Okay,” they do not initiate any actions to move toward their goal. When these children finally enter their rooms, because they have not pre-imagined the task, they are only starting to ask themselves, “Okay, what am I doing?” Without the vision of an outcome in mind, they are open to distraction. When these children go into their bedrooms and see books, Legos, and a laptop, they easily disengage from the goal of getting ready. They are



**ORGANIZATION & FOLLOWING DIRECTIONS:** A basic map of a bedroom or a classroom can be used with a pointer to plan out directions and rehearse routines. This strategy can improve the use of mental imagery and self-talk, which are two skills that support a child's ability to carry out tasks and routines.

now a beat behind. Likewise, a senior moment is simply the loss of this pre-imagined intention.

### Developing strong executive function skills

So, what can we do to develop a child's capacity to be a beat ahead and successfully carry out intentions in the future? According to Russell Barkley, in order to develop strong executive function skills, individuals "need to repeatedly practice: self-monitoring, self-stopping, seeing the future, saying the future, feeling the future, and playing with the future so as to effectively 'plan and go' toward that future."

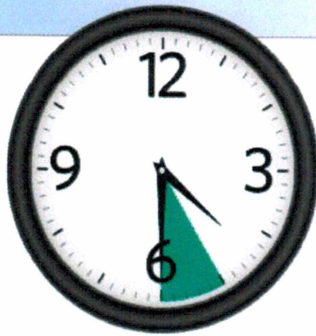
Our natural inclination might be to provide checklists. While this strategy can sometimes work, it is limited. Checklists made by adults are not that helpful in creating mental imagery for children. For example, as adults, we might make a list of items to buy at the market. While making this list, we create, if only for a brief moment, a mental image of the supermarket, our dinner table, or shelves in our cabinets. These images help us navigate the market and remember items even if the list is left at home. When we hand children a checklist we've made, they have not used imagery to create the list and may find it hard to create imagery after the fact.

A better technique, when giving directions, is to use words that create mental imagery. For example, rather than asking a child, "What do you have for homework tonight?" pose a question such as: "When you walk into

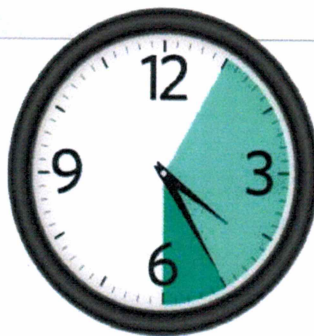
class tomorrow, what do you see yourself handing to your science teacher Mr. Jenson?" Instead of directing your child to get ready for soccer, try asking, "If you were standing at the door ready to go to soccer what would you look like? What does 'ready' look like?" To improve the effectiveness of your instruction to go upstairs and get dressed, try saying, "What drawer do you see opening to find your sport clothes?"

Visuals are also helpful in teaching kids to get ready and organize themselves. It's often a struggle to get children out the door in the morning. Multiple prompts and checklists might get your child out the door, but the process is likely to be difficult. Instead, try snapping a quick photo of your child when he is ready for school and standing by the door with his coat, clothing, shoes, backpack, and lunch. The next morning, show your child the photo, and simply say, "This is what 'ready' looks like." Ask him to imagine a plan that enables him to "match the picture." Once children remember the images in these photos, they can use their mental imagery and the photos no longer need to be shown.

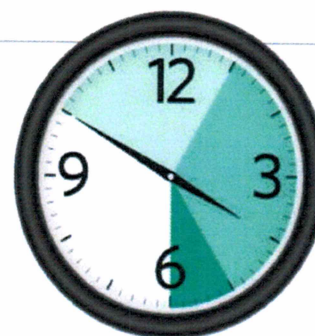
In the classroom, cue students to imagine their actions before they transition. For example, when students are transitioning from recess, as they line up, say: "Imagine yourself at your cubby. What do you look like? What do you see yourself doing?" For younger students, ask them to describe how they will prepare for an activity. They can use a pointer to point to the space they will go to and pre-imagine themselves in



What does 'ready to start the lesson' look like? You need 5 minutes before your lesson actually starts at 4:30 to prepare so that you are ready when the lesson starts. This 5 minutes gives you time to take your instrument out of the case, open the sheet music to the practice warm-up page and to be seated in front of the music stand.



Working backwards to shade in the time needed, what does the travel time look like? 5 minutes to walk through the parking lot, 15 minutes to drive to the music lesson.



Shading in 5 minutes to gather your instrument and sheet music and 10 minutes to dress and brush your hair and teeth, you can see that you need to start getting ready for your 4:30 music lesson at 3:50.

that space carrying out the expected actions, "I am going to go to the back of the room and get a worksheet, then I am going to walk to the counter under the windows and get my text book, then I am going to sit at my desk and take out my pencil."

Take this technique a step further. Ask the student to draw a blueprint of the classroom or their house. Tape this blueprint to a clipboard, so the child can 'tap out their plan' before a task. Use a pencil or pointer to tap on the blueprint while encouraging them to pre-imagine and verbalize their plan; this method will foster an important skill—self-talk. For example: "I am going to walk into the bathroom, brush my teeth, then go across the hall to my bedroom. Next, I'll go to my closet, get my shoes, then walk downstairs to the front hall to get my backpack."


### Use an analog clock

Children may still have difficulties using an appropriate pace even if they have a mental image of the directions. If their pace is slow, then they are vulnerable to distractions. What helps children to imagine carrying out a plan within a particular time frame? An analog clock.

As adults, we often strategize times before verbalizing the plan to children. We say, "You need to start getting ready at 3:45." However, this direction is given after we have thought, "Dance starts at 4:30, so we need to leave the house at 4:00." Try asking children to work backwards from an end time. Many children benefit from seeing how time fills up on an analog clock. A dry erase marker can be used to shade "slices" of time and write actions when planning backwards on a glass analog clock. See the example of backwards planning for estimating the time to prepare and travel to a music lesson (see graphic above).

Students can also use the clock to visually plan their time for homework or in-class assignments.

Another advantage of drawing on the clock is building self-awareness. Students can see visual markers of the time that has passed, and then determine if they have used time effectively or had any "time robbers" such as daydreaming or getting distracted by the television or Internet. To stay a beat ahead, students must monitor how closely their outcomes match the future plan they had imagined.

Ask students to plan checkpoints when they can stop and determine if they are on track with their plan. Students set a mid-point timer to stop and check how well they are working towards completing an assignment. The purpose of the timer is to improve self-monitoring and an awareness of how time is used, but not how quickly they can complete an assignment. Students who set timers for the end of a task frequently experience more stress, whereas a timer set for check-ins midway through a task provides opportunities for problem solving. Overall, when students are given guidance to plan and self-monitor while using mental imagery, they often experience independence and a better sense of self-control. Try it! 

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