

Facilitating Executive Function Skills at Home



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Understanding
Executive Control

9

Mark it is
Tuesday!



If _____
Then _____

11

The Role and Order of Working Memory

Nonverbal Working
Memory

If....then

Verbal Working
Memory
Self-Directed Talk
"I will, I am going to,
Maybe, When I..."



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14

Space

Read the Room

•What's going on?
•Expected?
•Unexpected?
•Wide Angle → Zoom In

Time

Get on the Timeline

•Pace
•Time of day
•What is happening at this Moment in Time
•What is coming up?
 ➢ Predictable sequence

Objects

Read the Organization of the Materials

Objects
Parts
Location
Purpose

People

Read the Person (ROLE)

Face
Body
Appearance
Mood
Saying

Situational Intelligence:
S.T.O.P. & Read the Room

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NonVerbal Working Memory + Situational Intelligence=

Mimetic-Ideational
Information Processing
(mental trial and error simulation)

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Be a Future Thinker: “Mind **MIME** it’

M

Schematic Future Thinking: **M**ake an Image: **STOP** What will **it** look like?

I

Episodic Future Thinking: What do **I** Look like? Self Projection into the Future

M

Mental Time Travel (Temporal - Spatial): How am I **M**oving to achieve this?

E

The Future **E**motion: How will I **feel**? Emotional Physiological State

i

If then

T

Self **T**alk

It is ‘experiencing the self in time’ and talking yourself through that experience so you are efficient and successful

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90% of the Time Task Planning Happens in a Different Space from Where you Execute the Plan

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Elements of Future Thinking



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Development of the Time Horizon

How Far into the Future can they Anticipate?

2 Years Old: NOW

3-5 Years Old: 5-20 Min

1st Grade: Several Hours

3rd Grade: 8-12 Hours

12- 16 Years Old: 2-3 Days

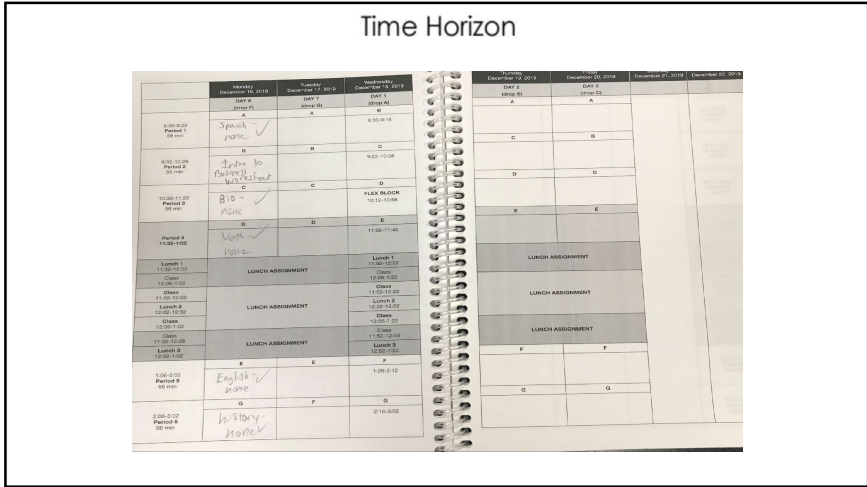
17-23 Years Old : 2-3 Weeks

23-35 Years Old: 3-5 Weeks

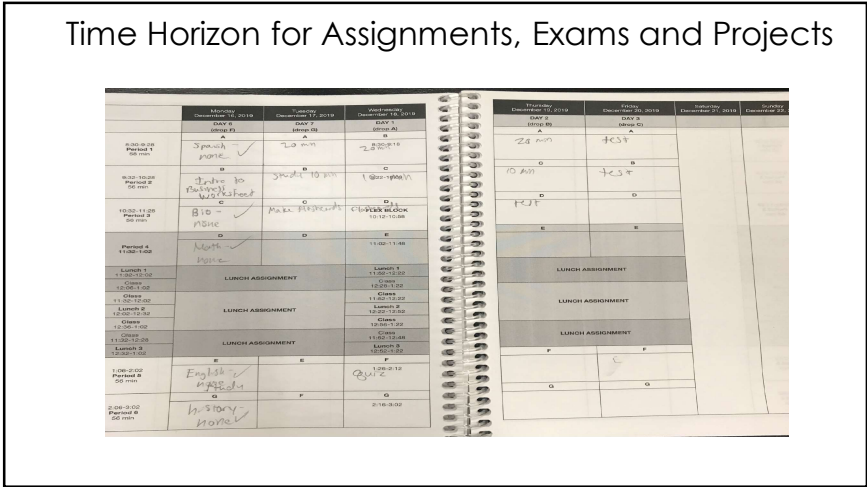
30% Delay with ADHD

Temporal – Spatial Capacity/Window

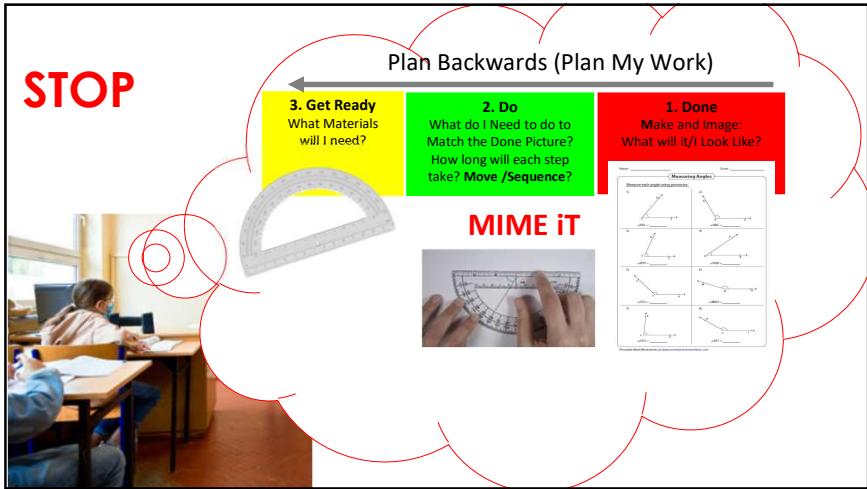
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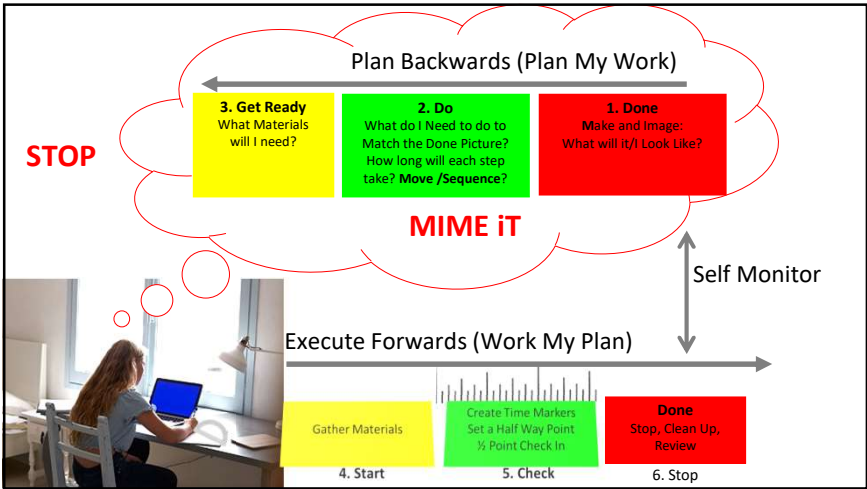
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27



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GOAL: Shifting from Adult-Directed Students to Self-Directed Students



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Get Ready for School!



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“Get Ready for School!
Tell Me Your Plan!”

“I will pack my books and computer. I **should probably** pack my computer after eat breakfast so it can charge up for class. **When** I get in the car I will double check my bag.”

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Prompts Ought to Match The Role and Order of Working Memory

Nonverbal Working Memory



↔ If....then ↔

Verbal Working Memory
Self Talk

- ☐ Head Band
- ☐ Sweatshirt/Coat
- ☐ Snack
- ☐ Bag
- ☐ Homework/Notebook
- ☐ Shoes for Gym



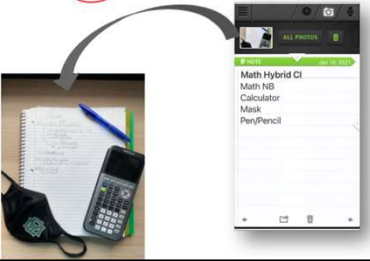
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Try:



SuperNote Notes Recorder&Photo
Notes+Voice Recorder+.





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Be a Future Thinker: “Mind **MIME** it”

A **Stated Intention** Helps a student Move from a Scripted Plan to Self Projection

Future Self Talk

Plan A: As I see it.....

I will
I am going to
When I
I can
(one's name) you can
At the

Plan B: but.....

Maybe
I might
Should
Probably
In case...
If ... then

Element of Uncertainty

See the works of Christina Atance and Arnaud D'Argembeau

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Script Vs. M.I.M.E.

The language the student uses is an indicator of whether they are projecting themselves into that event or not.

How will you prepare for the test on Friday?

"Study. Make Flash Cards. Look over old homework."

Vs.

"I am going to study with Becca. We will meet at Panera. Maybe I will use Quizlet to make flashcards. I should probably take a practice test using the website from the Text Book."

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Is my Bag packed for school?

☐Agenda Book

☐Homework Folder

☐Blue Math/Science Binder

☐Red ELA/Social Studies Binder

☐Math text Book

☐History text Book

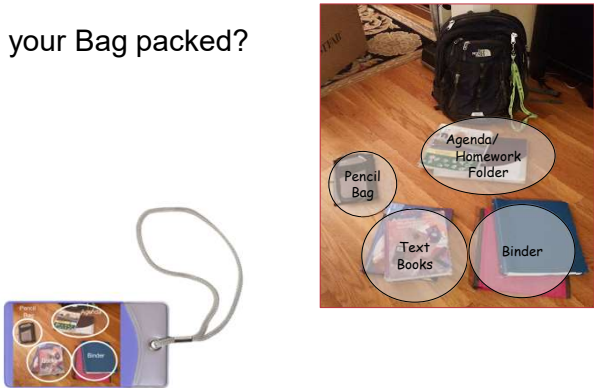
☐Pencil Bag



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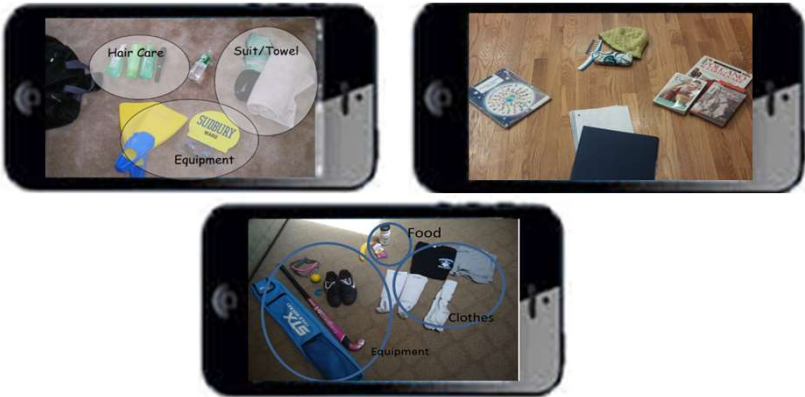
Managing Materials:

Is your Bag packed?



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Managing Materials: Have Students Use Devices to Create an Album of Materials



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Planning Ahead:
See Yourself in a Future Space



Using Gestures
STOP and Read the Room
Developing Situational Intelligence and the Spatial Temporal Window

45

MIME : Downstairs - Task Planning Happens in a Different Space than Where you Execute the Plan



Point out your plan:

46

Gesture to Extend Temporal-Spatial Horizon

- Gestures are really just an outgrowth of how we might mentally simulate performing activities
- Gestures give life to our mental scratch pads, allowing us to perform actions with our hands before we have to do them in real life or before we have thought these activities all the way through to put them into words
- Gesture helps infuse memories with an emotional charge that makes them last.

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MIME: Right in Front of Me



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MIME: At the Door



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MIME : Downstairs



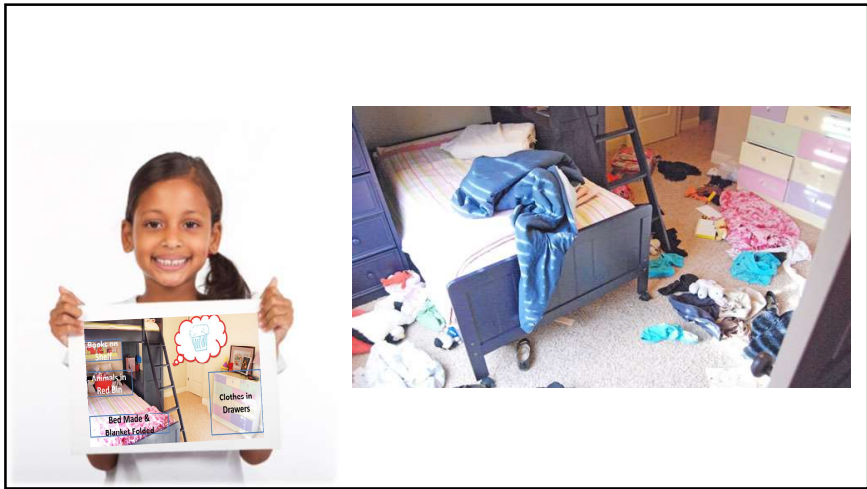
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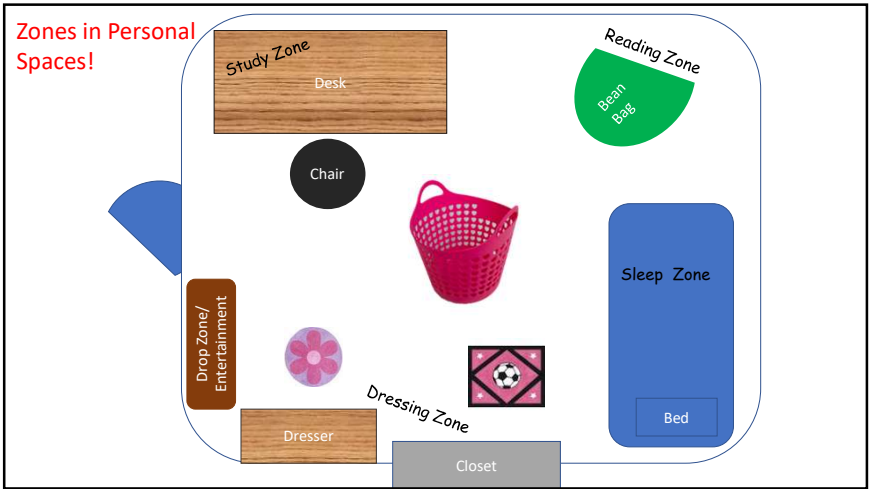
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Future Self Talk

Plan A: As I See It	Plan B: But...
I Will	Might/ Maybe
I am Going to	Could
When	Should
I can	Probably
	In case
	If...then

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Clean Your Bathroom



Future Self Talk

Plan A: As I see it.....	Plan B: but.....
I will	Maybe
I am going to	I might
When I	Should
I can	Probably
(one's name) you can	In case.....
At the	If ... then

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Use your Language to Coach the Student to Independently MIME

Job Talk!

Turn the Verb/Action word into a Noun label (add -er)

Turn the action into a “Job” and name for the student their “Job Title”

- Develops Nonverbal Working Memory (What will I look like?)
- Creates Immediate Structure for the Student
- Accesses Procedural Memory (How am I moving?)
- Neutralizes Emotional Reactions

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Job Talk

By Kristen Jacobsen, MS CCC-SLP &
Sarah Ward, MS CCC-SLP

Job Talk refers to a highly effective language-based executive function prompt that supports students of all ages in planning and carrying out tasks. With the use of Job Talk, students are better able to envision themselves assuming all the behaviors associated with carrying out a task. It is most helpful to ask students to assume a role during the planning and self-monitoring stages of carrying out any task. The foundation of this language support rests in “psychological essentialism”, or seeing oneself carrying out a role in one’s mind’s eye.

In one research study, politicians wanted to increase voter turnout and turned to psychological research for information. Researchers asked one group of individuals to return on another day in order to “vote”, which is an action word associated with the task. A different group of individuals was asked to return on another day and given the personal identity label of being “voters”. There was an overwhelming response from the group asked to be “voters”. Repeated research in this area supports this finding that people want to feel like they are playing a role and taking ownership of carrying out that role rather than simply being directed as to what “to do”.

Children are no different! Executive functioning requires motivation and intention when initiating any academic task or assignment. The motivation and intention to complete a task is increased by invoking a student’s sense of self and how they see themselves assuming a role. By modifying the verb form of a behavior (“Sharpen the pencils”) to feature a noun label (“Annie is a pencil sharpener”) we create an essential part of the student’s identity. In other words, it creates confidence and a positive sense of self that this is “What I can do!” This subtle, but important modification in language can change an occasional behavior of helping in the classroom into a child who has the confidence to lead as a permanent trait or skill, for example, I am a “fact finder” when I read non-fiction and a “perspective taker” when I read fiction.

The use of Job Talk efficiently manages many cognitive resources needed to support executive functioning. When students are recalling an organized list of actions or steps from factual or semantic memory to complete a task, this places a heavy demand on the working memory load. By shifting from the list of actions, one must take in order to comprehend a reading passage to a role one is assuming when being a “sentence expander”, “summarizer”, it also access a student’s background personal experiences of fulfilling that role in the past. Rather than retrieving the steps from factual memory, the steps are retrieved from episodic memory, which allows for a more effective and efficient process to plan and carry out the steps of the task.

This terminology also invokes a gestalt image of one assuming the role during independent and group tasks, routines and assignments. When students are going to be “writers”, they need to create an image in their mind, “What does a writer *do*? What does a writer *look* like?” If they seem unable to create that image and direct themselves through the task of writing, it gives us insight into what other inherent roles in the task might they not yet be able to envision. Do

they need to see themselves as an “Idea Maker?”, “Outliner”, “Idea Mapper?” Notice that these names do not need to be formal terms and can often be generated by the students. They only need to be terms that create the psychological essentialism necessary for generating a concrete mental image of the outcome of the task, steps in carrying out the task if necessary and an overall sense of ownership. Using the declarative form of the nouns helps students develop important aspects of executive functioning, a stronger sense of self, and generalizes how they perceive themselves and their essential role over time.

Declarative Job Talk (noun form)	Imperative Verb Form
Please be a handwasher-	Please wash your hands.
Be a counter wiper-	Clean off the counter.
Be an animal designer-	Draw a creative animal.
Be a summarizer-	Answer reading questions.
Be a time organizer-	Record and prioritize homework

Resources:

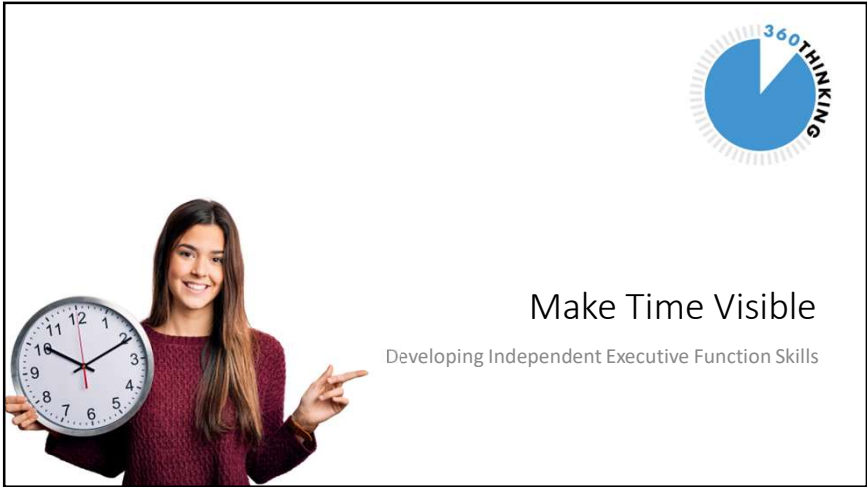
Bryan, C.J., G.M. Walton, T. Rogers, and C.S. Dweck. “Motivating Voter Turnout by Invoking the Self.” *Proceedings of the National Academy of Sciences* 108.31 (2011): 12653-12656.

Gelman, S.A., & Heyman, G.D. (1999). Carrot-eaters and creature-believers: The effects of lexicalization on children’s inferences about social categories. *Psychological Science*, 10, 489-493.

Heyman, G. “Talking about Success: Implications for Achievement Motivation.” *Journal of Applied Developmental Psychology* 29.5 (2008): 361-70.



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MIME it: Make time Visible

The **WORKING** Clock

Sketch the Volume of Time The Student Has
Always Start in the center of the Clock
Draw out the Minute Hand in a Clockwise Direction
To show the “sweep of time”.

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The **WORKING** Clock

Future Self Talk

Plan A: As I See it	Plan B: But...
I Will	Might/ Maybe
I am Going to	Could
When	Should
I can	Probably
	In case
	If...then

“I **will** read my science article and I **should probably** add the new vocabulary words to my quizlet for my test on Friday.”

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People Think in Time Markers

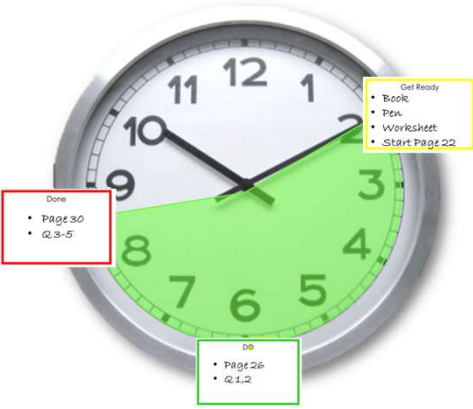


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"I have history homework tonight. I need to read and highlight Chapter 2 and Fill out the worksheet."

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Create Post It Time Markers!



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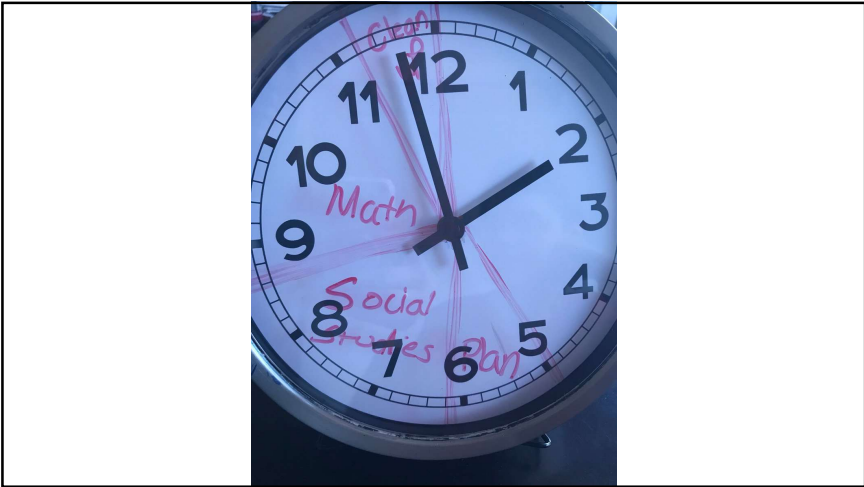
Role/Order of Working Memory in Executive Function Skills



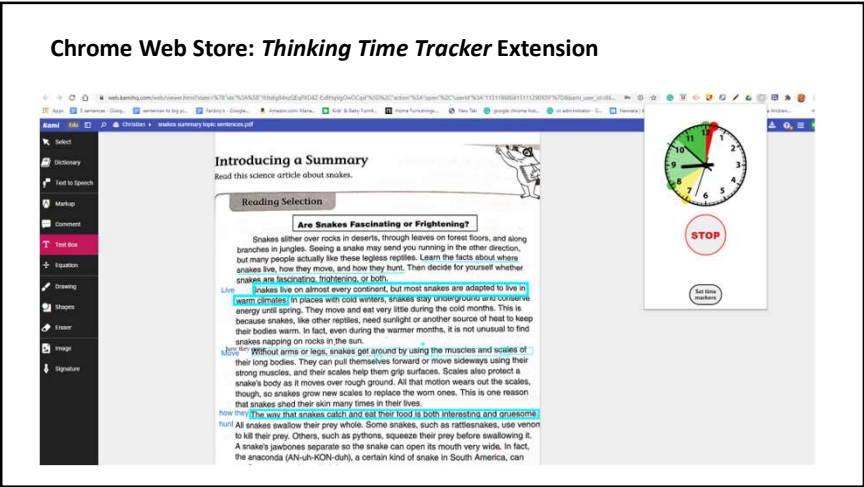
If....Then

I need to get ready to go to practice at 3:45 (time). I need to highlight the text then do the worksheet(sequence). I get to use that cool highlighter in my backpack. (Self Talk)

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Planning Time: Create Time Markers

Shade, Mark, Check

Draw How Much Time The Student Has

Identify/Sketch The “Future Picture Image” **[Fixed vs Flexible Time]**

Factor in time to ‘Get Ready’ and ‘Close out’ task

Create Time Markers:

- Start Time
- Stop Time
- Mid Point

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Create a Time Marker & A Mid-Point Check-In

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Self-Monitor: The Mid Point Check In

- How am I doing at this Mid Point time Marker?
 - Am I still focused on the task?
 - Am I clear on the expectations/directions?
- How is my focus?
 - Do I have any “Time Robbers”?
 - Identify
 - Remove
 - Re-Plan
- What are my “Time Savers”?



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Power On Zones

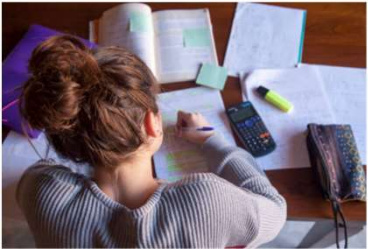


- *Music
- *Television
- *Phones or iPads



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Power Off Zones



- *Screens for Learning Only
- *Quiet Learning Environment
- *Phones Silenced or in a Parked Zone



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Imperative vs. Declarative Language

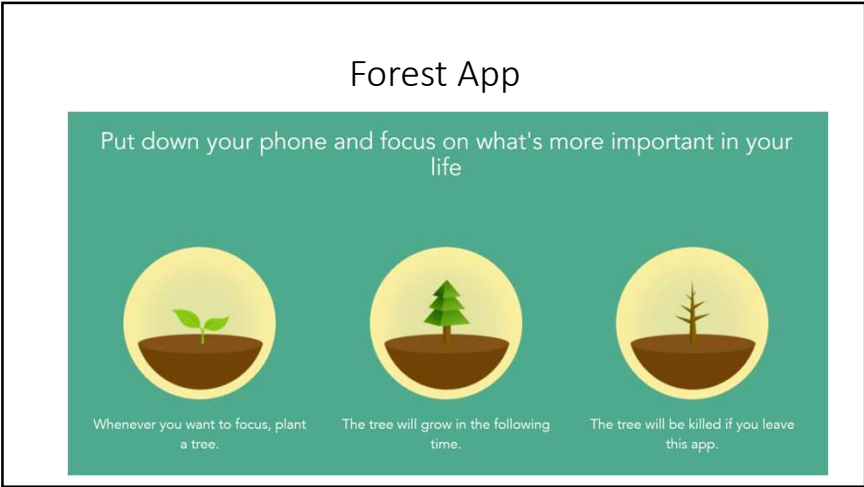
Imperative: Command

Declarative:



A Declarative References or Describes ‘what’ is to be accomplished so the learner creates the goal vs. commanding ‘what needs to be done’ to achieve the goal.

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5 Apps to Help Students Focus & Block Distractions from Technology

- [Freedom](#) for blocking distractions on all your devices at once
- [Serene](#) for planning and following through on deep focus
- [Cold Turkey Blocker](#) for scheduled system-wide blocking
- [LeechBlock](#) for free browser-based website blocking
- [RescueTime](#) for time tracking with built-in website blocking

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The screenshot displays the Google Calendar interface. At the top, there are browser tabs and the Google Calendar header. The main area shows a weekly view for January 2021. A red circle highlights the 'Add a task' button in the top right corner. The calendar shows various events and tasks, including 'quant versus chart and D11', 'physics momentum assignments', and 'math essay'. The interface includes a sidebar with navigation options like 'My calendars' and 'Other calendars', and a right sidebar with a list of tasks and events.

[illegible]

Monday	Tuesday	Wednesday	Thursday	Friday
Organize Notes	Determine What I know - Prioritize	Make Flash Cards/Crazy Phrases/ Study Tools	Memorize/ Practice Terms	Test!!!!

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
		Soccer				
7	8	9	10	11	12	13
		Soccer	Tutor		Dad's Birthday!	Soccer Game
14	15	16	17	18	19	20
		Soccer	Tutor	SCHOOL VACATION		Soccer Game
21	22	23	24	25	26	27
Soccer Game	Review Old Test	Organize Test Materials	Know/ Sorta Know/ No Clue	Make Study Tools Coming Over		Memorize
						Over with Jack
28	29	30				
Memorize	Mom Quiz Me	*** Test	Tutor			

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
		Soccer				
7	8	9	10	11	12	13
		Soccer	Tutor		Dad's Birthday!	Soccer Game
14	15	16	17	18	19	20
		Soccer	Tutor	SCHOOL VACATION		Soccer Game
21	22	23	24	25	26	27
Soccer Game		Soccer		Andrew Coming Over		Soccer Game/Sleep Over with Jack
	28	29	30			
		*** Test	Tutor			

Know/Sort

Review Old Test

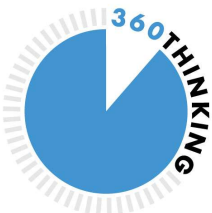
Organize Test Materials

Memorize

Make Study Tools

Quiz

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Planning for Initiation & Follow Through

Get Ready * Do * Done

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Creating the Get Ready*Do*Done Work Space

Develops the skill of the **Anticipatory Look** associated with Episodic Future Thinking

Cristina Atance 2014

Get Ready

DO

Done

Get Done

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Start by having the student practice planning backwards for familiar tasks in which they know what 'Done' looks like.

Get Ready

Plate
Bread
Mayo
Mustard
Knife
Ham, Cheese, Lettuce, Tomato

DO

Gather Ingredients
Bread on the Plate
Spread Mayo and Mustard
Add Meat, Cheese and Toppings
Put Bread on Top

Done



Get Done Dirty Items in Sink, Put Stuff in Fridge

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Plan Backwards: Clean Your Bedroom

MIME IT

Future Self Talk

Plan A: As I See It

Plan B: But...

I Will

I am going to

When

I can

Might/ Maybe

Could

Should

Probably

In case

If...then

Get Ready

☐ Clean sheets & Pillowcases

☐ Hamper

☐ Trash Bag

☐ Music

Do

☐ Make the Bed

☐ Put dirty clothes in hamper

☐ Put away clean clothes

☐ Throw away trash

☐ Take dishes to the sink

☐ Straighten my desk

Done

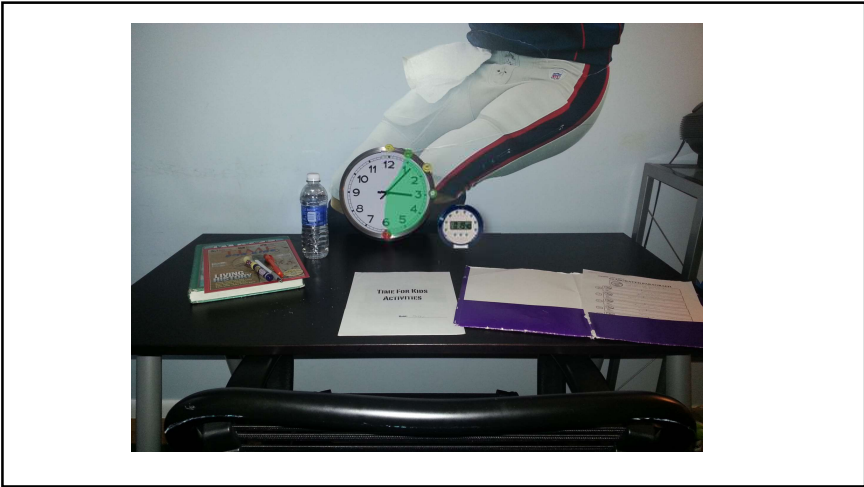


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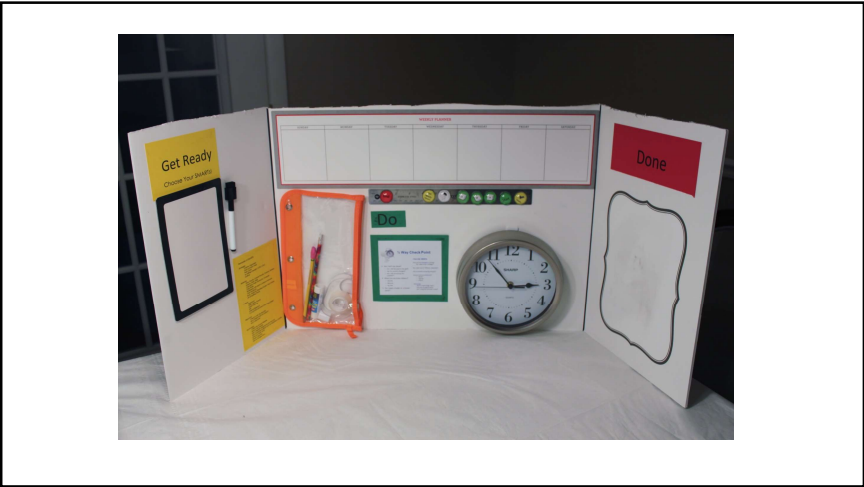
The Homework Dashboard



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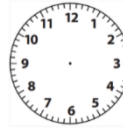
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Get Ready

- G** Gather Materials
- E** Estimate Time
- T** Time: Mark start, stop & mid points
- R** Review the Plan
- E** Emotions in the End
- A** Use Time Savers for Time Robbers
- D** Determine Time Robbers & Time Savers
- Y** You can do this with a positive mindset!



D



Done

Get Done: Turn in? Store in Binder/Folder? Backpack? Put Materials Away? Clean up? Other?



Assignment: _____

Get Ready

Do

Done

3. **Get Ready:** What items do I need? Any resources? Set Time Markers, Jail Time Robbers, Anticipate Obstacles

2. **Do:** What are the steps? How long will each step take? Do I need a Schedule?

1. What will it Look Like When I am **Done**? Future Sketch/or Create a Template

Get Ready

Do

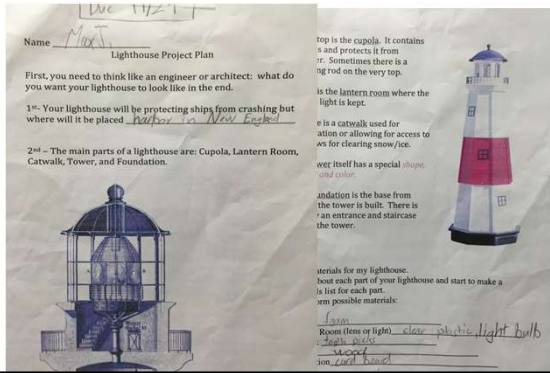
Done

Get Done

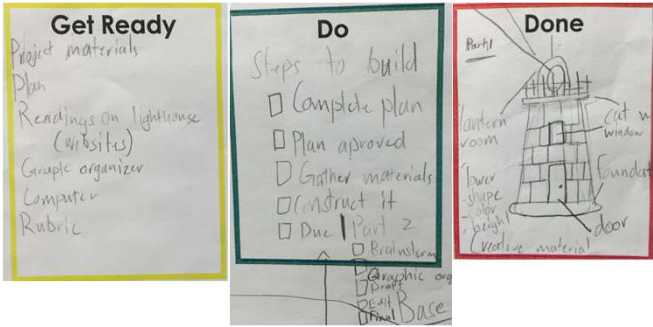
Turn in | Share | Store | Backpack | Clean up | Other



Sketching Directions to Plan when Reading Project Directions

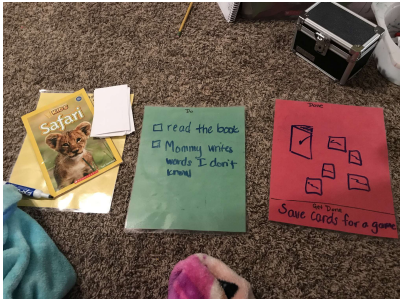


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"We tried the GDD with her schoolwork on Saturday. I laminated construction paper to create simple colored mats. We started with a basic handwriting sheet and she did so well we continued on. What blew me away was that when we got to this activity, she had no idea what to put in the "DO" section. She really couldn't explain how you would read a book. I had to prompt her with "maybe we'd open it?" "Oh yeah, you'd read it," she replied. Then she wanted to tell me I would write down all the words in the book. I said okay so I write every word you read? She said, no, wait, just the hard words. Just the ones I can't read. I feel so silly for wasting so many years being her executive function for her."



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Initiate Writing Assignments

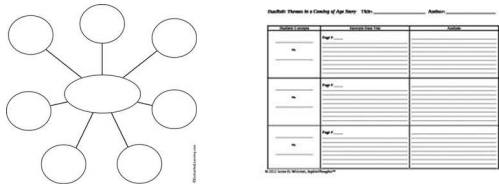
Write a multi-paragraph essay. Be sure to include a graphic organizer OF YOUR CHOICE!

1. Man has always been a questioner, wanting to know the whys of everything. Man used both his intelligence and his imagination to answer his questions long before science solved these mysteries. Myths were created thousands of years ago to help answer these age old questions, as well as to calm fears of the unknown, and as a means to teach good from evil.

Write a well-structured, multi-paragraph essay summarizing three Greek myths (you may choose ones we have read together) and describe what natural phenomenon they explain.

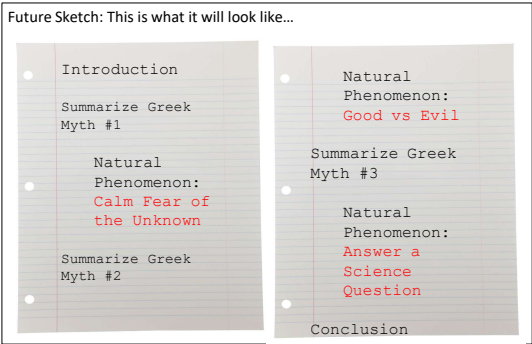
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Write a multi-paragraph essay. Be sure to include a graphic organizer OF YOUR CHOICE!



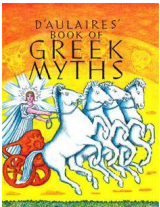
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Write a well-structured, multi-paragraph essay summarizing three Greek myths (you may choose ones we have read together) and describe what natural phenomenon they explain.

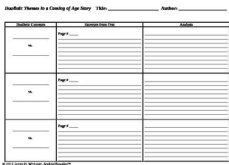


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Get Ready



Do



Done



Get Done

Edit/Revise
Hand In on Friday October 30

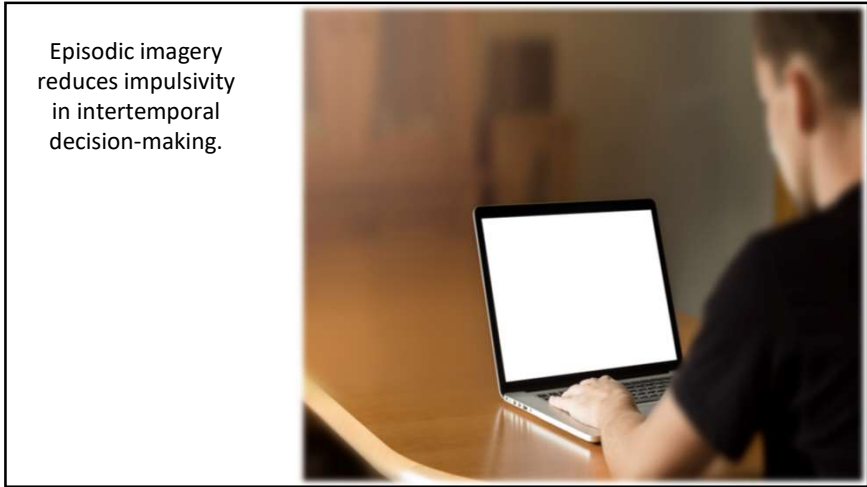
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Initiate Projects

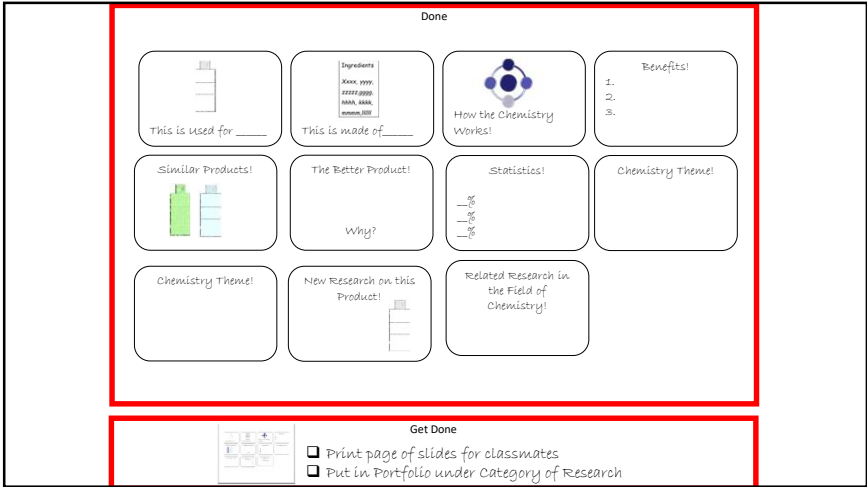
Chemistry around us (Research project) - Accelerated Chemistry

- 1) Pick one commercial product that you would be interested in knowing information about.
 - What is it used for?
 - What is it made up of?
 - How does it work? (Chemistry of the product) - Be clear on the material that you present
 - Benefits of the product?
 - Similar products of that kind? Which one is better and why?
 - Any interesting statistics.
- 2) Give two ways the information ties to the chemistry themes or chemistry concepts that we learned in class.
- 3) Give two pieces of information about new research that is going with that product or that product line or related chemistry area.
- 4) Make a power point for presentation about 10 to 15 slides per product. The presentation should be understandable to your classmates.
- 5) Print a copy with all slides on a sheet and put it into the portfolio under the category of research.

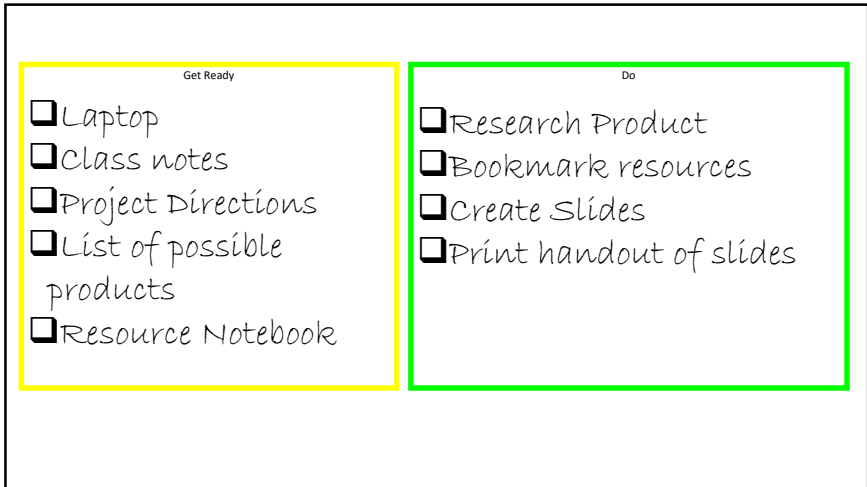
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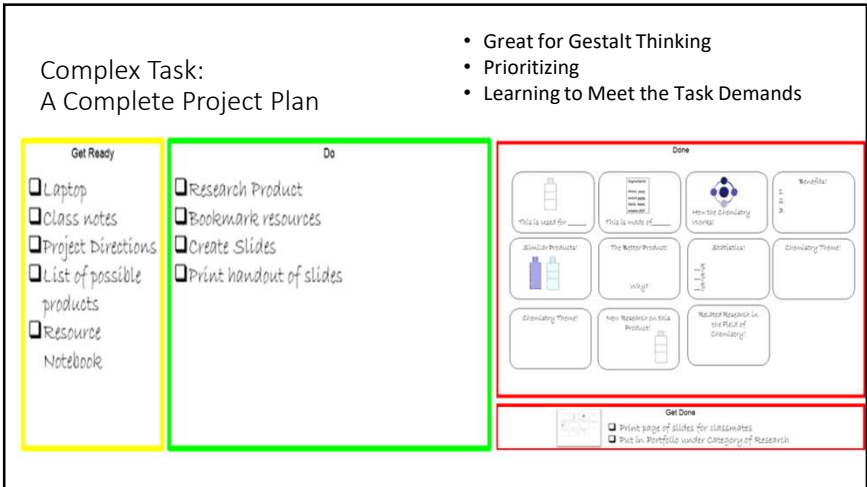
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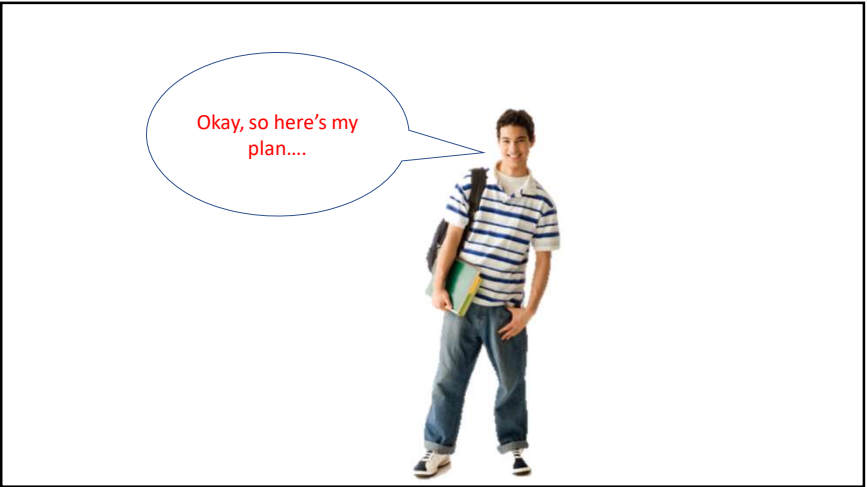
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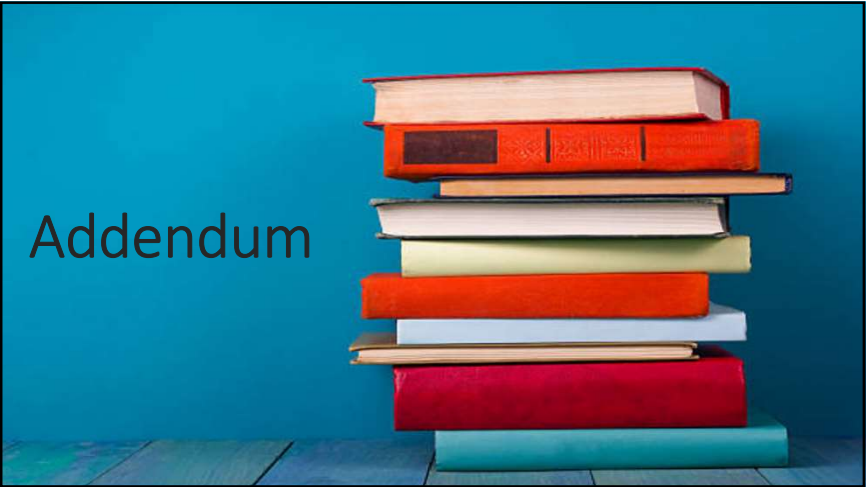
Cognitive Connections, LLP
www.efpractice.com
Telephone: 978-369-5200



If you share our ideas, please make attribution to Sarah Ward and Kristen Jacobsen.
Please reach out to us! We love to hear from you!

Kristen Jacobsen, M.S., CCC/SLP
Speech and Language Pathologist
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Ages and Stages

Check out our website: www.efpractice.com for articles on the development of executive function skills and many other resources!
Also check out : <http://www.familyeducation.com/home/>

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Executive Functioning Skills Check-List

- 3-4 Year Olds
 - ★ Complete simple errands; “Get your shoes from the bedroom”.
 - ★ Clean and put items away with minimal assistance.
 - ★ Perform simple chores and self-care tasks with reminders and physical assistance if needed; clear dishes from table, brush teeth, get dressed.
 - ★ Inhibit unsafe or inappropriate behaviors; don’t touch a hot stove; don’t run into the street; don’t grab a toy from another child; don’t hit, bite, push, etc.

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- 5-7 Year Olds
 - ★ Complete 2-3 step errands; “Put the napkin in the trash and then bring me a cup.”
 - ★ Tidy bedroom or playroom independently.
 - ★ Initiate and perform simple chores and self-help tasks, but may need reminders; making their bed, make a bowl of cereal.
 - ★ Bring papers to and from school.
 - ★ Complete homework assignments (20-minutes maximum).
 - ★ Decide how to spend their money.
 - ★ Inhibit behaviors; follow safety rules, use appropriate language (e.g. not swearing or using bathroom language when not appropriate), raise hand before speaking in class, and keep hands to self.

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- Ages 8-11
 - ★ Run errands, including those involving a time delay, such as remembering to bring something home from school without reminders.
 - ★ Perform chores that take 10-30 minutes; setting the table, dusting.
 - ★ Bring books, papers, assignments to and from school.
 - ★ Keep track of belongings when away from home.
 - ★ Complete the majority of homework assignments without assistance (1 hour maximum).
 - ★ Plan simple school projects such as book reports; select book, read book, write report.
 - ★ Remember changes in daily schedule including different after school activities.
 - ★ Save money for desired objects and plan how to earn money.
 - ★ Inhibit/self-regulate behaviors; maintain composure when teacher is out of the classroom; inhibit temper tantrums and bad manners.

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- Ages 12-14
 - ★ Help out with chores around the home, including both daily responsibilities and occasional tasks that may take 60-90 minutes to complete; emptying dishwasher, raking leaves, shoveling snow etc.
 - ★ Able to safely baby-sit younger siblings
 - ★ Appropriately use a system for organizing school work
 - ★ Independently follow complex school schedule involving multiple transitions with teachers and classrooms.
 - ★ Plan and carry out long-term projects, including tasks to be accomplished and a reasonable time-line to follow;
 - ★ Plan time effectively, including after school activities, homework, family responsibilities
 - ★ Inhibit rule breaking in the absence of visible authority.

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- High School
 - ★ Manage schoolwork effectively on a day-to-day basis, including completing and handing in assignments on time, studying for tests, and creating and following timelines for long-term projects.
 - ★ Establish and refine a long-term goal and make plans for meeting that goal; collegiate or other vocational goals.
 - ★ Independently organize leisure time activities, including obtaining employment or pursuing recreational activities during the summer.
 - ★ Avoid reckless or risky behaviors (e.g. use of illegal substances, sexual acting out, shoplifting, or vandalism).

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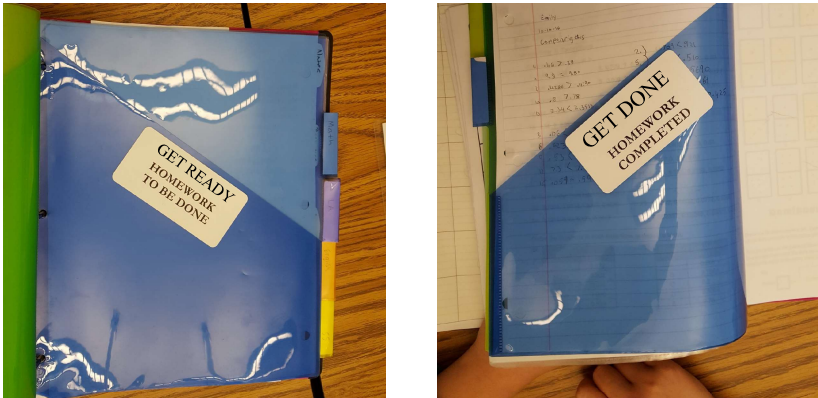
Organization & Homework

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Test	To Do	Trash	To Store
I need to keep this for an upcoming test.	Something To Work On or Hand in	Papers that I did but there is no reason at all to keep them	I don't need it for a test but it could be used for midterms, finals or future reference (SATs)
			

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A Homework Pocket in 3 Ring Notebooks



122

Managing the Extra Papers: Permissions slips, notices and forms, oh my!

Classtree



iOS, Android
Free for basic version; \$4.99/month for Pro

Your child is expected to bring home the permission slip, remember it, secure a parent's signature, and then return it to the teacher — all without losing or destroying it. That is asking a lot of a child with ADHD or poor executive functioning, as you well know. To relieve some pressure, ask your child's teachers to download Classtree, an easy-to-use app that allows parents and teachers to share permission slips, information forms, and other documents — totally digitally. Plus, the app allows teachers to remind forgetful parents in private — perfect for Moms and Dads who have ADHD, too.

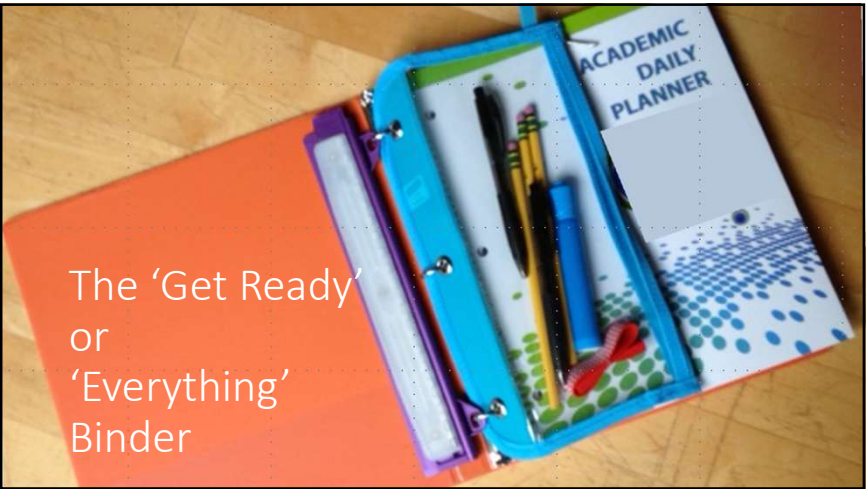
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Paper Management: The Older Student

The Get Ready Binder, The Do Binder & The Done Binder System

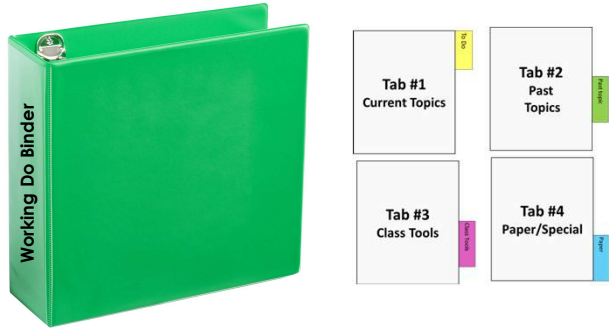


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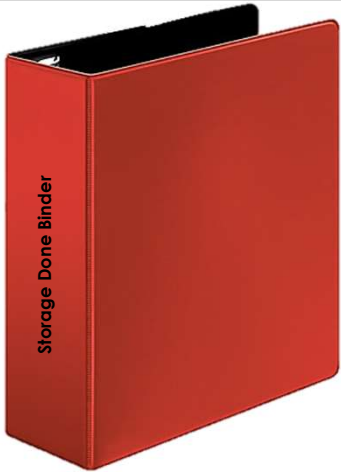
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The **Working or Do Binder**:
Contains what you are Working on Now



Where’s My Stuff? Ultimate Teen Organizing Guide, by Lesley Schwartz

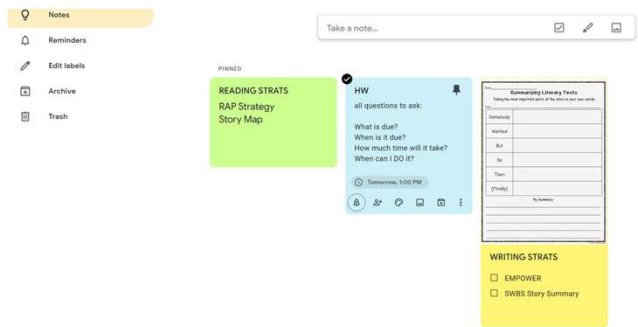
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The “**Done**” Binder is filled with notes and corrected papers that are no longer needed for learning new topics. There are dividers for each class. Newest information is filed on top of old information within each class divider.

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Use **Google Keep** for Online Strategies “Notebooks”



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by Sarah Ward,
MS, CCC-SLP, and
Kristen Jacobsen,
MS, CCC-SLP

AFTER 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



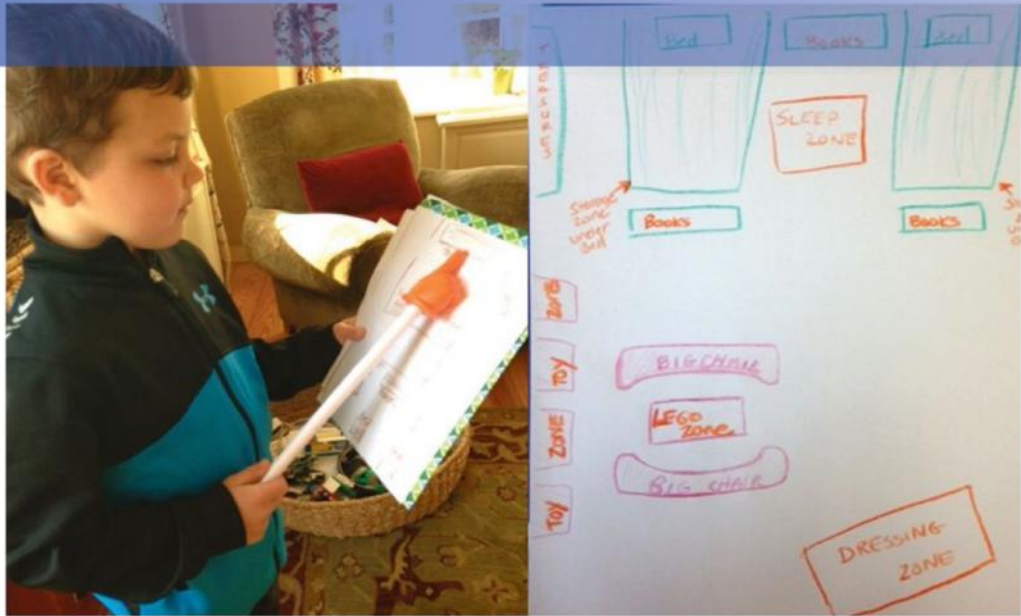
executive function skills as being “a beat” or—as Jackson’s teacher sighs—“twenty-two beats behind.” How do executive skills enable us to stay a beat ahead? Strong executive function skills enable us to imagine and plan a “dry run” of the task in our mind before we begin to carry out the plan. If a task 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. Jensen?" 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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