ADHD AND EXECUTIVE	
FUNCTION DEFICITS	
✓ What are Executive Functions?✓ What causes Executive Function Deficits?	
✓ What are the best practices for maximizing Executive Functions and increasing performance ✓ What can Parents of students with EFD do to help them function at their best at school and at home?	
Who am I?	
Jane Milrod-	
 Founding Director of CHADD Princeton-Mercer County (established 2006) CHADD-Certified Parent to Parent Teacher with 15 years of teaching experience 	
Attained the highest level of training (ACCG and Professional Advanced Coach) from The ADD Coaching	
Academy • ADHD Academic Coach for High School and College and Graduate Students, and an ADHD Career and Life Coach for Teens and Adults. • Employed by Princeton University Neuroscience Lab studying the visual features of attention.	
WHAT ARE EXECUTIVE FUNCTIONS?	
Executive functions are brain-	
based skills required for humans to effectively perform tasks and solve	
problems. They impact our ability to organize,	
prioritize, and analyze, in order to make reasonable decisions and	
plans and complete tasks.	

Individuals with ADHD tend to have impaired Executive Functioning in these 6 EF Clusters:

- * Activation: organizing tasks and materials, estimating time, getting started.
 * Focus: focusing, sustaining focus, and shifting focus between tasks.
 * Effort: regulating alertness, sustaining effort and processing speed.
 * Emotion: apparaise frustration and modulating operior.
- Emotion: managing frustration and modulating emotions (especially anger/ RDS)
- Memory: using working memory and accessing recall.
- Action: monitoring/ regulating actions.

Impaired in ADD/ADHD Executive Functions

Executive Functions

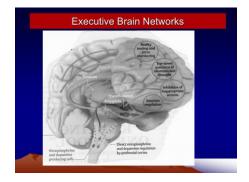
Executive Functions are "the brain's conductor"

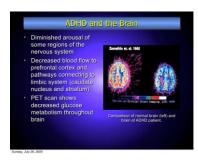
- Dr. Tom Brown
- The conductor organizes, activates, focuses, integrates, and directs the musicians as they play, enabling the orchestra to produce complex music.
- Similarly, the brain's executive functions organize, activate, focus, integrate and direct, allowing the brain to perform both routine and creative work.

Executive Functions manage the brain's self-regulation.

WILLE DREEDONIAL CORTICAL	
"THE PREFRONTAL CORTICAL NETWORKS INVOLVED IN	
EXECUTIVE FUNCTIONS ARE THE	
SAME NETWORKS IMPLICATED IN	
SELF-REGULATION AND ADHD."	
SEE RESSERTION AND FIDE	
Dr. Russell F. Barkley	
WHAT IS SELF-REGULATION?	
WHALIS SEEF REGULATION:	
Any action a person directs toward one's self (a behavior-to-the-self)	
To change their own subsequent behavior from	
what they otherwise would have done	
In order to change the likelihood of a future	
consequence.	
consequence.	
Dr. Russell Barkley	
How does lack of Self Regulation Affect	
Behavior	
Time Blindness	
• Emotional Lability	
Addictions – Internet, Food, Drugs, Alcohol Inconsistency, of affort	
Inconsistency of effort Erratic Driving	
 Lack of self awareness, lack of self restraint, lack of inhibition 	
(blurting words) , lack of self motivation	
Deficits of INTENTION	

WHAT IS THE ADHD/EXECUTIV	E
FUNCTION CONNECTION?	





Critical role of Emotions in EF

- \bullet Need to be in the right frame of mind to bring your EF system on-line
- Anxiety, Fear, and Stress can derail your Executive Functioning
- Sadness and Grief can also be a barrier to functioning
- Pay attention, check in and take a pause
- Emotional detective Find what works for you
- Parents: Ask questions, be curious not furious -

Stress Effect on the Brain



ADHD and Coexisting Disorders

- Disruptive behavior disorders
 Oppositional Defiant Disorder
 Conduct Disorder
- Mood disorders
 Depression (22%)
 Bipolar disorder
- Neurodevelopmental Disorders
 Tics and Tourette Syndrome
 Speech and Language Disorders
 Learning disorders
- Anxiety disorders
- Sleep disorders
- Substance use disorder



© 2017 by Children and Adults with Attention	

Therefore,	a person	with	ADHD	has
difficulty:				

- Getting and staying organized
- Starting tasks (especially boring ones)
- Keeping attention focused
- Remembering what was just read or heard
- Sustaining effort to complete tasks
- Controlling impulsivity
- Regulating emotions (especially anger)
- Managing time
- Using internal self-talk

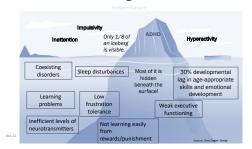
Biological Underpinnings

Because dopamine enhances the level of interest a person attaches to a stimulus, people who release dopamine at a lower rate might find it more difficult to work up the enthusiasm to act on a stimuli they don't find naturally appealing.

IMPLICATIONS: students with ADHD find it much more difficult to apply themselves to tasks that are not intrinsically interesting to them.

Source: Peg Dawson

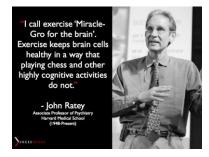
Understanding ADHD

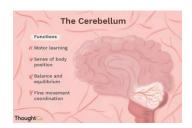


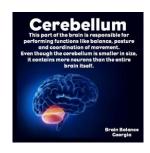
30 % Development Delay in EF requires more support	
Because an individual with ADHD tends to exhibit developmental delays in executive	
Because an individual with ADHD tends to exhibit developmental delays in executive function by as much as 30% (respectively a 35 year delay) in school and early adulthood) compared to peers, the role of the parent becomes critical for facilitating growth in this area. This awareness can provide caregivers and educators hope and empathy, as well as create a roadmap for developmental skill building to both support and build the delayed skills necessary for goal persistence and planning.	
skills necessary for goal persistence and planning. Setting expectations that match the appropriate developmental age of a child, as opposed	
to ner chronological age, results in meeting the child where she is rather man piace unrealistic expectations upon her. This is typically where the level of anxiety, overwhelm, or depression may increase if there are no supportive adults in the child's life such as	
Setting expectations that match the appropriate developmental age of a child, as opposed to her chronological age, results in meeting the child where she is rather than place unrealistic expectations upon her. This is typically where the level of anxiety, overwhelm, or depression may increase if there are no supportive adults in the child's life such as therapists, coaches, teachers, parents, or other caregivers. This underlines the need for parentlal support of and involvement in the emotional and executive functions and in the control of	
Source -ADHD and the Case for Support Through Collegiate Age: Understanding the Lifecycle of Developmental Delays in Executive Function for ADHD and its Impact on Goal Setting Kathleen Knight Barrett	
One can have a High IQ and ADHD	
From PubMed Central A Highly respected database from the National Institutes of	
Health published in a 2011 issue of Psychological Medicine further determined that IQ and ADHD are separate entities.	
The study claims that IQ can run in families much the same as	
ADHD, but having a relative with a high IQ doesn't mean another family member with ADHD will or will not have the same IQ.	
ADHD and IQ are separate and independent variables.	
Knowing is Easier than Doing	
ADHD is a disorder of actualizing good intentions	
People with ADHD usually know what the right thing to do is, but	
don't do it consistently. Executive Functions are the highest level cognitive processes; they	
help us create a better future.	
This often means sacrifice in the <i>present</i> , which is very difficult for the NOW-oriented ADHD brain.	
Dr. Ari Tuckman, BruD	
Dr Ari Tuckman, PsyD	

Understanding ADHD	
Myth #3: ADHD is a Disorder of Childhood	
Fact: ADHD persists from childhood to	
adolescence in 50%–80% of cases	
• Fact: ADHD persists from childhood into	
adulthood in 35%–65% of cases	
Padestrock() Page 1,2 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Students with EF deficits often look like they have made	
a conscious choice to not pay attention, to speak out of turn, to not listen, to break rules, to distract and	
annoy those around them, to interrupt, to act outso They are blamed for behaviors of which they may not	
even be aware, and which they cannot fix on their own.	
Parents and teachers must adopt a Disability Mentality to keep from making incorrect judgments about	
ADHD behaviors.	
Punishment does NOT cure ADHD!	
M/hat Car you do to improve Evacutive	
What Can you do to improve Executive Functions?	
. 2555	

How to Manage Executive Functions	
The Basics	
External Structure, Routine, Building Good Habits	
Sleep	
Exercise Mindfulness Meditation gives you space between stimulus and response move	
you out of Default Mode and into the Experiencing Self/The Present Mode. Sunshine (Vitamin D) 30 minutes a day	
Medication Medication	
Vitamin C – Connection – Buddies, Friends, Professionals	
ADHD 2.0	
Ned Hallowell and John Ratey VAST Variable Attention Stimulus Trait	
How to create a "Virtuous Circle"	
Treatment	
1.finding strengths 2. Practice	
3. Mastery	
4. Recognition	
ADHD 2.0 Hallowell/Ratey VAST discoveries	
Racecar Brain with Bicycle Brakes	
Finding the right kind of difficult for a brain that needs to be active	
Accept help! Interdependence is the road to success Neuroplasticity! We can change the brain for the Better	
Faulty Gate between the Task Positive Network (Angel) and Default	
Mode network (ruminative Devil) in ADHD. (research of MIT Gabrieli) - CURE? Move, dance, sing, walk, meditate, BREATHE	
Cerebullum exercises balance board, trampoline, yoga (Schmahmann)	







Effort and Persistence	
Brains with EF Deficits have a shorter Battery Life	
Plan for this, schedule frequent breaks	
Pomodoro Technique Brain Breaks and Energizers	
Pomodoro Technique	
5 SIMPLE STEPS POMODORO TECHNIQUE: 1 Conserve your land.	
2. Set a timer to 2.5 minutes foither manually or with an app). 3. Work on task for 2.5 minutes. Allowing no distractions. 4. Record lank completion or	
failure (if interrupted). 5. Take a "Simular benak to rechange your britteries. After four of these Fornodoro's, takes a "Oo Oo minuth break. Oo Oo minuth break.	
GRANG 201-30 minute freek. DEVELOPGORGMENT LOM	
Make it Smaller! Brain Breaks and Epergizers	
Time Management Tips:	
Create short blocks of work time with breaks Timers Put on the Music and Dance	
Implement a Brain Break by doing an activity Energizer" with your parts Snack or treat	

Break down long-term assignments
 "Read to the Clip" idea for novel or textbook
 Break down long-term assignments by planning them out with your child

11

Why Use Reinforcement?	
Punishment Does NOT Teach Skills!!	
(Book: "What I learned from Shamu)	
The Effective Use of Reinforcement 3 Positives to Every 1 Negative	
"Positive reinforcement" is the administration of a	
<u>desired consequence</u> to increase the probability of an appropriate behavior	
The focus on effort and on "appropriate behavior"	
The 5 C's of ADHD Parenting	
The 3 c 3 of Abrib 1 drefitting	
Control (of emotions for parents and children) * requires practice	
 Compassion (Meet your child where they are not where you expect them to be) Collaboration (work together with your child to find solutions) Consistency (do what you say you will do) 	
Celebration (notice what is going well!)	
Source: "What Your ADHD Child Wishes you Knew" by Dr. Sharon Saline	
Problem Solving	
 ADHD Detective – model the habit of noticing what works and what does not – Goal is an Integrated Collaborative Approach 	
 Employ Strength Based Thinking Brainstorm together - try to figure out the solutions together 	
3	

Create a Routine

•Pay CLOSE attention to your BIORYTHYMS
•When are your PEAK performance times and necessary rest times?

POST the Schedule in Multiple Locations!!
*Make the household daily routines predictable. Figure out when your child's high energy times are and work from their. Forewarn your child about upcoming breaks in the routine!

Getting up in AM, going to bed in PM
 Specific times for Breakfast, lunch, and dinner

HOMESCHOOL SCHEDULE		
8:00 AM	waterup, make body, brook teells, gell Armonic, brookfassi	
9:00 AM	Online Learning School	
11:00 AM	Brain Bryak / snack / back to work	
12:00 PM	Lunch Break	
12:30 PM	Online Learning School	
2:00 PM	DUTBOORS / AFTERNOON ACTIVITY	
4:30 PM	Free Screen Time / TV	
6:00 PM	DINNER	
7:30 PM	Both, Family Time. Describend, Books, Sed	
unit AmiCarley com/for more protektes		

How can parents help? Structure, structure!

- Make the household daily routines predictable. Figure out when your child's high energy times are and work from their. Forewarn your child about upcoming breaks in the routine!
- With your child's help, <u>create a daily schedule and put it in writing</u>. Schedule times for important daily activities including home work and chore completion, mealtimes, practice time, free time, and bedtime.
- Post this schedule in a visible location, and encourage the habit of checking-in with the schedule several times each day. This is an important lifelong habit for staying on task and on time.
- To help with better control of ADHD's instant gratification urge, reinforce (and manage, if necessary) "Work Before Play" reinforce the concept that once work is completed, THEN he/she will be able to engage in a highly valued activity or obtain a highly valued reinforcement. ADHD brains need lots of external motivation!

Barkley's "Prosthetic ADHD Aids:" Externalize all Intentions

- Reminders to self: Texts, calendar reminders, voicemail reminders, people reminders!
- · Document and Time Management apps
- Calendar: paper or electronic, use and monitor all day long
- Wrist minders, time timers, alarm clocks, pocket alarms, timer apps with alarms, clocks everywhere!
- Visual aids: post it notes, pictures, signs (using fewest words possible), objects as reminders

·	

Structure and Routine	
Tools	
 Apps Charts/Contracts Visual cues/reminders Lists Timers Rewards Please remember to clean your closet. 	
Dec 22 G. 2011 by (Dildern and Admit with Majoritorin. 40 Deft.27/Pagereschery Disorder (CHACO), All Rights Reserved.	
Creating To-Do Lists Daily	
■ If school assigned, used that work ■ Go online with your child ■ Create a "to-do" list of assignments for the day/week ■ Put them on a post-it note, google document, or a white board in a public and highly visible space ■ If you need, post it in multiple locations (including bathrooms) ■ Create a new "to-do list" each day ■ Teach Google Calendar Skills – see next slide	
Google Calendar: The Ultimate Planning tool	

Google Keep Brain Dump/TODO list	
# Name	
The UnSchedule Daily Planner System **The Unschedule Dai	
White Board Weekly Schedule	

Environmental Cues Work -Space separate from the bedroom

A clever transformation of a Den into a Distance Learning space



Organizational Strategies

- Designate a home for everything
- Break down large tasks
- Take pictures
- Create a checklist
- Set up command center
- Use timers
- Use labels
- Use open bins



Dec-22

Daily Maintenance

Determine a time (just before bedtime?) to

- check that everything has been returned to the bag (including completed homework, texts, notebooks, et al),
- put the bag <u>on the launchpad</u> where it will be seen and not forgotten in the morning, and include
- other items that need to go to school for that day of the week (lunch, projects, sports equipment, music & instrument, library book, etc.)

Weekly M	aintenance		
Structure and Consiste	ency Make a Difference		
Set a time (Sunday night?) to go through the backpack and binders, especially the divider pockets, to weed out anything that doesn't belong, and make sure everything that does belong is in the bag. Work from a list to refresh supplies. Do the same with the desk and other work areas. Put papers that need to be saved for test review into a separate clearly labeled filing system at home.			
Focus on Organizing, not Critiquing	 ignore academics and the junk 		
0, 0, 0, 0	0		
Software and a	Apps That Will:		_
Regulate online usage	Increase Self Awareness		_
Block social media sites Limit time web surfing	Alerts to passage of time Improve concentration and focus		_
Track computer time Block distractions	Monitor exercise diet, sleep Track medication		
Ask Coach Jane for the LIST!	- Hack medication		
• Timed LOCKBOX for all Devices!!			
A - station T			
	echnology		
SPEECH TO TEXT: Software on computers tablets	and phone		
Dragon Naturally Speaking NOTE-TAKING :			_
Live scribe pen			_
Audio recording devices OTTER app, transcribes lectures	3		_
		_	

Jane Milrod, PACG ACCG Recommendations for College Success with ADHD	
1. Lock Box for Stimulant Medications-instruct student not to share or sell medication and also ensure that no one steals the medication. 1. Parental access to Student's Email (many problems occurring from Student not checking their school email) 2. Google Calendar skills essential tool 3. The first-week student must enter all data from Syllabus into Google Calendar with 7-day advance reminders for preparing for tests and papers 1. The structure of the student must enter all data from Syllabus into Google Calendar 1. Magic of Study Groups, Study fundles, and the Tutoring Center – netre into the Google Calendar 1. Magic of Study Groups, Study fundles, and the Tutoring Center – netre into the Google Calendar 2. Earlow to Learn-Read "Make it Stick, The Science of Successful Learning" by Peter Brown (or read a summary) 3. Learn how to have a balanced life with social connections and exercise – Read "the Happiness Advantage" by Chip	
team from to have a planning or white sound connections and electuse—need the happiness Assumage by clinp Heath Newer skip class unless truly ill To fantastic handouts for learning, studying and college success http://learningcenter.unc.edu/handouts/	
Tips for working with teenagers	
Pick your battles Use natural or logical consequences Make access to privileges contingent on performance Be willing to negotiate (make deals!) If something in non-negotiable, ask this question: What will it take for you to go along? Involve others when you can (tutors, teachers, guidance counselors, coaches)	
Source: Peg Dawson	
Create Connections and Social Time	
■ Importance/Primacy of social interaction with peers	
Connection with educators equally key	
Set up and maintain study groups	
■ Book groups, activity groups	

Keep Your Eye on the Biggest Prize: Building Goal-Directed Persistence • Model this yourself- If your child sees you persisting over time to achieve a long term goal (a new exercise habit), that can make an impression. • Help him/her set and achieve little goals – they add up over time. • Praise effort –"Wow you stuck with it!" " You figured it out", "Can you believe how hard you worked for that, way to go!" • Emphasize your CHILD'S goals (not yours). Source: Peg Dawson	
GET HELP IF YOU NEED IT!	
If your frustration level is causing major stressIf you've stopped being mom or dad or spouse and become a warden	
ADHD Coaches (who work with students your child's age) Homework Helpers/Study Buddies	
Tutors ADHD Parenting Classes and Parent Coaches	
Professional Organizers Never suffer alone – Support groups, CHADD Parent to Parent Class	
Connect with Local Resources	
Contact CHADD at chaddprincetonnj.com	
 To get the Mercer County Provider Directory, write to <u>Janemilrod@gmail.com</u> 	
To connect with me, write to <u>adhdcoachjane@gmail.com</u> or visit	
adhdcoachjane.com	

The solution is to educate ourselves	
so that we replace blame with Support ,	
criticism with Motivation , punishment with Positive Feedback ,	
and become a part of the solution instead of part of the problem!	
What are our data sources?	
CHADD Parent to Parent Course in ADHD Education Chris Zeigler-Dendy's Presentation on Executive Function Deficits at CHADD's 20th annual conference Peg Dawson and Richard Guare's "Executive Skills in Children and Adolescents, A practical guide to assessment and intervention."	
Sandra Reif's "The ADHD Book of Lists, A practical guide for helping Children and Teens with Attention Deficit bisorders" "Attention" Magazine: "Understanding the link between Executive Functions and school success", February 2008 author: Chris Zeilerlo Pedrovid.	
Dr. AT Nucleman, "More Attention Less Deficit, Success Strategies for Adults with AD/HD." Websites adultation Understanding of ADHD in Children and Adults" (2013) Dr. Thomas Brown, "A New Understanding of ADHD in Children and Adults" (2013) Dr. Russell Barkly, "Executive Functions: What They Are, How They Work' Eric Tives ADHD NeWired Podicast and Website Susina Lasky—Organized For ADHD-DUTURE Magazine Webinar "The Organized Student" by Donia Goldberg Judith Roblegs and Ratthen Nadeau "DuD Friendly Ways to Organize Your Life" Ann Dollaris Webinar "Crash Course for Parents to Prepare for Coronavirus Quarantine" on ADDIVISE Magazine.	
Thank You for Your Attention	
AD/HD	
* IS this chade	
REAL!	

Bonus Content			
Extra Slid	des		
ADHD and Coexisting Dis	orders		
	ADHD and Coexisting Disorders		
The 2007 National Survey of Children's Health (NCSH)	existing Children Children sorder with without ADHD ADHD		
found that 33% of the children with ADHD had	ning		
one coexisting disorder, Conc.	order 27% 2%		
three or more.	ression 15% 1%		
Spee (turner 2000)	olems 12% 3%		
Dec-22	Attention-Deficit/Hyperactivity Disorder (CHADD). All Rights Reserved	62	
The Five W's of Life			
Who? What	t? When?		
807	BE TO THE		
4			

With Work and School from Home	
Parents Have Become Educators	
• "Home school Police"	
A role no one wants	
Parents want 'study mode' and kids are on 'vacation mode'	
Natural conflict and we're only just beginning.	
Structure and Routine	
Apps	
Sleep Cycle Happy Kids Timer	
• Happy Kids Timer • Habit List • Closet • Brush DJ	
• Cozi	
IS 2011 by Oklaten and Adult with Attention- tic 22 Deficit physical chiry Disorder (CM2D). All Rights Reserved 65	
The attention process is comprised of a	
subset of skills. When we ask a student to pay attention, we are really asking for competency in a number of areas.	
Focus : To initiate the attention process, the student must first be able to FOCUS.	
He/she must pick one thing to which to pay attention. Students who experience problems focusing attention will have difficulty starting and becoming involved in	
culticuly stating all or deciding involved in an assigned task. Once focused, they may be able to complete the task. Select: The student must be able to	
SELECT the correct stimuli. The individual with AD/HD may have difficult determining what is relevant. This student may learn a	
lot of material, however, it may be the wrong material, or he/she may not understand how the material relates.	

Sustain: Some individuals with AD/HD	
may be able to focus; they may be able to select the correct stimulus, but they are	
unable to SUSTAN attention. Resist Distractions: Throughout the attention process, students must RESIST DISTRACTIONS: The student with ADHIP is often influenced by external stimuli, such as activity around them or their own thoughts.	
Despite problems with inattentiveness,	
individuals with AD/HD can pay attention to activities that are of high interest, novel or occur in one-on-one situations. While this	
may be confusing or difficult to understand, students with ADHD often lack the ability to perform consistently over time.	
,	
Time Managament Charlesia	
Time Management Strategies	
mbrace the use of a written planner for school and personal use	
Could be school choice, computer generated or electronic device Google Calendar and I phone Calendar also options.	
Develop a schedule for completing a task	
Vrite it down, make it visible, include reminders	
7 -68 Privert to Privert © 2008 Revited 9-2010	
Space Maintenance	
aunchpad: assign a standard spot near the door to keep the backpack ports equipment after school items, (socks, toothbrush)	
anding Pad: Determine a time and place to empty the bag of the lomework/Notices folder, planner, Miscellaneous Papers folder and	
ecessary items for that day's homework	
lost a Checklist as a reminder of what to take that might not already be in he bag (lunch/money, permission slips, water bottle, musical instrument)	
ake a Photo of the bag and binder that shows how they look when ideally	
organized (memory fades quickly) ou do not have a separate set of books for home set reminders to bring books home and return do the	
same for library books and put them on the calendar	

Visual Cues



- Laminated word/color-coded signs
- Post it notes
- Photos

What causes EF deficits?

Recent NIMH neuroimaging studies of ADHD brains show clear evidence of:

> Differences in the ADHD brain size and structure, particularly in the pre-frontal cortex, the basal ganglia, and the cerebellum. > Delayed maturation of these brain regions by 3 years on average (and up to 5 years). > Delayed maturation of these brain regions by 3 years on average (and up to 5 years). > Differences in the thickness of cortical tissue, and in the white matter tracts that connect and provide critically important communication between various regions of the brain. > Abnormalities in 2 dopamine receptors and a dopamine transporter gene that prevent efficient and complete message delivery. This results in, for example, lapses in memory and attention, missed information, and poor emotional regulation. > Networks of neurors that manage the brain's management system require adequate neurotransmitters for clear message transmission, the ADHD brain tends not to release enough of these chemicals, or to release and reload them too quickly. > A slower conversion of simple surg (fuscose) into brain energy, which produces a slower rate of reactivity and cognitive processing in an ADHD brain.

ADHD and Coexisting Disorders

- Disruptive behavior disorders
 Oppositional Defiant Disorder
 Conduct Disorder
- Mood disorders
 Depression (223
 Bipolar disorder
- Neurodevelopmental Disorders
 - Tics and Tourette Syndrome
 Speech and Language Disorders
 Learning disorders

 Tearning disorders
- Anxiety disorders
- · Sleep disorders • Substance use disorder



Routines Rule! Externalize Everything Establish routines for a more organized, less stressful school year • Morning/leave for school • Afternoon/ homework • Dinner • After Dinner • Bedtimes • Weekend school prep/planning When creating a ROUTINE, discuss acceptable options together then let your *child* choose How to do this and Example Forms Next Slide Structure and Routine **Behavior Charts and Contracts** • Set up based on desired change • Determine the payout • Keep it simple • Post in visible location • Update chart each week

Source: Very Well, Create a Token Economy System to Improve Your Child's Behaviors, Amy Morin, LCSW