

# LET'S TALK ABOUT ADHD: From Stigma to Strength

Monday September 19, 2022  
6 pm - 7:15 pm

BRYANT BANK  
320 Pelham Ave SW, Suite 400  
Huntsville, AL 35801



Scan to register!



Ashlee Grove

## Topics

- WHAT IS ADHD?
- DIAGNOSIS AND TREATMENTS
- HOW CAN WE HELP: PARENTS, STUDENTS, AND SCHOOLS?
- NEXT STEPS: RESOURCES AND Q & A



**About Us**  
The Learning Team provides academic coaching through our highly experienced educators who use a student-centered approach to help students succeed.



**Price = Free**  
Join us monthly for our free community outreach program on relevant & research informed best practices.

Scan the QR, call, or email to register  
256-924-6028 | [GOLEARNINGTEAM.COM](http://GOLEARNINGTEAM.COM)  
[TUTORING@GOLEARNINGTEAM.COM](mailto:TUTORING@GOLEARNINGTEAM.COM)

Special Guest  
Crissy Powell



# Welcome to "Let's Talk About..." Series

# Presented by The Learning Team Grove Academy

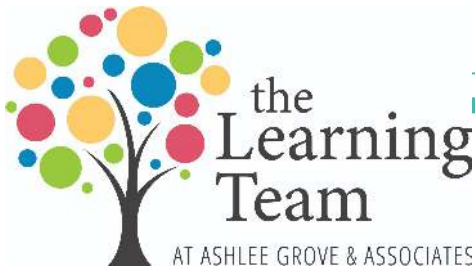
Sponsored by Bryant Bank

---

# ADHD: From Stigma to Strength

Ashlee Grove, Founder and CEO  
The Learning Team and Grove Academy

Guest Speaker: Crissy Powell, Solid Ground  
Counseling



---

---

# Ashlee Grove and Crissy Powell

—

Introductions: Who are  
we and what do we do?

—

---

---

# Ashlee Grove

Life-Long Learner

Nerd! I love math!

Founder and CEO: The  
Learning Team and Grove  
Academy

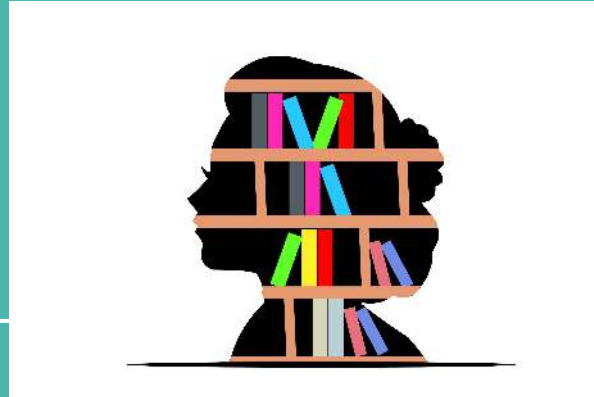
1. From Memphis to Huntsville

2. Saw a problem?

- Collaborated to find a solution.
- Found like-minded life-changers.
- Jumped off the cliff!

3. Mission:

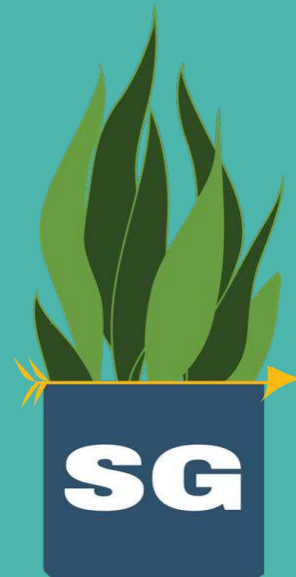
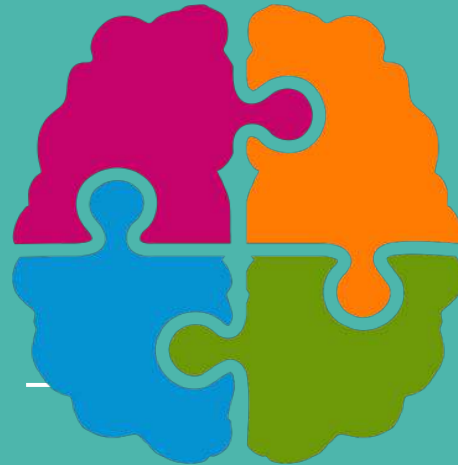
We encourage, engage, and empower students to catch up, keep up, and stay ahead, finding life-long success.



# Crissy Powell

Marriage and Family Therapist  
at Solid Ground Counseling  
Center

1. From Tuscaloosa to Huntsville
2. Discovered a passion for therapy.
3. Love normalizing therapy and helping people uncover their strengths through the process of reaching their goals.





# Can You Relate?

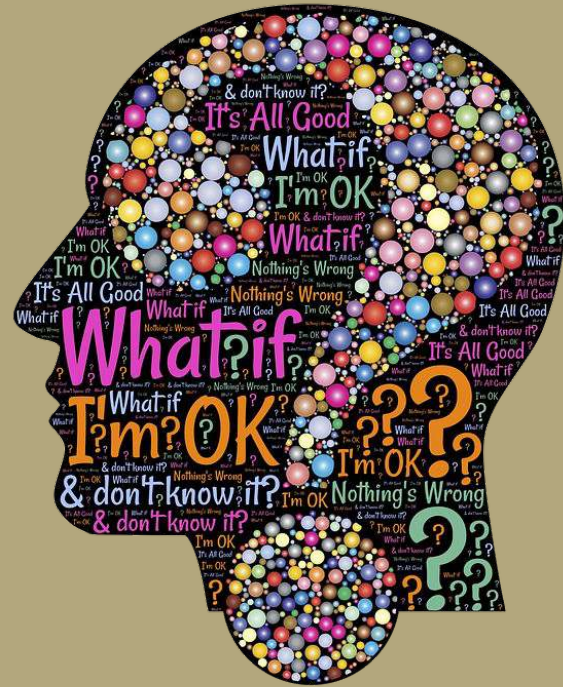
## Crissy Powell

*I forgot... my homework, why I'm upstairs, what you told me, anything relevant beyond this moment.*

AG

To avoid the law of forgetting, we have to get the information into the brain and mind and then practice pulling it out again.

So what do we know about how the brain works?

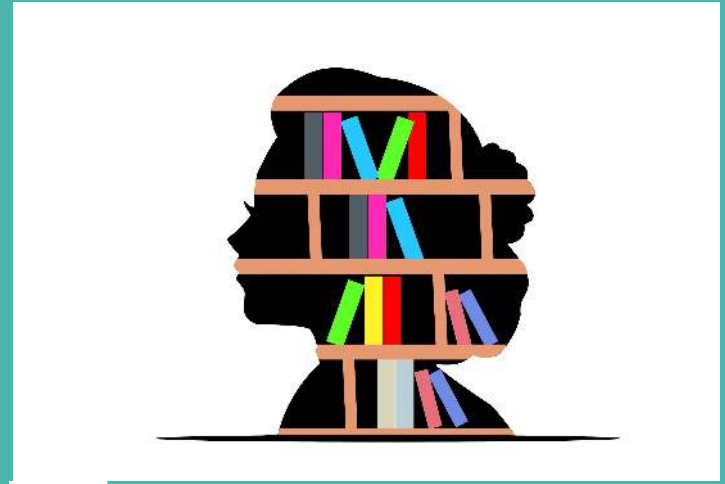


# Thinking



When you think about homework, what comes to mind?

1. List 3 words that quickly come to mind.
2. Write 2 questions that come to mind.
3. What is a metaphor for homework?







Before we move on,  
what is ADHD?

**How does it impact the previous questions?**



# ADHD... what happened to ADD? What's up with the "H?"

Diagnostic and Statistical Manual of Mental Disorders (DSM) defines all medically recognized conditions. The name has changed three times since 1980.

<https://www.verywellmind.com/is-add-the-same-thing-as-adhd-20467>

Attention-deficit/hyperactivity disorder— ADHD—is a brain-based disorder that affects about one in ten school-aged children. Symptoms continue into adulthood for more than half of those who have it in childhood. People who have ADHD have higher levels of inattention, impulsivity, and/or hyperactivity than their peers.

---



# 2013 (DSM-5):

- ★ ADHD, combined
- ★ ADHD, predominantly inattentive
- ★ ADHD, predominantly hyperactive-impulsive

Good News: Finally a recognition of the many presentation differences in age and gender (CP later)

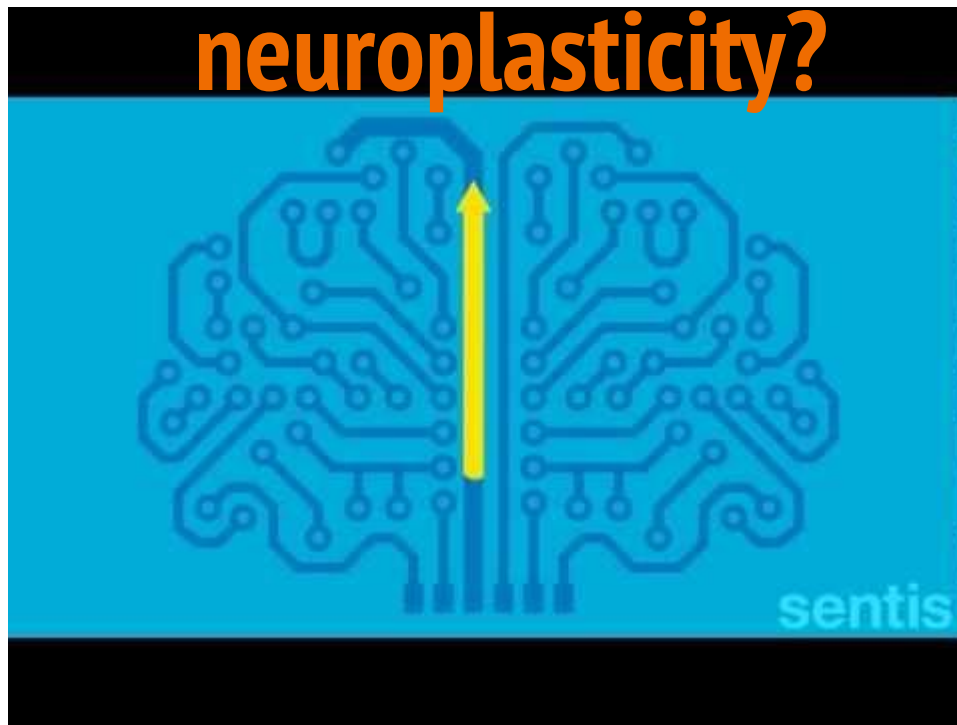


# What is Executive Functioning?

Executive function is often generally impaired when individuals have ADHD. This affects their ability to organize, plan, and manage thoughts and actions. They may have difficulty completing tasks or remembering important things and may not consider the long-term consequences of their actions.

# How does the brain work and what is

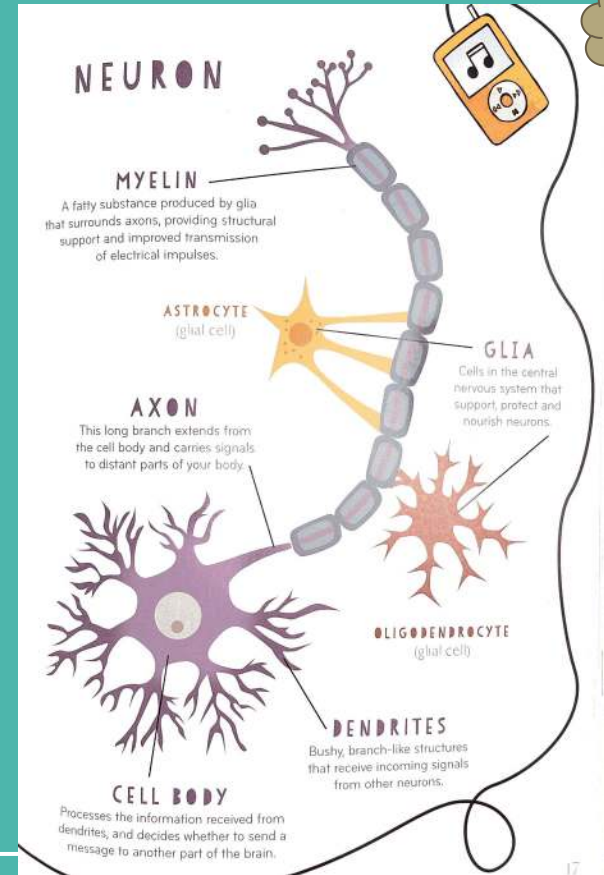
## neuroplasticity?



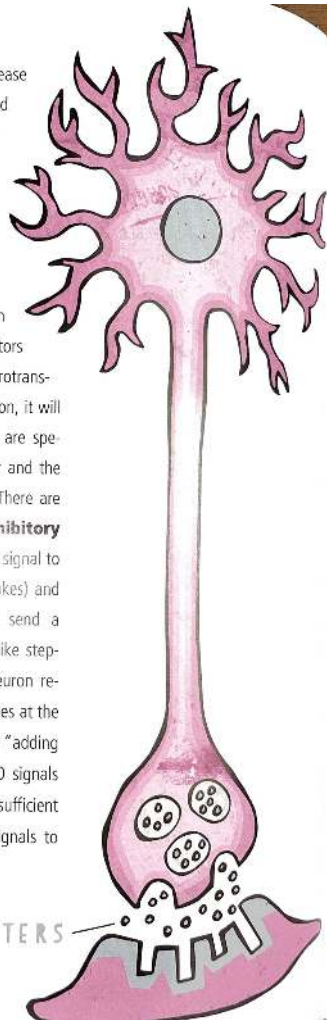
# Your Brain

## The Essential Parts for Learning

- Neurons are the building blocks of the brain.
- They are super small; ten neurons are smaller than the width of a human hair.
- They are really long; some neurons are three METERS long.



When a neuron is activated it will release **neurotransmitters** from the end of its **axon** (or axon terminal) into the **synapse**, a very small space between the axon of one neuron and the dendrites or cell body of the next neuron. These neurotransmitters are tiny chemical messengers that cause electrical changes in nearby neurons by binding to receptors like a key fits into a lock. When a neurotransmitter binds to a receptor on a neuron, it will cause changes in that neuron that are specific to the type of neurotransmitter and the type of receptor to which it binds. There are two types of neurotransmitters: **inhibitory neurotransmitters** send a **STOP** signal to the next neuron (like hitting the brakes) and **excitatory neurotransmitters** send a signal for the next neuron to **GO** (like stepping on the gas). Because every neuron receives thousands of chemical messages at the same time, each neuron is constantly "adding up" all of the STOP signals and GO signals so it can decide if it has received sufficient excitatory input to send electrical signals to the next neuron.



# NEUROTRANSMITTERS

## ADRENALINE fight or flight

produced in stressful situations. Increases heart rate and blood flow, leading to physical boost and heightened awareness.

## GABA calming

Calms firing nerves in the central nervous system. High levels improve focus, low levels cause anxiety. Also contributes to motor control and vision.

## NORADRENALINE concentration

affects attention and responding actions in the brain. Contracts blood vessels, increasing blood flow.

## ACETYLCHOLINE learning

Involved in thought, learning and memory. Activates muscle action in the body. Also associated with attention and awakening.

## DOPAMINE pleasure

feelings of pleasure, also addiction, movement and motivation. People repeat behaviors that lead to dopamine release.

## GLUTAMATE memory

Most common neurotransmitter. Involved in learning and memory, regulates development and creation of nerve contacts.

## SEROTONIN mood

contributes to well-being and happiness. Helps sleep cycle and digestive system regulation. Affected by exercise and light exposure.

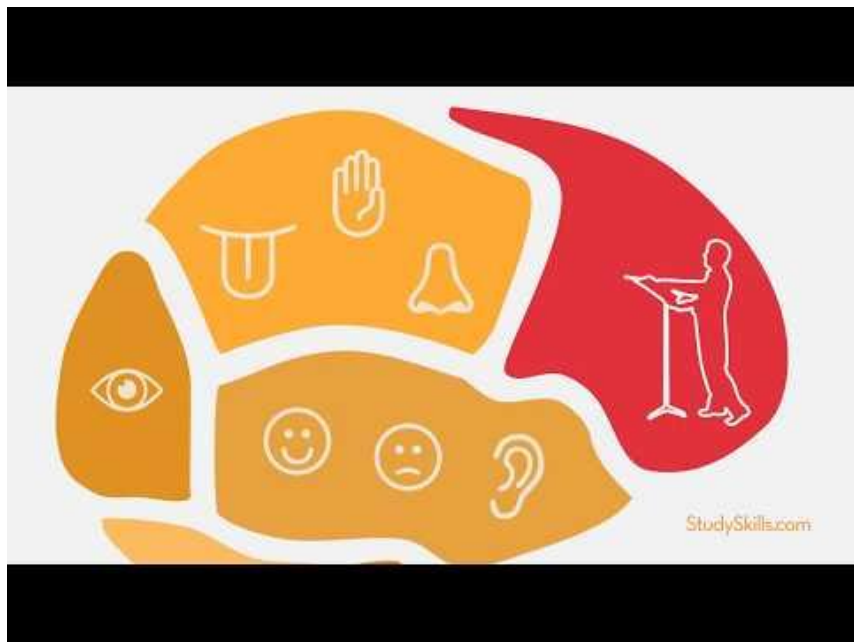
## ENDORPHINS euphoria

Released during exercise, excitement and sex, producing well-being and euphoria, reducing pain

# But is the ADHD brain changeable? YES! All brains are!



## Every Brain, Not Just the ADHD Brain



**“Because of its neuroplasticity, the life of brains can be improved or destroyed based on how you manage it.” Neuroplasticity refers to the brain’s ability to create new neural networks – regardless of age or even injury – in response to new activities and situations. Hallowell refers to this powerful ability as “a wonderfully liberating fact.”-- Edward Hallowell**

[U.S.News: Yes, the ADHD brain can be trained to improve Your Child's ADHD Circuit](#)



# Good News!

Be a good steward of your brain.

You only get one.

Make sure you are modeling this at home.



## MAKING MORE BRAIN

Did you know that your brain will continue to give birth to new neurons throughout your entire life? This process is called **NEUROGENESIS**. This happens mostly in brain structures that are important for **PLASTICITY**, or learning. You can supercharge your brain with regular exercise, which has been shown to increase neurogenesis!



# What is Neurodiversity?



**Neurodiversity describes the idea that people experience and interact with the world around them in many different ways; there is no one "right" way of thinking, learning, and behaving, and differences are not viewed as deficits.**

<https://www.health.harvard.edu/blog/what-is-neurodiversity-202111232645>

How do you learn? Find out more: [\*\*The Learner Sketch Tool\*\*](#)



What does a child with ADHD “look” like? What picture comes to your mind?



**So what is different  
about:**



- Boys
- Girls
- Adults
- Environment

---

# Boys

Boys with ADHD tend to display symptoms most people think of when they imagine ADHD behaviors.

- **Impulsivity or “acting out”**
- **Hyperactivity, such as running and hitting**
- **Lack of focus, including inattentiveness**
- **Inability to sit still**
- **Physical aggression**
- **Talking excessively**
- **Frequently interrupting other people's' conversations and activities**





# Girls

Girls with ADHD tend to display the inattentive aspects.

- Being withdrawn
- Low self-esteem
- Anxiety
- Difficulty with academic achievement
- Inattentiveness or a tendency to “daydream”
- Trouble focusing
- Appearing not to listen
- Emotional problems/sensitivity
- Verbal aggression such as teasing, taunting, or name-calling

# Adults

- Excessive activity or restlessness
- Impulsiveness
- Disorganization and problems prioritizing
- Poor time management skills
- Problems focusing on a task
- Poor planning
- Low frustration tolerance
- Frequent mood swings
- Problems following through and completing tasks
- Hot temper
- Trouble coping with stress
- Finish other people's sentences, interrupt, or talk excessively
- Prone to reckless behavior







# Environmental factors that impact executive functioning

- ❖ Am I learning this? I can't remember?
- ❖ I am great at \_\_\_, but I hate school!
- ❖ If I love it or it is super stimulating, I can do it for hours!  
Video games!

 School

 Sports

 Homework

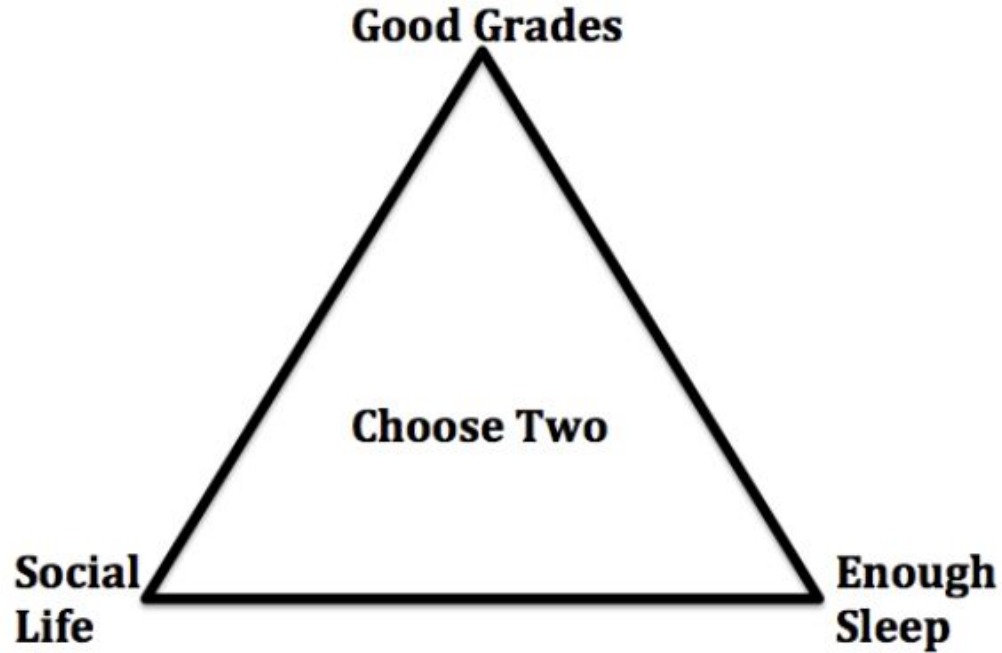
 Screen time

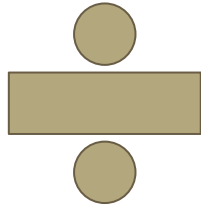
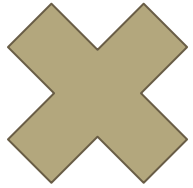
 Weekends

---

# Competing demands for students

---





**Pythagorean Theorem**  
 $x^2 + 54^2 = c^2$

**Slope**  
 $\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{x}{54}$

**Area of Triangle**  
 $A = \frac{1}{2} b h = \frac{1}{2} \cdot 54 \cdot x$

**Similar Triangles**  
 $\frac{5}{12} = \frac{x}{54}$

**AG**

The filing system is still weak.  
Learn it. Link it.  
How can you ensure you retrieve what you need?



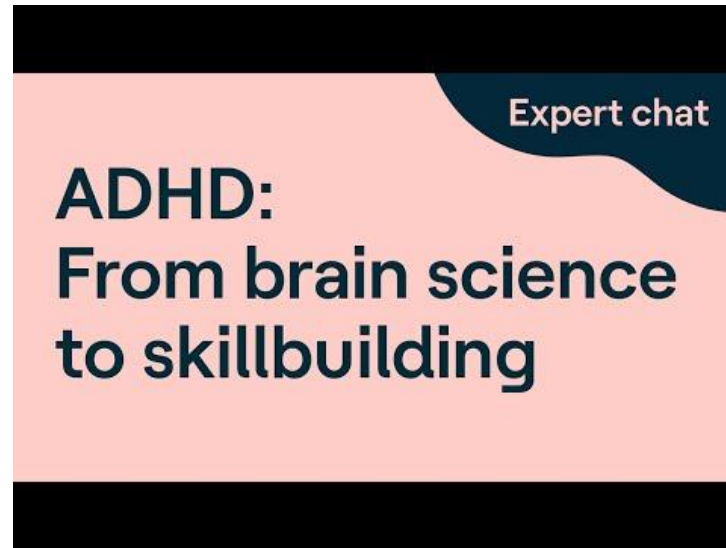
# The illusion of learning is caused by:

- Reading and rereading notes, books, and homework with a highlighter
- Lack of practice
- False confidence –repeating the same study technique
- Studying in a frenzy 24-48 hours before an exam or quiz
- Lack of ownership over the material – no real active involvement



## Understood.org

ADHD isn't a matter of laziness or willpower — that's one of many myths about it. In fact, people with ADHD are often trying as hard as they can to focus and keep their impulses in check.

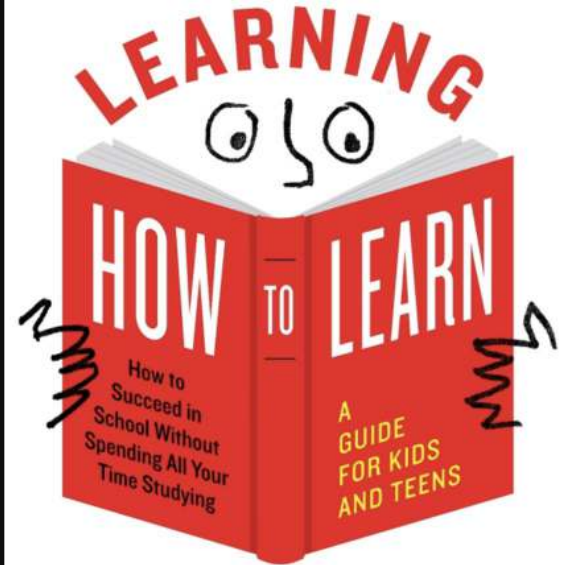


[What Is ADHD? Attention Deficit Hyperactivity Disorder Explained](#)

# Learning How to Learn Workshop

AG

From the bestselling author of *A Mind for Numbers* and the creators of the popular online course Learning How to Learn

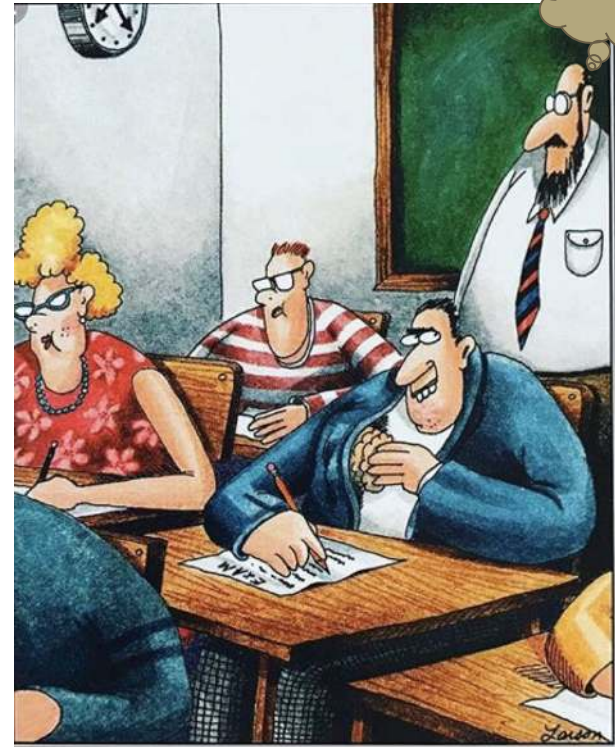


BARBARA OAKLEY, PhD, AND  
TERRENCE SEJNOWSKI, PhD,  
WITH ALISTAIR McCONVILLE

# Memory:

- Short-term Memory
- Long-term Memory Consolidation
- Active Working Memory
- Long-term Memory Access

To avoid the law of forgetting, we have to get the information into the brain and mind and then practice pulling it out again.



Midway through the exam, Allen pulls out a bigger brain.



# Storage:

Class instruction

**Self Testing**

**Flash cards**

**Write down everything you  
know**

**Teach a friend**

**Do it again!**

**Assessments or  
Tests**





# Student Strategies

<https://www.retrievalpractice.org/strategies/2019/8/28/student-study-strategies>

Building confidence around your studying and outcomes requires a variety of techniques:

- **Flashcards**  
Retrieve, Reorder, Repeat
- **Tech Tools that Work**  
Use tools that support retrieval.
- **Don't be Fooled**  
Make sure you mix it up (interleaving) during your study to connect concepts.

This works!

How you do it  
and how you  
practice  
matters.

But do it.



# Flashcard Frenzy

Use all your senses:

**REFLEXES**

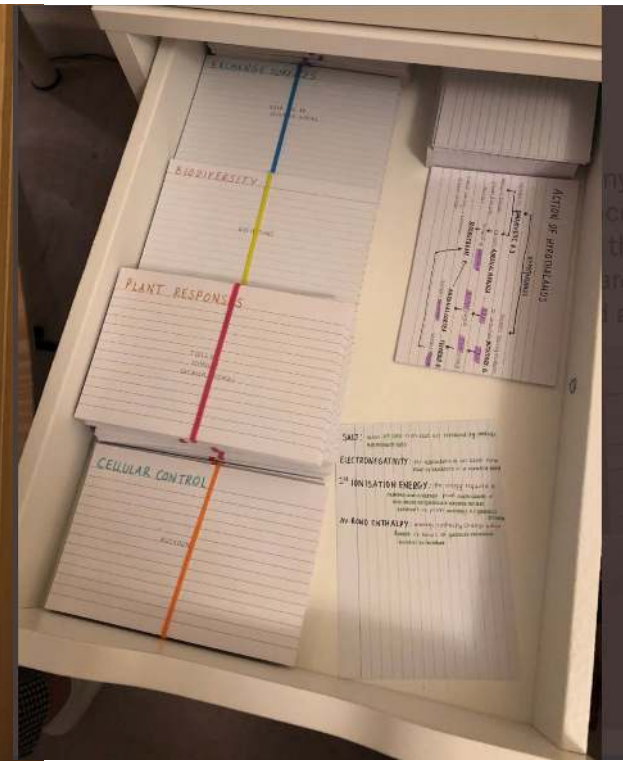
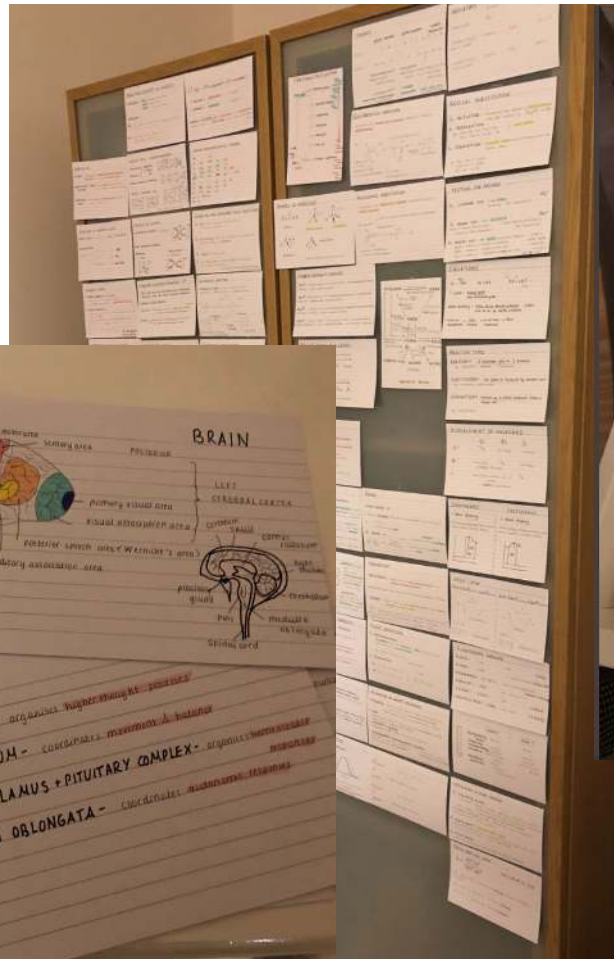
**BRAIN**

**Hox GENES**

- expressed in order along the anterior-posterior axis of the developing embryo
- sequential & temporal order of gene expression corresponds to the development of each body part

Abd-B Abd-A Ubx Antp Scr Dfd Fb Inh

eg





# Distraction Free



→ **Shut off all distractions**

Phone, TV, music (maybe); your environment needs to be optimal.

→ **Set a timer for 25 minutes**

If younger than 12, start with 10 min.

→ **Get going! You can do it.**

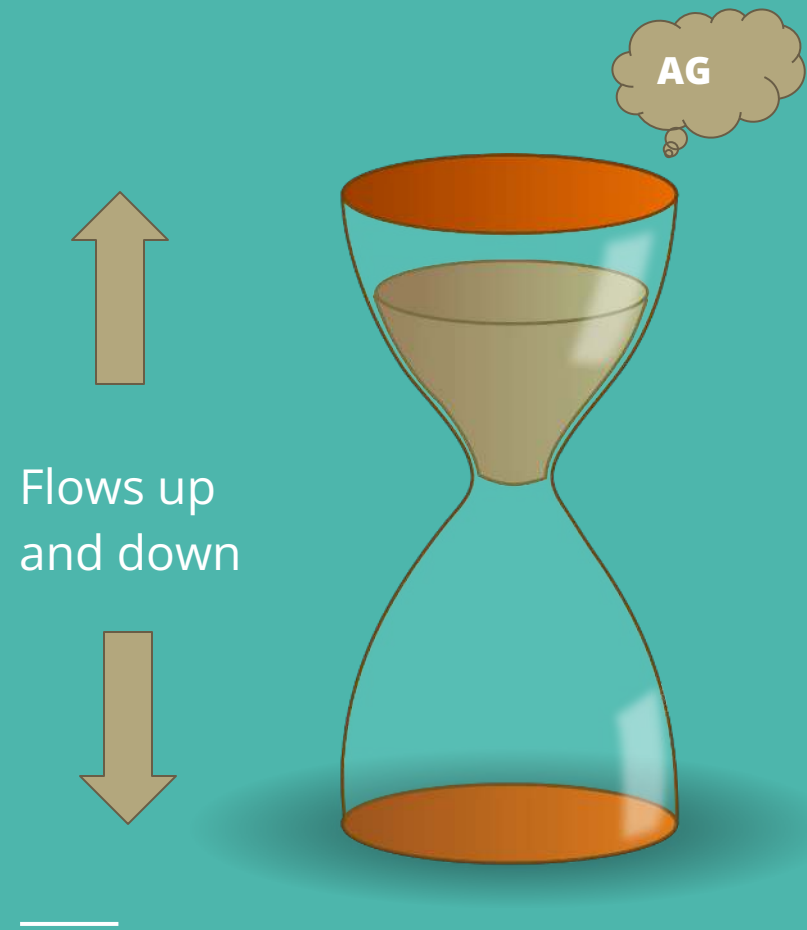
Set your intention and your space for learning. You are in control of your mind.

→ **Reward yourself**

Take a break to allow for the brain to download what you have been studying. This is called the Diffuse Mode.

# Hourglass Concept

From big picture to tiny details and back again, over and over.

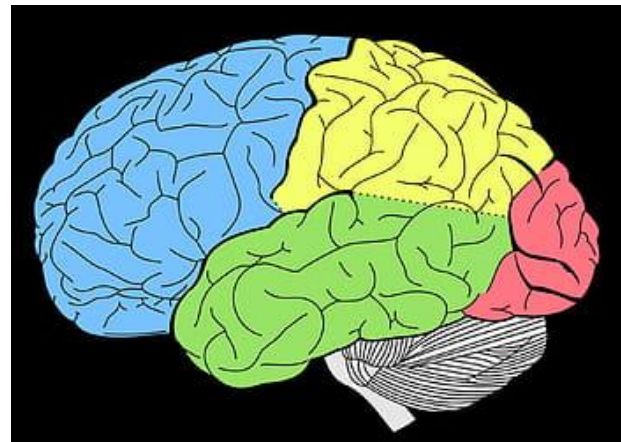


# Brain Dump

1. Write down everything you can remember about how the brain works?
2. Why you might forget?
3. What can you do differently with your brain to improve long-term learning?

Turn to your neighbor and review what you remembered. Think-Pair-Share

My strategy might work in your next class? After class? With a study buddy? Before an assessment?



# Resources



- Medication
- Exercise
- Diet
- Therapy

---



# Medication



Finding the right medication is important. Advocate for yourself or your child.

## Stimulants

- Most researched and commonly prescribed
- Boost dopamine and norepinephrine.
- Work within hours an hour or two of taking them.

## Non Stimulants

- Show same improvements, just not as fast acting.
- May take several weeks to start working.
- Treat ADHD along with other conditions that occur together.



# Exercise

- Provides some of those missing chemicals to the brain.
- Provides a more effective “I can do this” mindset.



School can be an especially excruciating environment for students with attention deficit hyperactivity disorder (ADHD) because of the need to sit still, face forward, and listen. Dr. Ratey says structured exercise—in the form of martial arts, ballet, skateboarding, or gymnastics, for example—is one of the best treatment strategies for ADHD. [Exercise and the Brain](#)

# Diet

Different types of diets:

- Overall nutrition
- Supplementation diets
- Elimination diets



# Therapy

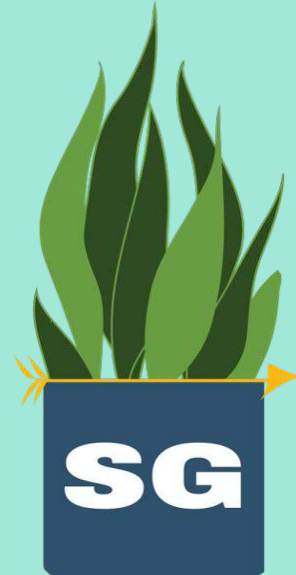
## Children

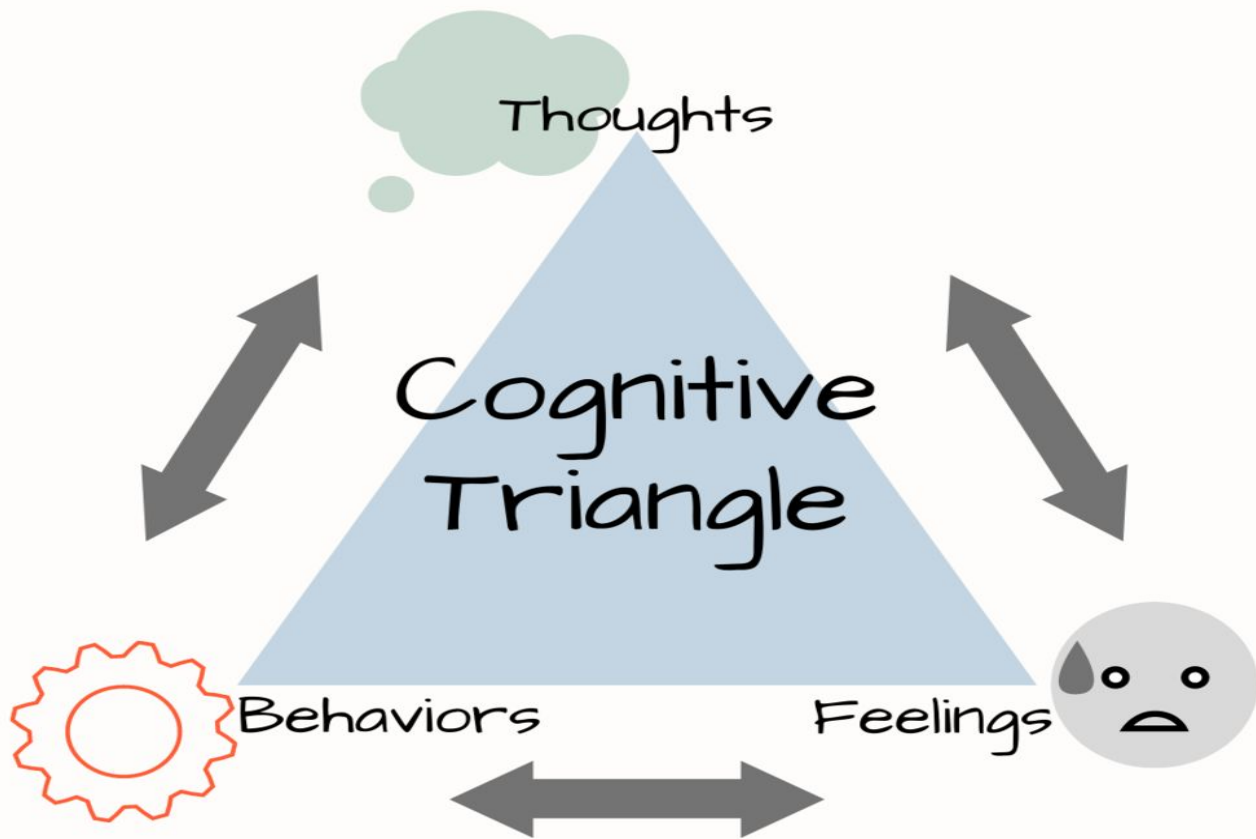
Behavioral Therapy

Play Therapy

## Adults

Cognitive Behavioral Therapy







**Think** ● **Pair** ● **Share**

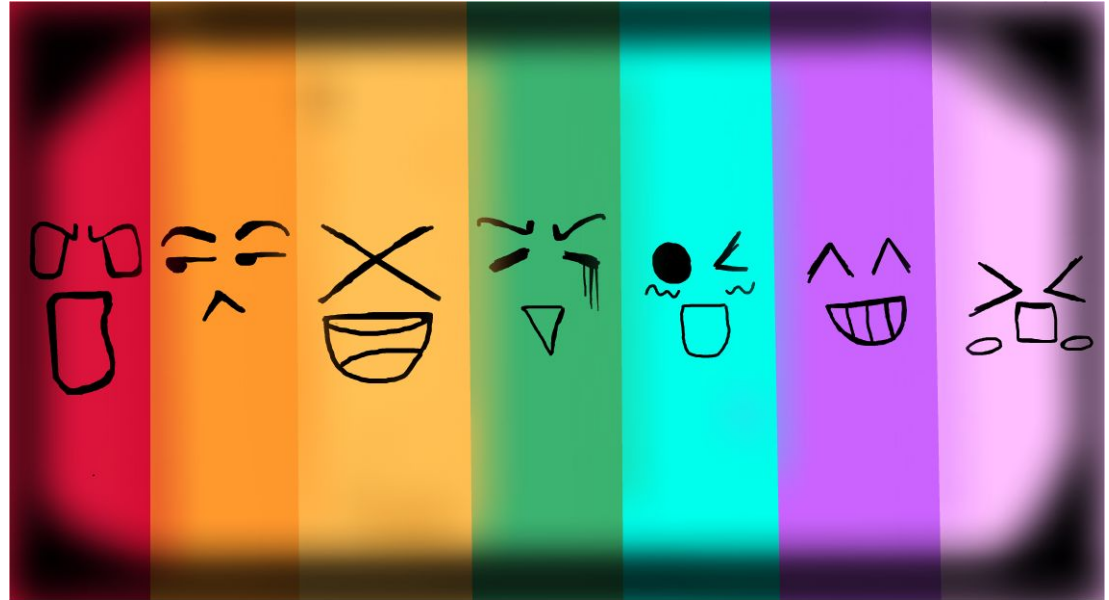
**Think about it. Write it down. Compare with  
a friend near you.**



# Emotions and Learning:

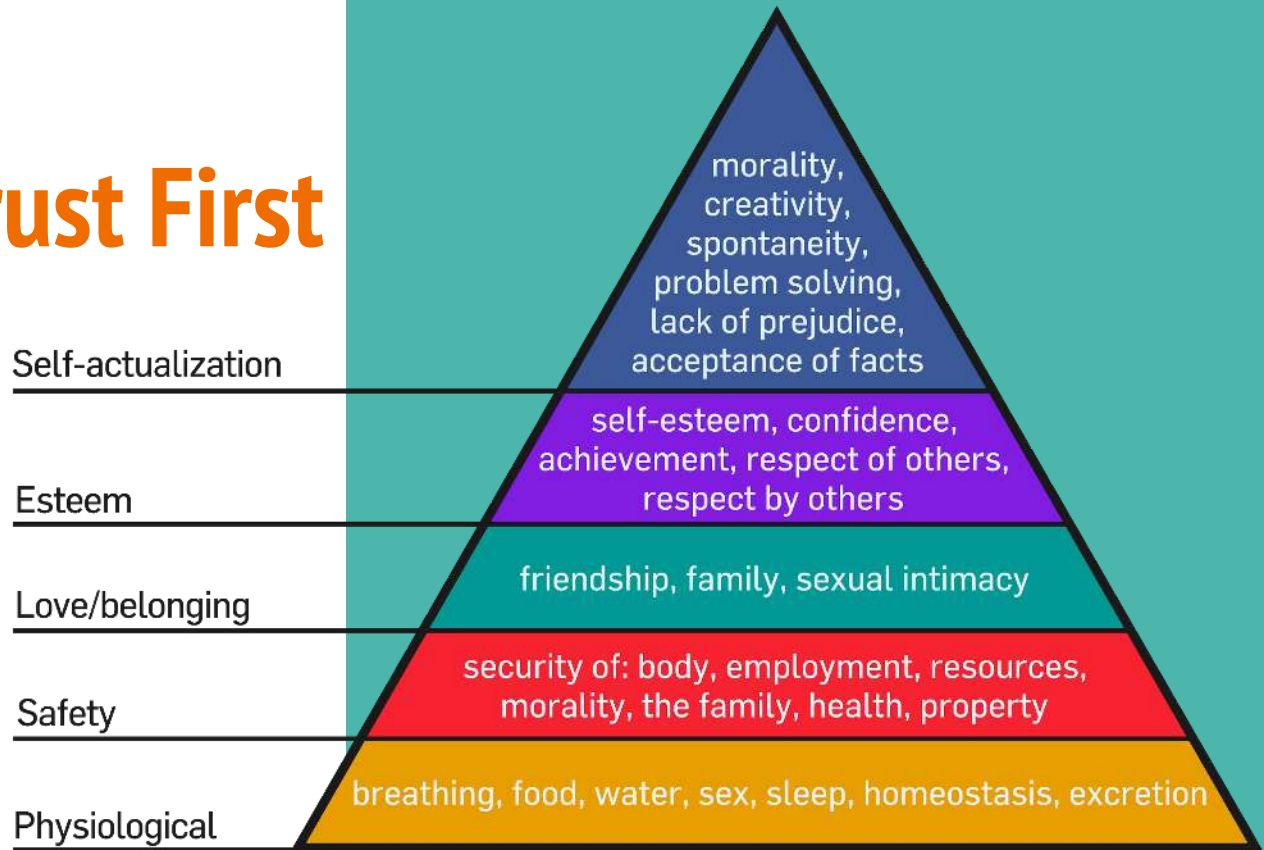
The social and emotional environment play a bigger role in learning than most of the things mentioned so far—feelings do matter.

Stop and listen.  
Find out what is going on *inside* to help effect change *outside*.



# Safety and Trust First

Learning happens when the pyramid is acknowledged and full in most layers.



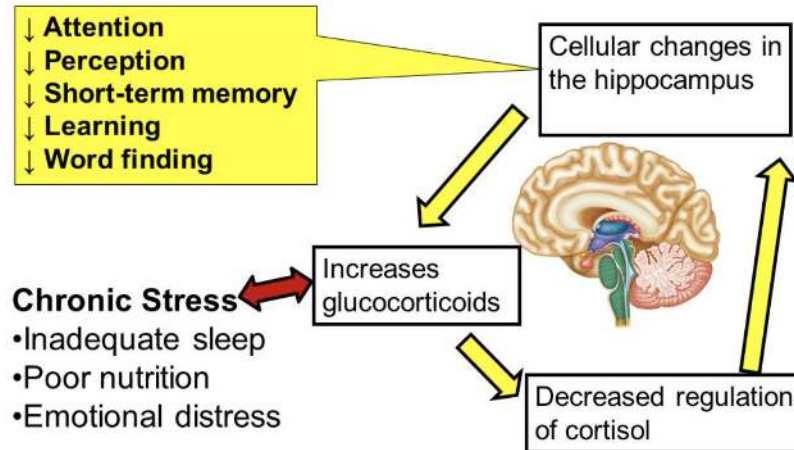


# Anxiety and Stress

**The Amygdala:** Why might I not be able to study? Do I have test anxiety?

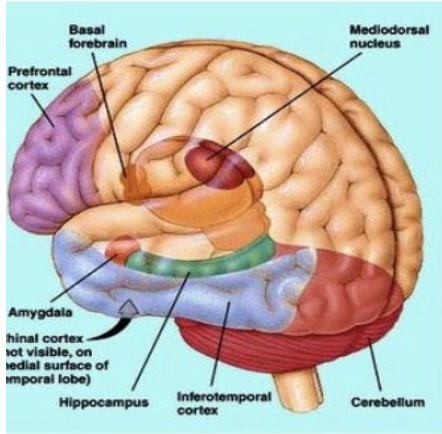
## Stress & Learning

The stress-brain loop





# When stressed...



- The Amygdala regulates our emotional state by acting as the brain's “**security guard**”, protecting us from threats. When in a negative emotional state (stressed or fearful), the amygdala prevents the input from passing along, effectively blocking higher-level thinking and reasoned judgment. The incoming stimuli and signals are left for the amygdala itself to process as an automatic reflexive response to “fight, flight, or freeze.”
- The input and output is to and from the lower reactive brain, where voluntary, retrievable memories are not stored and the behavioral responses are limited to fight/flight/freeze (acting out or zoning out).

(www.RADteach.com)

Judy Willis, MD, M.Ed

<https://radteach.com/>



# Procrastination

I'll do this later!

## Distraction and Procrastination

This is a major problem. We have many distractions and always think, “Before I start my homework, I’ll play a video game or watch Netflix.” Before we realize it, we’ve wasted an hour or more.

How can I get focused on my homework?

---



# The Pomodoro Technique

- **Step 1:** Set a timer for a short, intense burst of work on a single task. Many opt for a 25-minute session, but some go shorter (e.g. 15 mins), some go longer (e.g. 50 mins).
- **Step 2:** Give that task your undivided attention while the timer is ticking – no distractions!
- **Step 3:** When the time's up, take a 5-minute break – or perhaps a little longer if you're choosing longer work sessions.

## How do you study using the Pomodoro Method?



**Set a timer for 20-35 minutes, work intensely while it's counting down.  
When the timer rings, take a break and do it all again.**

[www.examstudyspecialist.com/pomodoro-method](http://www.examstudyspecialist.com/pomodoro-method)



**EXAM STUDY  
EXPERT**

- **Step 4:** Reset your timer, and repeat Steps 1-3!



# Disorder vs. Difference and Stigma vs. Strength

Entrepreneurship:

You are 300% more likely to find that business owners have ADHD.

Go rock the world with your uniqueness!

The world needs your creativity, risk-taking, outside-of-the-box thinking, and hyper-focusing!

You are not broken; you are boundless.

Use your SuperPower!



*Meet George Cicci*

## Embrace difficulties

The more effort required to retrieve, the more learning takes place.



## To learn, retrieve

Periodic practice and testing strengthens retrieval routes. Test yourself rather than constantly re-reading notes.



## Move beyond learning styles

We have multiple intelligences and by drawing on a wide variety, you improve retention.

STEP  
**01**



## Avoid illusions of knowing

Familiarity is not mastery. We are drawn to immediate, short term gains, not slower, effortful, long term retention.

STEP  
**02**

STEP  
**03**



## Space it out, mix it up

When testing yourself, variety, and a little time to forget, raises the challenge of retrieval and results in greater retention.

STEP  
**04**

STEP  
**05**



## Increase your abilities

Embrace a growth mindset, practice like an expert and construct memory cues.



## Generate

Attempt to answer a question or solve a problem before being shown the solution. Wade into the unknown and puzzle through it.

## Calibrate

Use objective measures, such as tests or expert feedback, to clear away illusions and adjust the accuracy of your judgements of your learning.

STEP  
**06**



## Elaborate

Find different layers of meaning in new material by explaining ideas in your own words and by making connections.

STEP  
**07**

STEP  
**08**



STEP  
**09**

STEP  
**10**




## Reflect

Combine elaboration and retrieval by recalling learning, connecting learning and reflecting on the success of the learning.

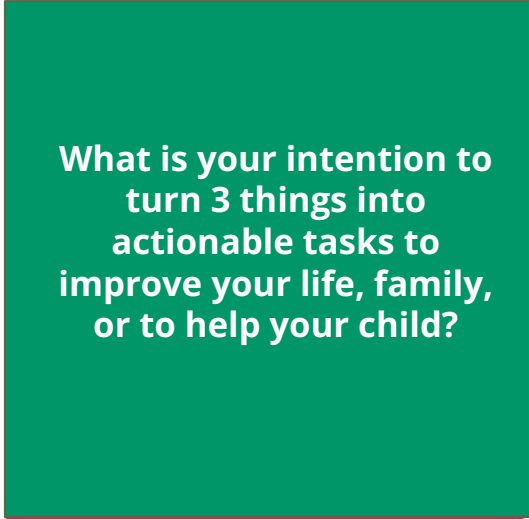
# Knowing what you know and don't know is key = Metacognition



What are  
three  
things you've  
learned or are  
excited about from  
this class?



What questions  
do you have? What  
questions do you need  
to have clarified?



What is your intention to  
turn 3 things into  
actionable tasks to  
improve your life, family,  
or to help your child?

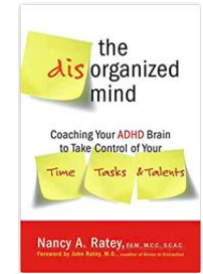
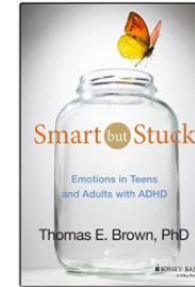
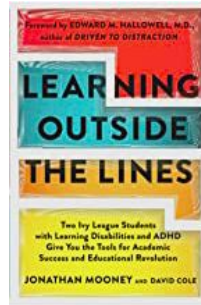
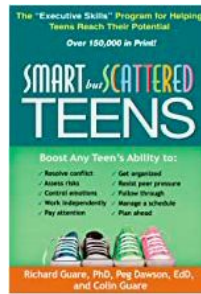
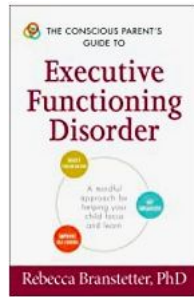
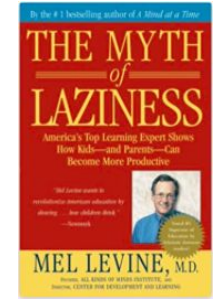
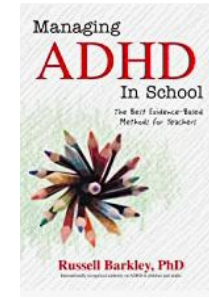
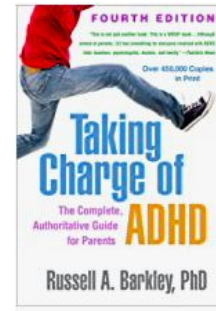
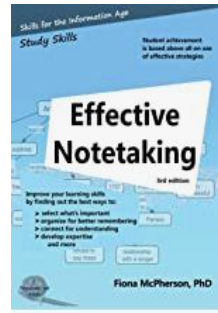
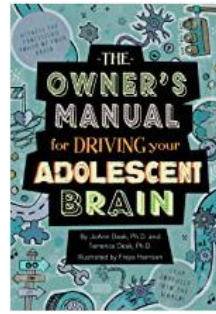
<https://creativecommons.org/licenses/by-nc-nd/4.0/>



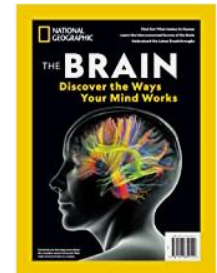
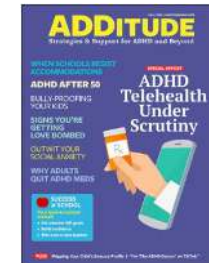
@RetrieveLearn

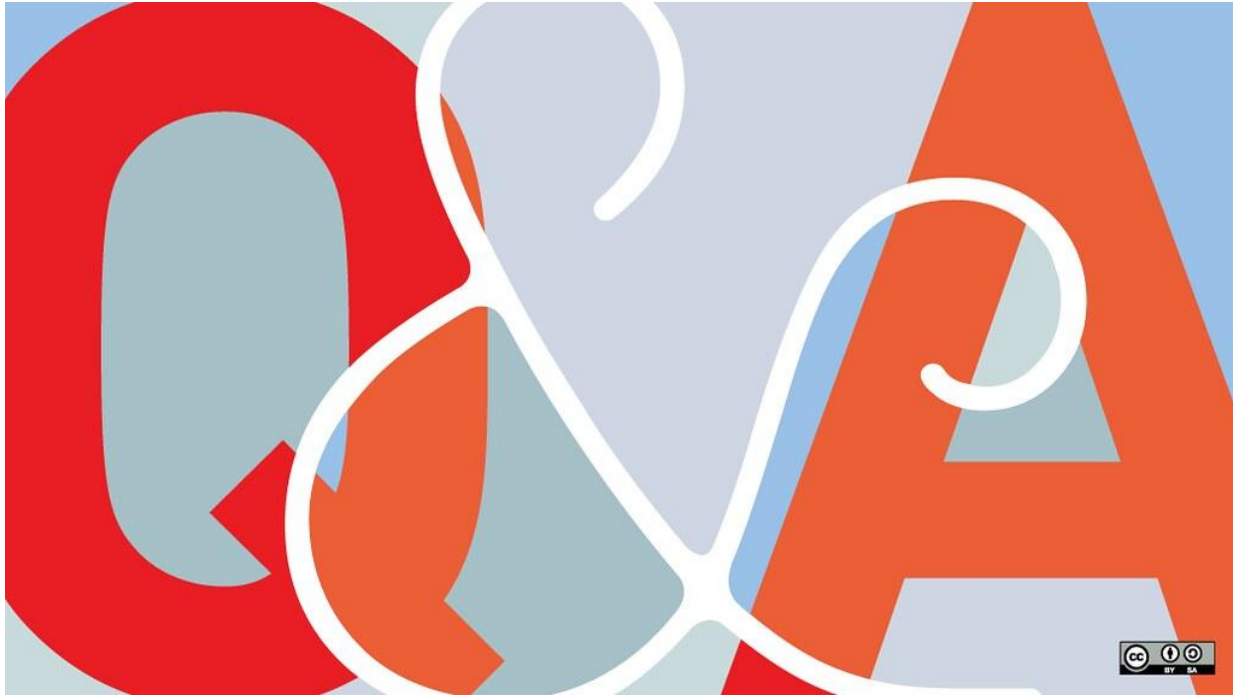


/RetrievalPractice



# Recommended Reading





We offer this time to answer any questions that you have. If you have more personal questions, please feel free to catch us after the presentation.



# References:

- Oyla Magazine: [www.oyla.us](http://www.oyla.us)
- Barbara Oakley: <https://barbaraoakley.com/>
- The Heath Brothers: [www.heathbrothers.com](http://www.heathbrothers.com).
- The Center for Transformative Teaching: <https://www.thectl.org/>
- Retrieval Practice: <https://www.retrievalpractice.org>
- Structural Learning:  
<https://www.structural-learning.com/post/retrieval-practice-a-teachers-guide>
- CHADD: <https://chadd.org/about-adhd/overview/>
- NAMI: <https://www.nami.org/About-Mental-Illness/Mental-Health-Conditions/ADHD>
- Harvard Health Publishing:  
<https://www.health.harvard.edu/blog/what-is-neurodiversity-202111232645>
- Child Mind Institute: <https://childmind.org/article/adhd-in-teenagers/> ,  
<https://childmind.org/symptomchecker/>

# References:

- Understood.org: <https://www.understood.org/en/articles/what-is-adhd>
- YouTube: <https://youtu.be/I9LRSgxbOqM>
- ScienceDirect, Journal of Business Venturing:  
<https://www.sciencedirect.com/science/article/abs/pii/S0883902616302348?via%3Dihub>
- SOAR: <https://youtu.be/suEjXwnxaYY>
- Your Brain Is Plastic: <https://youtu.be/5KLPxDtMqe8>
- Q.E.D. AKOM: <https://allkindsofminds.org/>
- Additude Magazine: <https://www.additudemag.com/>
- Hey Teach!:  
<https://www.wgu.edu/heyteach/article/exercise-and-brain-how-fitness-impacts-learning1801.html>
- Books: see the next slide for pictures

# Mindshift

Break Through Obstacles  
to Learning and Discover  
Your Hidden Potential

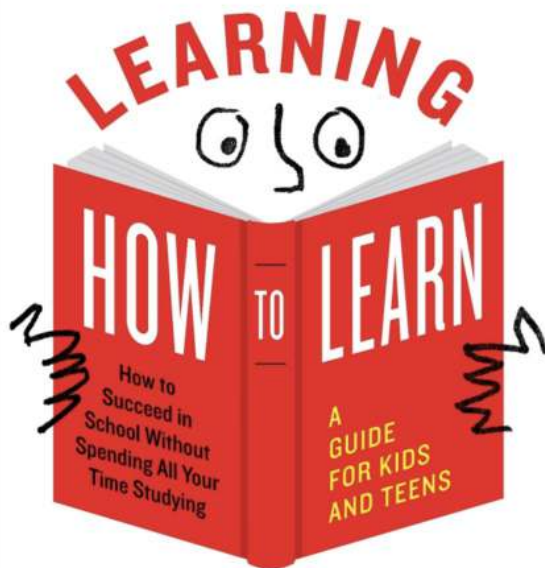


Barbara Oakley, PhD

Bestselling Author of *A Mind for Numbers*

And Creator of the Popular Massive Open Online Course "Learning How to Learn"

From the bestselling author of *A Mind for Numbers* and  
the creators of the popular online course Learning How to Learn



BARBARA OAKLEY, PhD, AND  
TERRENCE SEJNOWSKI, PhD,  
WITH ALISTAIR McCONVILLE

# UNCOMMON SENSE TEACHING



Practical Insights in  
Brain Science to  
Help Students Learn

From the creators of the popular online course Learning How to Learn

Barbara Oakley, PhD; Beth Rogowsky, EdD;  
Terrence J. Sejnowski, PhD