

Teaching with the Brain in Mind: Lessons from Neuroscience

Symptoms of Cognitive Weaknesses Activity

Cognitive Skills Bank

Short Term Memory Processing Speed Long Term Memory
 Visual Processing Logic & Reasoning Auditory Processing Attention

	Symptom	Guess	Answer
1.	“In one ear and out the other” syndrome	_____	_____
2.	Answers are out of left field	_____	_____
3.	Choppy reader	_____	_____
4.	Difficulty jumping quickly between tasks	_____	_____
5.	Difficulty making mental movies or pictures	_____	_____
6.	Difficulty with multi-step instructions	_____	_____
7.	Difficulty with writing/word problems/reading comprehension	_____	_____
8.	Dislikes reading	_____	_____
9.	Impulsive	_____	_____
10.	Low class participation	_____	_____
11.	Missing assignments	_____	_____
12.	Performs poorly on tests	_____	_____
13.	Poor spelling	_____	_____
14.	Struggles with timed tests	_____	_____



Seven Core Cognitive Skills:

1. **Short Term Memory:** The ability to retain information for short periods of time while processing or using it.
2. **Processing Speed:** The ability to quickly process information and perform mental tasks when speed is required.
3. **Long Term Memory:** The ability to store and recall information for later use.
4. **Logic and Reasoning:** The ability to reason, problem-solve, and plan.
5. **Visual Processing:** The ability to perceive, analyze and think in visual images – the mind’s eye.
6. **Auditory Processing:** The ability to hear and distinguish different sounds and make sense of verbal information.
7. **Attention:** The ability to stay on task, switch between tasks, and ignore distractions.

How do we improve cognitive skills?

1. **Assess (Cognitive Testing or Psychoeducational Testing with Nectar)**
2. **Treat (Cognitive Training)**
3. **Integrate into Schooling (Games, Teacher Mindset and Awareness, Brain Boosting Activities)**

Games for Cognitive Skills:

Skill	Games
Processing Speed	Anything Timed – Taboo, Scattergories, Blink
Short Term Memory	Memory, Simon
Long Term Memory	5 Second Rule, Times Up Title Recall
Visual Processing	On the Dot, Manifold
Logic and Reasoning	Tic-Tac-Ku, Risk
Auditory Processing	Word-a-melon, Spontaneous, Last Letter
Attention	Operation, Spot It, Stacking Cups

Brain Boosting Activities

Beat Reading:

Purpose: Processing Speed & Reading Fluency

When to Use: Pair with any text to increase reading fluency.

Procedure: Using a metronome (can use an app or website), set a beat for students to follow. Start at 120 beats per minute and adjust based on skill. Read one word (not syllable) per every beat. Take a brief pause (one beat) at commas and a longer pause (two beats) after end marks. After reading “like a robot,” turn off the metronome and read the same text with fluency and inflection. Continue to increase the speed to practice fluency and work processing speed through reading.

Practice Text:

Fit for a Queen by Jim Bartos – published in Reader’s Digest

When one of our grandsons was about eight years old, he announced at a family gathering that I treat my wife like a queen. Hmm. I puffed myself up and asked him a question, expecting that the answer would give me similar stature. “Since I treat her like a queen, what does that make me?” His immediate response? “A servant.” So much for my ego.

Simon Color Game:

Purpose: Short Term Memory

When to Use: Transitions, brain breaks, and rewards

Procedure: Give students two colors (“Red. Blue.”) Students repeat back colors. (“Red. Blue.”) Teacher responds, adding a third color to the list. (“Red. Blue. Green.”) Students repeat back list. Continue back and forth, adding a color each time. How many colors can they get? Make it a competition to beat their previous record!

Rapid Recall: Give students one minute to picture a space and say as many things that come to mind.

Purpose: Processing Speed & Reading Comprehension

When to Use: Transitions, warm-ups, and brain breaks

Procedure: Set a timer for one minute and give students a prompt in which they visualize a space and name items found there. Ask, “What do you picture in outer space? What can you see in your kitchen at home?” Tally student responses. Keep track on a whiteboard of personal records along with student goals to beat previous records.

How do we optimize brain function?

- 1. Organize and Declutter**
- 2. Engage the Senses – Scent (Rosemary for memory, Peppermint for focus, Lavender for Calm)**
- 3. Movement for Memory (Actions and Gestures)**

How The Nectar Group Can Help:

- **Assessments**
- **Cognitive Training**
- **Tutoring**
- **Study Skills and Executive Function Coaching**
- **Family and Individual Integrative Health and Wellness Coaching**
- **One-to-one Schooling through Nectar Academy**
- **Homeschool Support and Consulting**



855-221-4888 | TheNectarGroup.com | GetAnswers@TheNectarGroup.com

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