



# Case Study: Carla B.

## Key Terms

**ADHD • ASD • Stress and Anxiety • Social-Emotional Learning • Attention • Problem-Solving • Flexibility**



## Meet Carla

Carla is a sunny, imaginative, high energy young woman of 8. She came to Axiom Learning for support with her attention and persistence on difficult tasks shortly after she was diagnosed with Autism Spectrum Disorder and ADHD Combined Presentation.

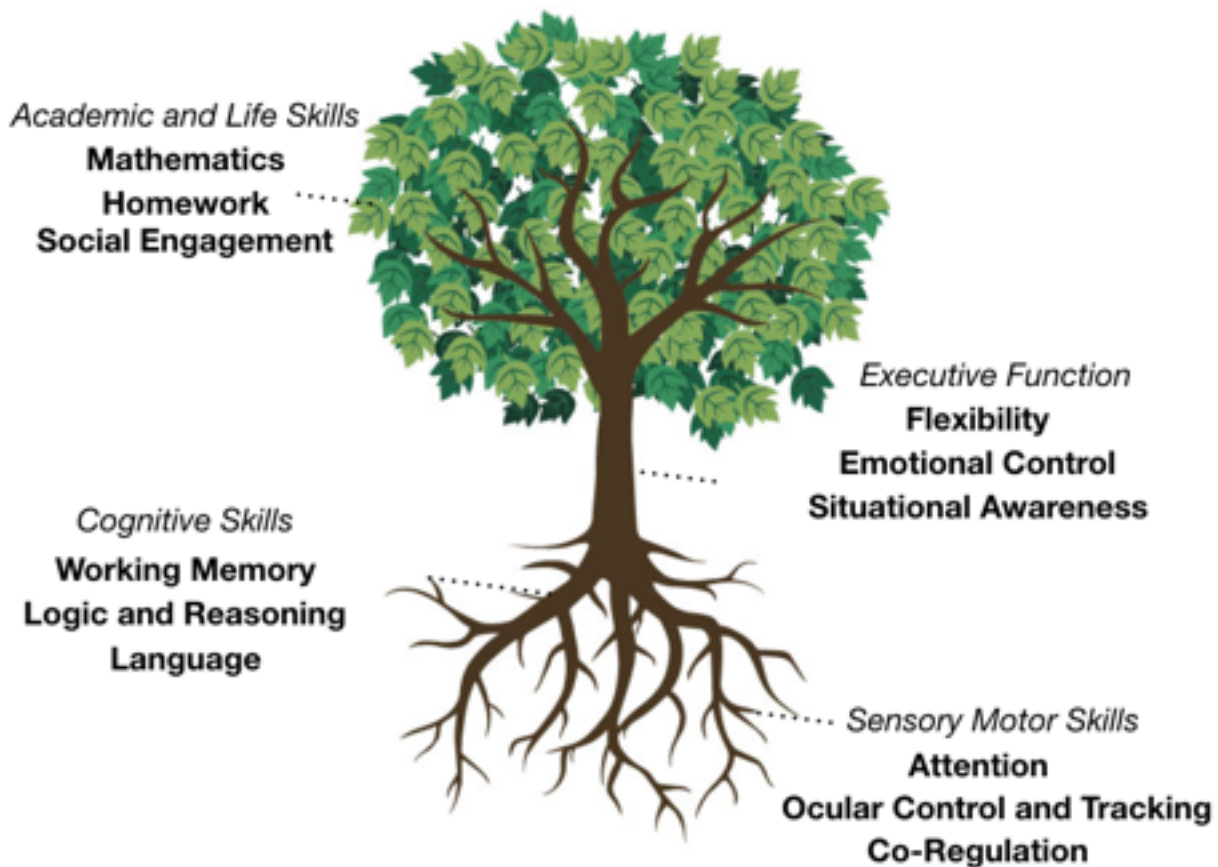
## Carla's Learning Profile

Carla came in with several notable strengths she could build upon: a vivid imagination, strong associative thinking, a knack for cartoon drawing, a broad vocabulary, an playful spirit, and a proclivity for open and honest communication.

A major challenge area for Carla was orienting to and navigating new situations. She would give up very quickly on anything that felt difficult, particularly anything number based, and would often yell or withdraw from a situation and stop responding. Additionally, Carla refused to complete homework from school and therefore was not getting additional practice on any in-school concepts.

## Carla's LEAP Program

During Carla's intake assessment, skills at all three foundational levels were identified that impacted her academic and life skills profile:



Carla's stepwise, customized program included targeted activities corresponding to each of the skills above, beginning with a focus on Sensory Motor and Cognitive Skills and building towards Executive Function and Academic and Life Skills.

### **Physical Systems**

- Carla practiced movement activities that built upon her gross motor coordination and differentiation.
- Carla practiced activities that required her to control her ocular impulses.

### **Cognitive Processing Skills**

- Carla built upon her sustained attention by completing visual attention exercises such as scanning a scene for an object, fitting puzzle pieces together, comparing scenes, and labeling.
- Carla targeted her logic and reasoning skills by completing visual reasoning problems and noticing what was same and different about these problems over time.
- Carla engaged in logic games that involve sequence, strategic thinking, and pattern recognition for increasing large sets of information.

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## Executive Function Skills

### *Situational Awareness*

- Carla practiced previewing a space upon entering it in order to organize her approach and experience. She used the acronym “STOP and read the room” to review the “Space, Time, Objects, and People” each day, observing what remaining the same and what was different.

Carla attended sessions at Axiom Learning 2-3 times a week for a total of one year with an 8-month hiatus halfway through her program.

## Progress

**“In the six months since my daughter started going to Axiom, she has become much more focused and aware of her potential. She has learned to control her impulses and pay attention to subtle social cues and nuances.”**

**- Carla’s mother**

## Academics

Carla has grown her academic and personal abilities to such an extent that this has manifested in a 14 point increase in her full scale IQ from 68 to 82.

### *WISC-V*

Skill	Percentile Growth	Percentile Pre		Percentile Post	
Full Scale IQ	10	2nd	Mildly Impaired	12th	Low Average

Carla’s increased flexibility, openness to experience, and emotional control have allowed her to establish a relationship with Mathematics. While previously she would become highly upset whenever anything to do with numbers was mentioned, Carla now not only practices Math each session and takes pride in her work, but also has started to complete academic homework for her school in all subjects including Math for the first time in her life.

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### Ocular Control and Tracking and Attention

Supported by stronger ocular control and visual tracking, Carla is now better able to attend and focus in all contexts for longer periods of time, supporting her ability to learn. Factors such as background noise or light and other people in the space are less likely to distract Carla. If they do, she is often independently able to recognize that she has become distracted and redirect herself back to the task at hand. Carla is also now able to move more deliberately with more coordination.

#### WRAML-2

Skill	Percentile Growth	Percentile Pre		Percentile Post	
Attention / Concentration	12	4th	Borderline	16th	Low Average

#### Gibson Cognitive Battery Test

	Age Equivalence Years of Growth	Age Equivalence Pre	Age Equivalence Post	Age Deviation Pre	Age Deviation Post
Visual Processing	3.5	5.0	8.5	-3.6	-2.5
Processing Speed	2.6	5.9	8.5	-2.7	-2.5

### Language and Communication Skills

Carla's language skills developed on multiple levels. She has leveraged her strengths to develop an advanced ability to alliterate, quote, create vivid descriptive images, rhyme, and wordplay.

#### TAPS-3

Skill	Score Growth	Score Pre	Score Post
Phonological Skills	23	99	122
Cohesion	22	78	100



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### *Gibson Cognitive Battery Test*

	Age Equivalence Years of Growth	Age Equivalence Pre	Age Equivalence Post	Age Deviation Pre	Age Deviation Post
<b>Auditory Analysis</b>	<b>6.8</b>	8.2	15.0	-0.4	+4
<b>Word Attack (Decoding)</b>	<b>6.5</b>	11.5	18.0	+2.9	+7

### *WISC-V*

Skill	Percentile Growth	Percentile Pre		Percentile Post	
<b>Verbal Comprehension</b>	<b>29</b>	8th	<b>Borderline</b>	37th	<b>Average</b>

### *WIAT-III*

Skill	Percentile Growth	Percentile Pre		Percentile Post	
<b>Sentence Composition</b>	<b>66</b>	9th	<b>Low Average</b>	75th	<b>High Average</b>
<b>Listening Comprehension</b>	<b>12</b>	13th	<b>Low Average</b>	25th	<b>Average</b>

### **Co-Regulation and Social Engagement**

Carla's stronger communication pairs with her stronger awareness of other people's perspectives to support newfound social flexibility. Carla now engages in collaborative problem-solving consistently to find ways to meet her needs as well as the needs and goals of others. For example, before, Carla would become upset if someone else could not grasp her vision for a story or joint task or proposed a new direction, she now frequently turn-takes with others in acts of mutual creativity such as imagining a joint scene or story, integrating and building upon the components introduced by others. She now has the tools to more fully communicate the stories and images she envisions and the flexibility to adapt what she is imagining. Carla's new ability to co-create and co-imagine opens up new possibilities for how she can thrive off her creativity in her future personal and professional life.

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## Emotional Control

Carla's strengthened language skills have enhanced her ability to communicate verbally when an activity or specific aspect of an activity is disagreeable, and why she is resistant to moving forward. This has dramatically reduced the frequency with which Carla becomes angry and/or withdraws completely from activities or interactions. She is willing and able to find precise language for her emotions, discuss what is bothering her, and why it is upsetting.

## Logic and Reasoning

Carla significantly grew in her ability to verbalize the steps and reasons for her visual logic. She increased her accuracy on visual reasoning puzzles from 10% to 85%. Carla also began choosing more complex and challenging puzzles willingly, without prompting from instructors, and has been completing them with increasing speed and strategy and little reliance on guessing or giving up. She was able to reason with larger amounts of information in puzzles and math problems, reflecting her stronger working memory.

### *Gibson Cognitive Battery Test*

	Age Equivalence Years of Growth	Age Equivalence Pre	Age Equivalence Post	Age Deviation Pre	Age Deviation Post
<b>Logic and Reasoning</b>	<b>7.0</b>	5.0	12.0	-3.6	+1
<b>Working Memory</b>	<b>4.4</b>	8.6	13.0	0.0	+1

## Growth Mindset and Flexibility

Over her six month LEAP program, Carla showed notable growth in her strategic thinking and approach to tasks. Initially, Carla had a strong tendency to stick to her first idea or approach even if this idea was not working and become frustrated. Now, Carla responds to setbacks with impressive flexibility. It is not at all uncommon for Carla to independently generate several possible strategies to resolve a roadblock and circle through them to find the best fit for her situation. Not only can she identify when her strategy is not working and try something else, but she is also open to external suggestions for other things to try. For example, when playing a matching game that requires categorization and reasoning, Carla is able to not only identify when her strategy is not working and she is stuck, but also draw upon past

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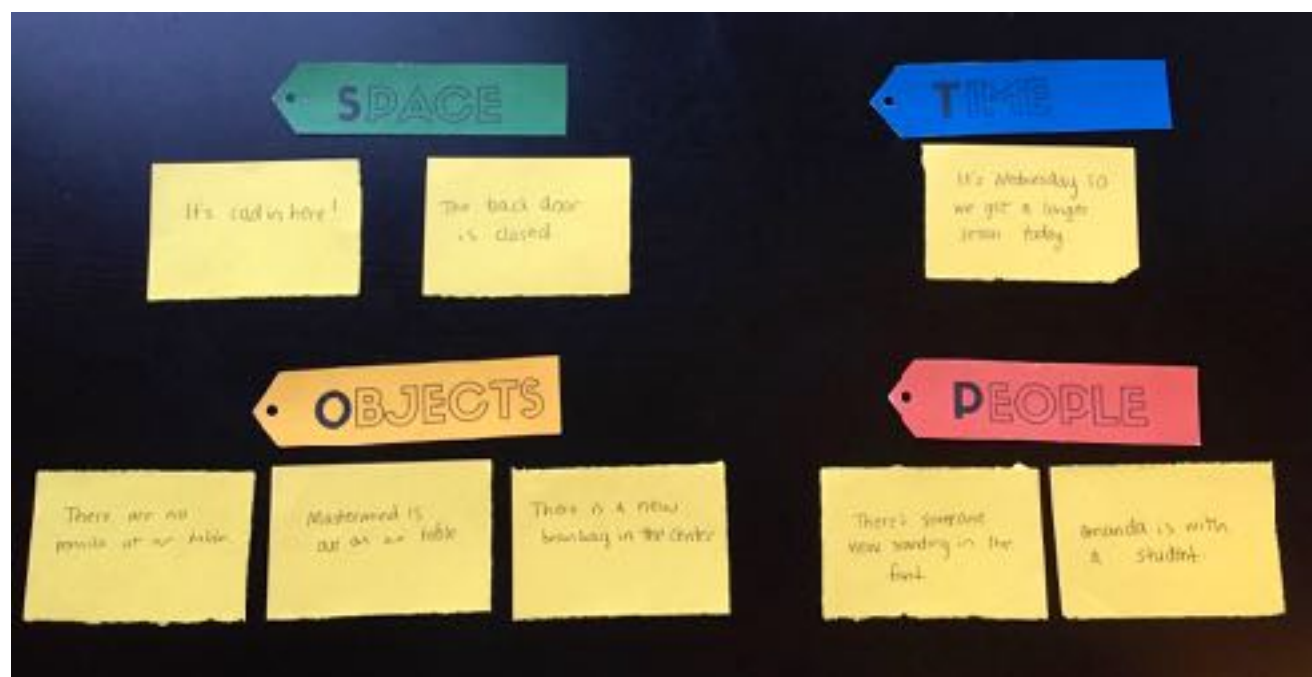
experiences to creatively generate ideas for other strategies to try, such as sorting the cards by different features.

One effect of this is that Carla's emotional state has stabilized, with less dramatic fluctuations, allowing her to develop stronger self and emotional regulation. Initially, unexpected changes such as a new pencil jar in the space were highly upsetting to Carla. Now, she is able to work in an open plan space that evolves continually from session to session, noting changes in the space and planning her response to them. Carla has even opted to intentionally try one new thing every session in order to continue to expand her horizons!

## Carla's LEAP Program: A Deeper Dive

As Carla's foundational skills strengthened, she grew increasingly able to leverage explicit structures to increase her self and other awareness. Below are examples of two such structures that Carla was able to generalize to new situations.

### *Tool 1 : Situational Awareness Screening*



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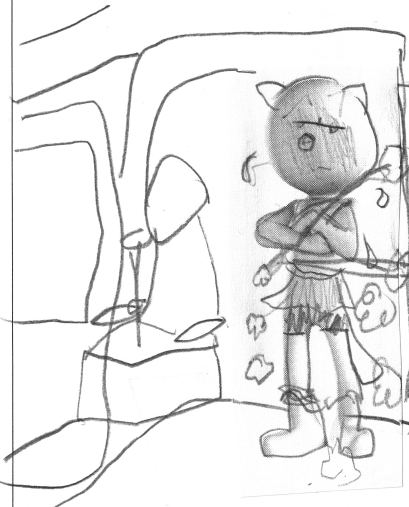

**Carla used “STOP and read the room”, an acronym for “Space, Time, Objects, and People” to preview the space as she entered it.**

Carla used these categories to identify key context clues in these categories in the Axiom space, in short movie clips and in discussions about her experiences at school. Carla now cites and uses these categories spontaneously when thinking about the characteristics of an environment such as home or school. Previously, Carla would ask where someone was even if they were right near her, would interrupt others’ activities, or would fail to notice major changes in the space. Now, Carla almost always immediately perceives who is present, what is unique about a given day, and who might be available to interact.

*Tool 2: Emotional Expression Cartoons*

Carla made cartoons of the triggers, physiological response, strategies, and outcome of strategies for different negative emotions such as anxiety and frustration. She then implemented these strategies within her sessions to better choose her response to her emotional states.

Carla brainstormed different strategies for responding to each emotion, and noted over time which ones were most helpful in different contexts. For Carla, choosing the figures for each box from a set of options helped her refine her understanding of physiological cues corresponding to different emotional states.

Feeling: anger	Strategy: explain & listen	New Feeling: chilling
	 <p>I feel Mad because I'm hot <del>much better</del></p>	

- S hot car, dinner table (sometimes)  
Axiom, school
- T long time doing same thing
- O heat, new games
- P brother, parents, teacher

other person is chilling  
& relaxed too!

**Carla made cartoons of the triggers, physiological response, strategies, and outcome of strategies for different negative emotions such as anxiety and frustration.**

## Discussion

Carla's growth through LEAP helped her leverage and grow her strengths and bolster her challenge areas in order to expand her opportunities for the future. Cases like Carla demonstrate the enormous potential students have to grow across skill areas when foundational skills are holistically and directly addressed.