



Mateo Santos

MindPrint Profile

Test Date: September 26, 2023

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Summary Results

STRENGTHS	EXPECTED RANGE			SKILLS TO SUPPORT
	High	Medium	Low	
Spatial Perception ★	Visual Memory	Verbal Reasoning	none	Working Memory
	Abstract Reasoning	Processing Speed		
	Visual Motor Speed	Flexible Thinking		
	Attention	Verbal Memory		

**Ahead of peers**

Top 16% of peer group

**Developing appropriately for peer group**

High: 69th - 83rd percentile

Medium: 31st - 68th percentile

Low: 17th - 30th percentile

**Developing behind peer group, may require outside support**

Bottom 16% of peer group

★ Mateo performed in the top 5% of peer group

Mateo's Stronger Skills

Visual Reasoning: Mateo shows very good visual reasoning skills, with excellent spatial perception and very good abstract reasoning. These important skills can serve Mateo well across subjects, particularly in math, science, and hands-on activities.

Visual Memory: Mateo's very good visual memory can support his efficient learning across subjects. In particular, very good visual memory can be helpful in subjects like math and science which rely more heavily on visual and numerical retention.

Attention: Mateo's shows very good attention, suggesting he can sustain focus for longer tasks, a key skill to show persistence even when tasks are challenging.

Mateo's Skills to Support

Relative Difference in Verbal Skills: Mateo's verbal skills are good, though not as strong as his visual skills. Since much of academic learning relies on verbal skills, it will be important for Mateo to appreciate his visual strengths and understand how to use strategies if language-based tasks require more effort.

Working Memory: Despite Mateo's very good attention, Mateo had difficulty briefly remembering information on the working memory task. While he might have a good ability to sustain focus, weaker working memory could interfere with his ability to juggle multiple tasks at once which could affect note taking, following directions or completing multi-step tasks.

Recommendations for Mateo

Use Visual Strengths on Verbal Tasks: Mateo can use his stronger visual skills to support his understanding and retention of what he reads or hears. Pairing images with text, using visualization or drawing pictures can help him more effectively understand and remember language-based information.

Support Executive Functions: Mateo might benefit from supports for executive functions including reduced distractions, frequent, scheduled breaks and visual reminders to stay on task. Mateo also might benefit from reminders to go back and check his work. Many students benefit from instruction on how to check their work under different scenarios and subjects.

Nurture Spatial Perception: Given Mateo's exceptional spatial perception, you might want to provide him with opportunities to continue to develop this skill, build his self-confidence, and enjoy learning. Mateo might prefer engineering, design or computer programming.

Next Steps

After you've had sufficient time to read and review this profile, we hope you make use of the extensive resources available to you on MindPrintLearning.com. If you wish to read more about the development of the MindPrint Assessment [click here](#). Our site also has more information on each of the skills we address in this report. You can learn how they might change over time, the importance of effort and attitude, and material on several other pertinent topics. We also have an ever-growing database of free professional-recommended learning strategies.

Strengths	High Expected	Medium Expected	Skills to Support/Invalid
<u>Spatial Perception</u>	<u>Visual Memory</u> <u>Abstract Reasoning</u> <u>Visual Motor Speed</u> <u>Attention</u>	<u>Verbal Reasoning</u> <u>Processing Speed</u> <u>Flexible Thinking</u> <u>Verbal Memory</u>	<u>Working Memory</u>

Performance by Skill

This report is organized by the four major domains of learning: speed, executive functions, complex reasoning, and memory. Across the domains, 10 cognitive skills were assessed. You will find descriptions of these 10 cognitive skills grouped by domain, followed by a description of how Mateo performed on a test of each skill. This description of how Mateo learns will help you recognize which activities will come more easily and anticipate which may require more support. MindPrint uses the information from this report to tailor recommendations for supporting strategies that you will find in Mateo's Personalized Recommendations. You will find these recommendations when you log in to your MindPrint Learning account.

Speed

How fast students work can have a large impact on school performance. Students who work efficiently are able to complete thoughtful work within the expected time. They can use any extra time to check their work, take on more challenges, or relax before the next task.

Students who work at a slower pace might find that they sometimes cannot get all their work done in the allotted time. These students might not be able to finish tests or they might take a long time to complete homework.

Some students accept the slower pace. Others rush through their work in an effort to finish on time, which can have a negative impact on accuracy.

There are two types of **speed** that affect performance: **visual motor speed** and **processing speed**.

Visual Motor Speed

Visual motor speed is the rate at which a student can see and physically respond to visual stimuli. Athletes usually have excellent visual motor speed. In school, students with strong **visual motor speed** might be fast at typing, copying assignments from the board, or efficiently handling procedures in the science lab.

On a test of **visual motor speed**, Mateo was shown one square on the screen and asked to click on it as quickly as possible each time it reappeared. The square changed locations and became smaller as the test progressed. This simple task was Mateo's first test, designed to make them comfortable with the testing environment and to create a baseline for how quickly they can react when they do not need to think carefully about answers.

EXPECTED RANGE

Mateo performed in the **high end of the expected range** on our test of visual motor speed. Good capability in visual motor speed supports efficiency in activities such as note taking, art projects, and science experiments.

Processing Speed

Processing speed is the rate at which a student takes in and analyzes information. Speed is a global process impacting all other learning. Students with efficient processing speed work quickly and accurately. Working quickly is not the same as working efficiently, however, as a fast pace but scattered errors can indicate that a student is processing information with insufficient depth. Students who work too quickly often have grades that do not reflect the student's best ability.

Conversely, students with slower **processing speed** take longer to read with full comprehension, finish assignments, or respond to questions. Sometimes a slower, more deliberative approach can be beneficial, especially for complex tasks. Other times, slower pace can be inefficient and interfere with the student's ability to keep up with the class or finish in an appropriate amount of time.

All the MindPrint tasks assess both accuracy and speed. One of the advantages of computerized testing is that it provides precise measurements of the student's working speed. We compare speed on fast-thinking tasks such as attention and memory to more deliberative tasks in the complex reasoning domain. This comparison enables us to assess if the student is efficiently working at an appropriate pace for the type of task.

EXPECTED RANGE

Mateo performed in the **expected range** on our measure of processing speed. Mateo demonstrated a fine ability to absorb, interpret, and respond to information. If you would like suggestions on how to help further develop processing speed, you can click on the link for processing speed in the Next Steps section of this report.

Executive Functions

Executive functions refers to a set of skills that involve the organization system for thinking. Just as the person in charge of a business has the powers of an executive, each person is in charge of his or her own thinking and actions. We consider abilities such as purposeful goal-directed activity, paying attention, evaluating, decision-making, planning, organizing, implementing, and following through. Succeeding in school, pursuing a hobby, learning athletic strategy and teamwork all require **executive functions**. MindPrint focuses on the executive functions of **attention**, **working memory**, and **flexible thinking**.

Attention

If executive function is the commander at the top of the system, **attention** controls the flow of information in and out of the mind. If a student is actively focusing, the quality of work will likely be consistent. If a student tunes in and tunes out, they can miss details in the information. A capable student whose attention is inconsistent is working with spotty information and therefore likely to produce inconsistent work. While it is easier to pay attention for tasks that we enjoy, such as a video or a game, it is harder to maintain consistent focus for tasks that we might not find fun or interesting.

MindPrint considers two aspects of performance in our measure of attention. We measure how accurate a student is on the task and also the working speed the student maintains to achieve that level of accuracy. The amount of time a student spends in order to maintain accuracy is important, as it indicates if the student is lagging in processing information, slowing down efforts in order to compensate for difficulty, or impulsively responding.

On the test for attention, Mateo was shown a seven segment display which changed every second. Mateo had to press the space bar whenever the display formed a complete digit or a letter. This admittedly dull task challenges a student to control attention by continuing to focus as long as needed even if bored. This task creates a demand for sustained **attention** similar to that needed to follow through on a frustrating homework assignment, listen to a presentation by a teacher, or complete an extended reading task.

EXPECTED RANGE

Mateo performed in the **high end of the expected range** on this task. Mateo demonstrates a good capability to maintain attention for school and other age-appropriate activities. Mateo's good attention could be quite helpful as class material becomes more complex and students are expected to focus for longer periods of time. Mateo can use good attention skills to go back and check work or re-consider problems, particularly in harder subjects. If you decide you want to further develop attention, you can click on the link for attention in the Next Steps section of this report.

Working Memory

A second area of **executive function** tested was **working memory**. **Working memory** is the ability to hold information long enough to use it for completing a task. Remembering a phone number long enough to dial is a simple example of **working memory**. This type of memory is used for following multi-step directions, completing mental arithmetic, listening to a complex story, or answering reading comprehension questions at the end of the chapter.

On the **working memory test**, Mateo was asked to do three conditions of a simple task. The test displays sequences of uppercase letters. In the first condition, Mateo responded to seeing the letter X. In the second condition, Mateo needed to respond if the letter was identical to that preceding it. In the final condition, Mateo was asked to respond if the letter in front was identical to that presented two letters previously. This is seemingly simple, but it is actually a quite challenging task. Mateo had to pay attention to constantly changing information, remember and mentally refresh relevant information, and simultaneously remember the instructions. Some students find that their minds start to get overloaded with the combination of letters and instructions, while other students complete this task more easily.

SKILL TO SUPPORT

Mateo performed **below the expected range** on this task. Mateo had difficulty juggling an age-appropriate amount of information to complete this task. Working memory can be important across all subjects, particularly as students reach higher grades and need to pull together a larger quantity and variety of information to understand and solve any given problem.

The Next Steps section of this report provides strategies to support Mateo's working memory.

Flexible Thinking

Flexible thinking, the ability to shift gears or change direction to adjust to unexpected changes, is a key problem solving skill. While working on a solution, a student must recognize when it may be necessary to try a new approach. Shifting is central to handling transitions, tolerating change, problem solving, and changing from one topic to the next. **Flexible thinking** relies on abstraction, or the ability to develop meaning, structure and order from complex information. Making connections, seeing the relationship between different events or topics, and meaningfully interpreting stories are all experiences that help abstraction skills develop. Students who are strong in this skill will probably be good at changing tactics if their first attempt is unsuccessful. In contrast, students who get stuck often have trouble taking a new point of view, trying a new solution, or accepting redirection.

On the test of **flexible thinking**, Mateo was presented with four objects at a time. Mateo needed to select the object that did not belong with the others based on one of three sorting principles. Sorting principles changed, and feedback was given to guide the correct identification of the principle. Mateo had to take feedback about being incorrect, shift gears, and find a new strategy. This test looks at whether Mateo can think flexibly, impose order on new information, and efficiently problem solve.

EXPECTED RANGE

*Mateo performed in the **expected range** on this task. Mateo demonstrated a fine ability to make adjustments and respond to novel tasks. If you would like recommendations to practice and develop Mateo's flexible thinking, you can click on the link for flexible thinking in the Next Steps section of this report.*

Complex Reasoning

Complex reasoning is the ability to analyze information and solve complicated problems. When students use reasoning skills, they are thinking through ideas in a logical way to arrive at a conclusion. This is often referred to as "higher order thinking."

Complex reasoning skills become increasingly important as students progress through grades at school. The complex reasoning skills assessed were **verbal reasoning**, **abstract reasoning**, and **spatial perception**.

Verbal Reasoning

Verbal reasoning requires students to make connections, identify relationships, predict potential events, read between the lines, and make inferences when concepts are presented in words. Students with stronger **verbal reasoning** skills are often quick to make connections between prior knowledge and experiences and new information when reading or listening. When learning in class, reading a book, or going on an excursion, they readily figure things out. Conversely, students with weaker skills might need to ask more questions and receive more guidance before they develop a full understanding of a concept or situation.

On the test for verbal reasoning, Mateo was presented with two words that relate to each other in a specific way and then asked to find another pair of words that relate to each other in the same way. For example, cat and kitten have the same relationship as dog and puppy.

EXPECTED RANGE

*Mateo performed in the **expected range** on this task of verbal reasoning, a skill important to reading and analyzing texts or participating in class discussions. You can find recommendations to help Mateo further develop verbal reasoning skills in the Next Steps section of this report.*

Abstract Reasoning

A second area of **complex reasoning** tested was **abstract reasoning**. **Abstract reasoning** is the use of critical thinking to solve problems that offer information in visual (or non-concrete) form. Students with a strength in this area can analyze novel problems and identify patterns and principles. They might readily understand new math concepts, come up with an insightful hypothesis in science, or understand a complex plot in a novel. Conversely, other students might shy away from tasks that require visualizing ideas they cannot see or touch.

On the **abstract reasoning** task, Mateo was asked to identify the missing piece of a pattern. To figure out which answers fit best, Mateo had to reason by analyzing and contrasting geometric and spatial principles.

EXPECTED RANGE

Mateo performed in the **high end of expected range** on this task. Abstract reasoning is important for tasks requiring students to understand, analyze, and identify solutions to complex problems. You can find strategies to nurture abstract reasoning in the Next Steps section of this report.

Spatial Perception

Spatial perception includes an understanding of direction, orientation, scale, and relationship between objects in space. People rely on spatial skills in art, interpreting maps and charts, using space on a page for writing, navigating screens on a computer, or planning a three-dimensional project.

On the test of **spatial perception**, Mateo was asked to view two lines at an angle. Mateo had to make one line rotate until it had the same angle as the other. The relative location of the lines and their sizes differed in each example. This is a purely spatial task that does not involve thinking in words or patterns.

STRENGTH

Mateo performed **well above the expected range** on this task. Mateo might be very comfortable using and applying this strength in art, geometry and other activities requiring one to sense how objects relate to each other in space. You can continue to cultivate this strength by providing opportunities to use spatial perception skills. You can find strategies to nurture Mateo's spatial perception in the Next Steps section of this report.

Memory

How is **memory** like the library? If books were shelved in no particular order, it would be nearly impossible to find a specific book when we need it. The library's filing system of subject area, Dewey decimal number and author's name, makes it straightforward to efficiently find the book we need. But when someone replaces a book in the wrong spot, it is a frustrating and difficult process to locate it.

Memory is the mind's storage and retrieval system. Like the library, **memory** is efficient if information is entered in an organized manner so we can find the data we need when we need it. How a student takes in and organizes information in **memory** has a big impact on how easily that student is able to recall information under specific circumstances.

MindPrint tested Mateo in two areas of memory central to learning, **verbal memory** and **visual memory**.

Verbal Memory

Verbal memory is the ability to acquire information through words. School emphasizes **verbal memory**, including remembering information read in a text book, written on a board, or discussed in class. Students with strong **verbal memory** often require less time to remember vocabulary words or study for a test. They are better at retaining and retrieving the information long after the test is over. Conversely, students with weaker **verbal memory** often take longer to prepare for tests requiring memorization and are more likely to forget the information once the test is over.

On a test of **verbal memory**, Mateo was asked to memorize 20 target words. Those words were then mixed with 20 similar but different words. Mateo was asked to indicate whether a word presented was included in the original target list.

EXPECTED RANGE

Mateo performed in the **expected range** on this task. Verbal memory is important for tasks requiring memorization of definitions, stories, or other text-based information. If you would like specific recommendations on how to further develop Mateo's verbal memory, click on the link for verbal memory in the Next Steps section of this report.

Visual Memory

Visual memory is the ability to acquire information through images. In school, visual learning can include looking at demonstrations, diagrams, and illustrations. Books, posters, charts, and computers in the classroom all offer an abundance of visual information.

On a test of **visual memory**, Mateo was shown 10 target complex geometric shapes. Those shapes were then mixed with 10 similar but different shapes. Mateo was asked to indicate whether a shape presented was included in the original target list. Unlike many of the other tasks, there was little opportunity to use verbal mediation to talk through a solution. Visual memory is a strictly visual task.

EXPECTED RANGE

Mateo performed in the **high end of the expected range** on this task. You might find that Mateo works efficiently on assignments that require remembering visual and numerical information. You can find recommendations to make the best use of Mateo's visual memory in the Next Steps section of this report.

Translating the Results into Successful Learning: The Mindprint Toolbox

Now that you understand how Mateo learns, you probably want to know how to help them to be more efficient and productive in school and learning. We suggest approaching this process from different perspectives depending on whether your focus is on specific academic subjects or the overall approach to life long learning.

Improving Academic Performance

If you want to supplement Mateo's schoolwork, we suggest that you look for academic products that do not rely heavily on weaker skills to be successful. We also recommend that you choose products that are a natural fit with Mateo's interests and hobbies to increase the likelihood that they will find them engaging.

Supporting Cognitive Skills

You will find evidence-based learning strategies in Mateo's MindPrint account. These offer guidance on specific approaches for working with Mateo on learning approaches and metacognition. Context matters when supporting your student, so we organize recommendations by academic subject, study skills, and test taking. Consider which context you think would be most beneficial to your student before selecting a strategy to use.

Understanding the Impact of Anxiety and Mood Disorders

Anxiety, depression and other mood disorders can have an impact on cognitive and academic performance. Fortunately, students struggling with emotional difficulties can often demonstrate their true capabilities on the MindPrint Assessment given it is relatively brief, low stakes relative to other standardized tests, and is often taken in a comfortable, familiar environment which minimizes stress.

If emotional difficulties do present, they are most likely to impact performance on the tests of working memory, attention and processing speed since mood can have an impact on the mind's ability to think efficiently. However, emotional difficulties can affect performance on any skill if a student is unable to maintain focus for even short periods of time or stops putting in effort. If a student has taken the MindPrint Assessment in the past and you see a significant decline in performance in one or more skills, you might want to consider if emotions could be the cause.

At school, students struggling with anxiety or depression might show declines or inconsistencies in academic performance. Given the direct impact emotions can have on executive functions, these difficulties might be confused with signs of executive dysfunction or ADHD.

In addition, students with unaddressed learning difficulties might develop anxiety and depression as they struggle to understand why they are not doing well in school, feel pressure to keep up with their peers, or simply feel misunderstood. Without a clear understanding and acceptance of the reasons for their struggles, learning challenges could affect self-esteem. It is one of several important reasons that experts recommend early identification and intervention for any type of learning problem.

We urge parents to investigate suspected anxiety and depression. The sooner any difficulties are understood and are addressed, the greater the likelihood for a happier, more productive, and self-confident child. We strongly encourage parents to consult a pediatrician for referral to a child psychologist or psychiatrist if you have any concerns about your child's academic progress or emotional well being.

Sharing Results with Your Child

Many parents wonder if they should share this profile with their children. Our experience, and much research, shows that children are more successful when they have a good understanding of how they learn. With this understanding, they generally have more confidence and are more comfortable asking for help.

The question of how and when to share the results of this assessment depends on when you think Mateo is ready to use the information productively. Children develop this type of maturity at different ages. When you feel Mateo is ready, you can share and discuss this report or you might prefer to use the Student Learner Profile which does not provide percentiles. Whichever report you choose, provide plenty of time for questions and discussion.

There is no right way to strengthen a child's self-awareness of their learning strengths and needs. It very much depends on your personal preferences and which will be most comfortable for your family.