

I'M A ROCKET SCIENTIST?



# CHAPTER 1

## I'M A ROCKET SCIENTIST?

**D**o you think it takes a genius to be a rocket scientist? The answer is no. I will share a secret with you. There is a self-empowering process that enables anyone to become brilliant in math. Trust me. Becoming a rocket scientist has almost nothing to do with math. I would have never imagined myself as a rocket scientist. My background was the most farthest away from prestigious. In fact, I would argue that my development was extremely dysfunctional! Nevertheless, I was given the talent to imagine. I call it faith. If I could become a rocket scientist, given such early dysfunction, I am convinced that anyone can use her skills and talents to achieve her heart's desire. Of course, boys can succeed, too!

My motto is: When given lemons, make lemon meringue pie. Here's a better illustration about my "great mathematician preparation." Picture this scenario. My childhood was the 100 percent – complete opposite from "rocket science" performance. I was never on the Ivy League-educational track. And yet I became a rocket scientist! I was raised in South Los Angeles, Calif., with three sisters in a financially-and emotionally-depressed, inner-city neighborhood. Sadly, many of today's early learners are conditioned to have dysfunctional thoughts. Throughout the day, little ones are exposed to inappropriate behaviors exhibited through; movies, TV, discouraging teachers, poor schools, unsafe neighborhoods, and even unsafe environments at home. I'm no exception to these unfortunate circumstances.

My mother was a single parent, who struggled to pay the bills. Between the factors of poverty, gang violence, and educational ignorance, I was bombarded with anxiety from every angle. As a kid, I was safe, while caged between the four walls at home. Once I exited my house, I was surrounded by gangs and gang violence!

I was raised on 55th Street, between Hoover and Vermont, which was highly gang-infested during the late 1980s. I remember an “unspoken” curfew on Fridays, where everyone had to be inside by noon. If you were caught outside; male or female; despite nationality; wearing the wrong colors or shoes; you would be shot dead! Fridays were designated for weekly gang initiations. We even slept a certain way in the bed at night to ensure that bullets would miss our heads, if they penetrated the walls.

I also worried whether we had enough food for us as a family to survive. My mother always said, “The only way to get out of this poverty is through an education.” So, I didn’t want to let myself or my mother down by not earning a bachelor’s degree. My number one goal was to make it out the ‘hood’.

*“Once I exited my house, I was surrounded by gangs and gang violence!”*

While growing up, my family had a lemon tree in the backyard of our home. A plethora of sour fruit fell from this tree. Even though sour lemons filled our backyard, I managed to make lemonade. Thanks to timing and the right directions, I graduated to making lemon meringue pies. All the same, my childhood was equivalent to a bucket of sour experiences. Fortunately, within time, I learned to make a great dessert from the lemons I received. Would you believe I used math to make the pies?

At 8-years-old, I first learned math, while doubling fractions for making

lemon meringue pies and oatmeal cookie recipes. I am convinced that baking allowed me to master fractions and pattern relationships. As I covered fractions in school, I began to enjoy the ability to solve math puzzles. To my amazement, I excelled in math concepts, and was placed in a gifted class. I took pride, for I was one of the few 8-year-old girls, who knew how to quickly solve math problems. For me, math was an escape from life's chaos. I often felt bad going to my mom for help, after realizing that she, too, needed help raising us. With one older sister and two under me, math became my "imaginary brother." Math was a "know it all." We would argue all the time. Of course, he would prove how he was right. Math offered a definite structure when I desperately sought order and boundaries.

But, no amount of protection could save me from what happened inside of Mrs. Breland's fifth-grade classroom. She sat Glen, a troubled, 10-year-old boy from my neighborhood, next to me. I asked Mrs. Breland to move our seats, because I had a bad feeling about sitting by Glen. He was a tall, slender, caramel-colored African-American male known for wearing light blue L.A. Dodger's™ ball caps, sagging, creased dark blue jeans, and white T-shirts. Unbeknownst to me, Glen had just been recruited into one of the local street gangs. Recently, he started wearing this filed-down ring on his right, wedding ring finger. The spiked edges were sharp like a knife. Daily, Glen would taunt and tease me. I defended myself by playing psychological mind games on him. One day, Glen had heard enough of my smart mouth.

Glen snatched the class assignment out of my hands, ripping it up with a burst of pent up emotions. I heckled back, "Ooh, big man! All I have to do is get another piece of paper. And, write my answers down again. They're all in my brain!" That was enough for Glen. He was furious! Before I knew anything else, Glen socked me under my left eye. While punching my face, Glen

used the ring on that right fist to slash open my left eye socket!

Immediately, I wanted to stand up and fight back!!

But, everything went black!! I was temporarily blinded in both eyes. I felt a cold, wet liquid, running down my face. I heard screams from my classmates because blood was squirting on them, tables and chairs. Needless to say, I was rushed to the hospital, where I received five layers of stitches. I was told that if the cut on my face was any higher, I would've lost my eye.

After that incident, my mother took me out of school. I was home-schooled for the remainder of the year. Several weeks later, I received a letter notifying me that I had been accepted into a gifted, academic magnet school for seventh grade. However, this posed a dilemma: I would not only be "skipping" a grade, but also attending school on the other side of town. Nonetheless, my mother ensured me this decision was for my safety, and to better my education. To say the least, my transition into this new gifted middle school was considerably overwhelming.

First off, I had always been raised in a predominately African-American and Latino-American environment. Alas, I learned that I wasn't speaking proper English. It was a complete culture shock for me! Here I am, going to school with holes in my shoes, and these kids from West L.A. and Beverly Hills, naturally assume that I would have the basic school supplies. I remember constantly borrowing paper from my classmates. That's just terrible and embarrassing. No child should have to be looked down upon for needing such items!

To make matters worse, I found out I was actually four years behind the educational curve. That was a BIG wake-up call for this scrawny, short kid from South L.A.! I was two years younger than my peers, and placed in a

seventh-grade gifted program, where they were working on ninth-grade curriculum. It was a real rough period. Needless to say, this transitional time was more than turbulent. My early years became even more challenging, and I received my first *FAIL* in Algebra I. At 10, my accumulated environmental fears began to re-channel themselves into one big BEAST with a particular name. This severe math worry crippled me, and the phobia was my crutch for years. For the naysayer, this horrific experience debunks the assumption that I always excelled in mathematics. Surprisingly, there is an ironic part. I still loved math despite these circumstances. Math was my brother, and I knew we were destined to survive together!

With a little fire under my belly, I decided to stretch my wings and pursue performing arts. I was accepted into the Musical Theater Academy at Alexander Hamilton High School, which is nationally recognized for its top-notch music programs. Although math was my buddy, I still couldn't pull an "A" in any math class. Like many students, I couldn't comprehend what I was being asked to do on the math tests. Chemistry was another subject, where I failed to spend enough time figuring out its applications and equations. Performing in numerous school productions took my mind off of the trouble I was facing at home and in my math classes.

When it came time for me to consider attending college, I was ill-prepared. At the time, my mother lacked a higher education and couldn't offer any guidance. Like any great actress, I learned to mimic those around me. So, I applied to colleges and took the college entrance exams. I had average SAT scores, but my cumulative GPA was competitive enough to allow me acceptance into a number of colleges, including California State University Northridge (CSUN). I had the inner fire to get myself out of the 'hood,' and that's made all the difference. While attending CSUN, I received the ANSWER. To pay

for school, I became a math tutor under the advisement of my late math mentor, Mrs. Jane Pinkerton. By working with hundreds of students, I witnessed that I, Olympia LePoint, was one of millions with the same math phobia.

Unfortunately, before working at Rocketdyne with some of the brightest space engineers, I suffered from this anti-math behavior as a teen and young adult. Fear had become my best friend. Then one day, this “terror” finally left, because I was given a special thinking gift. As soon as I learned the method to achieve in math, and in other university subjects, a number of my peers and employers were puzzled. They asked, “How did you make it out of the ‘hood’?” Deep down, I was extremely offended. For years, I hated this question. Mainly, because I erroneously thought I never owed anyone an explanation. However, I owed it to myself. My internal annoyance existed because I, in no way, truly investigated the reason. After years of pondering, I now know the answer. Are you ready? I will share the answer with you.

The answer is *MATH and* its creative problem-solving principles.

Can you remember your experiences in your past math classes? Most people do. Whenever I mention that I am a math professor, individuals usually cringe and tell me about their trauma while learning math. They either had difficult teachers or unresolved issues surrounding math. After teaching math to tens of thousands of students, I've witnessed far too many Americans suffering from math illiteracy, also widely known as *innumeracy*. Through my research and experiences, I discovered that innumeracy is caused by one root culprit: *mathaphobia*<sup>®</sup>.

This fear is a contagious, psychological virus that blocks the brain from math literacy, basic math calculations, and analytical problem solving. Like other phobias, *mathaphobia*<sup>®</sup> shuts down the frontal brain lobes – the same

lobes that are responsible for creative thinking.

The frontal lobes are needed to create math solutions. In turn, mathaphobia® activates the *flight-or-fight* survival response. If an antidote is not present, the mathaphobia® virus viciously spreads from person-to-person like a contagious plague. I saw my own fears through each person whom I helped.

*“Like other phobias, mathaphobia® shuts down the frontal brain lobes –the same lobes that are responsible for creative thinking.”*

I was forced to identify and eliminate my own self-sabotaging thought patterns through tutoring students with the same fear. Through time, I chose to relearn the math as I sat with each person. We learned the foundations together. I began to understand the intricate details of the universal math language. I saw that there is a sequential process to learn math and solve problems. Miraculously, my thoughts toward math changed, and my newly-gained confidence helped to resolve my real-life problems. With my newly-acquired critical thinking skills, (which I will show you in Chapter 4), I solved my real-life problems, and beat all odds against my favor.

In this book, I offer a fresh way to view math, expose the four types of mathaphobia®, explain the psychological thinking behind the mathaphobia® phenomena, and offer ways for parents, educators and students to become successful in math education. The three-step success plan removes your mathaphobia®, reprograms your brain, and makes you comfortable when solving math problems. As a result, your problem-solving abilities will transform into daily critical-thinking skills and self-empowerment.

## **Me, a Rocket Scientist?**

My college students constantly ask, “Did you always want to be a rocket scientist?”

DO YOU “MATH-SABOTAGE”  
YOURSELF?



# CHAPTER 3

## DO YOU “MATH – SABOTAGE” YOURSELF?

**R**eady for the journey? In this chapter, you will learn about the detrimental affects of mathaphobia<sup>®</sup>, understand the characters that self-sabotage themselves because they suffer from mathaphobia<sup>®</sup>, and determine if you, indeed have mathaphobia<sup>®</sup>. But, before I reveal more about mathaphobia<sup>®</sup>, I will give you this analogy. You just won a getaway vacation for one person to a resort! A shuttle bus is scheduled to arrive at 8:45 a.m. to transport you and other winners. Food, travel, lodging, and excursions are all-inclusive. Once there, a limousine will take care of your additional travel. Truly, you want to experience this destination. However, you secretly doubt that you should enjoy this experience alone. Perhaps, you want your children or your partner to join you. Possibly, you think that your best friend should accompany you. In any case, you hesitate on the travel. As a result, you unconsciously sabotage your vacation prize by committing irrational actions. Here are a few unreasonable scenarios:

- **Self-Sabotage Case 1:** Swamped with immediate concerns, you wait until the last minute to pack. You stay up all night, and it’s now 8:45 a.m. when you board the shuttle bus – beat with exhaustion. Too tired to maintain a conversation with other passengers, you start falling asleep. You doze in-and-out of consciousness. Periodically, you see the travel route, but are so weary that you’re completely disoriented. The bus arrives back at your original destination, and no one awakens you. Sadly, you were asleep and missed the opportunity to get off the bus. The shuttle then returns to your original pick-up location. But, you’re still on the bus! You

remain forever livid with yourself for missing a great opportunity. Years later, you’re still beating yourself up for falling asleep on the shuttle bus.

- **Self-Sabotage Case 2:** You arrive at the bus stop four times in total; (1) To check out the bus stop location; (2) Arrive two hours earlier to determine the traffic flow; (3) Visit 30-minutes before the scheduled pick up. At this time, you have an urge to be more prepared. Thus, you go back to your car to get your umbrella and; (4) you return and realize the bus came, and left without you. You are irate at yourself for returning to the car, and failing to know the EXACT bus schedule.
- **Self-Sabotage Case 3:** Due to a weak knee, you have difficulty traveling to the shuttle pick-up location. Consequently, you arrive late near the bus stop, finding people onboard with an apprehensive bus driver waiting. While slowly walking to the shuttle stop, you fail to indicate your physical restriction to the bus driver. Looking crossly at you, the driver motions for you to “hurry,” and board the bus. However, you’re prideful, and neglect to admit you can’t run because of your knee. The driver thinks that you are too slow, and is delaying the bus schedule! Thus, the bus driver closes his doors, leaving you at the shuttle stop! You are not physically able to quickly run after the shuttle. Due to your physical challenges, you are angry at yourself for not being physically capable of experiencing a great opportunity.
- **Self-Sabotage Case 4:** You happily board the shuttle, sit four rows back from the driver, and settle down for a bumpy ride. Anxious to start this well-deserved getaway, you become frustrated when you think the driver is slowly cruising. You start “back seat driving,” telling him how to take certain routes to quickly arrive at the location. Assuming you know a better route, but you don’t, the driver becomes highly-annoyed. Your blood

is boiling, and you can't endure the driver's obvious disregard to your suggestions! To save from further embarrassment, you demand to get off the bus. He finally lets you and your luggage off. Yet, you're a mile away from the destination, walking in the scorching sun! Now, you are furious at the bus driver, because he didn't take your suggestions.

Each winner sabotaged his or her prize of experiencing a new adventure. In Math, we do the same. Oftentimes, we hinder our self-development by behaving irrationally.

Such illogical actions stem from an unconscious fear. If the fear is not removed, our thoughts and actions can be warped. The phobia traps us in a repetitive cycle, void of growth and excitement. Once we understand fear and its effects on our thoughts, we can minimize our self-sabotaging actions. More importantly, we can maximize the opportunity to accept our future gifts. First, we must understand fear and its subconscious contribution to stagnation.

## **The Effects of Fear Are Real**

Are you afraid of spiders (arachnophobia)? Heights (acrophobia)? Snakes (ophidiophobia)? Confined spaces (claustrophobia)? Going to the dentist (dental phobia)? Failing math (mathaphobia®)? What happens when you think of these fears? Does your heart race? Do you think of ways to avoid such terror? Do you cringe and want to do *ANYTHING* to get away?

***"Oftentimes, we hinder our self-development by behaving irrationally."***

If any answer is yes, then you have now triggered fear in your brain. According to Wikipedia, fear is an emotional response to threats and danger. It's also a basic survival mechanism that occurs in response to a specific stimulus, such as pain or the threat of pain. As mentioned above, the stimulus may be a spider, dentist, snake, tall heights, or even math.

Your phobia triggers the “fight-or-flight response,” also called the “fight-or-flight-or-freeze response,” in the reptilian part of your brain. In 1929, Walter Cannon, an American physiologist and professor at Harvard Medical School, first discovered this phenomenon when he tested animals. Cannon found that a mammals’ fight-or-flee response is also stimulated when there is fear or threat of danger. During such scenarios, the brain releases epinephrine (adrenaline) and norepinephrine from the adrenal glands. Next, the body halts or slows down various normal, daily bodily processes such as the digestive system. Arousal responses and creative thoughts also adapt in order to survive the stressful situation. When a person remembers a past trauma, stress responses can sometimes go haywire.

Can you remember your first experience with a horrible teacher? For me, my educational trauma began in fourth grade. I had a horrible teacher, who wore immaculate clothing and way too much perfume. “Mrs. Subtraction” found pride in degrading every student who answered incorrectly. In my fourth-grade jail, (known as her class), I erroneously assumed that I had to be perfect to gain appreciation. Otherwise, I would endure her verbal abuse. I feared making a mistake. Consequently, my future performance-related stress was sometimes associated with my fourth-grade trauma.

During the time I was having extreme fear attacks, my body took on severe panic reactions. I started placing my hands near my face. My heart started racing, and I would sweat profusely whenever I didn’t know an answer. When asked to convey my comprehension, I would freeze. Gripping my pencils tightly, I would bite my lip and nails.

The effects of fearing math are universal as well. Now as a math educator, I witness the same terror in students at the start of every semester. Students place their hands on, or around their faces. Some completely turn away

from the board. I see students grip pencils tightly, or bite their lips, nails, heavily breathe or hold their breath. Others shake in hesitation as they write an incorrect step. When I see this, I know there is more work ahead of me. Such students can't hear nor understand anything that I say until this terror is eliminated. Unfortunately for many, their fear is so gripping that it stops their daily bodily functions. It is my belief that if this fear is not resolved within a person's brain within seven days, it transforms into a phobia.

## **What is Mathaphobia® Exactly?**

Studies have shown that if we do the same action for seven consecutive days, the action turns into a habit. When math apprehension is unresolved, the fear turns into the habitual, contagious mathaphobia® mental virus. Math has not changed: however individual thoughts toward math have transformed. Earlier in Chapter One, the basic Mathaphobia® definition was given as; *the fear and contagious mind virus that blocks the brain from math literacy, basic math calculations and analytical problem solving*. Now, we will understand mathaphobia®'s specific affects within the body and mind.

In more detail, mathaphobia® is a mental, self-imposed fear, causing the inability to deal comfortably with the fundamental notions of numbers, chance and cause-and-effect relationships. Mathaphobia® creates an unnatural, illogical functioning of the brain with physical and emotional effects. Your heart tends to beat fast, palms sweat, and your brain constantly fails to comprehend presented information. In some instances, mathaphobia® can cause as much difficulty as a learning disability and mild, self-imposed retardation.

Mathaphobia® is linked to the amygdala, an area of the brain located behind the pituitary gland in the limbic system. The amygdala secretes hormones that control pain, fear and aggression. The amygdala also aids in