Chapter Two

"The growth mindset lets people - even those who are targets of negative labels - use and develop their minds fully. Their heads are not filled with limiting thoughts, a fragile sense of belonging, and a belief that other people can define them."
- Dr. Carol Dweck

Two Mindsets

Learners and Nonlearners

Benjamin Barber, a well-known sociologist, once said, "I don't divide the world into the weak and the strong, or the successful and the failures ... I divide the world into the learners and the nonlearners." The question arises: Why are some people learners and others nonlearners? Could it be that some are born smart — with a natural desire to
learn, while others enter this world lacking ability and the ambition to acquire knowledge?

Dr. Carol Dweck, a leading researcher in the field of developmental psychology, has conducted some interesting research to explore these very questions. In her research, she concludes that one’s core beliefs about intelligence can have a profound impact on their attitude toward learning. Dweck identified two different mindsets or “belief systems” that appear to unfold in childhood and stay with us throughout adulthood. In her study (with 7th grade students), she documents that the fixed and growth mindsets can have a powerful influence on a student’s willingness to put forth effort, and their subsequent performance in school.

What are the characteristics of the two contrasting mindsets? Carol Dweck contends that individuals who are perceived as learners likely have a “growth mindset.” This growth mindset is based on the belief that basic qualities (intelligence, character, personality) are things we can cultivate, change and grow through effort and practice. Individuals with the growth mindset look at difficult challenges as an opportunity to get smarter, a chance to learn something new. They do not want to waste time proving how great they are; they are more interested in getting better. When someone with a growth mindset experiences failure, that person sees it as a temporary setback or an opportunity to grow and learn. Individuals with a growth mindset believe that more effort results in more ability.

In contrast, the nonlearners appear to have a “fixed mindset.” A fixed mindset is based on the belief that basic qualities are set in stone and are mostly unchangeable. This group believes that intelligence, character, athletic abilities, etc. are predetermined by genetics, that they are inherited. An individual with the fixed mindset is overly concerned about hiding deficiencies, believing that they are permanent. These individuals feel a need to prove that they are smart or to hide the fact they are not smart. They will not take risks, and they avoid challenging situations for fear of failure.

We can all agree that babies and young children are born with a healthy amount of ambition. No matter how many times little ones stumble or falter in their initial efforts to walk and talk, they keep on trying, determined to master their amazing new skills. Young children see a positive relationship between effort and ability. They hold the belief
that ability is gained through effort; that is, if you try hard and put forth effort, you will succeed. Their attitude is, “I just need to keep trying. If I do, I will eventually figure it out.”

By the age of 11 or 12, however, children’s views of ability and effort often begin to change. Suddenly, many middle school students begin to believe that effort and ability vary inversely (Nicholls 1990). For them, more effort implies less ability; that is, if you try hard and fail, you must lack some natural ability. As children move from elementary into middle school, many begin to lose their natural drive to learn, become discouraged, and end up joining the ranks of underachievers.

If you are not convinced that this shift in mindset occurs, try this: ask a class of kindergarteners how many artists are in the room and watch what happens. Nearly every hand in the room shoots into the air. Ask the same question to a group of middle school students, and you might have two or three students raise their hands. Finally, try asking the question again at your next faculty meeting. What you may discover, is that not even the art teacher will raise his or her hand.

Why would an art teacher not claim to be an artist? The answer is that such a teacher has the fixed mindset perspective. The teacher thinks: “The fact that I have earned a college degree in art does not make me an artist. Artistic ability is a gift, bestowed at birth. A person can learn to teach art, but they can not learn to be an artist.”

The belief that characteristics such as artistic giftedness and intelligence are fixed at an early age runs deep. Year after year, middle school students say such things as, “Sorry, Ms. B., I stink at math and science, I guess I just didn’t get the math and science gene from my parents.”

Having been a middle school teacher for nearly twenty years, I have concluded that most middle school students identify themselves as belonging to one of three groups: the smart group, the average group or the not-so-smart group. While many recognize that they can learn new things in school, they do not expect or believe in their ability to change groups. They believe that genetics has dealt them a set of intelligence cards, and they hold them firmly, fearful of revealing their hand.
One elementary school teacher had this to say, “Once assigned to the Bluebird Reading Group, students develop the “bluebird mindset” and there they expect to stay, with little expectation of receiving a promotion or a demotion.” Intelligence, they believe, is cast in stone.

Shifting Students to a Growth Mindset

If having a growth mindset is an important key to success in school, why can’t we simply tell our students that intelligence is malleable and then sit back and watch them flourish? Before you look for an answer, keep in mind that the two most frequently asked questions in a middle school classroom are, “Why do we have to learn this?” followed by “How do you know this is true?”

I remember trying to convince my seventh grade science students that all objects, regardless of their mass, fall to the earth at the same rate. I had two tennis balls, one regular tennis ball and one I had cut a slit in and stuffed with pennies. The kids placed bets on which tennis ball would hit the ground first when dropped from a balcony. Despite the illustration in their science book, and my insistence that the tennis balls would hit the ground at the same time, they placed bets heavily in favor of the “penny ball” landing first.

With the gravity experiment permanently etched in memory, I realized that middle school kids would demand scientific evidence that the brain can indeed grow in intelligence. Ironically, I soon discovered that students would not be the only ones to demand proof that intelligence is changeable. Many teachers and parents are firmly entrenched in the fixed mindset, and they need evidence as well. I once overheard a teacher say, “I don’t know what they expect me to do. Some kids were obviously behind the door when the brains were passed out. Do they expect me to perform a miracle?” If only that teacher understood the miraculous nature of the human brain!
Providing Evidence & Inspiring Effort

Much has been written about the brain and learning over the past ten years. In 2006, Pierce Howard released the third edition to The Owner’s Manual for the Brain, and it was over 1000 pages long! Educators are anxious to utilize recent discoveries about the brain in their teaching, and neuroscientists and educators have come together to share their secrets. However, even with all of this new collaboration, many teachers feel overwhelmed with the complexity of the scientific research and, surprisingly, almost all students have been left completely out of the information loop.

In 1913, the great Spanish neuroscientist, Ramon y Cajal, was quoted as saying, "In the adult centers the nerve paths are something fixed, ended and immutable” but he continued, “It is for the science of the future to change, if possible, this harsh decree.” Many of the stories that follow in this book, will reveal, that science has done precisely that.

The lessons (found at the end of chapter two), will allow students an opportunity to reflect on how their core beliefs about intelligence can influence behavior. Share and discuss the lesson with your students, and together you can experience and appreciate the power of the growth mindset!

Dawdlers & Daydreamers

Look over your current class roster. How many of your students fit the Emily mold? (Take a minute and read Lesson 2.2) How many abandon challenging tasks and dawdle, daydream, or begin an easier activity? As a classroom teacher, I routinely found many of my students to be like Emily – resistant to academic challenges.

If given a list of activity options for a class project, they pick the easiest activity, even over one that they find more interesting. Some might say that choosing the easier assignment particularly for a middle school student, is simply human nature, to be expected and not alarming. But as Dweck states in her book, Mindset, “It’s one thing to
pass up a puzzle. It's another to pass up an opportunity that's important to your future.” What could account for Emily's lack of enthusiasm for puzzle solving? Could it be the fixed mindset, fear of not looking smart, and fear of failure?

In many high schools, enrollment in advanced math and science classes continues to drop, despite efforts to encourage students to sign up. Teachers are told to increase the challenge, but students and parents complain when assignments are too difficult. What might inspire students to embrace a more rigorous curriculum and register for that Chemistry II class? Perhaps, sharing some real life stories, depicting the fixed and growth mindset could give them a new perspective. Let's begin our examination of the fixed and growth mindsets with tales of two world-class athletes.

John McEnroe and Michael Jordan were immensely talented athletes. McEnroe occupied the number one spot on the men's tennis circuit for many years, while Jordan won every award that professional basketball had to offer. Both men had very successful athletic careers. Yet, when you read their respective biographies, you can detect a sharp contrast between the two men. One man was a classic example of the “fixed mindset,” the other personified the “growth mindset.”

Carefully read the two biographies that follow (Lessons 2.3 & 2.4). Think about the characteristics associated with the fixed and growth mindsets. Read and discuss the two biographies with your students. Have them write a story about someone they know who exemplifies the growth mindset. Ask them which athlete they most identify with and why.