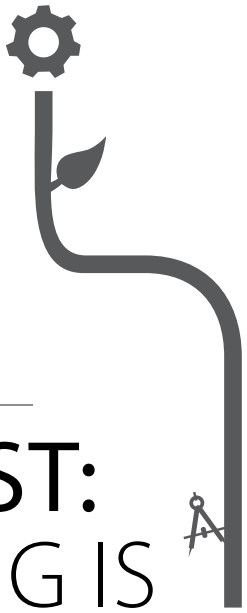

1

AUGUST: TEACHING IS A PRACTICE, NOT A PERFECTION

It does not matter how slowly you go, so long as you do not stop.

— Confucius

OBJECTIVES

- ✓ Familiarize yourself with growth and fixed mindsets.
- ✓ Reflect on the mindsets of your former teachers.
- ✓ Set goals to incorporate growth mindset in the upcoming school year.

MINDSETS

For many years, people have bought into the notion that certain abilities and qualities of our nature are fixed. You might have heard someone say "I'm not athletic" or "I'm not a math person," or you might've even said something like this yourself. And up until recently, many of us have accepted that there are certain unchangeable aspects of ourselves. Archetypal media representations of nerds, jocks, and meatheads have furthered the notion that certain people are simply destined for certain outcomes that are off-limits to others. That is, until Carol Dweck's *Mindset* was published and read by millions the world over.

In *Mindset,* Dweck lays out the evidence she and her team collected through years of research, which reinforces a simple, but powerful, theory: human intelligence, creativity, athleticism, and other qualities are not fixed traits that we're born with. Rather, they're malleable ones that with time and effort can be changed.[4] Dweck identifies two types of what she calls "mindsets" in her research: growth and fixed.

FIXED MINDSET: Assumes that intelligence and other qualities, abilities, and talents are fixed traits that cannot be significantly developed.

Those with a fixed mindset have bought into the idea, often from a very early age, that things like intelligence and other talents and abilities are of a fixed nature — they cannot be changed. A fixed mindset believes people have a certain amount of talent and intelligence in any given area. In other words, if you aren't naturally gifted at something or don't catch on to it right away, you might as well forget it. Often people of the fixed mindset work very hard to shed light on those areas in which they "naturally" excel and cover up areas in which they don't.

GROWTH MINDSET: Assumes that intelligence and other qualities, abilities, and talents can be developed with effort, learning, and dedication.

People with a growth mindset view themselves in an altogether different way than those with a fixed mindset. A person who tends toward the growth mindset sees things like intelligence or artistic and athletic abilities not as fixed traits but as qualities that can be changed and improved with time and effort. A growth mindset operates under the assumption that our qualities are not inherent or natural or that we're only given so much of them, but that our willingness to learn, our effort, and our persistence dictate how adept we become at any given pursuit.

The growth mindset does not buy into the idea that there are "math people" or "creative people" or "athletic people," but with hard work and perseverance, anyone can achieve success in any area.

Once a person learns to harness the growth mindset, the powerful forces of growth take over. No longer are failures viewed through a lens of disappointment and shame, but through one of opportunity for improvement. The growth mindset doesn't ignore the fact that some of us may have more inherent aptitude for some things — we've all seen children with a seemingly natural affinity for singing beautifully, hitting home runs, or reading beyond their years — rather, it understands that aptitude can be fortified with experience and effort, bolstered with resilience, and ultimately lead to great success regardless of the starting point. Does that mean we're all just a few singing lessons away from becoming the next Adele? Not in the least. It just means, as Dweck says, "that a person's true potential is unknown (and unknowable); that it's impossible to foresee what can be accomplished with years of passion, toil, and training."[5]

EXAMPLES OF GROWTH MINDSET

History is filled with paragons of growth mindset — people who have worked hard, refused to give up, and succeeded against all odds. American history is rich with stories of people like the pioneers, who battled brutal conditions as they headed West toward the promise of a better life, or the activists of the civil rights movement, who stood up against the systemic oppression they endured long after slavery ended and worked tirelessly for change at great personal risk.

Growth mindset can be seen in individual stories, as well — groundbreaking people who worked hard to turn dreams into realities.

The Olympic track star Wilma Rudolph started life as a premature baby in 1940s-era Tennessee, the twentieth of her father's twenty-two children. After battling scarlet fever and polio, she lost the use of her leg at just six years old. Her mother took her to weekly treatments, and her siblings massaged her leg every day. By the time she was nine, Rudolph had shed her leg brace and started moving. Later, her legs would carry her to gold in the 1960 Rome Olympics.[6]

Remember the movie *Rudy*? It's based on the story of Rudy Ruettiger, a working-class kid from Joliet, Illinois, whose childhood dream was to attend the University of Notre Dame. Despite a challenging dyslexia diagnosis and three rejections from Notre Dame, Rudy eventually was admitted to the prestigious university, where he set his sights on joining the football team. Through his displays of indefatigable work ethic, the five-foot-six-inch Rudy made it on the scout squad, and later into a single game, where in the final three plays he made one of the most memorable quarterback sacks in college football history.[7]

Supreme Court Justice Sonia Sotomayor grew up in the impoverished projects of the Bronx. Her mother began life as an orphan in Puerto Rico, and her father had only a third-grade education. Her mother emphasized the value of work ethic and education as a path to success, and young Sonia worked tirelessly at her studies, despite dealing with the effects of her father's alcoholism and early death, and her own diabetic condition, eventually earning a spot in the Ivy League. Sotomayor gives much of the credit for her success to those who helped her along the way, though it's clear her hard work and willingness to confront any challenge or obstacle contributed significantly to her incredible journey.[8]

Marie Curie is another exemplar of the growth mindset. Born in war-torn, politically charged Warsaw, Poland, where women, particularly Polish women, were not allowed to pursue higher education, Curie had to create opportunities, often at great personal risk, to learn about math, chemistry, and physics — the subjects she loved. Later she became the first woman to win a Nobel Prize.[9]

Malala Yousafzai was a ten-year-old girl from Pakistan with a zeal for education when Taliban forces infiltrated her region and banned girls from attending school. Malala's unwavering belief in her right to an education led her to start an anonymous blog, where she wrote about her desire to go to school and quickly became a voice for disenfranchised Pakistani girls being robbed of an education. When she was fifteen years old, Malala was riding a bus home when it was stopped by Taliban forces; one fighter boarded the bus, asked for Malala by name, and then shot her in the head. Against all odds, Malala survived the attack and refused to let the bullet silence her, redoubling her efforts to fight for equal rights in education. In 2014 Malala Yousafzai became the youngest-ever winner of the Nobel Peace Prize, and to this day she continues to advocate on behalf of girls all over the world in need of quality education.[10]

People who cultivate a growth mindset are more resilient in the face of setbacks or obstacles. The growth mindset, after all, relishes the process of learning, not achievement. While someone of a fixed mindset revels in success and admiration for being able to learn and accomplish with seemingly little to no effort, a person in the growth mindset is not satisfied with superficial achievement. When failure comes to people with a fixed mindset, as it inevitably does, they're far less equipped to deal with it because, in their mind, it speaks to their inadequacy as a person, rather than a challenge to be overcome or an obstacle to be negotiated. When failure comes to people with the growth mindset, on the other hand, they view it as a learning opportunity that will serve them as they try again.

Whether a person operates in the growth or fixed mindset may seem like a small thing, but consider that mindset is present in virtually every aspect of our lives. From decision making to career goals to romantic relationships to parenting, our mindsets heavily influence the lens through which we see the world. And, ultimately, our mindset affects those around us.

YOUR DAILY MINDSET

In *Mindset,* Carol Dweck tells readers that as they learn more about the two mindsets, they will begin to see "how a belief that your qualities are carved in stone leads to a host of thoughts and actions, and how a belief that your qualities can be cultivated leads to a host of different thoughts and actions."[11] The narrative Dweck has constructed around the mindsets based on her research and observation shows, without a doubt, people operating in the growth mindset experience different, arguably better, outcomes than those who operate in the fixed mindset.

Consider your own mindset for a moment. Do you exhibit the characteristics of a growth or fixed mindset? Most likely, you display a bit of both. Growth and fixed mindsets are dichotomous ideas that exist on a spectrum, and even though you may have designs on becoming a fully realized exemplar of growth mindset, you'll likely always be on your journey toward that ideal. We must recognize and accept that we're all a mixture of the two mindsets — growth and fixed — and, although it may become more intuitive with practice, we'll always have to be intentional about employing our growth mindset. It may appear that we're presenting

growth and fixed mindsets as a sort of mindset binary, but mindset isn't an either-or proposition. All people have both mindsets; it's more a matter of which mindset you're prone to defaulting to in certain situations. For example, a person could have a growth mindset about learning new languages, but a fixed mindset about losing weight. Even Dweck, the growth mindset expert, calls herself out in her own book for falling into the fixed-mindset trap from time to time.[12]

Before we discuss how to bring the growth mindset to your classroom, it's important to understand where you fall on the mindset spectrum. Below we've listed a series of statements. Check all the statements with which you agree.

1. _____ There are just some things I'll never be good at.

2. _____ When I make a mistake, I try to learn from it.

3. _____ When others do better than me, I feel threatened.

4. _____ I enjoy getting out of my comfort zone.

5. _____ When I show others I'm smart or talented, I feel successful.

6. _____ I feel inspired by the success of others.

7. _____ I feel good when I can do something others cannot.

8. _____ It's possible to change how intelligent you are.

9. _____ You shouldn't have to try to be smart — you just are or you aren't.

10. _____ I enjoy taking on a new challenge or task with which I am unfamiliar.

In this assessment, the odd-numbered statements (1, 3, 5, 7, 9) indicate a fixed mindset, while the even-numbered statements (2, 4, 6, 8, 10) illustrate a growth mindset. It's important to know where you are as a starting point, but whether you're more closely aligned with a fixed or a growth mindset or a mixture of the two, the goal of this book is the same — to hone your growth mindset and put it to work in your classroom. And, as we know from years of growth-mindset

research, your ability to grow and change in this regard depends on the amount of work you're willing to do.

Dweck identified five key areas in which the actions of people of opposing mindsets often diverge: challenges, obstacles, effort, criticism, and success of others.[13] In the fixed mindset, a response to any of the five situations typically relates to the person's desire to look smart and avoid failure; in the growth mindset the response more likely stems from the person's desire to learn and improve. Let's look at both fixed- and growth-mindset responses to each of these five situations.

SITUATION	FIXED MINDSET	GROWTH MINDSET
CHALLENGES	Challenges are avoided to maintain the appearance of intelligence.	Challenges are embraced, stemming from a desire to learn.
OBSTACLES	Giving up in the face of obstacles and setbacks is a common response.	Showing perseverance in the face of obstacles and setbacks is a common response.
EFFORT	Having to try or put in effort is viewed as a negative; if you have to try, you're not very smart or talented.	Doing hard work and putting in effort paves the path to achievement and success.
CRITICISM	Negative feedback, regardless of how constructive, is ignored.	Criticism provides important feedback that can aid in learning.
SUCCESS OF OTHERS	Other people's success is viewed as a threat and evokes feelings of insecurity or vulnerability.	Other people's success can be a source of inspiration and education.

GROWTH MINDSET AT SCHOOL

Now that you understand what growth mindset is, you're probably wondering what the science of mindset means for teachers. Teachers who strive to develop a growth mindset are a lot different from teachers who operate under the fixed mindset. Let's take a look at what the self-talk of a fixed-mindset teacher might look like in comparison to that of a growth-mindset teacher.

FIXED MINDSET	GROWTH MINDSET
Professional development is so boring; I never learn anything at these things.	During professional development, I'll listen with an open mind and seek out new ideas.
This parent is driving me crazy; he wants a progress update every day.	This parent is very invested; I need to find a way to communicate with him productively.
This student is incapable of making gains in math.	How can I present the information so this student will understand?
This student is a brilliant reader; she doesn't need my attention.	I should develop enrichment opportunities so this student feels sufficiently challenged in reading instruction.
I'll never be as good a teacher as she is.	I should ask her to be my mentor so I can learn from her.
My students ruined this lesson; they just refused to cooperate.	How could I change this lesson so it's more engaging for my students?
This student hates school, and there's nothing I can do to change that.	How can I use this student's interests and passions to engage her in learning?
With his poor home life, this student doesn't have a prayer of graduating.	I believe that this student can find success, regardless of his background.

Do you see the difference? The fixed-mindset teacher approaches situations as unchangeable. A bad lesson plan is a total failure never to be revisited. A needy parent will always be a source of annoyance. Professional development is a total waste of time. But a growth-mindset teacher approaches these same situations with a completely different point of view. A bad lesson plan is a trial run that went off course and can be tweaked to work better next time. A needy parent isn't needy; he or she is invested, and it's just a matter of figuring out how best to communicate. And professional development is a chance to learn something new, talk to colleagues, and spend some much-needed time thinking about the mechanics of teaching.

Oftentimes, using your growth mindset simply means a change in self-talk. Instead of writing someone off, you seek to find ways to make learning more accessible for that person. Instead of throwing in the towel, you figure out another way to attack the problem. Instead of letting jealousy or feelings of inadequacy take center stage, you focus on how you can improve.

As you work through the subsequent chapters, you'll discover our purpose in writing this book is twofold. First, we want to help you, the teacher, look inward

and find and hone the voice of growth mindset in your head. The fact is, we all have fixed and growth mindsets. Perhaps your natural inclination is in the fixed mindset, and that's okay. The trick is to respond to your inner fixed voice with your inner growth voice in order to reframe challenges and setbacks as opportunities for growth instead of personal failures. Second, we want you to take that inner voice of growth and unleash it in your school. We walk through strategies for using the growth mindset to help your students, colleagues, and parents embrace challenge, failure, and mistakes, not fear them. We want you and others to see that with patience, effort, and time, it's possible to achieve success in any realm of study.

The growth-mindset teacher has the ability to positively influence student performance, in addition to getting more from relationships and fostering a growth-oriented school culture. In this book, we examine how a teacher can use the principle of the growth mindset to change his or her classroom, school, and community for the better. We believe that your mindset changes the way you relate to the people around you, and that mindset is infectious. The research shows that when you can get students to buy into the idea that the brain, like a muscle, has the capacity to strengthen and grow, the result is better motivation, stronger resolve to succeed, and higher academic achievement.[14]

CAN GROWTH MINDSET FIX OUR SCHOOLS?

Is adopting the growth mindset a cure-all for what ails America's school system? Certainly not. We know, for example, that an achievement gap exists that is strongly correlated with poverty and race — a systemic problem that cannot be solved by simply telling students to work harder and persevere. We aren't suggesting that teachers and schools use the growth mindset to the exclusion of other solutions for the discrepancies in and barriers to achievement. As Dweck wrote in *Education Week*, "The growth mindset was intended to help close achievement gaps, not hide them. It's about telling the truth about a student's current achievement, and then, together, doing something about it, helping him or her become smarter."[15]

Our position is that growth mindset should be practiced in connection with strong pedagogy and robust curriculum, not instead of it. It's important that kids

put in effort and believe that they can achieve success in their schoolwork, but we as teachers must offer up learning experiences that are engaging, valuable, accessible, and meaningful in order for growth mindset to make a true difference in learning outcomes. Growth mindset is a way of thinking that allows for individuals to put aside fear of failure or looking stupid, and focus on learning — which is something students from all backgrounds wrestle with.

Can you imagine how limiting school must feel for students who believe there's a cap on their intelligence? The moment they encounter struggle, it's a big red flag telling them they might as well give up. Teaching your students about the power of the growth mindset means removing the false limitations they've put on themselves, and opening them up to possibilities previously thought out of reach because of distorted assumptions about their own intelligence, talent, and skills. Of course, only you can control your own mindset. It's the inner monologue that so often is the difference between approaching a challenge with the growth mindset over the fixed. You may not be able to personally change the fixed mindset of the teacher down the hall, or the student who insists she's not a "math person," or the parent who has a mistrust of education rooted in his or her own negative experience, but you can teach, model, and coach the growth mindset in a way that inspires others to see their own potential for success.

YOUR BEST/WORST TEACHERS

In discussing the idea for this book, we asked people about their negative and positive school experiences, and we quickly realized that, even though it didn't have a name at the time, most people's worst experiences revolved around interactions with educators who had a fixed mindset, and some of the best experiences were made possible by growth-oriented teachers.

One person remembered being victimized by a middle school teacher who organized the classroom seating chart from best test performance to worst, and the subsequent anxiety triggered by the possibility of winding up in the front row with the kids who had been very publicly declared stupid by this misguided educator. This was not a teacher interested in turning failures into opportunities to do better, but one who reinforced the wrongheaded idea that it's more important

to appear smart in front of one's peers than to authentically engage in the practice of learning regardless of your starting point.

Another person recalled a discussion about college with a school counselor, who pointed out, upon review of the student's grades, that she was obviously not a "math and science person" and should focus on her writing talents. Whether the student would have naturally gravitated toward writing as a career path remains unknown, but she said that as a seventeen-year-old kid she just accepted, at the word of this educator, that anything in the math and science field was off the table for her because it just "wasn't my thing." She later discovered a strong interest in math and science, when she realized that she not only had the capacity to understand math and science as learning disciplines, but really enjoyed them, as well.

Many others we approached had similar stories of how the fixed-mindset attitude of an educator had a negative impact on the course of their lives. As plentiful as the stories are of the fixed mindset wreaking havoc on the confidence and perseverance of young people, so too are the stories of growth-oriented teachers encouraging students to stick with something and overcome challenges in the learning process. In fact, you'll often find these qualities recounted when people discuss their favorite teachers. Think back to your favorite teacher for a moment. Why was he or she a favorite?

Three reasons why _____ was my favorite teacher:

1. _____

_____

2. _____

_____

3. _____

_____

Now think back to an ineffective or unlikable teacher. Why was he or she ineffective or unlikable?

Three reasons why _____ was my least effective teacher:

1. _____

_____

2. _____

_____

3. _____

_____

Do any of the items you listed fall into the growth- or fixed-mindset categories? Consider whether your best loved and least liked or most and least effective teachers had a growth or fixed mindset, and how those mindsets affected you as a learner.

AU: Do you mean Teach to Lead? http://www.ed.gov/teaching

TEACH, a United States Department of Education initiative and coalition between public, private, and governmental organizations to support teaching and American education, interviewed several successful people about their favorite teachers. Let's see if your answers about why your favorite teacher is so memorable are similar to their descriptions of favorite teachers.

- Arne Duncan, former US secretary of education, describes his favorite high school English teacher like this: "She worked us hard. She challenged us. It wasn't easy work. There was never talk about limits or ceilings or what you can't do. She was always pushing you. As good as you thought you were, she was pushing you to the next level."[16]
- Chris Paul, an NBA superstar, said, "Ms. Felder was my 10th grade biology teacher. She may be somewhere saying I'm just okay in the NBA, but if I would have stuck to it, I could have been a biology teacher. When you have good

people to tell you that when you work hard, anything is possible, you can have a lasting imprint on someone's life."[17]

- Steven Chu, former US secretary of energy, describes how his favorite teacher valued learning over right answers. "He wasn't trying to teach us facts. He was actually trying to teach us a learning process. Learning whether you understand something or not was the most important thing I began to learn in his class. That lesson I took with me not only through college and graduate school, but through my entire career as a physicist."[18]

- "He used to say the greatest gift a teacher or parent can ever give a kid is confidence," said Julia Louis-Dreyfus, an Emmy-award winning actress, of her high school physics teacher Mr. Coyne. "He even allowed the experiments we did to be funny. As a result, I don't find science scary or daunting. I love science."[19]

Are you sensing a theme? When people remember their favorite teachers, it typically isn't the teachers who let them breeze by or show off how great they were. It's not the teachers who made them feel certain subjects or pursuits were off-limits because they weren't naturally gifted at them. Rather, the most memorable and influential teachers were the ones who pushed and challenged their students. These teachers made learning accessible and valued and emphasized the process of learning, not just the outcomes.

This is what the growth mindset is all about: practice and persistence as a path to achievement, getting outside a comfort zone to take on new challenges, and recognizing that setbacks and failures are just part of the process.

PREP FOR YOUR YEAR OF GROWTH MINDSET

Now that you've familiarized yourself with the fixed and growth mindsets, and looked on your history as a learner to consider the characteristics of fixed- and growth-mindset teachers in your own life, it's time to prepare an action plan to get your year of growth underway. Let's start by writing a SMART goal related to

developing your growth mindset and fostering it in others. Use the same formula to write a few more.

There will be times when teaching with a growth mindset will prove frustrating. It'll take endless amounts of patience and resolve to encourage students to try a new strategy when they've given up. It'll take changing the way you offer praise and feedback. It'll take intentional, purposeful interactions with everyone you meet. And it'll be worth it.

MY GROWTH-MINDSET SMART GOAL

Specific — Write a specific description of your growth-mindset goal

Measurable — Write how you plan to track progress toward the goal

Actionable — Write specific steps you can take toward attaining your goal

Realistic — Write what resources and supports you need to achieve the goal

Timely — Write your deadline for achieving your goal

Here are some examples of what a SMART goal related to growth mindset might look like:

- By the second week of school, I will be able to call my students by name and know one of their personal interests outside school. To achieve my goal, I will make a point to use student names as often as possible and have students fill out an interest inventory. I will keep track of this information on my photo seating chart, and test myself on my progress weekly.

This goal is specific to building relationships with students. Progress can easily be measured by self-testing knowledge of each student's name and interest. The action items here include using the students' names as often as possible in conversation and asking them to fill out an interest inventory. Other action steps that would be appropriate to this goal might be greeting students by name at the door each morning, having students participate in icebreaker games to reveal their interests, or creating an "All About Me" interactive bulletin board with photos and facts about each student. This goal is realistic in nature, because two weeks is a reasonable amount of time in which to learn student names. A library media specialist, who works with all the students in the school, might need a bit more

time. Just make sure that your goal is realistic! The goal is timely because your deadline isn't too far off and provides an adequate amount of time to learn the new information.

Now, you try! First, break down the components of your SMART goal.

S _____

M _____

A _____

R _____

T _____

Using the components above, write your growth-mindset goal below.

_____

_____

_____

_____

_____

_____

_____

_____

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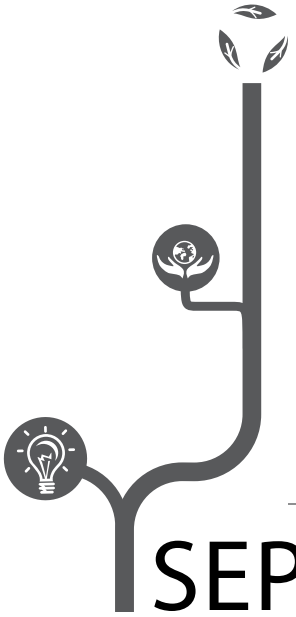


2

SEPTEMBER: EVERYONE CAN LEARN!

No matter what your ability is, effort is what ignites that ability and turns it into accomplishment.

— Carol Dweck, *Mindset*

OBJECTIVES

- ✓ Teach your students about the mindsets.
- ✓ Establish your classroom as a growth-mindset zone.
- ✓ Create a climate of growth mindset with parents and students.

When Ashley entered kindergarten, her teacher knew right away she was dealing with a case of fixed mindset. Whenever Ashley met a challenge that might give her the slightest bit of difficulty, she'd cross her arms, cry, and stomp away.

"I'm never coming back to school!" she would proclaim, after encountering a bit of difficulty in completing a task. "I can't get this. It's too hard."

Ashley's teacher began a rigorous growth-mindset intervention. Whenever Ashley gave up after only the slightest bit of effort, her teacher encouraged her to try again. When Ashley tried again, the teacher praised her for putting in effort. One day, Ashley's teacher told her about the fixed and growth mindsets. She told Ashley that having a positive attitude toward learning included taking on challenges and learning from mistakes. She told Ashley to never feel bad about making a mistake, because making mistakes is how the brain learns and grows. Every time Ashley made a mistake or got frustrated, her teacher would say, "Oh, look! Your brain is growing!"

Little by little, Ashley became more confident in her learning. She'd try new things, attempt to make new friends, and tackle other learning and social challenges in ways she hadn't been willing to before. Ashley's teacher had shown her the power of the growth mindset. By the end of the year, the disinterested and defensive girl had transformed into an engaged, curious learner confident in her ability to conquer difficult tasks.

Research has shown that teaching students the concept of growth mindset can have positive implications on student achievement, like it did with Ashley. In fact, researchers have begun to see results with as little as one forty-five-minute lesson on brain development and the mindsets.[20]

RESEARCH ON THE VALUE OF TEACHING GROWTH MINDSET

The Project for Education Research That Scales (PERTS), an applied research center at Stanford University, is dedicated to researching academic motivation and counts Carol Dweck and mindset rock stars David Yeager and Jo Boaler (author of *Mathematical Mindsets*, a must-read for teachers interested in using growth mindset in math instruction) among its research collaborators. Much of the work done at PERTS focuses on the mindsets. David Paunesku, executive director of PERTS, along with his colleagues, published a paper in 2015 on mindset training as a viable way to increase student motivation and achievement.

Paunesku and his colleagues wanted to devise a way to improve academic achievement that can work not just in one specific school but be scaled to schools

across the nation. The researchers tested two types of psychological interventions meant to improve student achievement.[21] The first was referred to as a "sense of purpose" intervention, which helped students understand how their education would help them achieve their long-term goals. Basically, it answered the why questions students often have: Why should I learn? Why does this work matter? The second type of intervention was a mindset intervention, in which students learned about the growth mindset, specifically that all people are capable of learning, and that struggle and challenge in academic work is simply part of the learning process and not an indication of failure or inadequacy.

Of the students who participated in the interventions, about a third were labeled at risk for becoming high school dropouts. Looking at the scores of these at-risk students, the researchers found a noticeable increase in the grade point averages of the students receiving the interventions.

Other research also indicates a strong correlation between mindset training and improved grades and engagement. One found that students who received training in the mindsets showed improved test scores, and girls who received the training outperformed girls who did not receive it in math, which suggests a potential strategy for closing the long-established gender gap in math education.[22]

Another study found that students who learned the growth mindset showed increases in academic achievement, and it also noted a specific increase for African American students, who reported attitudes of valuing and enjoying school more after the mindset training, which shows potential as a strategy for narrowing the racial achievement gap.[23]

So what's this body of research telling us? Students learning about growth mindset are learning that they're capable of achievement in all areas and then going on to prove it. They're receiving the message that the brain is capable of growth, but must be pushed and exercised to experience that growth. Once students get the message, they're able to apply it to the work they're doing in school. In other words, when students are taught that everyone is capable of achieving in all areas, they achieve at higher rates.

This subtle shift in perspective makes a big difference, and it made us wonder: if students showed improvement with just a single forty-five-minute intervention, how might they change when exposed to a sustained growth-mindset program for a year?

An important part of adopting the growth mindset in your classroom is to teach students exactly what constitutes a growth mindset and how they can harness its power. We know educating students about healthy eating and nutrition early on can help them avoid obesity and its associated health problems in the future. We know comprehensive sex education is associated with a lower risk for teen pregnancy. But when it comes to understanding how our bodies learn and how our brains are motivated to achieve, we don't really discuss it. Isn't it interesting that the one thing students and teachers are meant to do every day — dedicate themselves to the process of learning and growth — is the one process we never really bother talking about? Well, we think it's time for a change, and we're not the only ones.

After research findings indicated a positive association with growth mindset intervention and student achievement, PERTS developed Mindset Kit (www.mindsetkit.org), which is an excellent starting point for educators interested in teaching growth mindset to their students. There are free online lesson plans, activities, and videos that teachers can access. PERTS has also partnered with Khan Academy, a renowned personalized learning organization with thousands of instructional videos and lessons across a broad range of subjects, to create a growth mindset lesson plan. There's also a resource library where teachers can post and share materials for teaching growth mindset. These are all excellent places to access materials for teaching growth mindset, and we encourage you to explore them. At the end of this chapter we also share a list of helpful mindset resources.

Using *Mindset* and the Mindset Kit online as inspiration, we've developed our own growth-mindset lesson plan. Remember our mantra for the month? Everyone can learn! We don't just want your kids to say it, we want them to believe it! Your students, many of whom may already be deeply rooted in the fixed mindset like Ashley, aren't going to blindly accept the idea that everyone can learn without a little bit of convincing. So we've put together this lesson plan to guide you as you embark on your journey to create a growth-oriented classroom. The simplicity of the growth mindset is such that students from kindergarten through college can easily understand what it is and how to practice it, but there's no one-size-fits-all way to teach growth mindset. Consider your school culture, students, and classroom dynamics, and then adapt and differentiate this plan to make it work for you and your students.

THE GROWTH MINDSET

LESSON PLAN

LEARNING OBJECTIVES

By the end of this lesson, students will be able to:

- explain the difference between growth and fixed mindsets.
- distinguish between examples of growth and fixed mindsets.
- understand everyone is born to learn and we're all at a different place in our learning.

SETTING UP THE LESSON

Cultivating a climate for learning and fostering the growth mindset are essential to empowering students to achieve. Researchers and educators have developed many ways to help students embrace a growth mindset. Here are a few ideas to help you explicitly teach your students about growth and fixed mindsets, ways to help students identify the mindsets, and activities related to learning and growing the brain.

RESOURCES AND MATERIALS

- Computer and video projection capabilities
- Access to YouTube
- Marker board or large writing surface for brainstorming and web building
- Graphic organizers, including T-charts and foldables
- Markers/crayons/pencils

ESSENTIAL QUESTIONS

How do we learn new things?

Why is having a growth mindset valuable to learning?

How does understanding fixed and growth mindset help us meet our goals?

PART 1: EVERYONE CAN LEARN!

STEP 1: Preflection

Before viewing the video, ask the students to ***think, draw, or write*** about the following questions:

- Think of a time you learned something new. What steps did you take to learn it?
- Think of a time you failed at something. How did it make you feel? What happened after you failed?

Optional Ideas for Extension Activity: If you want to further explore the feelings that success and failure can evoke in your students, consider doing an extension activity. Students can create a comic strip with four simple pictures, write a poem or song, or create a short video to detail the learning process as they have experienced it.

STEP 2: Video and Discussion

Watch the video "You Can Learn Anything" (0:90), published by Khan Academy. It points out that Shakespeare, at some point, had to learn his ABCs, and there was a time Einstein couldn't count to ten. Have the students write an example of something someone acclaimed in their field would have had to learn before they were successful. For example, Serena Williams had to learn how to hit a tennis ball; Mark Zuckerberg had to learn how to type. Ask students to volunteer to share ideas they have generated.

STEP 3: Student Reflection

Older students can work in small groups to generate a T-chart of things they have learned and a prerequisite skill they needed in order to learn it.

Younger students can use a four-section foldable to draw pictures of something they've learned to do. Under each flap, have students illustrate something they had to learn first. For example, on the outside they may have drawn a soccer ball, so on the inside they would draw walking or running as a prerequisite skill for playing soccer.

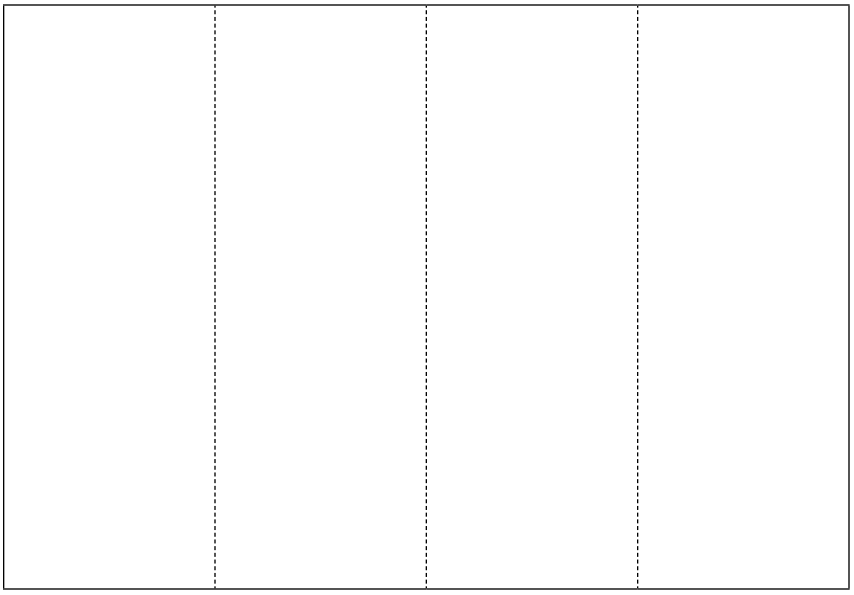
Name: _____

I have learned to . . .

SAMPLE DRAWING: T-Chart

I LEARNED THIS.	BUT FIRST I NEEDED TO KNOW THIS.

SAMPLE DRAWING: Foldable



STEP 4: Essential Question Connection

These activities lend themselves to answering our first essential question: How do we learn new things? We learn by building one skill on top of another, persevering through mistakes, and growing our brain.

STEP 5: Explain

Tell students about a time that you had to struggle to learn something. Describe in detail what you had to do to overcome the challenge, making sure to touch on the following areas:

- The effort you had to put in.
- Problem-solving strategies you used.
- How you sought help from others.

STEP 6: Activity: Think, Pair, Share

Allow students to share their experiences with a partner.

Encourage them to **Think** of a time they had difficulty learning something, **Pair** up with a partner, and **Share** with each other the experience, what they learned, and the outcome. Each student gets one minute to share. Allow students to meet with several classmates to discuss their experiences.

End of Part I. Combine Part I and Part II of lesson, or continue to Part II next class period.

PART 2: GROWTH AND FIXED MINDSETS

STEP 1: Self-Assessment

Students self-assess their mindsets using the following mindset quiz.

Directions: Read each statement and decide if it is **TRUE** or **FALSE** for you. Circle your answer.

1. If I have to work hard at something, it means that I'm not smart.
   TRUE or **FALSE**
2. I like to try things that are hard.
   TRUE or **FALSE**
3. When I make a mistake, I get embarrassed.
   TRUE or **FALSE**
4. I like to be told I'm smart.
   TRUE or **FALSE**
5. I usually quit when something gets difficult or frustrating.
   TRUE or **FALSE**
6. I don't mind making mistakes. They help me learn.
   TRUE or **FALSE**
7. There are some things I'll never be good at.
   TRUE or **FALSE**
8. Anyone can learn something if they work hard at it.
   TRUE or **FALSE**
9. People are born stupid, average, or smart, and can't change it.
   TRUE or **FALSE**
10. Doing my best makes me proud, even if it's not perfect.
    TRUE or **FALSE**

How many of the odd-numbered statements did you think were true?

____

How many of the even-numbered statements did you think were true?

____

Evaluating the Assessment: Odd-numbered statements are characteristic of a fixed mindset; even-numbered statements are characteristic of a growth mindset. Ask students if, based on the results, they have a fixed mindset, a growth mindset, or a mixture of the two.

Extension Activity: Have students give themselves one point for marking TRUE on an odd-numbered statement and one point for marking FALSE on an even-numbered statement. Ten points indicate a strong fixed mindset; zero points indicate a strong growth mindset. Plot the results to use later as a visual for explaining how most people are a mixture of the two mindsets.

STEP 2: Explore Mindsets

Present fixed- and growth-mindset definitions:

FIXED MINDSET: Assumes intelligence and other qualities, abilities, and talents are fixed traits that cannot be significantly developed.

GROWTH MINDSET: Assumes intelligence and other qualities, abilities, and talents can be developed with effort, learning, and dedication over time.

Post these definitions prominently in the classroom so students can reference them easily.

Review the results of student self-assessments. Tell students that everyone possesses both fixed and growth mindsets, and this year they'll be learning strategies to promote their growth mindsets. But first, they'll learn more about fixed and growth mindsets so they can easily recognize them and distinguish between the two.

STEP 3: Mindset Sort

Have older students come up with examples of fixed-mindset and growth-mindset statements, actions, and behaviors they encounter in their daily lives. Each example will be written on a sticky note.

Create large charts with the following headings: School, Relationships, Extracurricular Activities/Hobbies, Work/Chores. Post charts around the room.

Students categorize the fixed- and growth-mindset sticky note examples they wrote into the four categories. A fixed-mindset example might be: "I'm not good enough to make the basketball team, so I won't try" (Extracurricular Activities); "I'm not really a math person" (School); "She lied to me, so I'll never trust her again" (Relationships); "If I don't know how to do something at work, I ask my boss to show me" (Work/Chores).

For younger students, create a chart with sample fixed- and growth-mindset statements and questions. Read the statements aloud to the class, and decide together if they're fixed- or growth-mindset statements or questions. Use this opportunity to explicitly teach about the fixed and growth mindsets. For example, for the first statement, "Smart people get things more easily than other people," talk to students about how we're all at different places in our learning, and everyone will eventually encounter struggle in the learning process. Students can also add their own statements to the visual.

SAMPLE DRAWING: Statement Chart

	Growth Mindset	Fixed Mindset
Smart people get things more easily than other people.		X
If you make a mistake, people will think you're not smart.		X
When my teacher comments on my work, it's so I can do better in the future.	X	
My brain can't change much.		X
If I work hard, I can make my brain grow stronger.	X	
Anyone can learn anything if they work hard.	X	
I can learn from my mistakes.	X	
Which mindset uses the word *yet*?	X	
Which mindset uses the word *can't*?		X
Getting better is more important than getting a good grade.	X	
ASK FOR STATEMENT/QUESTION IDEAS FROM STUDENTS.		

STEP 4: Optional Extension Activity

If you need to reinforce the difference between fixed and growth mindsets, consider creating a sorting activity like below.

For younger students:

Have small groups sort a set of fixed- and growth-mindset statement cards. Review each statement and discuss the mindset association.

For older students:

Have students sort cards in groups and then brainstorm growth-mindset statements to replace the fixed-mindset statements. For example, students might change "I'm not good at this" to "I need more practice at this."

Post a set of growth-mindset cards as a visual in the classroom. Discuss how you expect the community of learners to build their growth mindset through focused effort.

FIXED-MINDSET STATEMENT	GROWTH-MINDSET STATEMENT
Math is not my thing.	I can grow my brain.
I'm not good at this.	I need to change my strategy.
She's the smart kid in class.	My hard work and effort has paid off.
Scores mean more than growth.	I'm not there yet.
It's better to look smart than take risks.	People can change.
I will never be that smart.	A good attitude is important in learning.
I feel dumb if I'm corrected.	I'm a problem solver.

STEP 5: Action Journaling

Have students journal or draw a specific action they will take toward building their growth mindset. If students have a difficult time with this task, encourage them to think of a specific goal they would like to achieve, setbacks they may encounter, and ways they'll work to overcome failures.

Provide students an opportunity to share their action step and don't forget to include your own growth action!

STEP 6: Elaborate

Discuss the importance of creating a classroom environment in which everyone can learn. Explicitly share with students how each learner is on his or her own journey. Some are learning academic skills, some are working toward social goals, and still others are developing additional ways to challenge themselves.

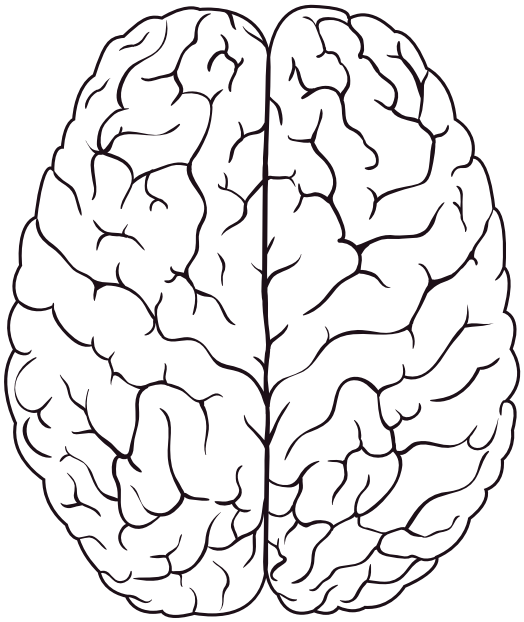
STEP 7: Defining Classroom Culture

Brainstorm a list of growth-oriented classroom rules, expectations, and guidelines. Ask students for suggestions on guidelines that could help them develop their growth mindsets and encourage it in others. Examples may include: Don't laugh when someone makes a mistake. Remember, everyone can learn. Try a different strategy if you don't get something the first time. Don't be afraid to ask each other for help, and so forth.

STEP 8: Prepare to Launch Next Lesson, "Growing Your Brain"

Distribute a handout with sketches of two brains. Have students create a growth-mindset brain (decorated with statements and symbols characteristic of a growth mindset, as they understand it) and a fixed-mindset brain (decorated with statements and symbols characteristic of a fixed mindset, as they understand it).

SAMPLE DRAWING: Brain Sketch



Make two copies of a blank brain sketch, like this one, and have students create a growth-mindset brain and a fixed-mindset brain by writing or drawing characteristics of each mindset, demonstrating their learning of the two types of mindsets.

STEP 9: Evaluate

- Students will collaborate to share and enhance their understanding of ideas and perspectives.
- Students will present information based on their drawings and discussions.
- Students will accurately describe information presented and connect to the classroom expectations and essential questions.

STEP 10: Feedback

Provide students with support and constructive feedback. Praise their effort in completing the tasks. Keep the praise on effort authentic and direct. For example, "I like how hard you worked on thinking of growth-mindset examples." Or, "You really stretched your brain adding creative details to your drawing."

Give yourself grace as you learn how to provide effective feedback to your students in your growth-mindset classroom. Remind your students that you too are learning and growing.

TEACHER JOURNAL: Reflection is a critical part of any lesson. Write a journal entry answering one or more of the following questions to determine what went well with your lesson and how it can improve next time.

- What went well with your lesson?
- How can you improve the lesson?
- What can you do as you prepare for the next month's lesson?
- What are your future goals with delivering growth-mindset lessons?

THE GROWTH-MINDSET ZONE

Establishing your classroom as a growth-mindset zone is an important part of making this your year of growth. Of course, when we say "growth-mindset zone," what we really mean is a judgment-free zone. As Dweck emphasizes in *Mindset*,[24] judging has little value, but engaging students in the learning process is key to growth. We recommend establishing guidelines that underpin the growth-mindset ethos of your class. Sharing those guidelines for growth with your students and making them part of the daily routine and classroom dialogue are essential to creating a growth-mindset zone.

Let's look at what establishing consistent classroom practices that convey the value of growth mindset to your students looks like. Mrs. H is a kindergarten teacher who has been teaching growth mindset in her classroom of five- and six-year-olds for the past several years. Read how she approaches teaching growth mindset to her students and then reinforces those skills in her classroom every day.

A PLACE OF GROWTH
MRS. H'S JOURNAL

In my class of kindergarteners, it is essential that I begin each school year establishing the expectation that we will resolve as individuals and as a community of learners to be the best problem solvers we can be. The most important rule in our classroom is to be prepared with a good learning attitude. The good learning attitude, of course, is the growth mindset. My students know a positive learning attitude will help them grow. We start our day by reciting a pledge establishing our classroom as a place of growth:

"Today I will:
Have a good learning attitude.
Be an active learner and grow my brain.
Be a mindful problem solver."

My students often remember things better when they are put with actions, so we have an action associated with each part of our pledge. "Have a good learning attitude!" is recited with an exaggerated wide smile and thumbs on cheeks as the students move their heads from side to side. "Be an active learner and grow my brain" is said as students place their hands over their