WHAT YOUR COLLEAGUES ARE SAYING . . .

Recognizing that students need to learn social and emotional skills is one thing; helping them do so is another. This book can help you do just that. With its easy-to-follow structure, The Well-Rounded Math Student *offers us ways to help students develop both intra- and interpersonal skills through specific instructional strategies situated within the context of mathematical activities, such as problem-solving, reasoning, argumentation, and precision, and brought to life with real classroom examples.*

—Peter Liljedahl
Professor of Mathematics Education,
Simon Fraser University
Vancouver, Canada

This book could revolutionize the world of education! It takes the concept of integrating interpersonal and intrapersonal life skills into the math classroom. It is informative and straightforward. The authors provide current, practical examples that help readers see the full vision of the author's work and how to implement the ideas quickly and effectively.

—Kali Swisher
School Counselor, USD 504
Oswego, KS

This book illuminates how to integrate the development of students intrapersonal and interpersonal skills alongside emphasizing the mathematical practices. The many classroom examples, dozens of competency builder ideas, and collection of logs and assessment tools equip teachers to explicitly attend to students social and emotional competencies, while also developing their mathematical proficiency.

—Jennifer Bay-Williams
Professor, Mathematics Education and Author
Louisville, KY

This book is exactly what teachers need right now. After working with the math practices for 20 years it's time to take them to a new level. Incorporating purposeful social-emotional learning into the math classroom will build connections between students and their math knowledge. It's a brilliant idea!

—Jill Solomon
Director of Academic Systems,
Oakwood School
North Hollywood, CA

Written by practitioners, for practitioners, the authors authentically demonstrate how to recognize and support students' social emotional development through mathematics planning and assessment. This resource seamlessly integrates social-emotional competencies with the eight Standards for Mathematical Practice. Shifting focus from the stigma of adding "more" to a teacher's plate, this book serves to encourage meaningful mathematical learning.

—Sara Schwerdtfeger
Dean, The Teachers College,
Emporia State University
Emporia, KS

The Well-Rounded Math Student *offers a practical guide for fostering strong math skills as well as social and emotional competencies. As a former elementary math coach, I've seen how building number sense, problem-solving abilities, and confidence in students leads to success. This book highlights the importance of creative thinking and self-regulation, providing strategies to nurture both academic and emotional growth in young learners. Ideal for teachers, administrators, and math advocates.*

—Antionette Stith
Assistant Professor of Education, Lake Superior State University
Marie, MI

The authors have thought deeply about our learners and their ever-evolving needs, as well as the math educators who are doing the brave work of teaching them on a day-to-day basis. The Well-Rounded Math Student: Leveraging Math Practices to Build Next Generation Skills *is written with both groups in mind. The work intentionally elevates competencies in a way that helps students access content, offering educators practical strategies that position their students as both capable mathematicians and thriving humans.*

—Tammy McMorrow
First-Grade Teacher,
Indian Creek Elementary
Kuna, ID

The Well-Rounded Math Student: Leveraging Math Practices to Build Next Generation Skills *is a must-have resource for educators committed to whole-child development. By seamlessly embedding social-emotional competencies into mathematics instruction, this book equips teachers to foster self-efficacy, adaptability, and perseverance in their students. The practical tools, reflective questions, and real-world examples make it an invaluable guide for creating engaging, inclusive classrooms where academic and social-emotional growth go hand in hand. A transformative resource for educators and school counselors alike!*

—Hanna Kemble Mick
Elementary School Counselor, Auburn-Washburn USD 437
Topeka, KS

This book bridges the gap between math instruction and social-emotional development, providing practical tools and insights I wish I had as a teacher. It is an extremely useful resource for math educators who want to cultivate not just problem solvers, but thoughtful, resilient, and adaptable learners.

—Kristin Wright
Research/Evaluation Associate, Office of Educational
Innovation and Evaluation (OEIE)
Kansas State University—College of Education
Clay Center, KS

If we want to build confident mathematicians who have self-efficacy and can talk fluently about math in a respectful classroom setting, this book walks us through just how easily we can achieve that! I feel empowered to make the shift in my lesson planning to meld social-emotional competencies with my math practices. It just makes sense! Make this your next professional development read!

—Stacey Johnston
Sixth-Grade Math and Science Teacher,
MEd Leadership, Central Middle School
Edmond, OK

This book challenged me to view the math classroom through a new lens, and after reading, I felt empowered to embed social-emotional competencies within math instruction in ways I had not thought of before!

—Kelly Oberheu
Former High School Mathematics Teacher
Emporia, KS

The Well-Rounded Math Student

The Well-Rounded Math Student

Leveraging Math Practices to Build Next Generation Skills

Sherri Martinie

Jessica Lane

Janet Stramel

Jolene Goodheart Peterson

Julie Thiele

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PREFACE

AS A TEACHER SOMEWHERE IN THE P–12 TRAJECTORY, you know that your craft is both a science and an art. You know that students' knowledge, skills, and competencies grow as much through how you foster relationship, connection, and understanding (the art) as they do their academic learning (the science) (Bouffard, 2018). You likely joined the profession hoping to positively impact students' lives, just as another teacher once did for you. However, you also know impacting students' lives goes beyond delivering the content of a well-developed lesson. Research shows that learning social and emotional skills helps students academically (Benson, 2021; Institute of Education Sciences [IES], 2022; Jones et al., 2021; Langreo, 2023; Prinstein & Ethier, 2022). As P–12 students' needs continue to grow and change as they mature, teachers and staff become the frontline in social-emotional support, as most children and adolescents in the United States spend seven or more hours of their daily lives in school. This idea connects back to the core of teaching, which views teachers as trusted leaders who guide learning and use their knowledge, creativity, and connection in the classroom.

This book is intended to help you—as a teacher of mathematics, specifically—see how you can use what you already do, with some small shifts in intentionality, to foster both your students' academic prowess *and* their social and emotional development. It is designed to help you capitalize on all aspects of the student for a holistic approach to learning. This book will give you a new lens to consider and leverage in your planning as well as concrete ways to use your mathematics lessons to explicitly teach, highlight, and reinforce the social-emotional competencies—or the intrapersonal and interpersonal skills, sometimes referred to as Next Generation skills—your students need to build for ultimate success. As you will see, these competencies are already present (but sometimes unseen) within every P–12 mathematics lesson.

WHAT THIS BOOK IS ABOUT

Traditionally, teacher education programs from preschool through high school have focused exclusively on making sure teachers understand the subjects they teach and how to teach them. They have focused on the

science of teaching through pedagogy, lifespan development, curriculum, and instruction. They have prepared teachers to learn how to create lessons and manage classrooms, keep students engaged, and adapt lessons for different needs (Tomlinson & Imbeau, 2023). Teaching content is important for student success, but it's only one part of what happens in classrooms today (Lane, 2018). While today's teachers are well-trained in teaching subjects like math, the challenges they face often go beyond this (Benson, 2021). Teachers must also know how to help students develop personal and interpersonal skills like self-reflection and communication.

The art of teaching, found and built within connections and relationships, is a key part of teaching. The student adage "I may not remember what you taught me, but I remember how you made me feel" still applies. Students may not remember the exact lesson or content standard, but they will remember that they learned and were supported as people. Teachers often innately rely on and draw from their own abilities to help, connect, and relate, but arguably the student-teacher relationship has been undervalued in today's education system. Additionally, intrapersonal and interpersonal skills have often been skills that teachers subconsciously assume students already have, and they develop lessons with that assumption. However, those student skills cannot be taken for granted and must be taught and developed alongside mathematical concepts and skills.

Over the past two decades, social-emotional learning (SEL) has surfaced as an overarching term for several concepts including character education, 21st-century skills, next generation skills, soft skills, employability skills, social skills, and trauma-informed learning (Jones et al., 2021). Regardless of the terminology used to encapsulate the skills we focus on in this book, the fundamentals of SEL states, "social-emotional learning (SEL) can help young people thrive personally and academically, develop and maintain positive relationships, become lifelong learners, and contribute to a more caring, just world" (Collaborative for Academic, Social, and Emotional Learning [CASEL], n.d.a). Social-emotional learning improves academic achievement (CASEL, n.d.b) and is a critical layer of prevention for children's mental wellness (Key Social Emotional Messages, CASEL, n.d.b). While teachers are in no way mental health providers, they are on the front lines of working with students and can offer and support preventive practices to promote student wellness.

Social-emotional learning improves academic achievement and is a critical layer of prevention for children's mental wellness.

Intrapersonal and interpersonal skills—also referred to in this book as social-emotional competencies (SECs)—are an undervalued but necessary component in K–12 education and postsecondary life. Teachers teach and model these skills to help students use them in different situations, both in and out of the classroom. This helps make the classroom and school environment better and helps students have a more positive attitude about themselves, others, and school (Jones et al., 2021). Also, colleges and employers continue to seek evidence of intrapersonal and interpersonal skills, or next generation employability skills, such as clear communication, decision-making, problem-solving, and teamwork that are transferable to life beyond P–12 environments. These competencies are in high demand and valued just as much as academic and content knowledge.

The overarching goal of education has always been to help kids become responsible adults who are ready for their future. A teacher's impact in this comes from both academic rigor *and* through cultivating strong social and emotional skills that facilitate healthy relationships. These developed skills and relationships offer students the chance to grow into productive adults and citizens.

The overarching goal of education has always been to help kids become responsible adults who are ready for their future.

WHO THIS BOOK IS FOR

This book is designed to help you reconnect with the art of teaching and support a holistic approach to developing and enriching critical thinking and employability skills to aid in content learning. As outlined, we know you are already highly skilled and trained in creating and executing lessons that support mathematical content and standards. This book is for any P–12 classroom teacher looking for a bridge to shape and reinforce intrapersonal and interpersonal skills within the mathematics classroom through enhanced lesson planning. This book is also for any preservice teacher seeking ideas on how to develop holistic lessons and coaches working with teachers to strengthen and enhance social development, connection, management, and community within classrooms.

WHAT TO EXPECT FROM THIS BOOK

As you begin this work, the Introduction will set the stage by describing modern shifts in education, including the goals of today's schools, today's students' needs, and the evolving and important role of the classroom teacher. From there, each chapter represents and reviews a mathematical practice and offers guided questions to help you consider each phase of a comprehensive lesson. You will gain a clear understanding of the inherent social-emotional competencies—both intrapersonal and interpersonal skills—connected to that practice that can be easily integrated and enhanced across the lesson.

You will capitalize on your strengths in content delivery to recognize and leverage the implicit connections between the standards for mathematical practice (MPs) and SECs. With a targeted lens and a few small tweaks to your current lessons, you will learn how to seamlessly draw out the intrapersonal and interpersonal components, making what is implicit clearer and more explicit, resulting in a more holistic lesson. After reading the book, using the competency builders, and reflecting on the narratives, you will

1. Feel comfortable identifying social-emotional competencies in your lessons.
2. Understand how, with a few small changes to your lesson plans, you can support students' intrapersonal and interpersonal growth along with their wellness during math lessons.
3. Feel confident and empowered to embrace this expanded way of thinking, uncovering the often-hidden social-emotional competencies in the classroom and math lessons. You already have the skills to incorporate a more holistic approach to learning, and after reading this book, you will be ready to make a difference in your very next lesson.

Our goal with this guide is to support your efforts in the classroom to teach and build social-emotional competencies without being burdensome. We know you are a highly trained professional, skilled in mathematical instruction, and we recognize and value that expertise. The demands on both you and your students are significant, and your role is crucial to their success. Your students rely on you, and you deserve practical solutions that deliver the greatest impact.

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From Sherri: To my children Curtis, Peter, and Lucy—your love and encouragement inspire me every day. Thank you for your patience and unwavering support. To my husband, Brian, I am thankful for your steady presence through every new endeavor, for enduring the highs and lows, and for celebrating each milestone with me. To my parents, I know you are with me in spirit, and I thank you for instilling in me a love of learning and solid work ethic. A heartfelt thank you to Jessica, Janet, Jolene, and Julie—your collaborations on this book has been invaluable. I truly enjoyed our time together! Finally, to my current and former colleagues and students, I am profoundly grateful. You have shaped my journey, challenged my thinking, and inspired me to keep learning and growing as an educator.

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INTRODUCTION

The Role of Intrapersonal and Interpersonal Competencies in Mathematics Education

YOU MIGHT HEAR SOMEONE SAY, "When I was in school, we didn't need this (social-emotional support)" or "I've been teaching for years and we weren't trained to do these kinds of things, we just teach." However, today's schools look different than they did even one or two decades ago, and the insights on what is needed have mostly been ignored by the profession (Prinstein & Etheir, 2022). In this chapter, we will explore the current state of schools, the changing needs of students, and the shift in education necessary to support today's learners. While teachers are still key in delivering content, especially in math, the role now must include supporting students' social-emotional development and helping them to hone those next generation skills that will be critical into their adulthood.

Specifically, this chapter will

- Discuss the shift toward holistic teaching, which includes integrating social-emotional skills into lessons.
- Guide you step-by-step to enhancing your lesson plans with small changes that promote these skills, showing how careful preplanning and simple adjustments can make a big difference to student engagement and learning with minimal effort.

A PARADIGM SHIFT IN EDUCATION

The world is changing fast, with global forces like technological advances and economic growth impacting our daily lives and requiring new skills to succeed in the future. Instruction must now focus not just on traditional subjects like math and reading, but also on teaching students how to think critically, solve problems, and work well with others.

Because of these global shifts, how we teach must evolve to help students develop the necessary skills to meet the demands of a complex and ever-changing world. This requires us to consider fundamental shifts in education in three ways: the shifting goals of education, the shifting needs of students and demands on schools, and the shifting role of the teacher as schools have become more of a hub for whole child support.

The Shifting Goals of Education

To better understand where we have been and where we are going, it's important to briefly understand how K–12 education has shifted over the past 20–25 years. In 2001, under the academic mandate of No Child Left Behind (NCLB), schools nationwide were driven by academic initiatives and outcomes that focused heavily on assessments and accreditation requirements. Educational outcomes were measured by testing and assessment, placing heightened pressure and emphasis on teachers and students to succeed in these academic areas of focus. High-stakes testing in math and English language arts (ELA) became the primary metric for evaluating the academic success of students, teachers, and schools. With hyperfocus placed on math and ELA outcomes, adjustments were made within the school day for extended time and prioritized resources for assessed courses. Schools and districts adopted testing resources, hired instructional coaches, and developed supplemental class sections and seminars to meet this initiative's demands (Lane, 2018).

As this approach of academic accountability continued, some unintended consequences emerged. Under the pressures of high stakes testing, teachers began "teaching to the test" or focusing mainly on helping students pass these tests. This made students pay more attention to getting the right answers, instead of understanding the material. In elementary schools, recess, physical education, and art classes were shortened or put on a rotating schedule so there could be more time for math and reading. In high school, math and reading were seen as the most important subjects, and time for other subjects was reduced. As NCLB continued, many states and schools saw the inherent challenges of this academic mandate and the need for a broader definition of academic success.

The Shifting Needs of Students and Demands on Schools

While schools focused more on test scores to measure success, students' social, emotional, and developmental needs didn't go away. In fact, student well-being diminished, and mental health challenges increased during this time (Centers for Disease Control and Prevention [CDC], 2024). The CDC's (2021) Youth Risk Behavior Surveillance System reported that from 2009 to 2019, even before the COVID-19 pandemic, many students experienced emotional distress, such as feeling persistently sad and hopeless (CDC, 2021; Prinstein & Ethier, 2022). Nearly every group of young people reported poor mental health during this time. Alarming trends showed that one in five students thought about suicide, and about 1 in 11 tried to take their own life

(CDC, 2021; Prinstein & Ethier, 2022). Concerns of bullying, cyberbullying, and school safety also grew. Unfortunately, while these experiences and behaviors were trending up, they were also largely ignored by education and health care (Prinstein & Ethier, 2022).

The growing mental health needs and behavioral challenges became even worse in 2020 because of the COVID-19 pandemic. When COVID-19 hit in the spring of 2020, people globally were left isolated and uncertain within their homes. Schools closed, as did the rest of the world, and remained so for at least the first several months of the pandemic—some much longer. Throughout the academic year of 2020–2021, educators created a variety of make-shift school formats and structures to accommodate learning—from in-person full time but socially distanced classrooms, to part in-person/part online hybrid learning structures, to fully remote learning. Structures differed by state, by district, and sometimes even by building. As a result, nearly all formats of schooling were very different from what students, teachers, and families had been used to (Jones et al., 2021). Resources for student support also differed by state, by district, and by building. The changes caused by the pandemic impacted all students, but they were especially harmful to the most vulnerable groups. Social development was stifled by a lack of interaction with others, and in many cases "connection" occurred from behind a screen (Lane et al., 2020). For many, there was little to no connection at all. Isolation and heightened unknowns—including food insecurity, unstable income and housing, anxiety and fear wrought by a contagious disease, and dealing with family members' illness and death—created additional pressures on student well-being and mental health (Bonella et al., 2020). Chronic absenteeism has also increased post COVID-19 (Swanson et al., 2024), impacting classroom instruction, student interactions, and academic outcomes.

SCHOOLS AS A HUB FOR WHOLE CHILD SUPPORT

As schools began to reopen, most educators (82 percent) said their biggest worry returning to the classroom was the social-emotional well-being of students, even more than academic issues (Bonella et al., 2020). The National Center for Education Statistics (NCES, 2022) reported that "classroom disruptions from student misconduct (56 percent), rowdiness outside of the classroom (48 percent), and acts of disrespect towards teachers and staff (48 percent)" increased (para. 2). One in five educators felt unprepared to provide social-emotional support to students (Bonella et al., 2020).

In fact, 70 percent of public schools surveyed requested more training to help students with their social-emotional development (Institute of Education Sciences [IES], 2022). This concern was the same in rural, urban, and suburban schools.

The social impact of isolation and gaps in social-emotional development and academic learning created by COVID-19 impacts all aspects of student development. COVID-19 influenced an increase in depressive symptoms, anxiety, and stress in students (Zarowski et al., 2024). While short-term government funding was provided to help schools connect students with the mental health support they needed, efforts often fell short. The need for support was so great that schools found it difficult to identify and hire enough qualified school counselors to meet the demand. Availability of youth mental health professionals became impacted and wait times to see a therapist *outside* of school could be as long as six months.

Today, 84 percent of teachers believe that social-emotional learning has a positive impact on academic achievement (Bushweller, 2022; NCES, 2022). There is recognition that serious and ongoing mental health issues requiring professional intervention can't easily be fixed in a classroom and teachers are *not* expected to become formal mental health providers. However, preventive and supportive efforts focused on social-emotional learning *create* a protective factor for student's mental wellness. Protective factors, such as positive relationships, lower the likelihood of negative outcomes to enhance mental well-being. This means classroom teachers need to be part of the effort to build or rebuild social-emotional skills in students, creating strong and supportive relationships to negate stress, trauma, and other obstacles that students face (Jones et al., 2021).

In reviewing recent educational history assessing where we were and where we are, we now have a clearer picture of where we need to go moving forward. Simply put, solely focusing on academics is an antiquated way of teaching and learning, and educators must evolve and adjust to successfully meet today's needs. With this newfound understanding, for today's classroom teacher to be as successful as possible, there must be a paradigm shift toward a more holistic and preventive response. The way forward can be found in social-emotional competencies embedded within the classroom, and the synergy and strength that comes from addressing academic, social-emotional competencies to maximize student outcomes.

Solely focusing on academics is an antiquated way of teaching and learning, and educators must evolve and adjust to successfully meet today's needs.

The Shifting Role of the Teacher

Given the recent changes and challenges in education, it's clear that a new, integrated approach to teaching and learning is essential. While the needs are known, how exactly to bridge the gap between academic and social-emotional needs remains a concern. Many educators acknowledge that they were not trained in social-emotional skill development or delivery in their preparatory programs, and more instruction within this area of teaching is necessary, as "all professionals who work with young people need the knowledge to support students" (Abrams, 2023). We know teachers already feel stretched thin between higher student needs, delivering engaging lessons, and the burden of "doing more with less." The real question is, "**How do we do this?"**

How do teachers

- Lift up and enhance what they are already doing well?
- Capitalize on the relationships and connections already developed?
- Look for opportunities to tweak, not overhaul, their lessons to incorporate and highlight social-emotional competencies and support the whole child?

This book is intended to help you understand this. While challenges are evident, so are many assets. First, we begin by holding a strengths-based mindset and approach—for both ourselves as teachers and our students. Never has the care, concern, and impact of teachers been more needed. As caring and invested adults, we are our greatest resource for student success and serve as one of the largest influencers of success and learning (Jimerson & Haddock, 2015). As mentioned at the beginning of this book, many K–12 teachers join the profession hoping to positively impact students' lives, just as another teacher did for them. Grounded in purpose and driven by their work, teachers teach, inspire, and provide care, consistency, and stability within their classroom each day. You can likely relate to this.

Teachers already use social-emotional competencies within their lessons and classrooms every day; it now simply becomes a matter of intentionally and explicitly enhancing the already present intrapersonal and interpersonal skills found within the lesson. Through careful preplanning and enhanced, integrative lesson planning, we can teach and model desired skills and outcomes. Time spent creating strong lesson plans can help with engagement, classroom management, behavior, and learning and can positively impact students' social and emotional well-being.

Through small adjustments, teachers can encourage connectedness and productive social behavior while also teaching critical math concepts. This small adjustment can have great gains, and doesn't require more money, more time, or another trendy program that is not followed with fidelity.

WHAT DO WE REALLY MEAN BY SOCIAL-EMOTIONAL COMPETENCIES?

Over the past two decades, social-emotional learning (SEL) has surfaced as an overarching term for several concepts including character education, 21st-century skills, soft skills, employability skills, social skills, and trauma-informed learning (Jones et al., 2021). According to the Collaborative for Academic, Social, and Emotional Learning (CASEL, n.d.a), the fundamentals of SEL states, "social-emotional learning (SEL) can help young people thrive personally and academically, develop and maintain positive relationships, become lifelong learners, and contribute to a more caring, just world." Social-emotional learning improves academic achievement (CASEL, n.d.b) and is a critical layer of prevention for children's mental wellness (CASEL, n.d.b).

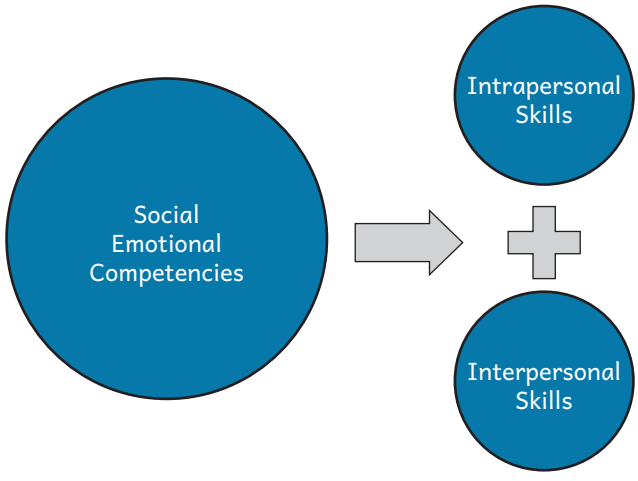
> **Social-emotional learning improves academic achievement and is a critical layer of prevention for children's mental wellness.**

Unfortunately, in recent years, some have tried to politicize and weaponize the term *social-emotional learning*. To be clear, regardless of packaging, social-emotional learning or competencies are not controversial (Prinstein & Ethier, 2022). Social-emotional learning are skills that help students better understand themselves and interact well with others. Teachers teach and model these skills to help students use them in different situations, both

in and out of the classroom. This helps make the classroom and school environment better and helps students have a more positive attitude about themselves, others, and school (Jones et al., 2021).

For this book's purpose, we offer terminology to help name and frame social-emotional competencies (SECs). Having a common language across lessons, classrooms, and grade levels reinforces and strengthens positive social-emotional competencies and behaviors. This shared understanding clarifies and amplifies these skills and enables K–12 teachers to better understand, apply, and integrate those skills into lessons. To the authors, social-emotional competencies are an overarching construct for the targeted skills needed to build and enhance healthy relationships. In Figure i.1, the SECs are the overarching theme, and the competencies are further broken down into two key concepts of intrapersonal and interpersonal skills.

Figure i.1 • *Social-Emotional Competencies*



There are several bodies of work that describe social-emotional competencies, including the CASEL competencies framework and the College and Career Competency Framework and Wheel (https://www.cccframework.org). Not one of these descriptions quite fits the bill, so we have derived our shared language from these places as well as others.

Intrapersonal Skills

Intrapersonal skills have two distinct purposes:

1. **Highlighting the Relationship with Ourselves and the Learning Process**:
   - **Purpose**: Intrapersonal skills emphasize the significance of our internal relationship with ourselves. This means understanding our own thoughts, emotions, and motivations.
   - **Importance**: By developing intrapersonal skills, we become more aware of our own learning processes, which helps us better manage our personal growth and development. Essentially, these skills help us reflect on our own experiences and understand how we learn and grow.
2. **Understanding Ourselves to Better Interact with Others**:
   - **Purpose**: Intrapersonal skills also emphasize the need to gain self-awareness to improve our interactions with others.
   - **Importance**: By understanding our own thoughts, feelings, and behaviors, we become better equipped to relate to others. This self-awareness enables us to communicate more effectively, empathize with others, and work collaboratively. In other words, knowing ourselves well helps us understand and connect with people around us more effectively.

In summary, intrapersonal skills help improve our understanding of ourselves and how we learn and enhance our ability to interact and work with others by first gaining self-awareness.

We selected the following intrapersonal skills (Table i.1) based on their connection to the mathematical practices (MPs) and based on their importance for success in mathematics.

Table i.1 • *Intrapersonal Skills*

Competency	Description
Creative Thinking	Students develop unique and meaningful alternative ideas to solve the problem. They see the ideas from multiple perspectives and brainstorm ideas to explore using concrete referents such as objects, drawings, diagrams, and abstract approaches.
Curiosity	Students seek to learn or to know something for its own sake; desiring information to fill knowledge gaps and welcome new experiences. They look for connections or patterns, practice trial and error, and try new approaches to solve mathematical problems.

Competency	Description
Goal Setting	Students establish objectives, monitor progress, and adjust strategies to achieve success. They develop a roadmap toward completing the mathematical problem within certain steps and a given timeframe.
Integrity	Students act with honesty, sincerity, fairness, and values. Teachers provide clear guidelines and high expectations, and students make strategic mathematical decisions that display academic honesty through the appropriate use of tools and strategies, and fairness with others.
Intrapersonal Communication (Self-Talk)	Students hold ongoing internal dialogue and reflective thinking by contextualizing a situation and considering how they would approach it. They use self-talk to think through and convince themselves before sharing an idea or making an argument.
Perseverance	Students persist and consistently work toward an outcome, even when difficult, until the result is achieved. They grapple with the mathematical process, working to determine the pattern or solve the problem.
Responsible Decision-Making	Students gather information, assess potential outcomes, and determine the best possible plan. They identify and consider options before making sound decisions about what steps to take, what tools would be useful, and if the outcome is reasonable.
Self-Awareness	Students hold a conscious understanding of one's own feelings, characteristics, thoughts, motivations, and desires. They are challenged to reflect on their feelings, thoughts, and values as they explore the truth of their conjectures and justify their conclusions.
Self-Efficacy	Students succeed in specific mathematical situations and tasks, which helps develop confidence in mathematical abilities. As students practice attending to precision and see improvements in their mathematical skills, they are likely to feel more confident in their ability to attempt future math problems.
Self-Regulation	Students manage thoughts, emotions, and behaviors during mathematical problem-solving, particularly in times of stress. They monitor their thoughts and emotions when they disagree with someone else's approach, and when giving and receiving feedback.
Sustained Attention	Students maintain focus and concentration over time. They engage in abstract and quantitative reasoning tasks, push through tedious processes such as decontextualization, looking for and generalizing patterns, working through the modeling process, attending to precision, and seeing the process through to the end.

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We encourage you to actively incorporate and emphasize intrapersonal skills in your lessons whenever possible. These skills are often underdeveloped and less visible but are crucial to students' overall development. Prioritizing intrapersonal skills in lesson planning helps students build self-awareness and apply these skills effectively in various situations. Like all skills, they need practice to grow and improve, as intrapersonal skills directly impact interpersonal and cognitive skills.

Interpersonal Skills

Interpersonal skills largely focus on communication and relationships with others. These skills are important because they are a part of everything we do in math and are useful in many areas of life. The math classroom is a key place for students to use, develop, and sharpen interpersonal communication skills. The following interpersonal skills (Table i.2) were selected based on their connection to the MPs and their importance for success in mathematics.

Developing and strengthening communication skills and teamwork is recommended across all math practices. Effectively communicating mathematical ideas and strategies with others, working together, sharing strategies, and learning from each other's approaches to problem-solving naturally fosters teamwork and cooperation. For this book's purpose, we do not focus much time on these skills since they are so naturally embedded, but instead intentionally focus on other interpersonal skills to highlight how those might be implemented into a lesson.

While some skills are clearly either intrapersonal or interpersonal, other skills draw from both skill sets and fall somewhere in between. For example,

- **Communication Skills**: Often seen as more of an interpersonal skill, communication is how you interact with others and interpret their responses. However, communication also involves intrapersonal aspects, such as how you understand and manage your own messages and emotions.
- **Decision-Making Skills**: These can also involve both intrapersonal elements (e.g., personal judgment and self-awareness) and interpersonal elements (e.g., considering others' opinions and collaborating with them).

Table i.2 • *Interpersonal Skills*

Competency	Definition
Adaptability	Students adjust to new conditions or challenges with ease by changing to respond to new information or circumstances. They detect errors, explore consequences, and compare predictions, which allow the adjustment to the mathematical model, problem-solving process, or solution.
Assertiveness	Students clearly express wants, needs, and thoughts while respecting others, even when difficult. They impart their own thoughts, mathematical critiques, and ideas in respectful ways and are treated with respect when doing so, even if there is disagreement.
Communication	Students effectively exchange ideas, thoughts, and feelings between two or more people. They mathematically express themselves with clear and accurate expressions, interpretation of symbols, attention to detail, effective explanations, and contextual understanding.
Empathy	Students seek to understand, share, and respect the feelings of others. They show concern when responding to the arguments of others by trying to comprehend from another perspective whether they agree or not.
Social Awareness	Students listen to, reflect, respond, and empathize with others' experiences to understand social norms and other diverse perspectives. They consider the contexts and backgrounds that influence others' ideas, perspectives, and contributions.
Teamwork	Students discuss approaches, fairly contribute, respect other teammates, and reach consensus toward a shared goal. They work with others by engaging in shared work to arrive at a mathematical product or answer.

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In summary, skills like communication and decision-making don't fit neatly into just one category. Instead, they lie on a continuum where they incorporate both intrapersonal and interpersonal elements. This means that these skills' development and application can be influenced by personal experiences and social interactions.

INTEGRATING SOCIAL-EMOTIONAL COMPETENCIES INTO OUR MATHEMATICS LESSONS

Integrating social-emotional competencies, or intrapersonal and interpersonal skills, into lessons means being aware of how to connect those skills to what we are teaching as important parts of learning. It's also important to note that, for many reasons, students may not possess these personal and social skills. Therefore, we as teachers must explicitly incorporate, teach, and scaffold these skills, even informally, to ensure their development.

In this book, we share a framework for planning a lesson that enables you to be intentional about amplifying SECs in your math classroom by integrating intrapersonal and interpersonal skills with the standards for mathematical practice. The goal is to help you build on what you already do naturally in your teaching by highlighting and making clear the intrapersonal and interpersonal connections and opportunities within the lesson. Lesson planning will be addressed in three parts: the standards for mathematical practice, social-emotional competencies, and the pedagogical decisions teachers make.

Each chapter is dedicated to one of the eight standards for mathematical practice. The chapter begins with the connection between specific content standards and the focus MP, as this is likely where you are most comfortable. Then, the overlap between the MP and SECs is provided and some intrapersonal and interpersonal skills that specifically engage in this MP are discussed.

Through each chapter is a framework of questions you can use as you plan a math lesson that merges content standards, MPs, and SECs—thereby resulting in a robust lesson plan template. To support your enhanced lesson plan development, the Well-Rounded Math Lesson Guide (Figure i.2) provides a comprehensive list of all the questions to consider as you develop your lesson.

Figure i.2 • *Well-Rounded Math Lesson Guide*

<table>
<tr><td colspan="2">Topic:</td><td rowspan="5">Math Practices:

Which mathematical practice enhances understanding of this content standard?

☐ MP1 Problem solve and persevere
☐ MP2 Reason abstractly and quantitatively
☐ MP3 Construct and critique arguments
☐ MP4 Model with math
☐ MP5 Use appropriate tools strategically
☐ MP6 Attend to precision
☐ MP7 Look for and make use of structure
☐ MP8 Look for and express patterns

Intrapersonal skills:
☐ Creative thinking
☐ Curiosity
☐ Decision-making
☐ Goal setting
☐ Integrity
☐ Perseverance
☐ Self-awareness
☐ Self-efficacy
☐ Self-regulation
☐ Self-talk
☐ Sustained attention</td></tr>
<tr><td colspan="2">Content Standard:</td></tr>
<tr><td colspan="2">Math Goal:

What is the mathematical goal of the lesson?</td></tr>
<tr><td colspan="2">Lesson Objective(s):</td></tr>
<tr><td>Launch/Introduction</td><td>Intrapersonal / Interpersonal Skills:

What intrapersonal and interpersonal skills are inherent, are needed, and can be further developed for students while engaging in the MP? How will I explicitly address SECs?</td></tr>
</table>

<table>
<tr><td>Lesson Activities:

With an eye on our math goal, how will I support social-emotional development as I engage learners in the MP? What structures, strategies, methods, and/or tools can I use?</td><td>Intrapersonal/
Interpersonal Skills:</td><td rowspan="3">Interpersonal skills:
☐ Adaptability
☐ Assertiveness
☐ Communication
☐ Empathy
☐ Social Awareness
☐ Teamwork</td></tr>
<tr><td>Summary/Closing:</td><td>Intrapersonal /
Interpersonal Skills:</td></tr>
<tr><td>Assessment:

How will I assess students' progress toward the mathematical goal of this lesson, their engagement in the MP, and their ability to use and continue to apply SECs?

How will I provide feedback?

How will I build a chance for students to reflect on their skills?</td><td>Intrapersonal /
Interpersonal Skills:</td></tr>
</table>

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BREAKING DOWN THE PROCESS

Successful lesson planning begins with purposeful preplanning. When developing holistic lessons that emphasize social, emotional, and cognitive learning, it is important to

1. Begin with the math content standards you will address.
2. Connect this with the mathematical practice outlined.

3. Determine the social-emotional competencies that naturally align.
4. Consider what is developmentally appropriate for the age group one is teaching.
5. Deliver the lesson and provide reflection to solidify learning by discussing the social-emotional skills used to meet the math components and looping around the lesson for reflection.

Beginning With Mathematical Content and Practice Standards

Regardless of location, today's modern mathematical standards in every state and province aim to develop mathematical concepts and skills more deeply and to engage learners more fully in thinking and doing mathematics than previous standards had done. All standards also carry with them some form of standards for mathematical practice. These are sometimes referred to as math practices, math processes, or process standards, and they apply broadly to K–12 students and describe the practices, habits, and expertise that characterize proficient mathematicians that we strive to develop in all students. They describe ways in which developing students can engage with mathematics in an increasingly more sophisticated manner as they mature, and their mathematical expertise grows throughout their education.

The first step of lesson planning is to ask,

- **What is the mathematical goal of the lesson?**
- **Which mathematical practice enhances understanding of this content standard?**

Each of this book's chapters begins by describing the overarching mathematical goal of the lesson and the corresponding math, followed by determining what mathematical practices stand out and/or what you want to emphasize. While there are opportunities to focus on several mathematical practices, being intentional about one practice supports the development of other mathematical practices because they are often intertwined with each other. Being intentional means planning for students to be engaged in mathematics in a specific way.

As you engage in the lesson planning process, this section will feel familiar and comfortable as this is how we have been trained to approach planning with a keen focus on the math content.

Elevating the Inherent Social-Emotional Competencies

Next, you will add to the traditional lesson plan by bringing the implicit intrapersonal and interpersonal skills to the forefront. Recall that in their simplest form, intrapersonal skills are knowing and regulating oneself, and interpersonal skills facilitate interaction with others (Glowiak & Mayfield, 2016). Remember, the addition of intrapersonal and interpersonal skills is not a change to the math goal, content, or standards, but a magnified lens to make the social-emotional competencies obvious. Math teaching is the foundation, and it becomes even stronger when combined with the natural social-emotional competencies that are part of the lesson.

Ask yourself,

- **What intrapersonal and interpersonal skills are inherent, are needed, and can be further developed for students while engaging in this MP?**
- **How will I explicitly address SECs?**

By consistently highlighting these skills, we help students reinforce concepts, connect cognitive and personal aspects, and encourage reflection in a seamless way. The opportunity to "name and frame" social-emotional competencies also emphasizes their interplay and importance within the lesson. Using shared language to identify these skills helps make them more intentional, familiar, and comfortable. This also gives students another way to connect with and understand the math content better. By drawing from, explicitly naming, and building on the social-emotional competencies embedded in a math lesson, we can shape, support, and complement them. We also know that some students have fears or beliefs that they are not strong or skilled in math. When leaning into and applying other skills (e.g., communicating, adaptability, perseverance) within a lesson, we can also support the student who may not feel as confident in learning math by encouraging them to implement intrapersonal and interpersonal skills to be resilient and successful with math.

> **By drawing from, explicitly naming, and building on the social-emotional competencies embedded in a math lesson, we can shape, support, and complement them.**

We begin by focusing on and determining intrapersonal skills and then identifying interpersonal skills. As you read the book, you'll find examples

that highlight a few skills within lessons. This doesn't mean other skills aren't relevant; these are just a few concrete examples of *many* possibilities. When developing your lesson, remember that it's important to focus on one or two SECs at a time and teach them explicitly so students can recognize and develop them.

Deciding on Instructional Structures and Engagement Strategies

Shifting toward planning, we ask ourselves, **"With an eye on our math goal, how will I support social-emotional development as I engage learners in this math practice? What structures, strategies, methods, and/or tools can I use?"**

After determining the key elements of the lesson through a holistic view where we begin with the math, and supporting the social-emotional competencies, we can consider how to engage students in the learning by using specific instructional strategies.

Assessing Progress Toward Mathematical Content, Practice, and Social-Emotional Goals

As we move into assessment, ask yourself, **"How will I assess students' progress toward the mathematics goal of this lesson, their engagement in the mathematical practice standard, and their ability to use and continue to apply social-emotional competencies? How will I provide feedback? How will I build a chance for students to reflect on their intrapersonal and interpersonal skills?"**

While math assessment can be either formal or informal, social-emotional competency assessment is largely informal. Due to its often undervalued status, lack of standardization, teachers' limited exposure, and the developmental and growth-based application, it is best to assess students' use of SECs informally.

Having regular, informal, individual check-ins with students regarding intrapersonal and interpersonal skills is a good way for students to practice social skills, develop rapport and connection between student and teacher, and allows for the student to authentically share their experience through effective communication. Formative assessment allows for immediate feedback throughout the lesson. As we observe student discussions or interactions, we can quickly gather insight into what students understand

and help boost correct answers or redirect and support other answers. These are actions to build into the lesson plan.

Students need feedback and an opportunity to reflect on their awareness and development in using various social-emotional competencies. When we know ourselves, we are better able to work well with and help others. Self-reflection is a practice that we should embed into student awareness, to help them understand and regulate their emotions and actions in various settings. To establish assessment criteria, identify actions we want to promote or instill on the part of the student.

> **Self-reflection is a practice that we should embed into student awareness, to help them understand and regulate their emotions and actions in various settings.**

THE LESSON PLANNING PROCESS

Figure i.3 illustrates lesson development that purposefully integrates social-emotional skill development and cycles back to ensure SEC support. The process starts with the math content, including the content standards and the standards for mathematical practice, enhances the social-emotional competencies to build the lesson plan, and then plans for assessment. The arrows on the top of the figure indicate the reflection of and tying back to previous decision points to inform planning and strengthen connections. After completion of the lesson, the arrow below illustrates the reflective process necessary to determine the effectiveness of the lesson in the given areas of math and intrapersonal and interpersonal growth.

As teachers, the adjustment to traditional teaching preparation is in the *intentional planning and acknowledgment of SECs*, naming them in the lesson, allowing time to model and discuss them, as well as reflecting on how students engaged in these actions.

As you can see, there is not a significant change in content and lesson development, but an added emphasis on drawing forth the implied skills that many teachers infer students already possess. This small adjustment in front-end planning on social-emotional competencies and enhanced lesson reflection can lend itself to greater rewards in the lesson and the classroom. This is a small shift in the traditional way of developing lessons, but it has the potential to deliver large returns in social, emotional, and cognitive learning,

Figure i.3 • *Reflective and Holistic Planning and Teaching*

and in ways that greatly benefit the learner and the teacher without being burdensome.

In the following chapters, we will focus on the process of applying this new approach to lesson planning by concentrating on the mathematical practice, the corresponding standards, and opportunities for amplifying the natural intrapersonal and interpersonal opportunities within a lesson.

Questions to Think About

1. In your own words, how do you define intrapersonal and interpersonal skills?
2. Consider lessons you already teach.
   - **a.** How do you engage learners? What interpersonal activities come to mind?
   - **b.** What reflective practices do you use? What intrapersonal activities come to mind?
3. How do you currently reinforce positive classroom behaviors?

Actions to Take

1. As you move through this book, consider some of your favorite lessons or favorite activities that you already enjoy teaching. By shifting your lens, you will likely notice in those lessons that you already have natural avenues for intrapersonal and interpersonal connections. Now consider how you might amplify or draw out those connections a bit more, by naming the skills and asking reflective questions to build a more holistic lesson that maximizes math content along with social-emotional competencies.

CHAPTER 1

BUILDING SELF-EFFICACY IN PROBLEM-SOLVING FOR MATHEMATICS AND DAILY LIFE

IN OUR DAILY LIVES, navigating decisions and solving problems is a fundamental part of being human. Children also encounter problems at every stage of their development, from learning to tie their shoes to understanding the intricacies of social interactions. As they grow, they naturally acquire tools and experiences to help them tackle these challenges. However, what if you could intentionally cultivate and hone these problem-solving skills in a way that empowers them for life?

In mathematics, you have the unique opportunity to do just that. By guiding students through the process of *making sense of problems and persevering in solving them*, you can equip them not just with mathematical strategies, but with a mindset that is invaluable beyond the classroom walls. It's about more than "just solving for x" or finding the area of a rectangle; it's about building a repertoire of strategies that students can draw on in any situation. This dual focus on gaining and retaining problem-solving techniques is what prepares students to confidently approach challenges, persist through difficulties, and succeed in making sense of problems—both in mathematics and in life. While Mathematical Practice 1 (MP1) outlines some key strategies for problem-solving in mathematics, these strategies are transferable to many nonmathematical situations.

MAKE SENSE OF PROBLEMS AND PERSEVERE IN SOLVING THEM

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems and try special cases and simpler forms of the original problem to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches. (CCSSM, 2010)

Consider the actions associated with MP1 in Table 1.1. Review the actions listed in the first column and think about how they connect to mathematical problem-solving. Then, examine the second column, where these actions are interpreted in the context of everyday problem-solving scenarios, like accidentally locking your keys in the car, or realizing you're missing ingredients for a recipe you've started.

Table 1.1 • *Actions Associated With MP1 That Can Be Applied to Everyday Life*

In Mathematics	In Everyday Life
• Interpreting and understanding the problem before attempting to solve it	• Identify and understand the problem. What is happening?

In Mathematics	In Everyday Life
• Planning a solution pathway	• Generate viable solutions. What can I do about this?
• Monitoring progress and being willing to change one's approach if needed	• Evaluate the alternatives and decide. If this is not working, what else can I try?
• Connecting current situations to previously learned concepts	• Think about what you know about the alternatives. Has this happened to me before? Has this happened to anyone else that I know?
• Continually assessing the logic and coherence of one's approach alongside the approaches of others	• Weigh the cost and benefit of the alternatives. What makes the most sense? Implement a strategy and evaluate whether it is working. What other strategies might also work?

MP1 describes a comprehensive approach to mathematical problem-solving that emphasizes understanding the problem, considering multiple strategies, analyzing representations, engaging persistently with a positive mindset, verifying solutions, and reflecting on solutions with peers. Effective problem-solving requires determining what the problem asks, what's important, the best strategy, and whether the solution is reasonable. It also involves having the mindset to handle confusion and persist until a solution is found (O'Connell & SanGiovanni, 2013). MP1 consists of two key components, each with its own distinct attributes (Table 1.2).

Table 1.2 • *Attributes Associated With MP1*

When students make sense of problems, they	When students persevere in solving problems, they
• Understand what they are being asked and consider multiple strategies and tools to analyze the problem • Analyze the meaning of the problem • Actively engage in the problem • Ask if their answers make sense • Check answers using a different method	• Show patience and a positive attitude • Continue thinking about what they can learn from the problem

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By incorporating MP1 into mathematics instruction, teachers can support students' social-emotional growth, including their **self-efficacy**, **perseverance**, and **social awareness**. As students engage with problems and work through challenges, they recognize their abilities and learn to persist. Self-efficacy, defined by Bandura (1995) as the belief in one's capacity to execute necessary behaviors, plays a key role in how students approach tasks and respond to obstacles. Teachers can enhance this process by intentionally integrating and modeling social-emotional skills throughout lessons, using strategies like discussing and reflecting on problem-solving actions. Students' **social awareness** grows as they learn to understand and appreciate diverse perspectives. By naming these skills and providing regular opportunities for reflection, teachers can create a supportive learning environment that fosters both academic and emotional development.

As with all mathematical practices, students engage differently based on age and experience. Regardless of the grade level, it is essential to plan deliberately for this practice. All lessons should actively (1) assist students in linking mathematics content with mathematics practices, (2) help students connect mathematics to their social-emotional development, and (3) reflect what is suitable for the age group they are designed for.

MERGING CONTENT STANDARDS, MATHEMATICAL PRACTICES, AND SOCIAL-EMOTIONAL COMPETENCIES

There are many decision points in planning mathematics lessons that explicitly incorporate MP1 and the relevant social-emotional competencies. In the introductory chapter, a framework was shared for building mathematics lessons with a social-emotional learning mindset. This framework does not require additional work but rather a thoughtful and intentional approach in the planning process. The framework consists of questions to prompt you to be purposeful in your lesson development, and shift thinking about the social-emotional competencies, so you are not adding "one more thing" but *the* thing that is foundational to deep and meaningful learning of mathematics.

Mathematical Content Standard and Corresponding Mathematics Goal

Start by asking, **"What is the mathematics goal of this lesson?"** For example, in kindergarten, students learn to "represent addition and subtraction with objects, fingers, mental images, drawings, sounds

(e.g., claps), acting out situations, verbal explanations, expressions, or equations" (K.OA.A.1, CCSSM, 2010). In this standard, students experience addition and subtraction in a concrete context to develop an understanding of what it means to add and subtract, as well as solve addition and subtraction scenarios using different representations. One mathematics goal for a lesson focused on this standard would be for students to engage with addition and subtraction situations using various representations (visual, verbal, symbolic, contextual, and physical) to help them make sense of the operations and how they relate. This will enable us to deepen students' understanding of the concepts of addition and subtraction and to move beyond a focus on rote calculation to grasp the underlying meaning.

At the middle school level, students learn to "solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale" (7.G.A.1, CCSSM, 2010). One goal for a lesson addressing this standard would be for students to explore the concept of scale factor as the number of times one object's measure is multiplied to obtain a similar object's measure. They then use this understanding to find the dimensions of an actual object given a drawing of the object that has been reduced or enlarged by a certain amount (also called a scale). A floor plan of a house is an example of a scale drawing. Another goal would be for students to determine the scale factor between two figures. This standard strongly emphasizes the role of visualization. The ability to visualize and then represent geometric figures on paper is crucial for making sense of and solving geometric problems.

Mathematical Practice

After examining the mathematical goals within the standards, consider how they align with the mathematical practices. Ask, **"Which mathematical practice enhances understanding of this content standard?"**

The standards emphasize using multiple representations (visual, verbal, symbolic, contextual, and physical) to help students understand concepts and solve problems. These standards encourage students not only to compute but also to analyze, identify relationships between representations, and make sense of problems. This approach fosters focus, patience, and adaptability as students plan, monitor, and, if needed, revise their strategies. These expectations align well with MP1. For instance,

- Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together,

taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (1.OA.A.2, CCSSM, 2010)

- Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. (3.MD.A.1, CCSSM, 2010)
- Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. (HS.A.REI.1, CCSSM, 2010)

These examples highlight not only the importance of problem-solving and multi-step problems but also the ability to represent problems in various ways, a crucial element of mathematical proficiency. By requiring students to use objects, drawings, and equations to solve addition and subtraction problems (1.OA.A.2), solve problems involving time (3.MD.A.1), or solve equations (HS.A.REI.1), students develop a deeper understanding of the underlying concepts. This approach supports the idea that there are often multiple pathways to a solution, encouraging students to explore different strategies and choose the most efficient one.

By encouraging students to understand a problem, devise a plan, and persist in finding a solution, these standards foster deeper mathematical understanding. Guide students in verifying their solutions by asking, "Does this make sense?" Across all grade levels, students are motivated to explore various strategies and persist through challenges.

Social-Emotional Competencies

Next ask, **"What intrapersonal and interpersonal skills are inherent, are needed, and can be further developed, while students engage in making sense of problems and persevering in solving them?"** As mentioned in the Introduction, integrating intrapersonal and interpersonal skills into lessons requires being mindful and intentional, so these skills are seen as a natural part of learning, not separate from the content. Students come with different levels of these skills, therefore it's important to explicitly teach and support them, even informally, to help students develop them fully. To accomplish this, pinpoint the intrapersonal and interpersonal skills that naturally align

with the mathematical tasks students are completing. Although many of these skills can be applied during MP1, it's important to focus on one or two at a time, teaching or emphasizing them explicitly. This approach helps students recognize when they are using these skills and encourages their ongoing development. To illustrate this, let's focus on the intertwined intrapersonal skills of **self-efficacy** and **perseverance** and the interpersonal skill of **social awareness**.

Intrapersonal Skills

As mentioned at the beginning of this chapter, **self-efficacy** is the belief in one's ability to succeed in specific situations or accomplish a task. MP1 encourages students to reflect on their problem-solving approaches and consider alternative strategies. This process of reflection and adjustment demands perseverance, as students must be willing to continue working on a problem even if their initial approach doesn't yield immediate results. This idea pairs with Carol Dweck's work, which recognizes that students with a growth mindset, who believe in their capacity to improve through effort, are more likely to **persevere** when faced with challenges. **Self-efficacy** and **perseverance** are therefore mutually reinforcing, and MP1 cultivates this mindset of nimbleness and determination in mathematical problem-solving.

Interpersonal Skills

As noted in the introductory chapter developing and strengthening **communication skills** is recommended across all MPs. In the case of MP1, making sense of problems often involves discussing mathematical ideas and strategies with others. This includes listening to others' arguments, showing an understanding and respect for their ideas, and considering the various contexts and backgrounds that shape their perspectives. To promote this, create lessons that emphasize collaboration and discourse. Doing so also supports the development of **social awareness**, which allows students to appreciate diverse ways of thinking and helps create a supportive learning environment where all ideas are valued. When students collaborate with partners or in groups, MP1 helps them develop skills like listening to others, understanding different approaches, and respecting diverse perspectives. Engaging with others' ideas might present disagreements or conflicting perspectives, and **perseverance** in this context means staying engaged in discussions, listening carefully, and being open to new ideas, even if they seem difficult at first.

Instructional Structures and Engagement Strategies

Now shift toward planning and ask, **"With an eye on our mathematics goal, how will I support social-emotional development as I engage learners in MP1: Make sense of problems and persevere in solving them? What structures, strategies, methods, and/or tools can I use?"**

There are two important aspects of this MP to consider as you plan to implement it in the classroom. First, what approach to problem-solving are you using and how can you center the reasoning processes around student thinking? Second, how do you build self-efficacy in a way that supports perseverance in problem-solving? The teacher and student activities that follow speak to these considerations and demonstrate how to address these competencies explicitly.

Identifying a High-Quality Task

High-quality mathematics tasks have two critical components: the what and the how. Traditional word problems are simple and have one correct answer. Students are often taught to solve them by finding keywords and numbers and then calculating the answer; the perceived goal for the students becomes simply to arrive at the correct answer. This approach—sometimes called teaching *for* problem-solving—deprioritizes the thinking process. Conversely, a high-quality mathematics task is open-ended and/or can be solved in more than one way. High-quality tasks generate discussion, questioning, and critical thinking. They allow students to understand the context, explore various methods for solving tasks, and eventually decide on an efficient strategy to solve the problem. This approach is thought of as teaching *through* problem-solving and is especially important to building conceptual understanding. To support the selection of high-quality tasks, SanGiovanni (2017) created an Identifying High-Quality Tasks rating tool (Figure 1.1) that can be used to evaluate the quality and effectiveness of mathematical tasks.

Figure 1.1 • *Identifying a High-Quality Task Rating Tool*

Identifying a High-Quality Task

The purpose of the task is to teach or assess:

☐ Conceptual understanding ☐ Procedural skill or fluency ☐ Application

Rating:

2 – Meets the Characteristic

1 – Partially Meets the Characteristic

0 – Does Not Meet the Characteristic

The mathematics task:	**Rating**
Aligns to the content standards	
Promotes deep understanding of mathematics concepts rather than procedural knowledge	
Is relevant and engaging for students	
Has multiple entry points (self-efficacy)	
Encourages students to make sense of problems and persevere in solving them (perseverance)	
Encourages students to be actively engaged in discussions (social awareness)	
Allows for different strategies for finding solutions (adaptability)	

Source: From SanGiovanni (2017, p. 2). Reprinted with permission.

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John SanGiovanni also developed a corresponding rubric that describes the way a task may or may not meet the intended characteristic as summarized in Figure 1.2. The rubric helps you evaluate the following criteria on a scale of fully meets, partially meets, and does not meet.

Figure 1.2 • *Task Characteristic Rating Rubric*

The task aligns to the mathematics standards I am teaching. Tasks must be worthwhile and aligned to the skills and concepts in our curriculcum.
The task encourages my students to use representations. Representations help students make sense of and communicate mathematical ideas.
The task provides my students with an opportunity for communicating their reasoning. Students can communicate their reasoning with models or pictures, numbers, and words.
The task has multiple entry points. Students can approach a problem from various perspectives, using diverse strategies and/or representations.
The task allows for different strategies for finding solutions. Students can solve a problem in various ways.
The task makes connections between mathematical concepts. Mathematics ideas are related. We can also connect them to representations, procedures, and applications.
The task prompts cognitive effort. High quality tasks should generate some amount of struggle. Students should have to make sense of the prompt, the problem, or the representation.
Tasks are problem based, authentic, or interesting. High-quality tasks are problem based. They can reflect real-world, authentic applications of mathematics. They should have interesting or noval prompts that grab students' attention.

You can download the full rubric at https://companion.corwin.com/courses/wellroundedmathstudent.

Notice within the descriptions of the characteristics are connections to social-emotional learning saying things, such as "High quality tasks should generate some amount of struggle, " Students make sense of and communicate mathematical ideas," and "Students can approach a problem from various perspectives."

Competency Builder 1.1

Teacher Task Analysis

Use the Identifying a High-Quality Task Rating Tool (Figure 1.1) and the corresponding Task Characteristic Rating Rubric (Figure 1.2) to analyze the tasks you have selected for your next lesson. Next, consider modifications that

could improve the quality, accessibility, and rigor of each task. Then, review sources with examples of high-quality tasks. Look for opportunities to replace or enhance tasks in your existing materials with those that foster greater student engagement and deeper thinking.

When you use the Identifying a High-Quality Task Rating Tool and the Task Characteristic Rating Rubric, the social-emotional competencies are more explicit. **Self-efficacy** grows through tasks that offer appropriate challenges, and social awareness is enhanced through collaboration.

Some Sources for High-Quality Tasks

Illustrative Mathematics (https://tasks.illustrativemathematics.org/content-standards)

Youcubed (https://www.youcubed.org/tasks/)

Illuminations (https://illuminations.nctm.org)

3 Act Math Tasks (https://tapintoteenminds.com/3act-math/)

Rich Math Tasks (https://us.corwin.com/landing-pages/rich-math-tasks)

Using Self-Efficacy Starters

As students tackle difficult problems, you can attend to the development of their self-efficacy through several concrete skill building activities so that they can build perseverance. The following two activities illustrate each approach, and by doing both activities with students, you are doing this work explicitly, in small doses, applied consistently over time. You are giving students opportunities to understand perseverance and act themselves into the belief that they are capable of doing mathematics.

Competency Builder 1.2

I Used to . . . But Now . . .

Begin by defining self-efficacy and persistence with your students (or reviewing the definition if it has already been introduced). Share that self-efficacy is believing you can do hard things, and persistence is continuing to do something even when it is hard. Ultimately, there are two parts, believing and doing, but not necessarily in that order. Explain that it is normal to think that something

(Continued)

(Continued)

might be hard, and to question your abilities, but you are constantly growing, and you will know more and be able to do more tomorrow than you can today if you make the effort to learn. Over time, that effort adds up to a lot of learning and something that seems "too hard" now will not be hard in the future.

Ask students to name something that seemed hard to learn that they can do now with ease. Look outside the mathematics classroom for examples, such as tying shoelaces, riding a bike, running a mile, or beating a certain level of a video game. Throughout the year, students reflect on their learning and growth and respond to the prompt, "I used to think . . ., but now I . . . ." For example, "I used to think subtraction was hard, but now I know how to think about addition to help me solve subtraction problems" or "I used to think solving two-step equations was hard, but now I know how to break them down into manageable steps and solve them with confidence."

Competency Builder 1.3

Reflecting on Quotes

Share a quote and ask students to think about what the quote means and then share with a partner. Ask them to think about how it relates to self-efficacy and persistence (believing you can do hard things and continuing to try) and discuss as a class. Finally, ask them to think about how this applies to learning math. Here are some quotes to get you started.

- You are off to great places, today is your day. Your mountain is waiting so get on your way. —Dr. Seuss
- It doesn't matter how slowly you go if you don't stop. —Confucius
- You must expect great things of yourself before you can do them. —Michael Jordan
- Hard days are the best because that's when champions are made. —Gabby Douglas
- There will be obstacles. There will be doubters. There will be mistakes. But with hard work . . . there are no limits. —Michael Phelps
- If plan A isn't working, I have plan B, plan C, and even plan D. —Serena Williams
- You have to be able to accept failure to get better. —LeBron James
- Do not go where the path may lead, go instead where there is no path and leave a trail. —Ralph Waldo Emerson

Seeing Mistakes as Opportunities to Learn

Encourage students to recognize and reflect on their mistakes, as this helps them see how much they've learned and builds perseverance through the "power of yet" (Dweck, 2006). This mindset transforms challenges into growth opportunities, encouraging students to keep trying and believe in their ability to succeed with effort.

Ask students,

- Are you really learning if you are doing something you already know how to do?
- How do you know when you are learning something new?
- Yes! It is hard! You will do it wrong many times before you get it right. That is why mistakes are so important to learning!
- You may not have the answer *yet*, but I know you will keep trying!

Mistakes also help us target specific areas to focus on and practice and identify challenges in the first step toward setting goals and learning new things.

Competency Builder 1.4

Learning From Mistakes

Have students engage in a reflection activity where they identify a mistake they made (personal or academic) and either explain or draw the mistake. Then, have them explain or draw what they learned from that mistake. Students can keep this in a journal or a log (Table 1.3).

Table 1.3 • *Mistakes That Become Learning Log*

Mistake	Lesson Learned

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Embed these strategies into problem-solving tasks that students encounter. Brief interventions that target students' mindset toward mistakes and their ability to learn new things have been shown to impact perseverance (Marshall, 2017).

Providing Constructive Feedback

Providing constructive feedback encourages students to persevere by acknowledging their efforts in tackling difficult problems and guiding them toward strategies that help them overcome obstacles. This improves their mathematics skills and social-emotional competencies. There has been a movement to provide better feedback, but what we are working on is getting students to respond appropriately to the feedback.

Competency Builder 1.5

Analyzing Constructive Feedback

To build self-efficacy and social awareness, create structured opportunities for students to be mindful of the feedback they receive and to respond constructively. Provide time, space, and a log (Table 1.4) for recording feedback and their emotional and behavioral responses. Encourage students to note physical sensations and emotions triggered by feedback and to observe if they react defensively or with curiosity. Reflecting on feedback helps students understand their reactions, especially if they have challenging experiences in subjects like math, and fosters clarity and openness to learning, showing growth over time.

Table 1.4 • *Student Log to Record Response to Feedback*

Feedback	How I Felt	How I Acted	Benefits

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Connecting to Children's Literature

Children's literature offers students an opportunity to exercise their problem-solving skills as they relate to characters in stories and engage with the challenges they face. Many children's books offer a mathematics context.

Competency Builder 1.6

Counting on Frank

Consider the book *Counting on Frank* by Rod Clements. It follows a dog named Frank and his imaginative owner as they present intriguing mathematical claims that involve counting, measuring, estimating, and calculating.

After reading aloud the book, ask students to share all the ways the boy in the story "uses his brain." He uses it to ask questions, create problems, collect information, make calculations, and draw conclusions. Next, have students discuss with a partner how using the mathematical practices of making sense of problems and persevering in solving them enabled the boy to build self-efficacy. Go back to the page where he calculates that 24 Franks could fit into his bedroom. Tell the students they will now use their brains to determine how many Franks could fit into the classroom. To make sense of and solve this problem, students will need to ask for more information. For example, "How big is Frank?" Frank weighs about 100 pounds and fits into a large dog crate. They will need to gather more information (e.g., the dimensions of a large dog crate and the dimensions of the classroom). Solutions will vary depending on how students interpret and approach the problem. As they share, encourage them to reflect on the process they used and what they might do differently next time.

Assessing Interpersonal and Intrapersonal Skills

Last, ask, **"How will I assess students' progress toward the mathematics goal of this lesson, their engagement in the mathematical practice standard, and their ability to use and continue to develop social-emotional competencies? How will I provide feedback? How will I build in an opportunity for students to reflect on the development of the social-emotional competencies?"**

Recall the attributes in Table 1.2 at the beginning of the chapter. When observing student discussions, look for evidence of students making sense of problems and persevering in solving them. Use a whole class or individual observation tool (Tables 1.5 and 1.6) to document their development in mathematics content knowledge, engagement in MP1, and intrapersonal skills. These same prompts can be given to students to help them reflect on their own learning.

- How did you demonstrate **perseverance** today? Provide an example.
- How did you practice **self-efficacy** in today's mathematics activities? Provide an example.
- Share two examples of your **social awareness**. Were these interactions positive or negative? How could you improve?

Encouraging self-reflection helps students connect mathematical practices with social-emotional skills, fostering better self-awareness, collaboration, and emotional regulation. Use Table 1.7 to support self-assessment of these skills.

Table 1.5 • *Whole Class Observation Tool*

Name	Mathematics Goal	Engagement in Practice Standard ***Make sense of problems***	Engagement in Practice Standard ***Persevere***	Intrapersonal Competency ***Self-efficacy***	Interpersonal Competency ***Communication skills***

Note: *Progress will be marked using 0–No evidence, 1–Little evidence, 2–Adequate evidence*

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Table 1.6 • *Individual Student Observation Tool*

Name of student:			
Mathematics Goal	**No Evidence**	**Some Evidence**	**Adequate Evidence**
Engagement in the Mathematical Practice	**No Evidence**	**Some Evidence**	**Adequate Evidence**
Sense-making			
Perseverance			
Social-Emotional Competencies	**No Evidence**	**Some Evidence**	**Adequate Evidence**
Self-efficacy			
Communication			

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Table 1.7 • *Self-Assessment Checklist*

Social-Emotional Competency	Not Sure	Not Yet	Getting There	Got It
Sense-making				
Perseverance				
Self-efficacy				
Communication				
Other skills used:				

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LOOKING AT EXEMPLARS IN ACTION

Now that the merging of content standards, mathematical practice standards, and social-emotional competencies has been explored, let's look more closely at an elementary and a secondary example, using the standards and competencies focused on in this chapter.

Ms. Patel and Their Kindergarten Class

Ms. Patel's kindergarten classroom is focused on the mathematics standard "represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations" (K.OA.A.1, CCSSM, 2010). As you read the vignette from this kindergarten classroom, identify how the teacher engages the students in MP1: Make sense of problems and persevere in solving them while helping them develop self-efficacy, perseverance, and social awareness. Think about ways you do this in your own classroom.

Ms. Patel gathered the kindergarten children on the carpet, the center of which contained a basket of colorful counters. Ms. Patel begins, "Today, we are going to learn different ways to add and subtract using these counters." As they hold up a red counter and a yellow counter, they ask, "Who can tell me what happens when we put these two counters together?"

Several children are excited to answer Ms. Patel's question. Miguel responds, "They make 2!"

"Yes Miguel!" Ms. Patel says with a smile. "Now let's see if we can find different ways to make 4 using our counters."

Ms. Patel asks two other students, Addison and Brennan, to demonstrate making 4.

Addison chooses 2 red counters and 2 yellow counters and places them in a row. "2 and 2 make 4!" Addison says excitedly.

Brennan places 1 red counter and 3 yellow counters on the carpet. "1 and 3 make 4 too!" she adds.

Ms. Patel then asks the students to work in pairs and explore making 4 with their own counters. Samantha and Miguel sit together, taking turns creating different combinations. Miguel says, "Look, we can make 4 this way too!" as he arranges the counters in a new pattern.

Ms. Patel walks about the room, kneeling to talk with each of the children as they work. They listen to their conversations, asking questions to guide their thinking. "Good job of finding 4. Now, can you show me *another* way to make 4?" they ask one group.

When students encounter challenges, Ms. Patel encourages them to persevere. "It's okay if you are stuck for a moment. I like how you keep trying different things, that's showing perseverance. Remember when we read the book, *The Little Engine That Could*?"

Ferdie enthusiastically says, "That was my favorite story!" Ms. Patel asks Ferdie why that one was his favorite. "The little engine kept trying and kept saying 'I think I can, I think I can, I think I can.' He kept trying to get over the mountain," replies Ferdie.

"That's right," says Ms. Patel. "Keep trying and believing you can solve it. Let me know if you'd like to think through it together," they say.

As a closing to the lesson, Ms. Patel gathers the children back on the carpet. "Today, we learned that there are many ways to add and subtract," they say. "You can use counters, your fingers, or even your imagination! Remember, it is important to make sense of problems and keep trying and believing in yourself, just like you did today." ●

Ms. Patel used hands-on activities with colored counters to support students' understanding of addition and subtraction. By asking questions like "what happens when . . ." they encouraged students to explore different methods and explain their thinking to each other, fostering both self-efficacy and interpersonal skills. As students encountered challenges, they reinforced perseverance by acknowledging their efforts and motivating them to keep

trying. Through structured activities and social interactions, students learned to collaborate, share ideas, and adjust to peers' perspectives, enhancing their social awareness. Ms. Patel's approach nurtured self-efficacy, perseverance, and social awareness in their students.

Mr. Nguyen and His Seventh-Grade Class

Mr. Nguyen is emphasizing the mathematics standard "solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale" (7.G.A.1, CCSSM, 2010). As you read the classroom vignette, identify how the teacher engages the students MP1: Make sense of problems and persevere in solving them while helping them develop self-efficacy, perseverance, social awareness, and adaptability. Think about ways you do this in your own classroom.

Mr. Nguyen is ready to introduce the seventh-grade lesson on scale drawings. He begins the lesson by discussing what scale drawings are and why they are used in real life. He asks the class where they have seen scale drawings. Renee says enthusiastically, "Maps!" Latisha responds, "And floor plans."

Mr. Nguyen projects onto the whiteboard a scale drawing of a local park in which 1 inch represents 50 feet and explains, "Today, we are going to solve problems involving scale drawings of geometric figures."

Mr. Nguyen calls on two students, Matthew and Amayah. He points to the distance on the scale drawing and asks, "According to the scale, how long is this pathway in the actual park?" Matthew and Amayah look at the scale carefully, then calculate the actual length using the scale factor. "It's 250 feet long," Amayah says.

Next, Mr. Nguyen provides students with a floor plan and asks that pairs of students choose a specific feature (e.g., length of a room, width of the hallway, etc.) and calculate its actual length using the scale.

Mr. Nguyen circulates around the room, listening to the students' conversations. He hears that some students are struggling to understand the concept of

scale and how to apply it. He sits down with the students and asks, "Can you explain to me how you are using scale factor to find this length?"

The students look confused, so Mr. Nguyen encourages them to persevere. "It is okay to find it challenging, and yet, I like how you keep working to solve the problem. That's showing perseverance. Let's break it down step-by-step," he assures them.

When Mr. Nguyen is confident that students are comfortable with using the scale factor to find the actual length, he moves on. He explains to the students that they will now practice reproducing a scale drawing at a different scale. He provides the class with a new scale factor and rulers and asks students to recreate the drawing using the new scale factor. He encourages the students to use rulers and to be precise in their measurements.

Some students immediately start measuring and drawing, while others hesitate. Sitting with one group, he asks, "Could you explain how you're using the scale factor to redraw the floor plan?"

With some guidance, the students begin to understand. They erased their initial attempts and started again, this time applying the scale factor correctly. "Look, now it's beginning to look like the original drawing!" exclaims Sarah.

As the class ends, Mr. Nguyen calls the students back together. He asks some students to share their solutions and strategies with the class.

Valerie says, "I looked at the scale, which is 1 inch equals 4 feet. Then, I measured the length of the bedroom on the floor plan. It was 3 inches, so I know that the length of the bedroom is 12 feet."

Heather replies, "I changed the scale factor to 1 inch equals 6 feet, so that meant I needed to draw the bedroom length 2 inches long."

Mr. Nguyen then asks his students to talk about any challenges they faced and how they overcame them. Amayah says, "My group had trouble with the

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scale factor and understanding how to draw the floor plan. So, we looked at the original park drawing first. We saw that 1 inch was equal to 50 feet and multiplied to find that 5 inches would be 250 feet."

Mr. Nguyen concludes the lesson saying, "Today, we learned how to solve problems involving scale drawings. Remember, it is important to make sense of the problem and persevere in finding a solution, just like we did today." ●

Mr. Nguyen introduced scale drawings through real-life examples like maps and floor plans, allowing students to calculate actual lengths and recreate drawings at different scales. This hands-on approach engaged students in problem-solving as they computed and reproduced scale drawings. Mr. Nguyen fostered self-efficacy by encouraging students to believe in their ability to apply the concept and persevere as they tackled challenges with the scale factor. By working in pairs, students practiced social awareness, adjusting their approaches and sharing strategies. This vignette highlights the importance of integrating self-efficacy, perseverance, and social awareness into mathematics lessons.

Reflection

To further enrich and reinforce the lesson, incorporate reflection to deepen learning. Reflective practice is crucial for the effectiveness of any lesson, as it aids in the growth and enhancement of both the teacher and the learner. It involves the teacher and students evaluating the lesson's effectiveness and identifying areas for future improvement. This practice naturally fosters self-awareness and the synthesis of learning, engaging in higher-order thinking skills.

When reviewing the lesson, it's important to assess students' grasp of their mathematics competencies and understanding of intrapersonal and interpersonal skills. Engaging in a class discussion can be highly beneficial. There's always room for improvement, and we hope to identify and discuss positive aspects while also considering ways to enhance the learning experience.

SUMMARY

In this chapter, we examined how we can leverage MP1 and draw on the social-emotional competencies of **self-efficacy**, **perseverance**, and

social awareness to enhance classroom lessons. MP1 emphasizes making sense of problems and persevering in them. In both classroom narratives, the teachers deliberately plan and prepare to integrate content standards, practice standards, and intrapersonal and interpersonal learning competencies. They make thoughtful and purposeful pedagogical choices, employing a variety of instructional tools and methods. They highlight the integration and value of intrapersonal and interpersonal skills in their preparation. They also identify and create suitable opportunities to support student interaction, making these approaches explicit for students.

The practice of "naming and framing" intrapersonal and interpersonal skills significantly emphasizes their interplay and importance. When consistently integrated into mathematics lessons, this approach becomes a natural part of the learning process, reinforcing concepts and encouraging personal and social reflection without adding burden to the teacher or the student. Some students may have fears or beliefs about their mathematics abilities. By highlighting other skills, such as communication, adaptability, and perseverance, within the lesson, you can support students who may not feel as confident in mathematics by showing them they can use these skills to become resilient and successful.

Questions to Think About

1. How can you, as a teacher of mathematics, integrate social-emotional competencies into your lesson planning and classroom routines to support students in making sense of problems and persevering in solving them?
2. Consider a specific mathematics lesson that incorporates MP1. Which intrapersonal or interpersonal skill would most enhance the lesson?
3. How do you ensure active integration of MP1 and social-emotional competencies into your mathematics lessons?
4. Reflect on a recent mathematics lesson you taught. How could you have integrated self-efficacy, perseverance, and social awareness during the preparation and planning to positively impact your teaching and student learning?
5. What are other intrapersonal and interpersonal skills you could incorporate in this mathematics practice? What are other ways we can naturally amplify social-emotional competencies within the lesson?

Actions to Take

1. Be intentional about reflecting with your students about the skills they developed throughout the lesson. Pose the following questions to guide the discussion:
   - What mathematics skills did we develop today?
   - What other skills did you/we use to practice or learn this concept?
   - What is the value of learning this concept individually/together?
   - What social-emotional competencies did you apply in this lesson to strengthen students' understanding?
2. Reflect on how you implemented MP1 in the classroom.
   - What strategies did students use?
   - What challenges did students face?
   - How did students persevere through those challenges?
3. Discuss with your colleagues how you merge content, practices, and social-emotional competencies in your mathematics classroom, specifically related to MP1.