



Considerations for K–12 Mathematics Education

Social Emotional Support:

Attend to the needs of students to build a culture for learning.

- Build relationships between teachers and students as well as among peers so that students feel safe, engage fully, and work hard.
- Create communities of learners within classrooms who trust, believe and rely upon one another.
- Ensure that students know that caring adults believe in them and that their ability and competence will grow with their effort.

Relevance:

Engage in mathematics that has meaning for and connects to students' lives

- Offer problem solving opportunities that help students make meaning of their world.
- Focus on learning that endures, that will provide foundations for future understanding and skills.
- Support students' on grade level learning with on time supports for unfinished learning.
- [Kick-start fall planning: 4 principles for instructional leaders.](#)

Integration of Mathematics Standards:

Plan for curriculum and instruction thoughtfully.

- Emphasize the learning *process* over *products* by encouraging students to share their thinking.
- Consider how multiple math standards can support each other in developing conceptual understanding.
- [2020–21 Priority Instructional Content in English Language Arts/Literacy and Mathematics Develop Connections between Content.](#)

Instructional Practices:

Commit to equitable mathematics instruction for all students regardless of the school structure

- Provide students individually and collectively with opportunities and supports to engage with mathematical ideas and relationships.
- Facilitate meaningful mathematical conversations to develop shared understanding.
- Implement tasks that promote reasoning and problem solving.
- Differentiate instruction according to student needs.
- [Moving Forward: Mathematics Learning in the Era of COVID-19](#)

Assessment:

Monitor student growth and development regularly.

- Key in on formative assessment to determine how to bring students into grade-level instruction. How to support students as they work.
- Develop student capacity for self-assessment.
- Use open ended tasks to elicit student thinking.

Special Considerations for Mathematics:

" Focus on the depth of instruction, not on the pace. ... [A]void the temptation to rush to cover all of the 'gaps' in learning from the last school year. The pace required to cover all of this content will mean rushing ahead of many students, leaving them abandoned and discouraged. It will also feed students a steady diet of curricular junk food: shallow engagement with the content, low standards for understanding, and low cognitive demand—all bad learning habits to acquire. Moreover, at a time when social emotional wellbeing, agency, and engagement are more important than ever, instructional haste may eclipse the patient work of building academic character and motivation."

– [Council of the Great City Schools](#)

Standards for Mathematical Practice	Effective Teaching Practices
The Effective Teaching Practices represent a core set essential teaching skills necessary to promote deep learning of mathematics through the Standards for Mathematical Practice.	
<ul style="list-style-type: none">• Make sense of problems and persevere in solving them.• Reason abstractly and quantitatively.• Construct viable arguments and critique the reasoning of others.• Model with mathematics.• Use appropriate tools strategically.• Attend to precision.• Look for and make use of structure.• Look for and express regularity in repeated reasoning.	<ul style="list-style-type: none">• Establish mathematics goals for focus learning.• Implement tasks that promote reasoning and problem solving.• Use and connect mathematical representations.• Facilitate meaningful mathematical discourse.• Pose purposeful questions.• Build procedural fluency from conceptual understanding.• Support productive struggle in learning mathematics.• Elicit and use evidence of student thinking.