

Math Strategies for Grades K-3

Vol 1 Issue 7
September 2022

Instructional Strategies

Represent and solve problems involving addition and subtraction within 100.

Provide opportunities to solve problems where key words are contrary to such thinking. (e.g., the use of the word “left” does not indicate subtraction as a solution method: Debbie took the eight stickers she no longer wanted and gave them to Anna. Now Debbie has 11 stickers left. How many stickers did Debbie have to begin with?)

Encourage students to look for patterns. (e.g., they adopt mental math strategies based on patterns of making ten, fact families, or doubles)

Help students see that numbers can be added in many different ways. (e.g., when adding $29 + 43$, they can add them by saying $20 + 40 = 60$ and $9 + 3 = 12$ so $60 + 12 = 72$). [Reference](#)

Assessment Strategies

Check ups

Check-ups are short, individual assessment instruments and tend to be less complex and more skill-oriented than questions on quizzes and summative assessments. These questions provide insight into student understanding of the baseline mathematical concepts and skills of the instruction. Student responses to check-ups can help teachers plan further instruction. The [Standards Aligned System](#) provides resources for grade level check-ups.



Standards of Mathematical Practices

Look for and Make use of Structure

Look for patterns. For instance, they adopt mental math strategies based on patterns (making ten, fact families, doubles). Look closely to discover a pattern or structure. Use properties of operations as strategies to multiply and divide (commutative and distributive properties). [Standards for Mathematical Practice Grade Level Emphasis*](#)

Classroom / Time Management Strategies

Support Asking for Help

Create an environment of trust by providing consistency and predictability in daily routines, activities, and staff. Help students develop understanding of moral and ethical dilemmas. Encourage students to turn to peers for assistance. Offer assistance in helping a student complete a task after multiple unsuccessful attempts.

[Pennsylvania Early Childhood Education Standards for Second Grade](#)

The resources listed are provided as options and examples.

Pennsylvania does not require, recommend, or endorse any specific program or product. All curricular and instructional decisions are made at the local level.