

Math Strategies for Grades K-3

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Instructional Strategies

Make it Hands-On

Elementary math can be difficult because it involves learning new, abstract concepts that can be tricky for children to visualize. Try to imagine what it's like for a five-year-old to see an addition problem for the very first time. Since it's a totally new concept to them, it can be hard for them to visualize a scenario where one quantity is added to another. Manipulatives are hands-on tools that make math a lot easier for young children to understand. Tools like Legos, clay, and wooden blocks can all be used in the classroom to demonstrate how math ideas work. For example, Legos are a great way to demonstrate number building, operations, fractions, sorting, patterns, 3D shapes, and more.

Assessment Strategies

Math Maze to Start Class

Start each class with formative assessments in the form of math mazes. Students pick up their maze and start working on it when they enter class. The daily maze has problems related to learning. Watching students work through their daily maze gives a teacher information about where the whole class and each individual student is with the topic. Teachers should check in with every student and provide feedback. If they have no errors, students may be rewarded and move forward with the lesson. When there's an error, either ask students a probing question, or give them a quick pointer. This provides a formative assessment to every student every day. It's a great way to start class and ensure that students get feedback.



Standards of Mathematical Practices

Model with Mathematics

- Experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart, list, or graph, creating equations, etc.
- Create opportunities to connect the different representations and explain the connections.
- Evaluate their results in the context of the situation and reflect on whether the results make sense.

[Standards for Mathematical Practice Grade Level Emphasis*](#)

Classroom / Time Management Strategies

Resiliency

- Foster a positive environment where students learn from successful and unsuccessful attempts.
- Model positive coping strategies.
- Talk through an adverse situation with students.
- Acknowledge students' demonstration of efforts to persevere during difficult or frustrating times

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

The resources listed are provided as options and examples.

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