

# Math Strategies for Grades K-3

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## Instructional Strategies

### Peer Interaction

Encourage peer interaction by pairing students to work together and have discussions about math. For example, students might do independent practice and then meet up with a partner to share what they learned.

You can use flexible grouping to match students, like pairing students with similar math abilities or by different strengths. Peer discussions can develop students' math language and vocabulary, as well as helping students express their reasoning. This strategy can also help students become more aware of problem-solving processes — both how they solved the problem and how others solved it.

Students who struggle with math may find this routine helpful because their peers may explain a concept in a way they better understand. All students can benefit from seeing that the same problem can be solved in multiple ways.

## Assessment Strategies

### Matching Activities

A fun way to assess student knowledge of vocabulary or facts is to match words with their definitions or group facts into given categories. Provide each student or pair of students with a set of cards. Be sure that there is only one word or one definition on each card.

Students can also play a game of concentration with these cards. All cards are turned over so that the words and definitions are hidden. Students play this game with a partner. One student turns over two cards. Cards that do not match are turned back over and the other student takes a turn at finding a match. The activity continues until all words and definitions have been found.

Another way to use the matching activity is to put individual words onto each card and then have the students group the cards.



## Standards of Mathematical Practices

### Construct Viable Arguments and Critique the Reasoning of Others

- Construct arguments using concrete referents, such as objects, pictures, drawings, and actions.
- Practice their mathematical communication skills as they participate in mathematical discussions involving questions like “How did you get that?” “Explain your thinking,” and “Why is that true?”
- Explain their own thinking, but listen to others' explanations.
- Decide if the explanations make sense and ask questions.

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

## Classroom / Time Management Strategies

### Explain the impact of Communication on Interactions with Others

- Communicate using details related to the topic being discussed, including topics of personal interest and special events.
- Respond to conversation adding further detail, or contribute further to the topic being discussed.
- Pose questions related to the topic being discussed.
- Link conversation to prior knowledge and past learning experiences.
- Respond to questions posed by adults and peers using detail.
- Recognize conversational cues. (e.g., wait, turn-taking)

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

The resources listed are provided as options and examples.

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