

# Math Strategies for Grades K-3

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## Instructional Strategies

### Connecting Geometry to the Space Around Us

To support the development of shape awareness and identification, ask students to identify and label shapes around the classroom or in nature. Create a “shape hunt” around the room in which students find a certain number of basic shapes. Play flashcard games with students. Show the students an image of a simple shape, and then cover it and ask them to describe what they saw. Play a memory game with students. Add multiple shapes to the cards and have students find the matching card from the deck. Students should be able to reproduce the shapes using blocks, rubber bands, crayons, or even pipe cleaners. All of these activities become more challenging as student knowledge increases.

## Assessment Strategies

### Assessing Geometric Relationships

Play I Spy with a group of students using content specific words and phrases such as next to, beneath, on top of, along with a description of the object. Increase detailed clues as the game progresses. Allow students to take the role of the teacher in the game I Spy, using content vocabulary. Engage and observe students in a map description (e.g., playground, classroom, or community). Finally, have students create a familiar map of an area and have them provide descriptions of key areas.



## Standards of Mathematical Practices

### Use Appropriate Tools Strategically

Consider the available tools (including estimation) when solving a mathematical problem and decide what tools are appropriate. Use graph paper to find all the possible rectangles that have a given perimeter. Compile the possibilities into an organized list or a table and determine whether they have all the possible rectangles.

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

## Classroom / Time Management Strategies

### Social Identity

Discuss expectations of unfamiliar or different environments (e.g., library, restroom, cafeteria, classroom, outside) or of a new situation (e.g., field trip, classroom visitor). Model appropriate behavior. Provide consistent rules and expectations in classroom environment. Provide literacy experiences related to socially acceptable ways to behave in different places. Encourage families to provide consistent rules and expectations in home environment.

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

The resources listed are provided as options and examples.

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