

Is Your Classroom a Creative Math Environment?

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Classroom Components	Teacher Actions
Physical environment	<ul style="list-style-type: none">• Thoughtfully include a variety of manipulatives, blocks, natural materials, and digital media for free exploration.
Role of the teacher	<ul style="list-style-type: none">• Develop a supportive environment for playful learning, experimentation, and risk taking.• Closely observe children's play and exploration, using formative assessments.• Ask thoughtful questions and provide provocations to expand and clarify children's thinking.
Relationships among peers	<ul style="list-style-type: none">• Provide opportunities for collaborative experiences.• Demonstrate respect for children's work.• Promote opportunities for play and exploration.
Structure of mathematics lessons and experiences	<ul style="list-style-type: none">• Provide opportunities for individual and group experiences.• Maintain flexible scheduling for lesson lengths based on children's responses and interests.• Provide for repeated mathematics experiences.• Promote opportunities for children to make their thinking visible (using concrete manipulatives, math journals, digital photography, and so on).• Extend familiar lessons and concepts to build proficiency and flexibility of student understanding.

Teacher as Guide, Facilitator, and Provocateur

Questions to Promote Inquiry and Exploration

- How do you know this shape is a triangle?
- Is that shape the same as this one? How are they the same/different?
- What shape could you make if you combined these shapes together?
- Have you ever seen a shape like this before? Where?
- Would your shape roll? Bounce? Stack on top of others?
- What would we need to do to change this square into a rectangle? Circle into an oval?
- How can you use the scissors to cut this square into a triangle? What will you need to cut away?

