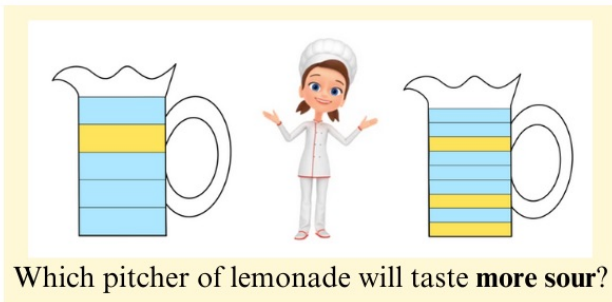


Hello and Thank you

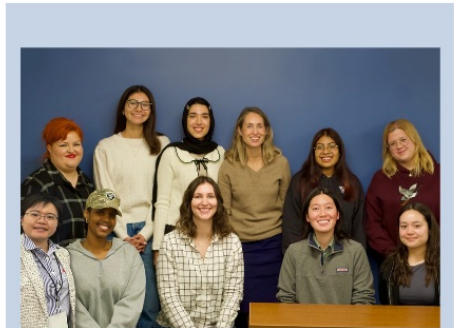
Thank you for participating and collaborating in our recent Math Study! Our goal in sending this newsletter is to ensure that our work reaches our community. We are sharing some of the findings from our recent studies and evidence-based tips that we hope will be useful in your classroom and even at home for parents!

What we learned from you!

You helped us learn how to improve teaching for some challenging concepts: Ratio and Proportion. These can be difficult because they require thinking about numbers in a new way - each number isn't just alone, you have to think about how numbers are related to each other. In our previous studies, we found that kids differ in how they pay attention during math class. Some kids focus on memorizing math steps to solutions, while others tend to pay attention to the number relationships and might start thinking about why procedures work, or how to use what they already know to solve new problems. Since paying attention to relations is an important part of mathematical thinking, we created a warm-up activity that helped all students focus on relationships.



Results: When students started class by comparing how sour each pitcher was, they later were more successful at comparing ratios in word problems.



About Us

We are researchers at the University of California, Irvine. As educational psychologists, we study how to support a child's thinking and learning. Our lab focuses mostly on math, but we also research how to improve students' deep thinking skills in general.

Tip for Teachers:

To get your students thinking about math relationships, design your math warm-up activity using comparison or contrast.

Which shape doesn't belong and why?



Tip for Parents:

It's great to get your children reasoning through everyday conversations. Talking about comparisons, pointing out cause-and-effect, and doing sorting games are great to help your kids figure out patterns at home.

Why do you think bubbles float?

Is a carrot healthier than a cookie?

Other Recent Findings

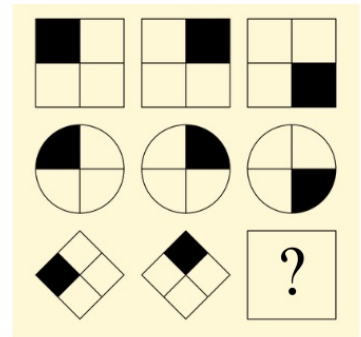
Developing Thinkers



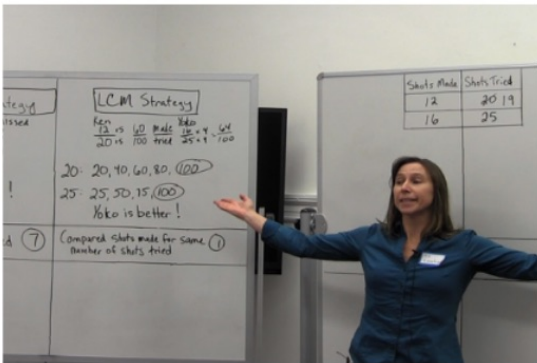
We know it's important for children to figure out patterns, see hidden relationships, and learn how to make hypotheses or inferences about their world. How can parents and teachers help them grow those skills? We found that asking children to say how things are related to each other was a very powerful way to train them to look for relationships in new activities. When parents asked their child to discover patterns, rather than pointing them out, children showed stronger thinking skills in other activities.

Let's Talk about Numbers at Home

Kids are surrounded by numbers and quantities. Parents can help their later math learning by talking about numbers and patterns in their everyday lives. This might mean talking about amounts while cooking or fair sharing between friends, which helps kids notice numbers more on their own. We found that children who tend to notice numbers, math, or other patterns, even when not told what to look at, learned more from a math lesson. Yet another reason to talk about math and finding patterns in everyday life!



Less Stress, Better Learning



When students are stressed and anxious, they tend to learn less from their math classes. One way to help students lower their stress is to write out the solution to a sample problem and always have that available for students to reference. In one of our studies, we gave students examples to look at throughout the lesson. This reduced children's stress about math, helped them focus better, and led to better math achievement.

We would love to hear your input!

Please feel free to reach out to us using the contact information listed below. Having open discussions with teachers, parents, and students will help inform our research on how to best promote student learning.

Email us: scienceoflearning.manager@gmail.com

Visit us at our website: uciscienceoflearning.org

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