



Apr 14th, 9:00 AM - 10:00 AM

## Calculating an Approach to Differentiation in Math

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# Calculating an Approach to Differentiation in Math

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Two second graders enjoy exploring geoboards during math stations.



Students are engaged as they participate in an activity involving thermometers.

## What is Differentiation?

Differentiated instruction is the process by which educators adapt their instructional methods to best meet student needs and appeal to their individual interests and abilities

(Kirkey, 2005, p. 2).

## Methodology

**Participants:** 26 second grade students

**Data Collected:** photographs, field notes, pre-and post-test scores, and student work

## Research Questions

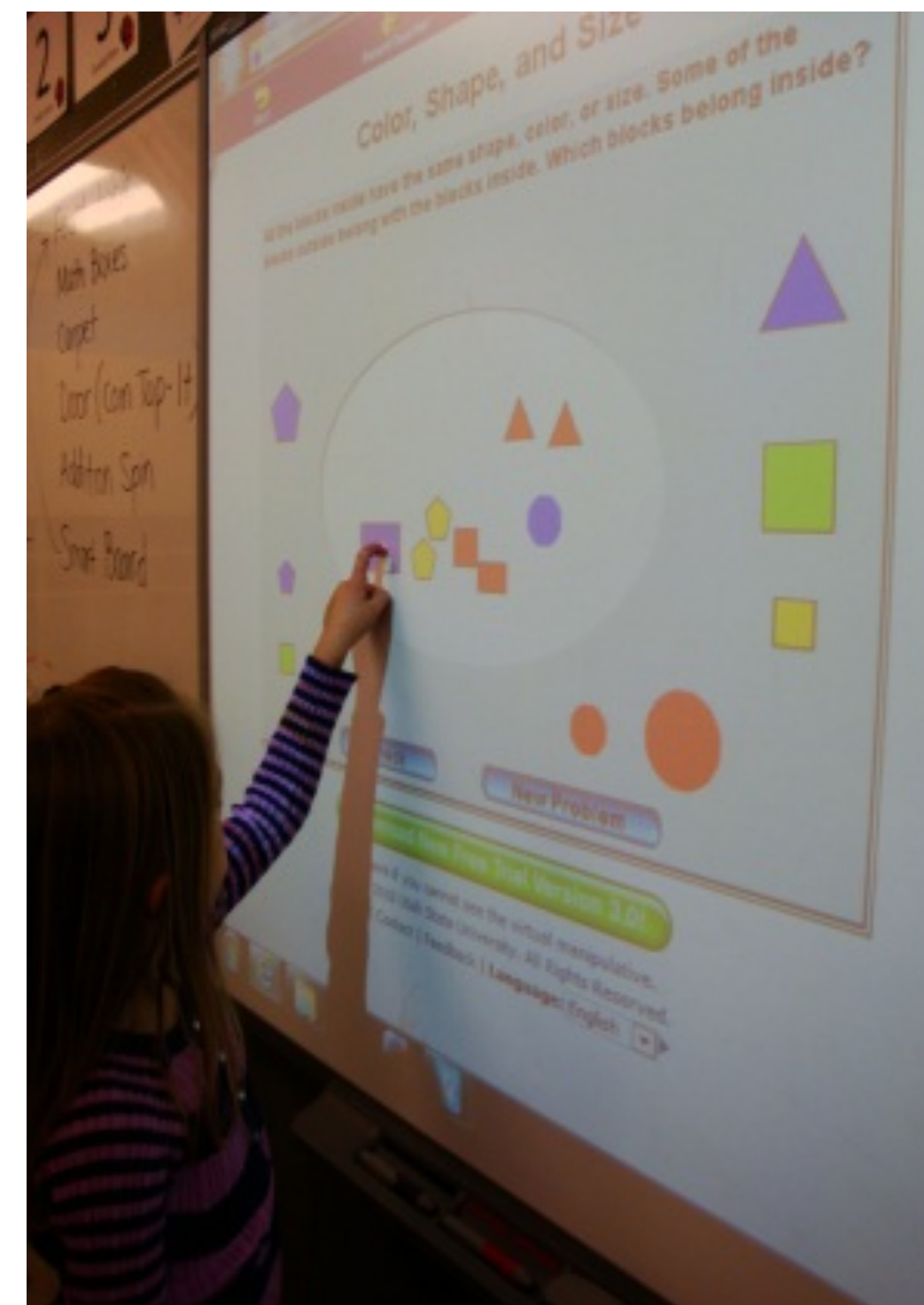
- Which instructional strategies challenge, motivate, and interest students in mathematics?
- How can I meet the needs of those who are struggling, those who are meeting expectations, and those who need additional challenges in math?

## Findings and Conclusions

- Smart Board and movement activities increased participation
- Math games and manipulatives engaged students
  - Engagement led to meaningful learning
- Differentiated instruction helped students improve their math skills
- Some students needed additional challenges
- Some students needed more one-on-one attention
- Frequent observation is necessary

## Differentiation Strategies

- Grouping
- Manipulatives
- Math Games
- Stations
- Videos
- Movement Activities



A student is eager to participate during a Smart Board activity.



A small group plays Dollar Rummy, a math game that involves counting money.

## Supporting Literature

- Through the use of manipulatives students can construct mathematical concepts in a manner that makes sense to them (Puchner, 2008, p. 316).
- ...In flexible groups students can refine their skills by explaining their thought processes to fellow students and by learning other methods of solving problems from their peers (Heuser, 2000, p. 293; Sloane, 2007, p. 86).
- There is no one correct method for differentiating instruction; rather, teachers must become informed of each student's individual needs and incorporate the most effective teaching strategies and educational activities to suit those needs (Tomlinson, 2003, p. 2).

**Acknowledgements:** This study would not have been possible without the encouragement of my cooperating teacher, the hard work of my second grade students, and the guidance of Robin Leavitt, my research supervisor. I sincerely thank each of you for your support throughout this journey.