

Differentiation—Supporting and Challenging All Students

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CAMT Conference
July 2012



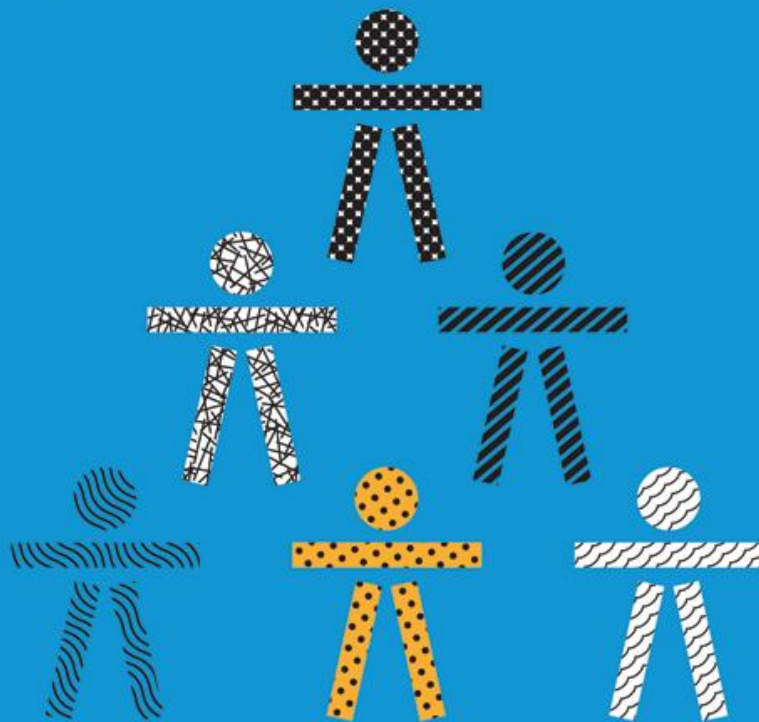
Differentiated Instruction —

Instruction designed to meet
differing learners' needs

MATH FOR ALL

Differentiating Instruction

Grades
K-2



Linda Dacey & Rebeka Eston Salemi

**I have four coins.
I have one penny,
two nickels, and
one quarter. How
much money do I
have?**



I have pennies, dimes, and nickels in my pocket. If I take three coins out of my pocket, what are the different amounts of money I could have taken?



The Money Problem

I have four coins. I have one penny, two nickels, and one quarter. How much money do I have?

I have pennies, dimes, and nickels in my pocket. If I take three coins out of my pocket, what are the different amounts of money I could have taken?

Tasks Cast a Wider Net when they.....

- **Allow students control over difficulty level**

Lucas has _____ stamps.

His mother gave him _____ more stamps.

Then Lucas used _____ stamps to mail some letters.

Now Lucas has _____ stamps.

Tasks Cast a Wider Net when they.....

- Allow students control over difficulty level
- Are open to multiple solutions or strategies

Jackie has raisins and carrots for snack.

He has 7 pieces of food altogether.

How many of each could he have? How many raisins? How many carrots?

Tasks Cast a Wider Net when they.....

- Allow students control over difficulty level
- Are open to multiple solutions or strategies
- Provide students with “number story” and with “answers” -- then have students create the questions

Number Story:

Colin has three nickels and seven pennies.

Lisa has nine nickels and three pennies.

Here are the answers: 4, 22, 2, 48, 26

What could be the questions?

Tasks Cast a Wider Net when they.....

- Allow students control over difficulty level
- Are open to multiple solutions or strategies
- Provide students with “number story” and with “answers” -- then have students create the questions
- Make use of open-ended probes

Open-Ended Probes

- Write and draw to tell about money.
- How would you describe a square to someone who has never seen one?
- The answer is 87. What could the question be?
- What are some patterns you see on the hundreds chart?

Tasks Cast a Wider Net when they.....

- Allow students control over difficulty level
- Are open to multiple solutions or strategies
- Provide students with “number story” and with “answers” -- then have students create the questions
- Use open-ended probes
- Allow students to show their understanding in different ways

On Chinese New Year, also known as Lunar New Year, people celebrate with a dragon dance.

____ people are dancing a dragon dance. **How many legs** does the dragon have?

The dragon has ____ legs. **How many people** are dancing a dragon dance?

Differentiated instruction is most successful when teachers:

- Believe that all students have the capacity to be successful learners;
- Recognize that diverse thinking is an essential and valued resource;
- Know and understand mathematics and are confident in their ability to teach mathematical ideas;

Differentiated instruction is most successful when teachers:

- Are intentional about curricular choices
- Develop strong learning communities in their classrooms;
- Focus assessment; and
- **Support each other in their efforts.**

Remember, in order to provide for a wider range of students:

- Allow students some control over the difficulty level
- Transform problems so they allow for more solutions or a wider range of responses
- Encourage the use of multiple models



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