Differentiation—Supporting and Challenging All Students

Presenter
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Differentiated Instruction —

Instruction designed to meet differing learners’ needs
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