Differentiation
Meeting the Needs of All Learners
Grades 6–8
Genni Steele
April 25, 2009
NCTM Annual—Washington
What is Differentiation?

Differentiation is instruction designed to meet differing learners’ needs AND is a lens through which we can examine our teaching and our student’s learning.
We need to develop new skills and be more adept at:

• **Identifying** the important mathematics

• **Assessing** what students know and how they learn

• **Creating, designing** and **modifying** tasks

• **Providing** the opportunity for student choice
Focus Categories:

• Casting a Wider Net
• Scaffolding Learning
• Supporting Choice
Casting a Wider Net
Transforming Tasks

When we expand tasks to allow access we do not want to undermine the integrity of the mathematical challenge.
Number Story:

Sabina and Mike ran each day this week. Each day Sabina ran 3.5 miles in 28 minutes. Mike ran 6 miles in 63 minutes every day.

Here are the answers: 35, 2.5, 245, 7.35

What could be the questions?
If I were…

I would be…

I would be…

But I would not be…

Because that would be…
Fraction Division

• Pick 5 examples whose quotient is less than 2 and explain how you know

• Pick one of the problems and write 4 different fraction division problems with the same remainder.
A family has 5 members. The mean age is 26.

How old could the family members be?
Scaffolding Learning

What can students do with support that they are not able to do on their own?
How are $y=2x$ and $y=x^2$ the same? How are they different?

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**Word Bank**

Coefficient, rate of change, slope, linear, non-linear, y-intercept, quadratic, exponent, y-axis, x-axis
Place the numbers 1–24 in the Venn Diagram

Multiples of 3

Even Numbers

Factors of 18
How are tables, graphs, and equations alike and different?

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<th>Tables and Graphs</th>
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Supporting Choice

- Partners
- Work space
- Tasks
- Demonstrate understanding
Choose your numbers

There are ______ cups of milk in the refrigerator. 4 ½, 3 ⅔, 2 ¼

It takes _______ of a cup to make frosting for one brownie recipe. ¾, ⅔

How many batches of brownies can be frosted?
Choose your numbers

The price of basketball shoes are $_____

They are marked down _____%

What is the sale price?
Demonstrate Understanding

**A Walking Race**

- Zoe walks at rate of 1 meter per second.
- Darnell’s rate is 2.5 meters per second.

Design a race that Zoe will win, however, only by a little bit.
Authors:
Linda Dacey
Karen Gartland