Fractions, Decimals and Percents Mini-course

Session One

Mixer: Introduce yourself to someone. Also put your name on your notecard, cut out your tangram puzzle, and put it in a plastic bag to take home with you.

Objectives

- This session is designed to expand your understanding of mathematics.
- To have you experience mathematical activities that you can do with your child or children.
- For you and your child to have fun doing mathematics.

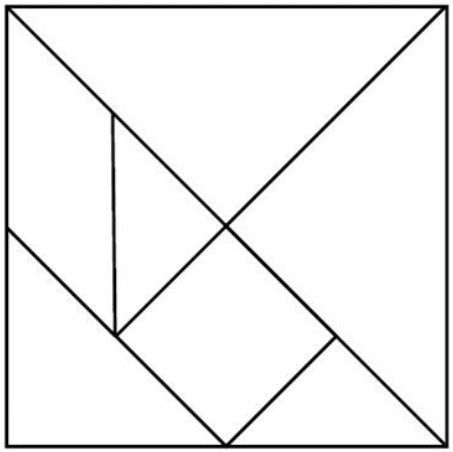
Session One Overview

- 5 min Welcome, Mixer
- 5-10 min Introduction to Cognitively Guided Instruction
- 40 – 50 min Tangram Puzzles and Tangram Value Reasoning Task
- 20 – 30 min Fractions, Decimals and Percents in everyday life.
- 3 -5 min NCTM`s Learning Principle
- Reflection and Closing

Activity One: Tangram Puzzles

- Solve each puzzle with Tangram Pieces. Compare your solutions with others near you.
  - Robot
  - Rabbit
  - Shovel
  - Square
  - Rectangle
  - Triangle

Tangram Value Puzzles



- Use the tangrams pieces to figure the dollar amount
- What would be the dollar amount for each piece if the whole set had a value of $8.00
- Then assume the value for whole set is $12.00
- Now find the value of each piece if the whole set where $1.00
- Assume the value of each piece depends on size.

Fractions in everyday life

- Brainstorm some uses of fractions, decimals and percents in everyday life. Make your list under the three headings on a sheet of paper.

- Fractions
- Decimals
- Percents

NCTM Learning Principle

- Participants must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge.

- MATH CLASS WEB: Teacher Activities; Student Activities; Your Feelings

Reflection & Extension

- What have you learned from these activities about fractions?
- How are fractions decimals and percents used in real life?
- What is the connection between fractions, decimals, and percents?

What impacts student achievement?

Parental Involvement & Education

(Goldstein & Campbell, 2000; Mullis, Martin, Gonzalez, & Chrostowski, 2004)

- Child Safety (Pearl, 2010)
- Nutrition (Carroll, 2014)
- Family Structure (Stack & Eshleman, 1998)

Mathematical Knowledge for Teaching

(Hill, Rowan, & Ball, 2005)

THE POWER OF PARENT INVOLVEMENT

"The evidence is consistent, positive and convincing: families have a major influence on their children's achievement. When schools, families, and community groups work together to support learning, children tend to do better in school, stay in school longer and like school more." (Henderson and MAPP, 2002)

Child Safety and Nutrition

- Teach them to “Yell and Tell”.
- Breakfast-include a protien (ie oatmeal)
- Limit sodas, sweets, junk food
- Increase fruits and veggies

See
http://www.todaysdietitian.com/newarchives/100614p64.shtml

Benefits of low-conflict, intact families for children

- Academic and intellectual performance
- Physical and mental health
- Less likely to drop out of school
- Less likely to live in poverty
- Less likely to suffer from physical or sexual abuse, abuse
- drugs or alcohol, get involved in criminal or violent
- behavior, engage in early sexual activity
- (GA Supreme Court Commission on Children, Marriage
- and Family Law Strategic Plan)

Mathematical Knowledge for Parental Involvement

- Content knowledge
- Valuing students' own strategies
- Listening to students' explanations
- Knowing there is more than one way to solve
- Knowing to use manipulatives versus solely pencil and

  paper to solve problems
- Knowing *how* to use manipulatives to model
- Knowing appropriate games & skill reinforcers
- Knowing how to support the learning process (i.e. Do not immediately give answers.)

Next MAPPS Math Nights

BRING A FRIEND

- October 20–Fractions for Sharing Cookies
  - City Park Gym
- October 27– Rates and Proportions
  - Fairmont Park Gym (Repeat of 9/20)

“We all as a family
are graduating tonight.”