

Nurturing Mathematical Reasoning in Young Children

Howard County Parent Academy

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What is Mathematical Reasoning?

- Many of our young students are only concerned with using a “formula” and getting the “right” answer .
- (Many of our parents are only concerned with the “right” answer)

Mathematical Reasoning

- Allows for students to really think about and apply various strategies.
- Mathematical “reasoners” are able to reflect on solutions to problems and determine whether or not they make sense

Why is Mathematical Reasoning important?

- Students can make use of all their mathematical skills.
- Students recognize that mathematics makes sense and can be understood.
- They learn how to select problem-solving strategies, develop and describe their thinking

- The goal is to unlock the world of mathematics through a student's natural inclination to look for meaning.
- Reasoning is fundamental to the knowing and doing of mathematics.

Reasoning in the Common Core Math standards

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Reason deductively about data
- Construct arguments using things such as objects, drawings, diagrams.

Time to.....

- Make sense of problems and persevere in solving them
- Reason deductively about data
- Construct arguments using things such as objects

Find a partner at your table and choose a Top This game.

- Work with your partner and follow the direction on the cards.
- Start at the beginning....work through the levels...you may skip some levels if you want more of a challenge.
- Think about what strategies you use as you attempt to solve each problem.

Questions....

- How did you approach solving each challenge? What strategy did you use?
- Did you change your strategy along the way?
- Did you ever feel like giving up?

Mathematical Reasoning in the Common Core State Standards for Mathematics

A Parents Guide to Supporting Standards for Mathematical Practice for Primary Students

Standard for Mathematical Practice	Goals for Mathematic Proficiency	Activities/Games/Tasks that Contribute to the Goal	Co
Make sense of problems and persevere in solving them.	Explain the meaning of the problem and look for entry points to its solution		
	Plan a solution pathway		
	Evaluate progress and change course if necessary		
Reason abstractly and quantitatively.	Make sense of quantities and their relationships		
Construct viable arguments and critique the reasoning of others.	Justify and communicate conclusions to others		
	Construct arguments using concrete objects and actions.		

Other Games that Build Math Reasoning....

- Math Dice Jr.
- Chocolate Fix
- Swish
- Quad - Card Game

Other No Cost Games to Play

- Guess my Number
- Nim
- Buzz

Take a look at the pink cards .

- Look at your Common Core Chart and work with a partner.
- Review each task to see if it builds on any of the Standards for Mathematical Practice

Questions????

Reflection on Tonight's Presentation

www.hcpssgtac.wordpress.com

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