Classroom Connections: DAY 2

Math in Games

Icebreaker

The Game of NIM

Play the game a few times—taking turns going first.

Pay special attention to who is the winner of each game and think about *why* that person won that particular game.

What's a Math Game?

Math games:

- **involve a challenge, usually against one or more opponents;**
- **are governed by a set of rules and have a clear underlying structure;**
- **normally have a distinct finishing point;**
- **have specific mathematical cognitive objectives**

(Oldfield, 1991)

Benefits of Using Math Games

Motivation

- Meaningful situations for the application of mathematical skills
- Children choose to participate and enjoy playing
- Opportunity for building self-concept and developing positive attitudes towards mathematics, through reducing the fear of failure and error

Benefits of Using Math Games

Access

- Few language barriers
- Build independence—children can work independently of the teacher
- Build home/school connections when families are encouraged to play games at home
- Increase exposure to math

Video Analysis

Tapatan Game from the Phillipines

Watch two pairs of preschoolers playing a round of Tapatan. The goal is to get three counters of one color in a row.

Where do you see evidence of motivation and access in this video?

Benefits of Using Math Games

Increased Learning

- Allow children to operate at different levels of thinking and to learn from each other
- Develop logical thinking—children test intuitive ideas and problem solving strategies
- Opportunity for assessment of learning in a non-threatening situation

(Davies, 1995)

Video Analysis

Cover Ten

Watch two pairs of preschoolers playing a cooperative cover-all game.

What kind of evidence of children's number sense can the teacher gather?

Game Station Rotation

Gross Motor Games

Try It: Balloon Volleyball

Strategy Games

Try It: “Achi”

(variation of Tapatan from Ghana)

Path Games

Try It: Itsy-Bitsy Spider

Matching Card Games

Try It: Memory (modified)

Game Station Rotation

You will have approximately 5 minutes at each station.

1. Try the game. (Instructions and materials are supplied.)
2. Discuss what kind of mathematical thinking the game activates.
3. What other games are like this one? Add your ideas to the poster.

Stop & Reflect