

Math Games & Activities to Supplement Any Math Curriculum

by Bob Hazen

A. Fundamental Ideas & Questions

1. What is math?
2. Questions:
 - a. Why...?
 - b. What if...?
 - c. What does that mean...?
 - d. Questions that stimulate mathematical thinking (see back)
3. The heart of a math-rich environment:
4. Leave 'em laughing: know when to stop
5. Three key elements to memorization: _____, _____, _____
6. The progression: 1st: _____; 2nd: _____; 3rd: _____; 4th: _____

B. Math Activities & References at Home

1. Makes Ten poster
2. Addition Doubles Facts poster
3. Skip Count Tapes
4. Compass orienteering
5. Battlefold
6. Scale drawings of house, neighborhood
7. Cooking in general, baking in particular (especially _____)
8. Anything involving a tape measure (_____, _____, etc.)

C. Games of Counting

1. Candyland (pre-counting)
2. Chutes & Ladders ^①
3. Parcheesi
4. Monopoly
5. Finger counting
 - a. why kids do it
 - b. how to broaden it
 - c. how to wean them off

D. Games of Logic & Strategy

1. Backgammon
2. Checkers
3. Chess
4. Battleship (not the electronic version)
5. Concentration
6. Four-In-A-Row (2-dimensional)
7. Score Four (3-dimensional)
8. Blackbox (Parker Brothers)
9. Mastermind (colored beads)
10. *Grid Works**

E. Homemade Games of Computation

1. Variations of dice/board games: +, -, x
2. Rummy 500
3. Target (Crypto)
4. Ten-Twenty-Thirty
5. Operations War (+, -, x ÷)
6. Fraction War
7. Basic fact tables
 - a. why kids want them
 - b. how to wean them off

F. Commercial Games of Computation

1. Cribbage; (Cribbage x 10 or 100)
2. Yahtzee
3. Ring-A-Round
4. *Twenty-Four**

* Starred items are items that are available after this presentation

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G. Games of Shape, Space, & Movement

1. *SET**
2. *Tangoes** (tangrams)
3. *Brick-by-Brick**
4. *Rush Hour**
5. *Tipover**
6. *Subtrax**

H. Computer Games

- Quarter-Mile Math

I. Book & Magazines

1. *Games* magazine
2. *Games Magazine Book of Games*
3. Anything on or by M.C. Escher (tessellations)
4. Books on origami
5. Books on mental math (*Rapid Math Tricks*; *Short-Cut Math*)
6. Anything involving compass-and-straightedge construction (*Creative Constructions*)
7. *Keeping Math Connected: Practical Principles to Unify K-8 Math Across Grades & Topics**, by Bob Hazen
8. *Math Games to Supplement Any Math Curriculum**, by Bob Hazen
9. *Rapid Math Tricks**, by Edward Julius

J. Other Opportunities

- SAI: the Summer Algebra Institute for Kids; www.AlgebraForKids.com
- UMTYMP: University of Minnesota Talented Youth Mathematics Project
- Summer Camps
- Science Museum of Minnesota

K. Acquiring Math Games

1. Give as presents at birthdays, Christmas, etc.
2. *Request* as presents (from grandparents, uncles, aunts, etc.)
3. Check Goodwill, Salvation Army, garage sales
4. Pool resources within a homeschool group, among neighbors, etc.

QUESTIONS TO STIMULATE MATHEMATICAL THINKING

1. Classifying Questions

- How are these alike?
- How are these different?

3. Specializing Questions

- Can you give a specific example?
- What's an example of that?

5. Convincing Questions

- How do you know that's true?
- How would you convince me?

7. Synthesizing Questions

- How would you summarize this?
- How does this all fit together?

2. Conjecturing Questions

- What might be true...?
- What if...?

4. Generalizing Questions

- What patterns do you see?
- What is always true about...?

6. Analyzing Questions

- What is this all about? What's it made of?
- What "parts" does this have?

8. Evaluating Questions

- Which is quicker/clearer/easier...?
- Which do you prefer? Why?