

# Math Bridge

**Pillar: Active Living**

**Division: I-III**

**Grades: K-7**

**Core Curriculum Connections: Mathematics**

**I. Rationale:** Math Bridge is a physical, social, and intellectual activity that promotes the importance of cooperation and teamwork amongst students. This multi-level teambuilding activity can be modified and adapted to suit curriculum outcomes at a variety of grade levels to reinforce the skill of sequencing, a fundamental math skill that is essential to understanding many other mathematical concepts. If one has trouble sequencing, counting to 100 could be difficult! Students are sure to enhance more than just their math skills as they work together to accomplish a shared goal.

## II. Curriculum Outcomes: Math K-7

**Strand: Number**

**General Outcome: Develop number sense.**

**Specific Outcomes:**

**Kindergarten**

1. Say the number sequence 1 to 10 by 1s, starting anywhere from 1 to 10 and from 10 to 1. [C, CN, V]

**Grade 1:**

1. Say the number sequence 0 to 100 by:

- 1s forward between any two given numbers
- 1s backward from 20 to 0
- 2s forward from 0 to 20
- 5s and 10s forward from 0 to 100.

[C, CN, ME, V]

**Grade 2:**

3. Describe order or relative position, using ordinal numbers (up to tenth). [C, CN, R]

**Grade 3:**

1. Say the number sequence 0 to 1000 forward and backward by:

- 5s, 10s or 100s, using any starting point
- 3s, using starting points that are multiples of 3
- 4s, using starting points that are multiples of 4
- 25s, using starting points that are multiples of 25. [C, CN, ME]

**Grade 4:**

2. Compare and order numbers to 10 000. [C, CN, V]

8. Compare and order fractions less than or equal to one.

**Grade 5:**

10. Compare and order decimals (to thousandths).

**Grade 6:**

7. Demonstrate an understanding of integers, concretely, pictorially and symbolically.

**Grade 7**

7. Compare and order positive fractions, positive decimals (to thousandths). [CN, R, V]

**III. Materials:**

- Two by four or other long piece of wood (for younger children, floor tape is advisable).
- You will also need number cards adapted for your grade level. For ECS, you will need the numbers 1-10. For Grade 7, you will need number cards that represent positive fractions and/or positive decimals to the thousandths place.

**IV. Procedure:**

1. Place the students in groups. The size of the group will vary according to the grade level outcome you are working towards. The number of students in each group should be conducive to meeting the indicated outcome. For instance, kindergarten students should be placed in groups of 10, so that they may arrange themselves in order from one to ten or 10 to one. For grade three, you may want to divide students into several smaller groups and to demonstrate counting by various multiples. To count all the way to 1000, the math bridge may need to be repeated several times using progressively larger numbers each time continuing on from the last number.

2. After the groups are formed, have the students get on the piece of wood or tape. Shuffle the number cards, and then hand each child one card. The children are to remain balancing without leaving the board or piece of tape and move so that they rearrange themselves on the board/tape from left to right in ascending order. The objective is to get all numbers in order without anyone stepping off the board/tape.

**V. Variations:**

There are numerous variations that can be made to this activity. Any number of options are possible in order to enhance the class' ability to work together towards accomplishing the task and reinforcing the mathematical concept they are working towards mastering in class. Please refer to the list of curriculum outcomes for each grade level listed above. Suggestions for number cards sets at each grade level include:

- ECS: number cards with the numbers 1-10.
- Grade 1: Four different sets of number cards for counting up to 100 by 1s, 2s, 5s, and 10s.
- Grade 2: One set of cards with ordinal numbers from 1st - 10th.
- Grade 3: Three different sets of number cards for counting up to 1000 by 5's, 10s, 100s, and two different sets for multiples of 3 and 4.
- Grade 4: Two sets of number cards: one containing random numbers between 1-1000 and one set comprised of fractions that are less than or equal to one.
- Grade 5: One set of numbers cards containing decimal numbers to the thousandths place.
- Grade 6: One set of integer number cards.
- Grade 7: Two sets of number cards, one with positive fractions and one with positive decimals to the thousandths.

## **VI. Source:**

- adapted from a lesson idea which appeared on Brain Breaks Web site:  
<http://www.emc.cmich.edu/BrainBreaks/>