

Subject Area: Elementary Math

Grade Level(s): K-5

Title of Approach: Cooperative Learning in Mathematics

Description of Approach:

- Interaction between students to exchange knowledge
- Teaches students work in groups of 2-6 people to learn
- Requires students to mutually and positively depend on each other to get the work done
- Teaches students to work together but to work individually to carry ones own weight in the group

References:

1. Hurley, E.A., Boykin, A.W., & Allen, B.A. (2005). Communal versus individual learning of a math-estimation task: African American children and the culture of learning contexts. *The Journal of Psychology, 139*(6), 513-527.
2. Kuntz, K.J., McLaughlin, T.F., & Howard, V.F. (2001). A comparison of cooperative learning and small group individualized instruction for math in a self contained classroom for elementary students with disabilities. *Educational Research Quarterly, 24*(3), 41-56.
3. Leikin, R., & Zaslavsky, O. (1999). Cooperative learning in mathematics. *Mathematics Teacher, 92*(3), 240-246.

How to Information:

Jigsaw:

1. each student is given a part of the task at hand
2. each member must teach the rest of the group their part
3. the group then uses each task to compare the whole project

Other Ideas to Use:

- Teams-Games-Tournaments (TGT)
 - Cooperative learning activity which consists of teaching, team study, and tournament games.
- Group Investigation
 - Students are given a task and by working together the students reach a solution
- Constructive Controversy
 - Involves problem solving discussions and debates
- Jigsaw Procedure
 - Cooperative learning activity where each member on a team becomes an "expert" on a topic
- Student Teams Achievement Divisions (STAD)

- Students study together after a lecture and then take a quiz individually, then the groups scores are combined and rewarded for performance
- Team Accelerated Instruction (TAI)
 - Combines cooperative learning along with individualized instruction
- Cooperative Integrated Reading & Composition (CIRC)
 - Students receive concept instructions from the teacher in small groups and then practice the skills learned in the group at their own pace

Implications for Practice/Other Considerations:

- Be able to handle multiple student interactions
- The teacher should pick groups to be productive
- Each student should have a specific role in the group
- Teachers should know their students before using program
- Make tasks appropriate for the grade level
- Have a different facilitator for each day
- Change group members throughout the year

Additional Links:

- Teaching Resources: The Reference Book
-<http://home.att.net/%7Eteaching/refbook.htm>
- Instructional Strategies Online
-<http://olc.spsd.sk.ca/DE/PD/instr/strats/coop/index.html>
- Cooperative Learning
-<http://edtech.kennesaw.edu/intech/cooperativelearning.htm>
- Lesson Planz.com
http://lessonplanz.com/Lesson_Plans/Cooperative_Learning/__Grades_K-2/index.shtml
- Cooperative Learning Techniques
-http://www.mathgoodies.com/articles/coop_learning.html

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