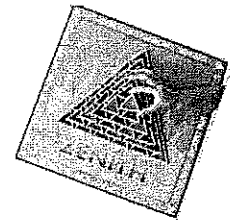
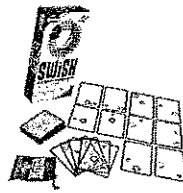


GAMES



Research has shown that not only do games help children build social skills and foster positive family memories, but **they also help develop math skills.**

- “There is evidence that certain kinds of board games boost preschool math skills. And these early skills are strongly predictive math achievement scores later in life (Duncan et al 2008).” *Parenting Science* 2008 Gwen Dewar, Ph.D.
- “As kids get older, we might also use board games as part of program of teaching critical thinking skills. We know that middle school students can make substantial improvements in problem-solving ability—even general IQ—when they are taught general principles of critical thinking (Herrnstein et al 1986).” *Parenting Science* 2009 Gwen Dewar, Ph.D.
- “The research corroborated the initial belief that math board games do indeed improve student achievement in mathematics (Siegler & Ramani, 2008)”.
- “Ramani and Siegler found that the amount of board game experience young children bring to school correlates positively with their number knowledge. Proficiency in mathematics in the early grades predicts mathematics achievement in later years (Ramani & Siegler 2008)”.
- “As a teaching tool, games helped students become better problem solvers because playing games gave them a chance to work out problems and develop strategies for solving problems in a non-threatening environment. (Klein & Freitag, 1991; Olson & Platt, 1992 as cited in Blum & Yocum, 1996).”
- “From the pretest to the posttest, the control group showed no significant difference. However, the difference with the experimental group was highly significant. This information supports the hypothesis that playing math games improved the students’ abilities in solving problems involving spatial sense and algebraic reasoning.” Center of Teaching –Learning Mathematics, 2004. Research article- Highlights of study directly related to Muggins Math.
- “Not only do games engage students, they also present the opportunity to present “High Level” math concepts in a colorful and simple way, said Mr. Isaacs, who is also a senior research associate in the physical sciences division at the University of Chicago.” Powers, Christopher, *Playing Games in Classroom Helping Pupils (children) Grasp Math.* Education Week. 2008.
- “Research and studies have shown that children who have advanced critical thinking abilities tend to be not only open minded in their thinking processes but also look at the different avenues that exist in order to solve a problem, as they have a healthy belief in different value systems that can be used for solving a problem. There are many critical thinking games that can be played in order to hone your thinking skills. Some of the best games tend to be the games that most of us played as kids, like Monopoly, Life, and Chess.” *Buzzle.com* Intelligent Life on the Web. “Critical Thinking Activities” Feb. 21, 2011.