Growth Mindsets in Math

To be a successful STEM learner, students must develop a mental mindset for growth. That mindset requires students to show persistence and determination as they encounter more complex challenges throughout their education.

In her book, *Mindsets in the Classroom* (Prufrock Press, 2013), Mary Cay Ricci implemented a Critical Thinking Growth Mindset Project in 6 schools in low income areas containing a total of 53 classrooms. Those schools embedded ThinkFun games in the classrooms. She writes:

“These games, in partnership with growth mindset lessons, showed unexpected results in just 7 months. Not only did the teachers report increased motivation and persistence, but the data showed growth in reasoning abilities...All 6 schools averaged growth of 8 percentile points in analogical reasoning and 7 percentile points for quantitative reasoning.”

ThinkFun’s special collection of STEM games challenge children to develop reasoning skills through fun, levelled challenges.
Your Goal:
Combine the blue and green game pieces to create two identical shapes.

To Play:

1. Pick a challenge card from the deck.

2. Select the blue and green pieces pictured on the challenge card.

3. On a flat surface combine the pieces to form identical blue and green shapes.
   
   Note: Blue pieces cannot overlap or stack on top of other blue pieces and green pieces cannot stack on top of other green pieces.

4. Place the green shape on top of the blue. If they match perfectly, YOU WIN; if they don’t, try again!

5. If you get stuck, check the back of the card for a solution!

About the Inventors:
The inventors of Shape Logic™ (formerly called Top This!) are Yu-Chuan Lin and Chun-Yen (David) Chou. They first created Shape Logic in 2007 as a math project when they were fourteen. They feel that having a strong mathematics education and learning to think logically has helped them become successful. They are both now studying biotechnology and architecture in university.