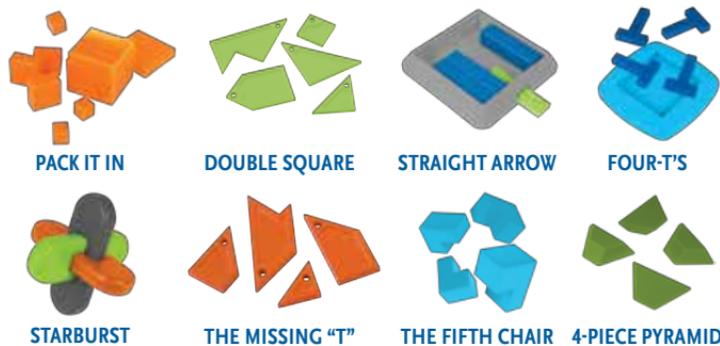


a-ha!

# Brain teaser Kit™

Perfect for the classroom!



### Includes:

- 8 Brain teasers
- 1 Object Card and 3 Hint Cards for Each Brain teaser



### Introduction:

Solving a brain teaser can be loads of fun and extremely rewarding—especially if it is tough and causes some hard thinking. This makes that “Aha!” moment when you finally find the solution so much more satisfying. Brain teasers are also a great way to exercise problem solving skills and get creative juices flowing. This kit is designed to introduce students to the joy of brain teaser solving so that they are ready to approach real world problems with confidence and ease.

### Quick Play:

1. Match each brain teaser with its Object Card and 3 Hint Cards.
2. Select a brain teaser and place the three Hint Cards face down (don't peek at them).
3. Read the Object Card, put on your thinking cap and try to solve the brain teaser!

### Some Playing Tips:

Players should have fun exploring and trying to solve the brain teasers on their own. Here are a few of our recommendations about how to make this the most successful and rewarding learning experience.

1. Make sure that you fully understand the problem. Restate the object in your own words—this will help you to visualize and more clearly understand the challenge.

2. Study all of the brain teaser pieces carefully. Look at how they are similar or different, explore size and shape. You might even want to list your observations on a piece of paper.

3. Attempt to solve the brain teaser. You may have several ideas for how the brain teaser can be solved. Give them all a try! As you play with the pieces it is likely that you will learn new things and get further ideas about how the brain teaser works. The more you work on solving the brain teaser before you turn to the hints, the more you're working your brain. So don't turn to the hints too early!

4. Stumped? Flip over Hint Card 1 (don't peek at the others just yet). The first hint will get you started on solving the brain teaser. After following this hint, see if you can solve the rest on your own. If you're still stuck, move on to Hint 2 and then Hint 3.

5. Once you've solved the brain teaser try coming up with hints of your own. Do you have a different idea about what would help someone think through the brain teaser to a solution?

6. Introduce the brain teaser to a friend. Tell them the object in your own words and if they get stumped, offer them your own hints to help them along.

### Classroom Use:

There are many different ways that you can use this kit in your classroom. You and your students will likely come up with your own ideas, but here are some to get you started:

#### Solve a Brain teaser a Week:

1. Pick a day of the week to be Brain teaser Day.
2. Each week, choose one of the 8 Brain teasers to solve together as a class.
3. Pass out the Object and Hint Cards to individuals within the class, reminding them not to peek. Put the Hint Cards in a closed envelope as a way to make sure that the answers aren't inadvertently seen.
4. Talk about the problem and explore the brain teaser pieces as a group.
5. Invite students to attempt to solve and, if necessary, call on the Hint Cards for help.
6. Once you have played through all 8 brain teasers, create a Brain teaser Corner in your classroom (see page 7).
7. Keep up Brain teaser Day by finding additional brain teasers to bring into the classroom. ThinkFun® has plenty of resources and games that you can find at [www.ThinkFun.com](http://www.ThinkFun.com).

# ThinkFun's Mission is to Ignite Your Mind!®

ThinkFun® is the world's leader in addictively fun games that stretch and sharpen your mind. From lighting up young minds to creating fun for the whole family, ThinkFun's innovative games and mobile apps make you think while they make you smile.



[www.ThinkFun.com](http://www.ThinkFun.com)



### Have a Brainteaser Party:

A great way to use these brainteasers is to create a Brainteaser Party using a typical Math or Science Fair format. You can encourage students to not only solve and learn the brainteasers, but to further their problem solving and presentation skills by creating their own hints and format for presenting their brainteaser.

1. Divide students into teams and assign (or allow teams to choose) one of the 8 brainteasers.
2. Give the teams time to explore and understand their brainteaser. If this is the first time they are seeing the brainteaser, it's a good time for them to try to solve it together as a team. (They may need an entire session or two to do this.)
3. Create Brainteaser Centers. Each team will create a center where they get to present their brainteaser. They will need:
  - a. The Brainteaser—students can be creative. You may want to encourage them to create a theme and story around the brainteaser.
  - b. Object and Hint Cards—students can use the cards provided or create their own. For some deep problem solving, have students think through creating their own hints. Perhaps these hints don't guide you where to place a piece but rather take you through the thinking that is required in order to get to the solution.

c. A Presenter— Someone to present the object and the brainteaser to their audience. Students can take turns doing this. The presenter has a big job in helping visitors to understand the problem and guide them through solving it without giving away the solution.

4. Hold the Brainteaser Party! You can have fun doing this with just the students in your classroom or you may choose to invite other classes to attend. It might even be a fun Parents' Night event!
5. Give everyone a chance to be a brainteaser solver. While the presenter attends to the Brainteaser Center and presents their brainteaser to viewers, the other team members can visit the other centers and try to solve their classmates' brainteasers. Make sure that presenters take turns so that everyone gets a chance to walk from center to center.

### Create a Brainteaser Corner in Your Classroom:

Set up a permanent place in your classroom where students can go to solve brainteasers. This is a good activity to do during any free time that they might have. Encourage students to visit the Brainteaser Corner together so that they can collaborate on a solution. Invite students to bring their own brainteasers to the Brainteaser Corner as well. Encouraging students to solve brainteasers is a fun and non-intimidating way to foster good problem solving and communication skills.



## Thank You SNAP Math Fairs!

One of ThinkFun's inspirations for creating this kit and certainly one of the most pioneering groups to use brainteasers in the classroom is SNAP Math Fairs. SNAP is an acronym for Student-Centered, Non-Competitive, All-Inclusive, Problem-Based. SNAP Math Fairs have students create fun interactive projects that bring classic problems to life. You can also find over 100 print and play brainteasers for grades 1-8 at:

[www.MathFair.com](http://www.MathFair.com)

### About the Inventors:

**Straight Arrow** was designed in 2004 by Hirokazu Iwasawa, known as Iwahiro. This brainteaser features pieces that are carefully calculated to create a challenge that is deceptively difficult.

**The Missing "T"**'s exact origins are unclear, although we know that it was invented sometime in the late 19th century and it continues to be regarded as one of the greatest classic brainteasers of all time!

**Four-T's** was introduced by its inventors Peter Hajek and Eduard Bakalar at the International Puzzle Party in 1993 where it quickly became a favorite of collectors and inventors.

**4-Piece Pyramid** was invented by Wolfgang Schneider and based on the first dissected tetrahedron brainteaser which was developed in 1940 and patented by Edward T. Johnson.

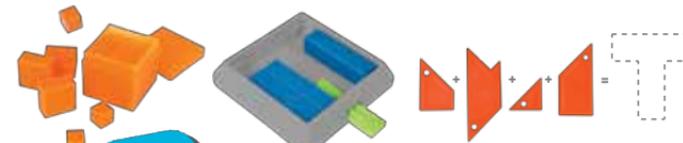
**Starburst's** original inventor is unknown, but it is a member of the family of brainteasers called "Burr" puzzles which appeared in Europe and Asia before the 18th century.

**The Fifth Chair** was invented by Dale Walton as an elegant little brainteaser where each successively larger chair contains exactly double the volume of the next smaller chair.

**Double Square** first surfaced in Johnson Smith's popular 1934 novelty catalog under the name The Five Block Puzzle.

**Pack It In** was originally called Conway's Curious Cube after its mathematician inventor, John Conway.

## LEARNING GUIDE



a-ha!

# Brainteaser Kit™



## Makes 8 Brainteaser Centers

EACH BRAINTEASER CHALLENGE HELPS STUDENTS:

- Build visual, spatial & logic skills
- Make sense of problems & plan solution pathways
- Reason abstractly & quantitatively
- Communicate a thinking process



GRADES  
2-8