

Make Marbles Mazes



Making a marble maze will test your creativity and engineering skills. Let your imagination run wild as you come up with challenging and interesting designs for your marble maze.

How to Make Your Maze:

- 1) Brainstorm designs for your maze: Think about making dead ends, if you want to have one way of solving the maze or more than one way, and making sure there is a way to solve your maze! You can draw your maze onto your box before you start OR you can begin without a plan.

Challenge: Make a blue print! Draw out different ideas for your maze design before you make it. Then, try to make your maze look exactly like your blue print.

- 2) Construct Your Maze: You will need a length of straw for every line in your maze. Use the straws to create pathways that your marble has to follow. Cut the straws to create different lengths as you need them. Secure your straws using strips of tape.

Challenge: Use straws or other materials available to you to make your maze more challenging. Examples: add a bridge or tunnel, use blocks, bottle caps, and LEGOs

- 3) Label Your Maze: Label the start and end point of your maze. Having the start and end points of the maze labeled can help others know how to properly navigate the maze.

Challenge: Use a symbol or unique words to label the start and finish.

Challenge: Add decorations and/or challenges to your maze. For example, some parts of the maze could be colored in pink, yellow, or blue. You have to pass through each color AND get to the end of the maze in order to win.

Materials

- Cardboard lid
 - Marble
 - Straws or thin strips of cardboard
 - Tape
- OR
- Legos
 - Lego base sheet



Think Like a Computer Programmer:

Write instructions on how to correctly solve your maze using direction words such as: left, straight, right, turn, pass.

Have a parent, sibling, or friend test your instructions by following them!



A-MAZE-ing Statistics

I spent _____ minutes making my maze.

My maze has _____ solution(s).

My maze has _____ dead ends.

My maze uses _____ straw pieces.

My maze uses _____ pieces of tape.

The fewest turns you need to make to complete my maze is _____ turns.

A-MAZE-ing Book list:

Big Book of Building / by Ventura, Marne: J 507.8 VEN

Working in Math / by Christine Zuchora-Walske: JNF 510.23 Zuc Wor

Working in Engineering / by Vicki C. Hayes: JNF 620 Hay Wor

Building / by Glover, David: J 624.1 GLO

A Kid's Guide to Building Forts / by Tom Birdseye: J 690 BIR

If You Lived Here: Houses of the World / Giles Laroche: J 728 LAR

Mazesapes / by Roxie Munro: J 793.73 MUN

Iggy Peck, Architect / by Andrea Beaty: E FIC Bea Igg