



Illinois 4-H | Spark Ideas. Ignite Possibilities.

Build creativity, engineering, and construction skills as you create original designs with plastic building bricks, like LEGO® and MEGA BLOKS®!



Exploring Creating with Building Bricks

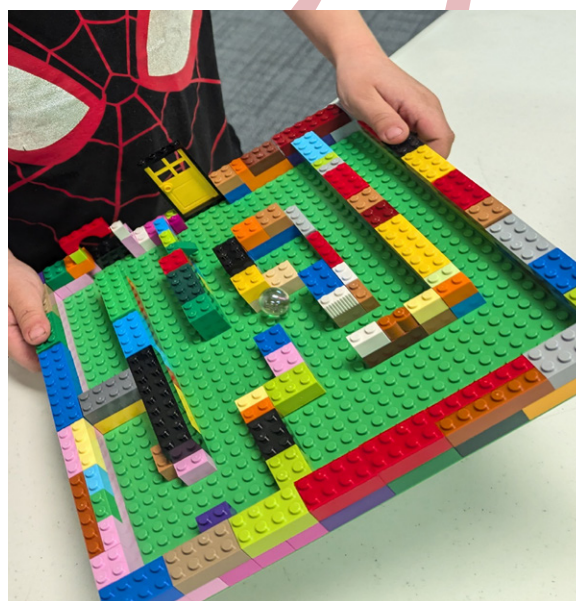
Spark Activity: Brick Marble Mazes

SUPPLIES:

- 1 marble
- 1 36 x 36 stud building brick baseplate
- Assorted building bricks

DIRECTIONS:

- Pick spaces on the baseplate to be the start and end of your marble maze.
- Use bricks to make a maze (wide enough for the marble to successfully navigate when the plate's direction is shifted) that goes from the starting point to the ending point.
- Add challenges to make your maze more difficult, like covering up a section of switchbacks, or adding ramps and traps.
- Test your maze to make sure it's doable! Then share it with someone else and have them try to get the marble through the maze by shifting the baseplate in different directions.



4-H Project Levels and Goals

Beginner

- Learn about the different types of plastic building bricks, and their uses.
- Learn different types of builds.
- Learn how to plan a build from reference, to sketch or model, to final product.
- Learn about building techniques by building sets designed by professionals.
- Create simple original builds.

Intermediate

- Learn about working in various scales from micro-scale to life-size.
- Learn about color theory.
- Learn about using axles and wheels to create moving builds.
- Learn about building stronger brick connections with techniques like bracing and staggering.
- Learn how to tell a story with bricks and minifigures.
- Create more creative and larger original builds.

Advanced

- Learn advanced building techniques such as Studs Not On Top (SNOT), offsetting, lettering, diagonal striping, greebling (using small bricks to create a more detailed and textured surface), mixed cylinder curving, and more.
- Learn to create more realistic plants, animals, buildings, and objects.
- Learn to use technic parts to strengthen builds.
- Learn to use motors and mechanical functions.
- Learn to use digital building software.
- Create detailed original builds.

Put Your Project Into Action

Show Your Skills

- Exhibit at your local 4-H Show or county fair with an original build in one of the exhibit categories such as art, buildings, creatures, objects, scenes, vehicles, mechanical, functional, or virtual
- Contribute to a display at a local brick convention or show
- Submit your official set ideas on LEGO® Ideas (<https://ideas.lego.com>)

Service and Leadership

- Host a build event for an underserved population
- Organize a used building brick drive and donate the collected items to a group in need
- Organize a new building brick toy drive for the holidays
- Be a junior leader for local Cloverbud building brick club meetings
- Organize a building workshop for youth on a school holiday
- Create your own tutorial videos to teach others building techniques

Entrepreneurship

- Create a product out of building bricks and sell your creations at craft fairs or online
- Sell your original digital set designs on the internet on sites like Rebrickable (<https://rebrickable.com>)

Technology Connection

- Virtual building software (including Bricklink Studio, MecaBricks Workshop, and LeoCAD)
- LEGO® Technic™ Control+ App

Connecting with a Mentor

- 4-H club leader or U of I Extension volunteers
- Connect with adults in a local LEGO® User Group (LUG)

Events

- Exhibit at your local 4-H Show or county fair
- Attend a building brick convention like Brickworld Chicago, Brick Fest Live, Brick Convention, or The Ultimate Brick Show
- Participate in virtual building challenges, including the Illinois 4-H Building Brick Challenge Series (go.illinois.edu/4HBuildSeries)



Careers for People Interested in Creating with Building Bricks

| | |
|----------------------|------------------|
| Animator | Engineer |
| Architect | Model Builder |
| Construction Manager | Product Designer |

Start a Conversation

What types of things do you like to create with building bricks?

What can you do to strengthen your building brick creations?

What types of items that you can use in your daily life could you make out of building bricks?

Want to learn more?

go.illinois.edu/4Hbricks

Explore more at Illinois 4-H!

4-H.extension.illinois.edu



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