

STEM Activities for Kids with Building Blocks

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When we think of building blocks, most of us remember our preschoolers having hours of fun stacking blocks or building towers. We all know that building blocks are a favorite toddler toy and mainstay of preschool motor skill development, but did you know that building blocks can also be used as meaningful STEM skill-building activities?



Building Blocks vs. Manipulatives: What's the Difference?

First, you might be wondering how building blocks can benefit your child's STEM skills, since blocks are technically considered manipulatives in the sense that kids manipulate blocks with their hands to build things. When younger kids use blocks, they develop fine motor skills as they learn to stack them to make towers. In this sense, blocks are used during the preschool and toddler years as manipulatives to increase muscle tone and motor skills.

Manipulatives, like blocks, are used to encourage the development of individual skills, like improving fine motor skills. Other manipulatives, like tangrams, pegboards, or math counters, help kids learn math concepts. While math is an important part of STEM learning, building blocks have the potential of teaching a multitude of STEM concepts besides merely math and motor skills.

Taking learning another step further, building blocks can be used to increase your child's ingenuity and engineering skills. By honing problem-solving skills, your child increases their creative thinking skills, and flexibility, which in turn increases their curiosity and zest for learning and building.

Sizzling Summer Offer: [get 60% off our comprehensive Talented and Gifted app! In between block-building sessions, let Kids Academy boost STEM skills for enhanced learning and mastery!](#)

Stem Challenges for Elementary Students

It's time to explore the different ways you can use those old building blocks as a way to strengthen your child's STEM skills and abilities.

Building Bridges

Perfect for younger kids, your kindergartener will love building simple bridges with building blocks to explore weight distribution and easy engineering concepts.

What You'll Need:

- Building blocks
- Wide strips of cardstock
- Card board or foam board. Also, find small objects to place on the bridge, like small toy cars!

What to Do:

On the floor, or on a table, challenge your child to build a bridge using the supplies above. Your child will use the building blocks as bases, supporting the strips of cardstock or foam board. Encourage your child to select the [building block shapes](#) to best support a long bridge, and get building! Meanwhile, your child will discover how many supports are needed to hold up the cardstock or foam, and just the right way to design the block supports. When completed, have your child "test" the bridge, using small toy cars to drive across!

Building Block Apple Tower

Also perfect for kindergarteners, this easy and fun-filled STEM challenge will have your child building a tower strong enough to hold an apple!

What You'll Need:

- Building blocks in a variety of shapes
- Don't forget the apple!

What to Do:

It's best if you select the number and type of blocks ahead of time that you would like your child to use—this ramps up the challenge, encouraging your little learner to think of a creative way to build the tower! You will task your child with building a tower strong enough to hold a small apple. Like anything else, this can be done in many different and creative ways.

Once your child solves the challenge, encourage your child to build the tower in a different way to hold the apple. Keep adding to the challenge to strengthen your child's skills; bring in other objects that can be used as supports, like thin books that can be used between blocks! With so many ways to build and enhance this activity, you can keep your child busy and learning for hours! Check [other STEM activities to support your little learner](#) on his way to successful learning.



Building Block Challenge Cards

Best for kindergarteners or 1st graders, this simple activity will use variety and an element of surprise to challenge your child to build all sorts of exciting objects and shapes!

What You'll Need:

- Building block set
- Notecards
- A pen, pencil or marker.

What to Do:

Prepare ahead of time by creating the challenge cards that will give your child an object or shape to build. You can make these notecards as simple or creative as you'd like, but the key is to flip them over and shuffle them to make each new challenge a surprise for your child. Each challenge card should say something like, "build a train", or "build a truck".

Once your child draws a card, he or she will need to figure a way to make that object or shape using only the building blocks. Watch as your child solves each challenge, selecting just the right blocks to build each object!

Draw a Blueprint: Create It with Blocks

Best for slightly older kids, like 1st or 2nd graders, this activity will increase your child's engineering abilities as your child designs their creation ahead of time, and then making it come to life!

What You'll Need:

- Building blocks
- Construction paper shaped like building blocks
- Large sheets of blue construction paper
- Scissors
- Glue.

What to Do:

Using the construction paper cutouts, help your child create a tower or building by pasting pieces to the large construction paper "blueprints". Talk with your child about planning a creation that can be realistically made using the real building blocks. Encourage your child to think about the challenges of making a 2D picture into a 3D creation. After your child is satisfied with their blueprint, challenge him or her to construct it using real blocks!

As you can see, building blocks come in handy long after the toddler years to help your child learn in amazing new ways! Increase your child's STEM skills and abilities challenging him or her to plan and construct towers, buildings, shapes, and more, using the meaningful activities above!

