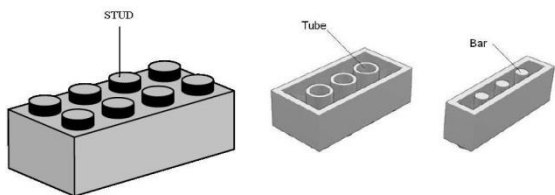


Advanced LEGOs®

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Glossary

Why know the names of LEGOs? It will help you talk with other LEGO builders, and you'll more easily find what you want at online stores.

BRICK: The heart-and-soul of LEGO is the basic brick.

STUDS: The little knobs on top of LEGO bricks.

TUBES: The short, *hollow* cylinders on the bottom of larger bricks.

BARs: The short, *solid* cinders on the bottom of narrow bricks.

SIZE: We refer to bricks by the number of studs the part has. The red and yellow bricks to the right have two studs on the short side and six on the long side; they're both 2x6 bricks (or "two-by-six bricks").



BASEPLATE: A very thin piece that you build things on. Baseplates don't have bottom connections, and they can be very big.



PLATES: Very thin pieces. If you stack 3 plates on top of each other, you get the height of one regular brick. The brown and white bricks to the right are plates.

TILES: Just like plates, but without studs on top. They're referred to by the number of studs they *would* have.

MINIFIG: Mini-figure.

LEGO Versus....

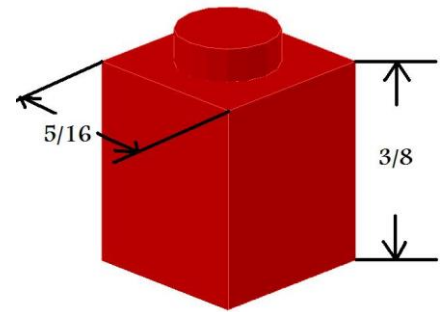
Real LEGOs are made of a good plastic that doesn't fade, warp, or easily chip. They have the name LEGO printed on the studs.

DUPLO bricks are made by the LEGO company. They're twice as big and are for younger kids. They fit well with LEGOs and are very good to use inside bigger creations.

Megabloks might work with your LEGOs, or they might not. Megabloks aren't made to the same exacting specifications.

Good to Know!

- Danish carpenter Ole Kirk Christiansen began making wooden toys in 1932. In 1934 he renamed the company “Lego,” from the Danish phrase *leg godt*, meaning “play well.” He expanded from wooden to plastic toys in 1947. And in 1949 the first modern LEGOs were sold. At the time they were called “Automatic Binding Bricks.”
- The Pikes Peak Library has over 100 LEGO-related items. There are over 24,000 LEGO items on Amazon.com
- There’s a free LEGO club and magazine that you can get from the company’s web site.
- The correct way to write the name is with four capital letters, and one lower-case “s” if you need it. LEGO, LEGOs
- Never put LEGOs in your mouth or allow anyone else to do it. It’s just nasty.



Online and More

There are dozens of iPhone and Android apps relating to LEGOs. In addition to games, there’s an app that will scan the collectible minifig package to tell you which one is inside. You can download a minifig catalog, images of every set ever made, directions for specific creations, photos for ideas of things to build... just about everything.

Cindy’s all-time favorite LEGO book is *The LEGO Ideas Book: Unlock Your Imagination*.

LINKS

- lego.com the official web site
- mocpages.com/moc.php/193188 enormous glossary
- wiki-brick-links.wikispaces.com/ links to dozens of LEGO sites
- brickshelf.com site for collectors, mostly adults
- legoeducation.us/ site for teachers

CLUBS

- The LEGO store in Denver has several theme clubs that meet monthly.
- The *LEGO Club Magazine* is for ages 7 and up. There’s a *LEGO Club Jr. Magazine* for 6 and under. Both are free on the company site.
- There’s an adult club in Colorado Springs that gives occasional programs at the libraries. It has teams and coaches, and a homeschool group. Go online to ppld.org, click on Programs/Events, and search for keyword “lego.”
- The YMCA has a monthly LEGO club.

ARTISTS

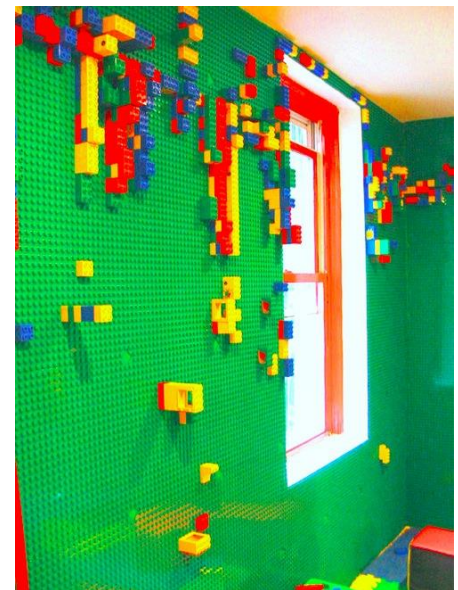
There’s a large group of people who use LEGO pieces to make sculptures, large mosaics, and complex machines. Some sculptures use hundreds of thousands of pieces and weigh as much as a fifth grader. Some of the most unusual of these are fully functional padlocks, pendulum clocks, a harpsichord, an inkjet printer, and a computer that predicts eclipses. Many of these artists consider themselves AFOLs (Adult Fans of LEGOs).

Basic Building

- Your creation needs to be stable enough to sit on the table, or to play with. Make a solid base for it.
- Some people like to plan out their building project. Some like to just jump in. Try both ways.
- The colors you use can make a big difference in how the finished piece looks. Try using unusual colors (blue for an elephant).

Advanced Building

- Most LEGO creations are built in layers from the bottom up, with the studs facing up. But some bricks have studs on more than one side. These are usually called *angle plates*, and they're great for building things on the side of your model. See the photos to the right.
- We usually think of LEGO models sitting on a table. But you can use a baseplate stuck onto a wall, and make your creation more like a painting.
- Mix up all your sets, and use space pieces for a house or airplane pieces for a giraffe.
- Details make a model interesting. Put headlights on your car, a joystick controller on your spaceship, flowers in your garden, etc.
- Many advanced builders keep all of their bricks piled together. But some like to organize their bricks by type or color.



One thing distinguishes Advanced Builders from beginners:

Advanced Builders *like* their mistakes!

Something that looks like a mistake is *almost always* an idea that no one else has ever thought of.

Your Own Space fighter #1

1. Grab a random handful or two of bricks.
2. Look at what you have, and use those bricks (and no others!) to make a spaceship.

A Useful Box

1. Do you have some plates with bars like the ones to the right? If so, you can make a hinged lid. If not, consider making a pull-out drawer.
2. Think about colors. You can use random different colors, all the same color, layers of different colors, or patterns. Collect the bricks that you will need.
3. Use plates for the bottom and top.
4. Use regular bricks for the walls. Stagger the seams to make your box stronger.
5. If you have tiles, use them on the top to make it smooth.



Other ideas for useful items:

I-Pod docking station	in-box for your desk	minifig display case
tape dispenser	board games	CD rack
pencil cup	coasters	photo frames

Your Own Space fighter # 2

1. Think about the main outside shape of your spaceship. Is it long and sleek? Or round? Or pointy?
2. What will the scale be? Do you want to put your minifigs in it, or would the people be bigger? Smaller?
3. Build the cockpit first. Then you can build the rest of the ship around it.
4. Now build the main body of the ship. But instead of making it all solid, build holes into the sides.
5. If you have a really unusual brick, find a way to put it into your spaceship.
6. If your spaceship will have wings, use thin plates to make them.
7. Add at least one unusual component: a robotic arm, a clear window for passengers to look out of, a communication dish, rocket thrusters, etc.

LEGO FACTOIDS

- Six eight-stud LEGO bricks can be put together in 915,103,765 ways, *not counting color combinations*. Three bricks can build 1,560 combinations, not counting color combinations.
- About 19 billion LEGO elements are manufactured every year; 2.16 million are produced every working hour; 36,00 every minute.
- More than 400 billion LEGO bricks have been created since 1958. That's about 62 LEGOs per person in the world.
- In the United States, the company launches about 130 new sets every year.
- Approximately 7 LEGO sets are sold somewhere in the world, every second.
- Germans buy more LEGOs per person than any other country. Americans are number two.
- LEGO fans often feel like there are more different parts now than ever. But the company has reduced the number of parts from 12,000 several years ago to 6,800 last year. These numbers include color differences.

- The corporate headquarters is in Denmark, where LEGOs originated. They're made in Denmark and several other countries.
- The manufacturing plant in Denmark uses hundreds of robots to make, sort, count, and move the bricks around.