

From posts on the
Facebook page LEGO
MOCs – Tips&Tricks



TIPS FOR BEGINNERS

Created by Alex Johnson

BUILDER's Handbook

Table of Contents

Brick Classification.....	1
Colours.....	2
Scales of MOCs.....	2-3
Planning.....	3
Starting your MOC.....	4
LEGO Digital Designer.....	4
Part numbers.....	5
Buying LEGO bricks.....	5
Restarting.....	6
Continuous improvement.....	6
Links.....	7

MOCs included made by Alex Johnson

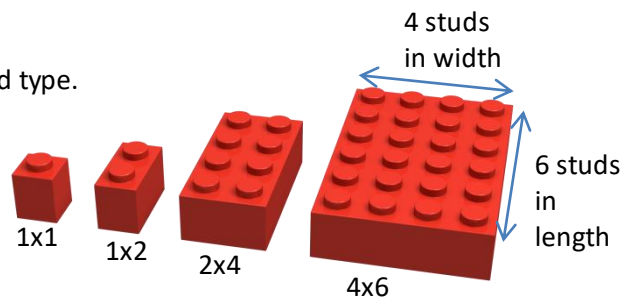
Images rendered in Stud.io

Information from the posts on the Facebook page LEGO MOCs – Tips and Tricks

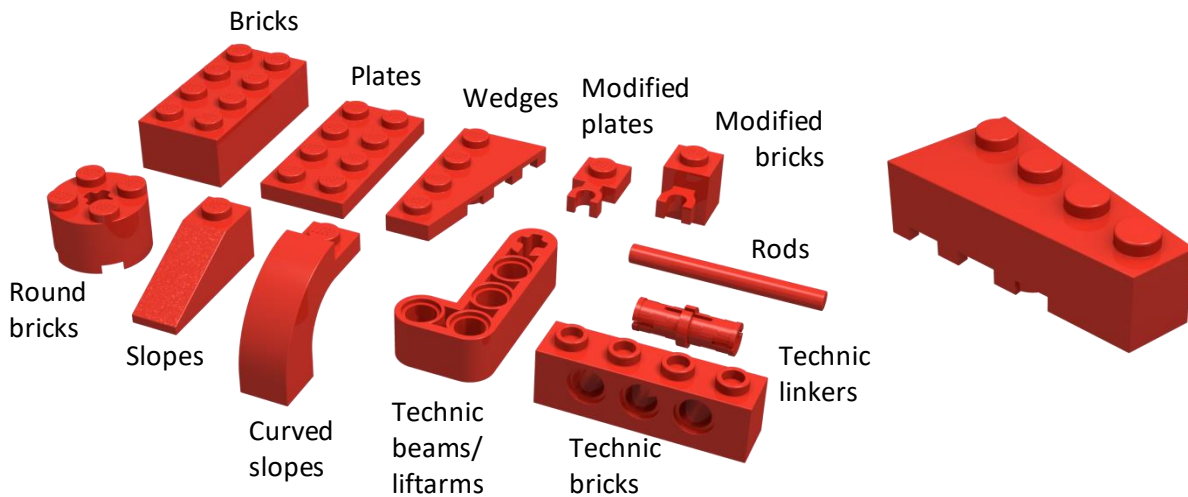
Brick Classification

Bricks are usually classified in 2 areas - their size and type.

The size of the brick depends on how many studs it takes up, such as a classic 2x4 brick. This has 2 studs in width and 4 in length.



There are many types of bricks; which can be split up into the categories of bricks, plates, wedges, modified plates, modified bricks, round bricks, slopes, curved slopes, technic beams/liftarms, technic bricks, technic linkers and rods



Even if a piece or brick has an angle to it, it is still classified by how many studs it takes up, such as this example, the 2x4 wedge

Colours

Here are the most common colours that you are likely to use in your MOC:

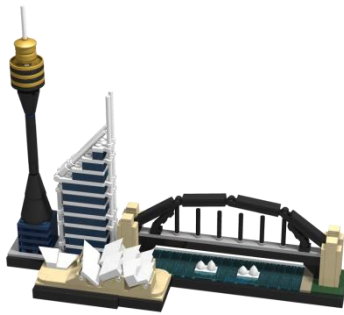
	Black		Tan		Purple
	Dark Bluish Grey		Dark Orange		Pink
	Light Bluish Grey		Bright Orange		Medium Azure
	White		Yellow		Bright Light Blue
	Dark Red		Lime		Dark Azure
	Bright Red		Sand Green		Medium Blue
	Reddish Brown		Bright Green		Sand Blue
	Dark Brown		Dark Blue		Light Flesh
	Olive Green		Blue		Trans-Clear
	Dark Tan		Dark Green		Trans-Black

Scales of MOCs

When designing your MOC, you have to decide what scale to make it at. Here are 6 scales you might want to use:

MICRO MIDI REDUCED MINIFIGURE LIFE-SIZE CUSTOM

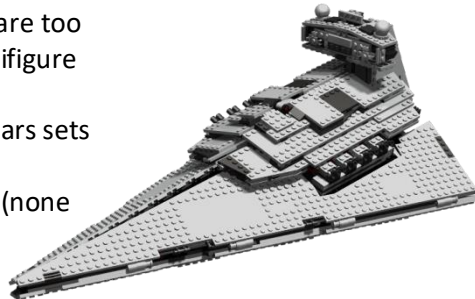
Micro-scale (or mini-scale)
- generally used for large dioramas or huge ships that you want to make to a small scale
- uses lots of small pieces



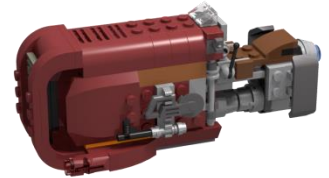
Midi-scale
- in between micro and reduced
- not that common



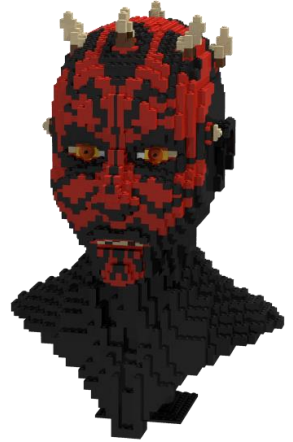
Reduced scale
- used for MOCs that are too big to be made in minifigure scale
- used a lot for Star Wars sets and MOCs
- not an official name (none given)



Minifigure scale
- used for buildings and most Star Wars ships
- very common scale for MOCs
- technical scale is around 1:40 or 1:50 (human to minifigure)



Life-size
- based on a 1:1 scale
- used for weapons or other objects



Custom scale
- a scale created by the builder
- any size they think will be the best

Planning

When you are ready to start your build, where do you start? It can be hard to find a good way to begin building so here are some tips for planning to get the wheels moving:

1. Reference material - If you are basing your MOC on a real thing then find clear pictures of what you want to build. This is important to get the proportions, colours and a lot of other things right.

2. Get a game plan - Think about what parts you will need, the scale you will build it to and any techniques you might need to utilize.

3. Basic sketches/designs - Start sketching rough ideas and dimensions on paper or if you prefer, design some key parts on LEGO Digital Design. This will help you visualize what it will look like as the final product.

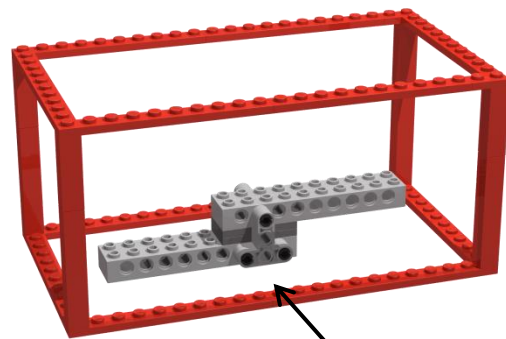
4. Alternative solutions - Consider alternative ways of building if your idea doesn't work or look how you wanted.

Starting your MOC

After you have some rough plans for your MOC, it's time to start building. Here are some tips on how to start building or designing and what to include at the start so you don't have to go back and put them in later.

1. Use technic — If your MOC is bigger than micro-scale, it's a good idea to incorporate technic before the main design work goes in. This will make your MOC structurally sound and allow you to build around it, instead of going back and putting it in later.

2. Rough dimensions — Map out rough dimensions by using base plates. If you are designing your MOC in design software (see page) then you can make a "cage" out of bricks to work inside. This makes you aware of the size, but this could always change throughout the building process. (Note: some builders do not use rough dimensions, as they consider it to be limiting)



"Cage" of dimensions

Technic bricks and beams

LEGO Digital Designer

LEGO Digital Designer or LDD is a design software you can use to design your MOCs. It is free to download (link on the last page) and lets you build in a digital software without physical bricks.

Advantages of design software

- Unlimited amount of bricks
- Wide range of parts
- Easy editing (copying/ changing colour)
- You don't have to buy bricks to experiment with
- You can plan what bricks you need to buy

Disadvantages of design software

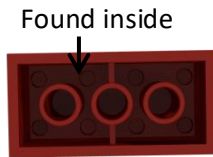
- No way to test physics and strength
- Unlimited parts can be hard to build with as there are so many possibilities
- Not every part/colour may be available
- Takes time and practice to get used to



Theed Palace
Micro-scale
made on LDD

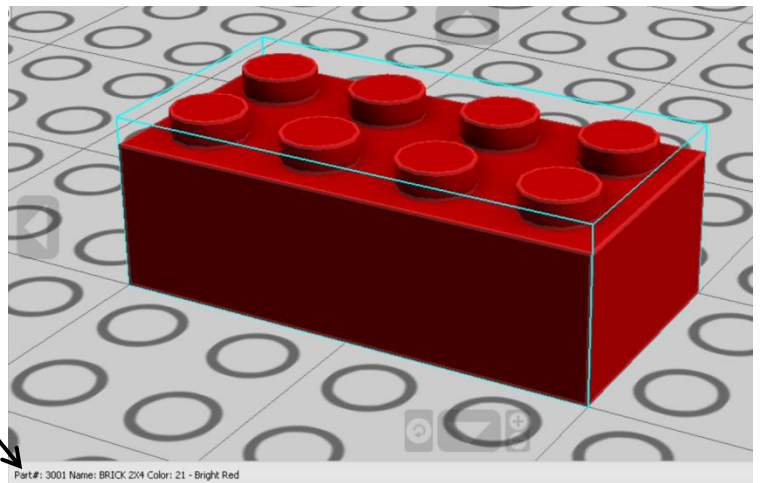
Part numbers

Every LEGO part has a number which identifies it. You can find the number on the inside of LEGO bricks, and in a variety of places on other parts.




LEGO Digital Designer will also tell you the part number if you select a part.


These can then be used to search for the piece when buying them and for finding them on design software.



Buying bricks

Here are the best ways to buy the LEGO bricks for building your MOCs:

1.  bricklink - The largest website for ordering parts, with a huge range to choose from. You look through shops and choose what you want, then make orders. This is the most efficient as you can upload a LDD file and it will automatically put the parts you need into your basket (link on the last page)

2.  Pick A Brick - Run by the LEGO Group, the pieces here are slightly more expensive than at Bricklink. However, you can order all the pieces together, but there is a reduced range of pieces



Restarting

Don't be afraid to restart your MOC, there are many benefits to starting a fresh:

- 1. Try out new techniques** - Sometimes techniques just don't work or don't have the effect you thought they would. Instead of adapting the technique, sometimes it's easier to just try and use or create another.
- 2. New possibilities** - By starting over, you can think of new possibilities that may have been hidden before because of a certain technique used.
- 3. Don't waste your time** - If you don't like the direction your MOC is going in, whether it's the scale or something else, it's better to start again rather than wasting time thinking about if you made the right decision, as you can always go back to the idea in the future if it turns out to work better.

Continuous improvement

Even when you have think you have finished a MOC, sometimes there is always something that could be done better.

Continuous improvement means looking back over your build and refining it, possibly because of new source material or a new piece, or just if you think of a different way to do something. Sometimes the "improvement" won't help your build at all and it was perfect how it was, but often it can add those little details and the correct angles you were missing that first time you designed it.



Development of a Kylo Ren
BrickHead

LINKS:

LEGO MOCs – Tips&Tricks - <https://www.facebook.com/LEGO-MOCs-TipsTricks-427029687665470/>
A Facebook page that posts daily tips, tricks, techniques, MOC features and set analyses

LEGO Digital Design - <http://idd.us.lego.com/en-us/download>
A design software to create your MOCs, directly linked to the LEGO Group

Bricklink - <https://www.bricklink.com/v2/main.page>
A website where you can buy bricks for your MOCs from online stores

Stud.io - <https://studio.bricklink.com/v2/build/studio.page>
An alternative design software, directly linked to Bricklink

Brickset - <https://brickset.com/>
A website that has a database of all the LEGO sets ever made and various news articles

LEGO Gallery - <http://idd.us.lego.com/en-us/gallery>
A website where you can access, upload and download MOCs and official LEGO sets

LEGO Tricks – <https://www.pinterest.co.uk/keithblack7547/lego-tricks/>
<https://www.pinterest.co.uk/johnathonv/lego-techniques/>
Pinterest boards that collect LEGO techniques from various builders

Swooshable - <http://swooshable.com/>
A website for LEGO articles on tips and techniques, especially SNOT techniques

Brickly - <https://www.facebook.com/bricklyHQ/>
An app that allows users to feature their MOCs to the growing community

LEGO MOCs – Community Builders - <https://www.facebook.com/groups/1591646100896260/>
A Facebook group dedicated to MOCs, tips and techniques

LEGO STAR WARS MOCs (DIEHARD FANS) - <https://www.facebook.com/groups/301165213630238/>
A Facebook group for sharing your own creations with a friendly community

LEGO Glossary - <https://www.brothers-brick.com/lego-glossary/#S@H>
A glossary made by the website Brother Brick that covers all the jargon used by LEGO builders

MOC pages - <http://www.moc-pages.com/>
A website with a library of 400,000 MOCs strong that is guaranteed to fuel your creativity