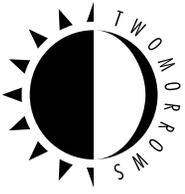


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Brick Journal

Issue 32 • January 2015
people • building • community

The LEGO® Brick Art Issue

Chris McVeigh • Nathan Sawaya

Brian Korte • Dave Ware



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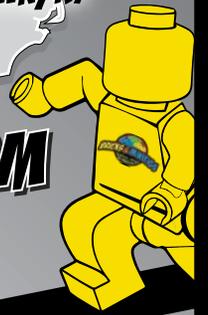
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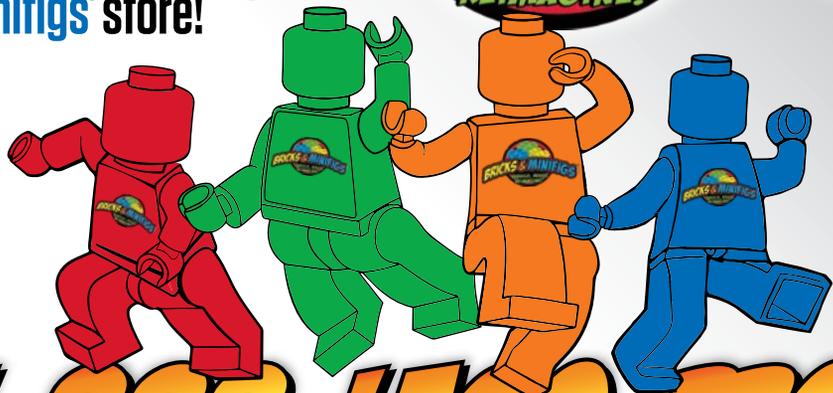
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January 2015

Issue 32

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Captain America is spotlighted in this Brick Sketch and photo by Chris McVeigh. TM & © Marvel Characters, Inc.

About the Contents Page:

More of Chirs McVeigh's Brick Sketches. Photos by Chris McVeigh.



May 7-10, 2015 (Mother's Day Weekend)
Charlotte, North Carolina
Details at www.brickmagic.org



From the Editor:

This issue is unique, as it spotlights a rather new part of the LEGO community: LEGO art. I have been wanting to do an issue on sculpture—and maybe mosaics—but it has taken a while to watch people begin to use the LEGO brick as an art medium.

The first people to do this were the LEGO Certified Professionals, and we have an interview and photo article from Nathan Sawaya, who is a person familiar to the pages of *BrickJournal*. It wasn't too long

before others outside of the LEGO Group began their work—and companies, including Brian Korte's Brickworkz, which is also in this issue.

Most recently, there have been people who have used the LEGO minifigure as an inspiration—Maddison Stapleton painted Benny the Spaceman, who you will see here, and Paul Lee draws LEGO superhero comics!

But what lies ahead? What will be the next LEGO art form? I don't know, but I will be keeping an eye out, especially when *BrickJournal's* own BrickMagic LEGO Festival returns this May in Charlotte, North Carolina—see you there!

Joe Meno, Editor

P.S. Have ideas or comments? Drop me a line at admin@brickjournal.com. I'm open to suggestions and comments and will do my best to reply.

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Glossary

AFOL (Adult Fan of LEGO)

NLSO (Non-LEGO Significant Other)

MOC (My Own Creation)

TLG (The LEGO Group)

BURP (Big Ugly Rock Piece)

LURP (Little Ugly Rock Piece)

SNOT (Studs Not on Top)

POOP (Pieces—that can be or should be made—Of Other Pieces)

LUG (LEGO Users Group)

LTC (LEGO Train Club)

DARK AGES (usually teen years, when you drift away from building)

STUDS OUT (building where the studs on bricks face the viewer)

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BrickJournal and its staff would like to thank the LDraw community for the software it makes available to the community, which we use for making all of the instructions and renderings in this magazine. We would especially like to thank Kevin Clague for his continued upgrades of the LPub tool that is a part of the LDraw suite. For more information, please visit <http://www.ldraw.org>.

Maddison Stapleton is a builder, a photographer, a cosplayer, and a painter. In only a few years, she has been recognized for her artistic and LEGO related creations at events around the US—she is a true LEGO artist.

Her roots in creativity began in childhood. Maddison tells, “I have always been interested in art. Growing up, my parents had a giant table that was stuffed with art supplies that my brother and I would go to town with. My love for art continued on to college, where I graduated with an art degree, with focuses on photography and painting, in 2012.”

Maddison also started building at a young age when her dad asked, “Hey kids, want to help me sort these LEGO bricks?” Her two favorite themes were the Ninja line, “because of the kick-butt female ninja in all the promo material,” and Bionicle, because “of the visuals, storyline, and the existence of another kick-butt female character.” Back then, she didn’t build a lot beyond a few small things, because she would get so frustrated with creations not turning out how she envisioned them. However, she was heavily involved with the Bionicle community on BZPower.com. Besides Bionicle, her senior project involved making pinhole cameras from LEGO and displaying huge prints of the photos in the school gallery. 2012 was the year that Maddison really took off on building, and also the year when she began taking antidepressants. As she happily notes, “It turns out that having a clear, anxiety-free mental state really does wonders for my ability to concentrate!”

Maddison’s building focus is mostly sculptural. In terms of theme, though, she kind of builds whatever catches her interest. She explains, “I like to push my abilities and see what I can do. Seeing how far I can take LEGO bricks as a medium is fun and challenging. When I went to LEGOLand California as a kid, seeing all of the giant LEGO sculptures of ordinary everyday things was fascinating to me, especially the creations that people were able to still interact with. I really like the idea of taking everyday objects and creating them out of bricks. It continually makes me wonder what I can create next.

Maddison Stapleton: Building LEGO Art

Article by Joe Meno

Photography provided by Maddison Stapleton



Far left: An example of Maddison’s photo work.

Left: A LEGO pinhole camera Maddison built, with (below) an image from it.



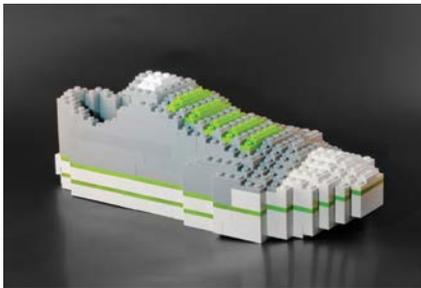


A Running Theme...



Examples of her fascination can be found in her models of shoes. She has made a series of running shoes, of which she explains: "The first shoe was built because I wanted to see if I could

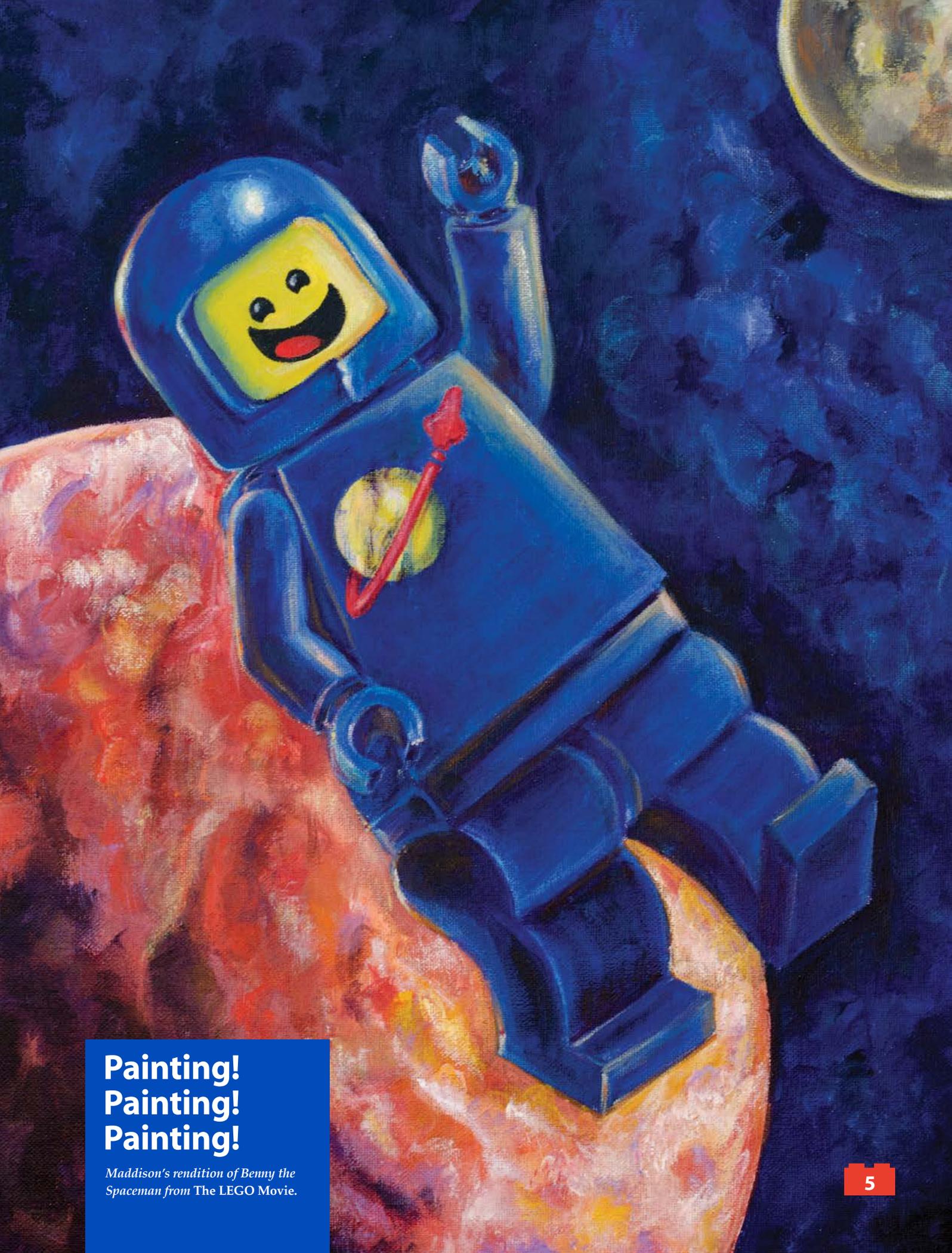
Top: Maddison's shoe and the mags it appeared in. Left and below: Other footwear Maddison made.



complete a successful system built to display at BrickFair Virginia 2012. I happened to have a pair of red Nike running shoes that I was using for track practice, along with an old surplus of red bricks, so I decided to see if I could build a shoe using that one for reference and make it appear realistic. It worked pretty well, because it was nominated for Best Sculpture at BrickFair that year!

"The second shoe (the blue one) was built because I wanted to make something to donate to Creations for Charity, an annual LEGO community holiday fundraising event. While it didn't sell, the shoe was noticed by *Runner's World* and *Runner's World Germany*, who featured the shoe in their magazines.

"I am not sure why I keep building shoes, though. I don't collect shoes by any means—I mean, running shoes do come in so many pretty colors and patterns, and I'd probably run around barefoot like the ridiculous Portlander I am if I could. It's definitely fun to see people's reactions during conventions when they think my creation is a real shoe, only to realize it's made of bricks!"



Painting! Painting! Painting!

Maddison's rendition of Benny the Spaceman from The LEGO Movie.



Above: A puffin model.

Top right: A Volkswagen Beetle built by Maddison.

Right: A life-scale skateboard.



Her art and her building definitely play off of each other. Maddison does a lot of drawings in sketchbooks of potential MOCs. “Being able to draw my ideas helps me a lot when it comes to visualization and planning,” she explains. “In recent months I’ve been trying to draw every day in order to help myself to work through ideas and concepts.”

One of her ideas that garnered her a lot of attention was a painting she submitted to BrickFair VA 2014’s charity auction. Seeing the success of the charity over the years and also that there was a bet placed between BrickFair and Brickworld (another event, in Chicago), she wanted to contribute to the charity as much as she could. Maddison wanted to make something iconic for the auction, so she figured that Benny the Spaceman from *The LEGO Movie* would be the best bet for the subject matter, because of the movie and the love that the fans have for him and the Classic Space theme. She also wanted to do some painting since she hadn’t painted in a couple of years.

Maddison recalls the auction: “The actual auction was crazy! Going into it, I expected my painting would sell for around two or three hundred dollars. I thought, ‘Hey, it might not make a lot of money, but it’s all going to charity, so anything will help!’ When it passed \$500, I had a ‘wait, what?’ moment, and when it made it to \$1000, I was completely flipping out. When two bidders got into a bidding war and made it to \$2000, it felt unreal. That was one of the coolest things to happen to me in a really long time, and it got to help out the charity auction, which made it even better.”



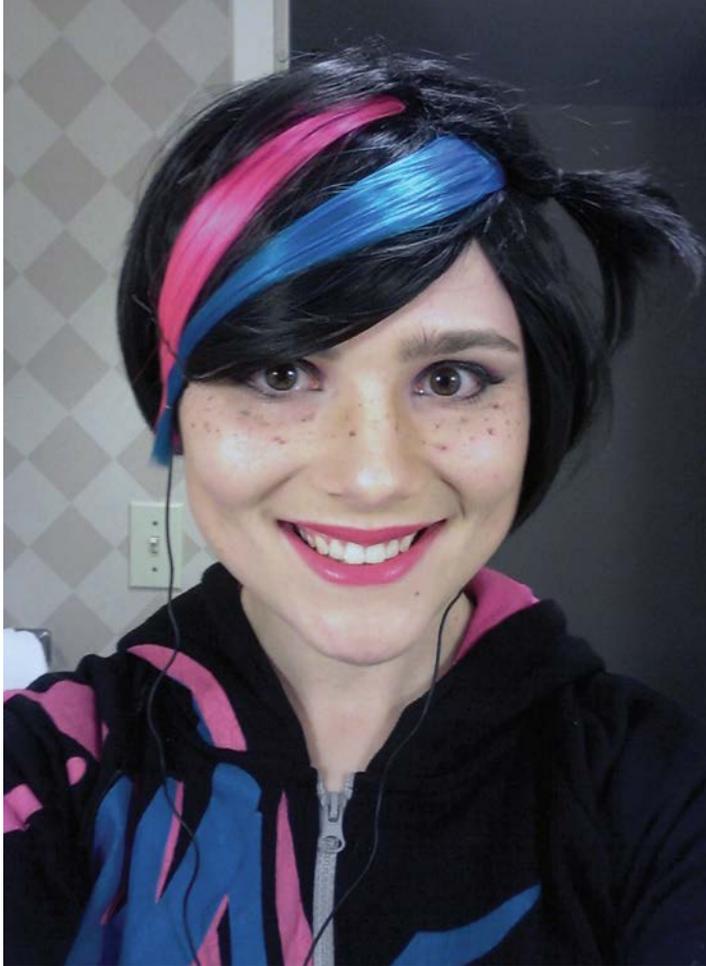
"Sometimes, you just can't get rid of a bomb!"

Another creation of hers made an impression at the same event—a sculpture of Batman running with a bomb. Based on a scene from the classic TV show, this is a minifigure Batman instead of Adam West. Maddison built this because the scene of him running around with the bomb cracked her up every time she saw it. She also wanted to try making a 10:1 scale minifigure, but also incorporate the idea of visual movement to it. As a result, she did a lot of research on references to make sure his costume would be accurate.

She also did a lot of drawings from different angles, including one of Batman at full size, to figure out how he would be posed. She explains: "After all the planning, the figure was built over the course of a few days, and then I made his bomb at BrickFair, as I was worried that the TSA would have some questions about why I apparently had a bomb in my luggage."

She continues, "The bat logo on Batman's chest is made of a mix of cheese slopes, plates, and tiles. That was the first time I did a mosaic using cheese slopes, so it was really interesting and it made a really cool effect."

Maddison's Batman model.



With all of her talents—builder, artist, painter and even cosplayer—is there anything Maddison won't do? Her answer is quick: "I don't skydive. That's not happening. Ever. I draw the line at the freefall I get during pole vaulting." 

*Left: Maddison as Wyldestyle.
Above: Another view of Batman.*



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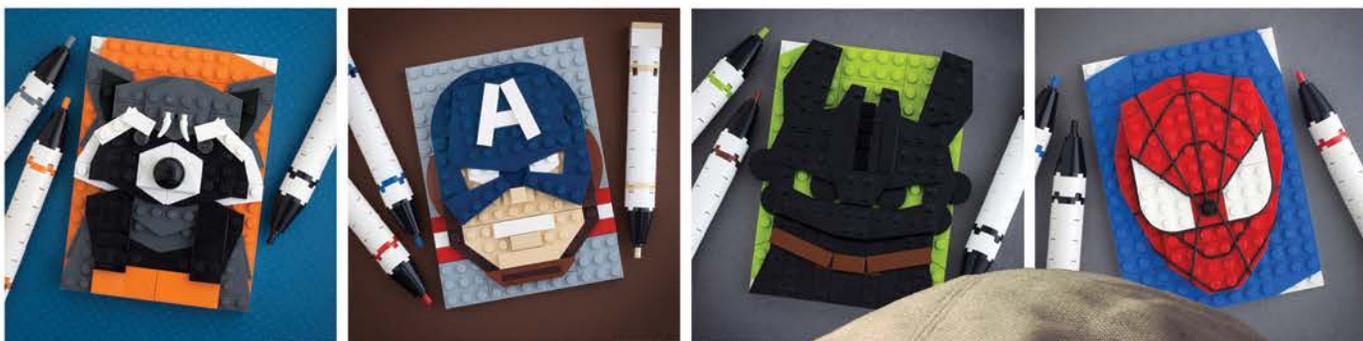
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People



Making Brick Artistry: Chris McVeigh

Article by Joe Meno

Photography provided by Chris McVeigh

Chris with his Brick Sketches. Characters TM & © their respective owners.



Chris McVeigh is a photographer that has made his mark on LEGO photography and building. With his building and photo skills, his work has been seen on websites and magazines. On his website, he has building guides for some of his most popular models. *BrickJournal* chatted with him about how he started out his LEGO art.

BrickJournal: What is your profession?

Chris McVeigh: I am both a technology journalist and graphic designer by trade. I got my start as a professional writer with *MacHome* magazine, and I'm now an occasional contributor to *Macworld*. And chances are good that you've seen some of the graphic design work I did for Microsoft's former ad agency; in the mid-2000s, I provided vector artwork for a number of high-profile online campaigns including MSN Search, SQL Server 2005, Windows Server and more. Yep, so... sorry about all that nonsense, I'm sure those ads got annoying quickly!

When did you start photography?

In 2007, a friend prodded me to join Flickr and start a photography project called '365' where I'd have to post a creative picture daily for a full year. I had very little appreciation for photography at that stage, and to be honest, I felt it was just something I wasn't capable of being good at. However, I found myself with a lot of free time as work for the ad agency wound down, and so I capitulated and signed up to Flickr.



More Brick Sketches.



I started off with a consumer-level digital camera that I'd previously used only for photos of family and friends. Over the next few weeks, I quickly picked up speed, learning about composition, framing and focal points. My photos were well-received on Flickr, and encouraged by the response, I purchased my first Digital SLR. I suppose I was equally excited and overwhelmed at that point, because there was so much more to learn: aperture, exposure, ISO, and how they're all so closely interwoven; as well as lenses, lighting, flash and more.

You did your own digital magazine — what was it about?

In my university days, I got a job at the campus computer store. I'd had an affinity for Apple computers since I'd gotten an Apple IIc for Christmas in the mid-eighties, and I suppose I quickly became the store's Mac expert. I'd always enjoyed sharing news and knowledge with other folks; for example, in high school, I published a weekly newsletter using early desktop publishing software. So I figured I'd do the same at the computer store (which, oddly enough, was actually called The Computer Store). I developed my own double-sided paper publication that I called *MacSense*, which I handed out to customers. It wasn't long before someone suggested that I should make a digital version and distribute it online. The Internet wasn't even a thing back then—so at first, I distributed it on America Online and local BBSes!

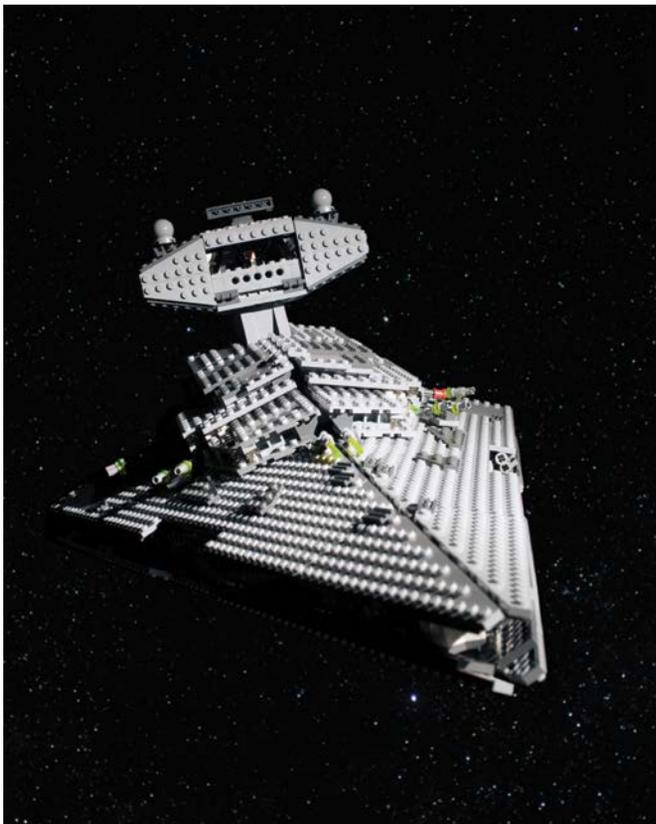
The monthly publication quickly grew beyond news, and I added tips and tutorials, opinion pieces and humour sections. It was a lot of fun, but as these things go, it became too much effort for very little return in return. Online advertising was in its infancy, and few marketers were willing to take a chance on a small online publication with a readership that was hard to quantify.

How did you begin taking photos of toys, and when did this lead to photographing LEGO?

Well now, that's an odd story. As I experimented with photography, I would take a few shots of toys every now and again. It was largely without purpose; really, I was just testing my camera and lens and toying



Chris' first LEGO photo.



Chris' first proper LEGO photo.

Cleaning up the Galaxy.



around with macro photography. But as I worked my way through the Flickr 365 project, I befriended a chipmunk in the backyard of my parent's home. Eventually, the chipmunk started to appear in my photos, and I got the brilliant/bizarre idea one day to pair up the chipmunk with some of my Hasbro *Star Wars* toys. The first such photo was called "Freeze," featuring an AT-AT halting the chipmunk, who I'd coaxed to stand up on her hind legs. Flickr loved it, and so I was encouraged to take more. The chipmunk photos often went viral and I enjoyed a fair amount of press coverage for that series.

All things much come to end, however; in 2008, I moved to Halifax and was no longer able to pop over to my folks' place to stage chipmunk photos. So I started taking photos of my Hasbro *Star Wars* figures. It was great fun, with one exception: creating scaled-down sets for the figures was a time-consuming process. It held me back from producing more photos, and this frustrated me to no end.

Around about the same time, I'd started to take some photos of LEGO minifigures. I'd emerged from my dark ages in 2007, but I was still a by-the-book builder, never going outside the lines. But then one day, everything changed. I had received the Green Grocer as a gift, but I was never entirely happy with the interior. And the more I thought about it, the more I wanted to change it. So one day I sat down and did just that—and suddenly, a whole new world opened for me! I realized I could build whatever I wanted; I wasn't beholden to the instructions. And initially, that meant I could create anything I needed for a minifig photo—a street scene, a dining room, a spaceship—and it would all have a consistent aesthetic, because it was all LEGO. This was really the tipping point for me; soon, I forgot all about photographing Hasbro *Star Wars* figures and exclusively focused on LEGO.

What was the first LEGO photo you took? What inspired you to do this particular photo?

According to Flickr, my first published photo of LEGO was of a Rebel Hanger, where I'd essentially arranged my LEGO *Star Wars* ships (X-Wing, Y-Wing, B-Wing) on a black fold-up table and populated it with LEGO pilots, droids, and support crew. It was a serviceable photo but nothing special; in effect, a very tame start to the nonsense I now do. (I followed it up the next day with a photo of an AT-ST having entered the hanger and destroyed everything in sight, hah!) About ten days later, I posted what I feel is probably a proper start to my career photographing LEGO—an Imperial Star Destroyer shot against black, with a star field composited into the background.

What was the first LEGO model you built for photography?

I'm going to give you a twofold answer to this one. The first models I made that appeared in photos were a trio of Halifax, Nova Scotia-style townhouses. These were narrow builds with open backs that allowed you to see inside (much like LEGO Town sets from the '70s and '80s). The townhouse series was developed shortly after I started to build again (following my awakening with the Green Grocer). They were also a product of LEGO Digital Designer; being a new builder, I of course didn't have enough parts on hand to make anything significant. Once the parts arrived and the models were constructed, I composed a shot of three Jedi tidying up the front step of one townhouse and called it "Cleaning up the Galaxy." Yes, I was clearly very, very clever back then with a sharp sense of humour. (How cheesy, really!) Nevertheless, it was the first time anything I'd built appeared in front of the camera.

The first model I built specifically for a photo was actually the original Twitter bird. It was meant to be a very LEGO-build, with exposed studs and whatnot, and I posted it to Flickr to announce that I'd joined Twitter (as @Actionfigured).

Along with the photos, you do LEGO oriented T-shirts—what inspired you to do these?

It's mostly just an extension of my work as a vector artist. It's been fun to visualize LEGO minifigures that will never exist, so that's been a big draw for me. But I've also enjoyed doing more generic type stuff that celebrates our brick culture, like my "Just Build" design.

Tell me about your computer (Apple) series.

I don't suppose it was ever meant to be a series, but it's definitely developed into one! The retro tech series of builds actually has its origins in the two stints I did as guest artist for Gizmodo, but not in the way you might expect. I was brought on board to provide editorial photos of LEGO builds, so each evening I'd be given an assignment which was due at noon the next day. In that short time, I'd have to develop a model, set up and photograph it, and then process the photo. I was really excited about working with Gizmodo, a site devoted to gadgetry, and assumed that most of the builds I did would be tech items. In fact, that was rarely the case. Gizmodo has started branching out editorially, covering a much wider range of subjects. So instead of tackling gadget builds, I found myself building ramen bowls, shower heads, cell towers and killer waves. It was actually great to get such a wide variety of assignments, because it (a) forced me to build cool things I otherwise would never have attempted and (b) taught me that I could build anything I set my mind to.

Chris' first LEGO model for photography.



Chris' Mac 128k.





Chris' Apple IIc.



I was able to build a few fun gadgets, mind you; among them, a broken iPod, classic Nokia and Motorola cell phones, and a Yamaha speaker. And this got me to thinking about other things that I might like to build in LEGO, from cameras to computers. (In fact, I took it upon myself to build a LEGO iPad, which I shoehorned into one photo!)

After finishing my second stint as guest artist in 2012, I still had loads of ideas percolating in my head and eventually decided that I would build a palm-sized Macintosh 128K. It was a relatively slow development process where I considered several different scales and a number of treatments for the display, none of which felt quite right. The solution came to me weeks later, while breaking down a relatively new LEGO set I'd purchased. As I pulled it apart, I took notice of the new 1x4 plates with bow (curved slopes) in it, and realized that five of them placed together would be perfect for the display. (This display technique has found its way into almost all my tech builds, actually.)

So, the model was finished up in late August of 2012, but I decided to sit on it until January 2013. I had to turn my attention to my holiday projects at that point, and I simply felt it was better to reveal my LEGO interpretation of the Macintosh 128K on the computer's 29th birthday.

And when I finally revealed it on January 24, 2013, the response was incredible. It went viral within a day, soon appearing on sites from The Brothers Brick to Gizmodo to Business Insider. People wanted to interview me; people wanted a building guide; people just wanted more. I was overwhelmed.

Needless to say, I was encouraged to create more computer models (and publish guides for them, of course). The IIc-inspired model was unveiled in the summer of 2013 and it remains one of my personal favorites, in part because it was my first computer. Additionally, it feels like it hits a lot of the right notes, perhaps more so than the Mac. The IIe-inspired design was developed in early 2014, and in fact, was actually the most requested model by fans. However, I delayed its development out of respect for another builder who had created his own IIe-inspired model in early 2013.



*A more recent iMac.
A Macintosh SE.*



An Apple IIe.





A retro refrigerator, with full food racks.

So what does the future hold? Well I can't be too specific, but you'll certainly see a much wider variety of retro computer models!

When did you start making building guides?

In 2010, I suppose I decided that I wanted to share something with the community. So, I made plans to develop a series of LEGO Christmas projects and post building guides for my fans on Flickr. 2010's Holiday Project series included a simple Christmas tree ornament, a Christmas Tree, and Santa's Sleigh. It was more or less an experiment, and it went well. However, 2011's Holiday Project series caught the attention of a much wider audience, due in part to my diminutive LEGO Gingerbread House. The incredible response encouraged me to keep the series going year after year—I've just received so many awesome letters from families who love these holiday projects!

Once I got up to speed creating building guides, I decided to expand my library to include other popular models, such as my miniature cameras and the computer series. They're substantively more work than the relatively simple ornaments, but people really seem to appreciate the effort. Although there's been a bit of an unfortunate side effect, hah! Every time I post a photo of a new build to Facebook, someone will demand a building guide. The simple truth is that my building guides are not in any way automated; in fact, they're an incredible amount of work, and I have to choose which projects become guides very carefully.

Tell us about your LEGO sketches.

Brick Sketches (as I call them) are a style of LEGO portrait I developed in 2013. I participate in several artist groups on Facebook, and a little over a year ago, a number of talented artists started creating marker sketches of pop-culture characters on 4" x 6" card stock. So I decided I'd have a little fun, and made a tongue-in-cheek version of a marker sketch entirely out of LEGO. It was a very basic rendition of Wolverine, which I thought would get a

few laughs (particularly in the artist group). However, people loved it! I was blown away by the incredible response, and thought I should create another one to see if I could actually do a character justice in such a small canvas.

I locked down a basic format by my fourth Brick Sketch: front profile, asymmetrical colored background, and the use of brick-built 'markers' as a framing device. The canvas is

A retro TV.



admittedly small, but I love the challenge of working at that size. Angle (wedge) plates are the key to eking out more detail, of course, allowing me to create the illusion of detail in an otherwise chunky, pixel-like resolution of 12x16.

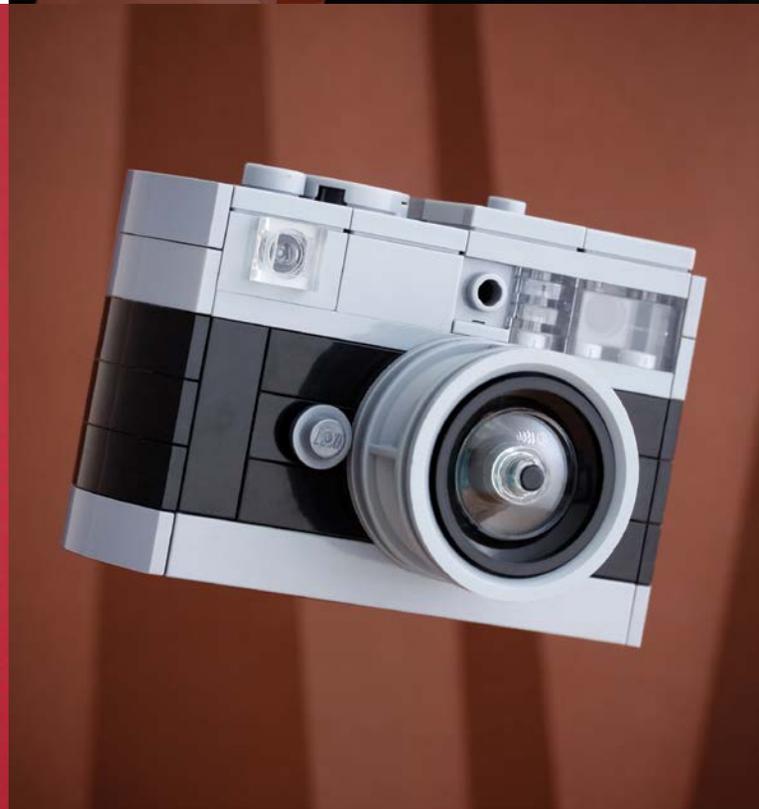
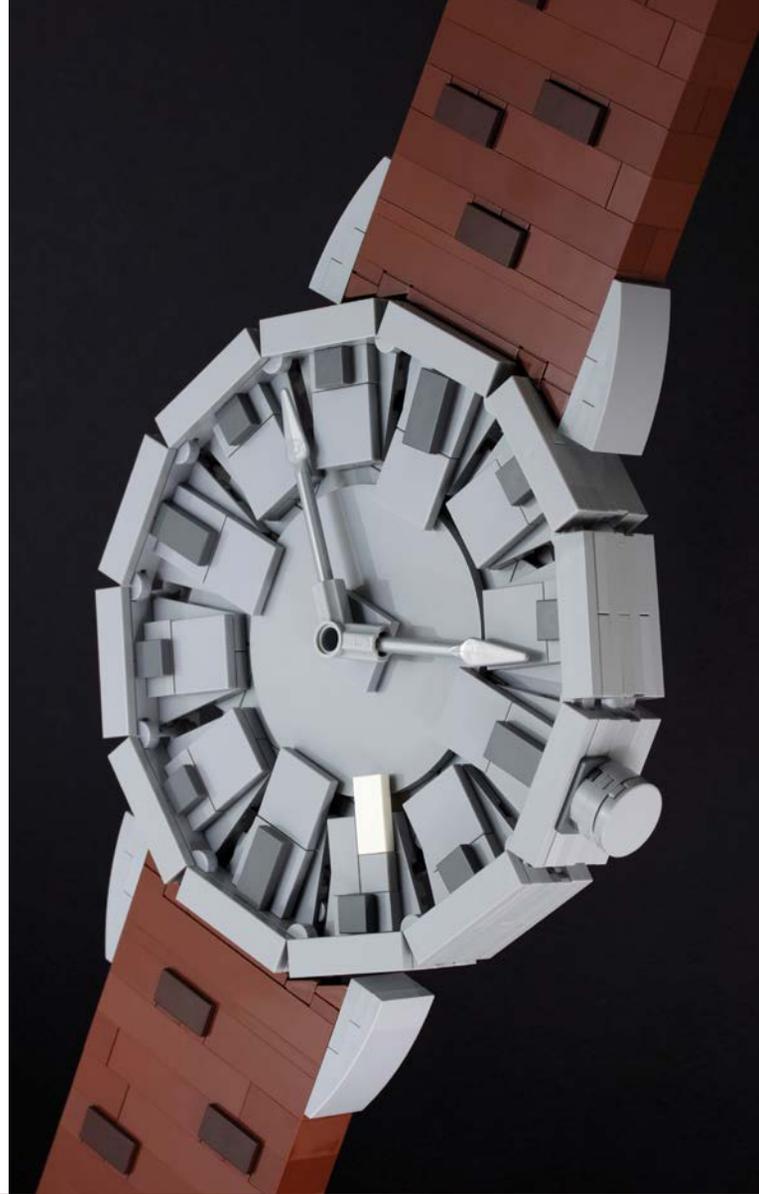
I have done 32 Brick Sketches so far, and I'll keep on producing them as long as there's interest. They're great fun!

What is the best MOC you have? The most popular?

My personal favorite model is undoubtedly my '60s TV. I suppose that might seem like an odd choice, but I'm a fairly harsh judge of my own work, and that model hits a lot of the right marks. It's instantly recognizable and has a warm, inviting color palette that is suggestive of the era; additionally, it's got a clever assembly method and its seams are clean and tidy. I rarely talk about my own work with such positive terms (and I'll admit I'm self-conscious doing so); in most cases, I find myself frustrated by necessary compromises to make a model work.

As for most popular, well that's easy. My Macintosh 128K-inspired build has more traffic on Flickr than any other model I've made, and I suspect it's the most-downloaded building guide on my website. :) 

A retro telephone, camera, and watch built for magazines.





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BRICKJOURNAL #11

"Racers" theme issue, with building tips on race cars by the ARVO BROTHERS, interview with LEGO RACERS designer ANDREW WOODMAN, LEGO FORMULA ONE RACING, TECHNIC SPORTS CAR building, event reports, instructions and regular columns on MINIFIGURE CUSTOMIZATION (by JARED K. BURKS) and MICRO BUILDING, builder spotlights, LEGO HISTORY, and more!

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A look at school sculptures by NATHAN SAWAYA, builder MARCOS BESSA's creations, ANGUS MACLANE's CubeDudes™, a Nepali Diorama by JORDAN SCHWARTZ, instructions to build a school bus for your LEGO town, our regular column on MINIFIGURE CUSTOMIZATION by JARED K. BURKS, how a POWER MINERS model became one for ATLANTIS, building standards, and much more!

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BRICKJOURNAL #13

Special EVENT ISSUE with reports from BRICKMAGIC (the newest US LEGO fan festival, organized by BrickJournal magazine), BRICKWORLD (one of the oldest US LEGO fan events), and others! Plus: spotlight on BIONICLE Builder NORBERT LABUGUEN, our regular column on minifigure customization, step-by-step "You Can Build It" instructions, spotlights on builders and their work, and more!

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BRICKJOURNAL #14

Discover the world of stop-motion LEGO FILMS, with brickfilmer DAVID PAGANO and others spotlighting LEGO filmmaking, the history of the medium and its community, interviews with the makers of the films seen on the LEGO CLUB SHOW and LEGO.com, and instructions on how to film and build puppets for brick flicks! Plus how to customize minifigures, event reports, step-by-step building instructions, and more!

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BRICKJOURNAL #15

Looks at the LEGO MECHA genre of building, especially in Japan! Feature editor NATHAN BRYAN spotlights mecha builders such as SAITO YOSHIKAZU, TAKAYUKI TORII, SUKYU and others! Also, a talk with BRIAN COOPER and MARK NEUMANN about their mecha creations, mecha building instructions by SAITO YOSHIKAZU, our regular columns on minifigure customization, building, event reports, and more!

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BRICKJOURNAL #16

Focuses on STEAMPUNK! Feature editor GUY HIMBER gives a tour with a look at his work, DAVE DeGOBBI's, NATHAN PROUDLOVE's, and others! There's also a look at the history of LEGO Steampunk building, as well as instructions for a Steampunk plane by ROD GILLIES! Plus our regular columns on minifigure customization, building tips, event reports, our step-by-step "You Can Build It" instructions, and much more!

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BRICKJOURNAL #17

LEGO SPACE WAR issue! A STARFIGHTER BUILDING LESSON by Peter Reid, WHY SPACE MARINES ARE SO POPULAR by Mark Stafford, a trip behind the scenes of LEGO'S NEW ALIEN CONQUEST SETS that hit store shelves earlier this year, plus JARED K. BURKS' column on MINIFIGURE CUSTOMIZATION, building tips, event reports, our step-by-step "YOU CAN BUILD IT" INSTRUCTIONS, and more!

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Go to Japan with articles on two JAPANESE LEGO FAN EVENTS, plus take a look at JAPAN'S SACRED LEGO LAND, Nasu Highland Park—the site of the BrickFan events and a pilgrimage site for many Japanese LEGO fans. Also, a feature on JAPAN'S TV CHAMPIONSHIP OF LEGO, a look at the CLICKBRICK LEGO SHOPS in Japan, plus how to get into TECHNIC BUILDING, LEGO EDUCATION, and more!

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LEGO EVENTS ISSUE covering our own BRICKMAGIC FESTIVAL, BRICKWORLD, BRICKFAIR, BRICKCON, plus other events outside the US. There's full event details, plus interviews with the winners of the BRICKMAGIC CHALLENGE competition, complete with instructions to build award winning models. Also JARED K. BURKS' regular column on minifigure customizing, building tips, and more!

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LEGO SUPERHEROES! Behind-the-scenes of the DC and Marvel Comics sets, plus a feature on GREG HYLAND, the artist of the superhero comic books in each box! Also, other superhero work by ALEX SCHRANZ and our cover artist OLIVIER CURTO. Plus, JARED K. BURKS' regular column on minifigure customization, building tips, step-by-step "You Can Build It" instructions, and more!

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LEGO CAR BUILDING! Guest editors LINO MARTINS and NATHAN PROUDLOVE of LUGNuts share secrets behind their LEGO car creations, and present TECHNIC SUPERCAR MODELS by PAUL BORATKO III and other top builders! Plus custom instructions by TIM GOULD and CHRISTOPHER DECK, minifigure customization by JARED BURKS, step-by-step "You Can Build It" section, and more!

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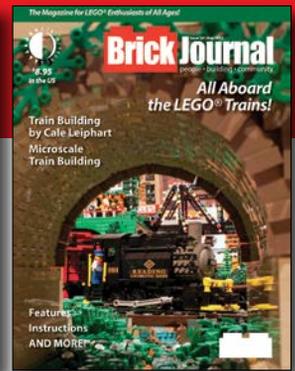
BRICKJOURNAL #22
LEGO PLANE BUILDING! Top builder RALPH SAVELSBERG takes off with his custom LEGO fighter models, there's a squadron of articles on Sky-Fi planes by FRADEL GONZALES and COLE MARTIN, find instructions to build a Sky-Fi plane, plus our regular feature on minifigure customization by JARED BURKS, AFOLs by GREG HYLAND, other step-by-step "You Can Build It" instructions, and more!

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STAR WARS issue, with custom creations from a long time ago and far, far away! JACOB CARPENTER's Imperial Star Destroyer, MARK KELSO's Invisible Hand, interview with SIMON MACDONALD about building Star Wars costume props with LEGO elements, history of the LEGO X-Wing, plus our regular features on minifigure customization by JARED BURKS, "You Can Build It" instructions, and more!

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LEGO TRAINS! Builder CALE LEIPHART shows how to get started building trains and train layouts, with instructions on building microscale trains by editor JOE MENO, building layouts with the members of the Pennsylvania LEGO Users Group (PennLUG), fan-built LEGO monorails minifigure customization by JARED BURKS, microscale building by CHRISTOPHER DECK, "You Can Build It", and more!

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MIEVIAL CASTLE BUILDING! Top LEGO Castle builders present their creations, including BOB CARNEY's amazingly detailed model of Neuschwanstein Castle, plus others, along with articles on building and detailing castles of your own! Also: JARED BURKS on minifigure customization, AFOLs by cartoonist GREG HYLAND, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, and more!

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CREATURES GREAT AND SMALL with builders SEAN and STEPHANIE MAYO (known online as Siercon and Coral), other custom animal models from BrickJournal editor JOE MENO, LEGO DINOSAURS with WILL PUGH, plus more minifigure customization by JARED BURKS, AFOLs by cartoonist GREG HYLAND, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, and more!

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BRICKJOURNAL #27
GUY HIMBER takes you to the IRON BUILDER CONTEST, which showcases the top LEGO builders in the world! Cover by LEGO magazine and comic artist PAUL LEE, amazing custom models by LINO MARTINS, TYLER CLITES, BRUCE LOWELL, COLE BLAQ and others, minifigure customization by JARED BURKS, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, AFOLs by GREG HYLAND, & more!

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Learn what went into the making of THE LEGO Movie and other brickfilms with moviemaker DAVID PAGANO, chat with brickfilmmers The Brotherhood Workshop, sit in on a talk with the makers of LEGO: A Brickumentary, a look at MINDSTORMS building, minifigure customization by JARED BURKS, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, AFOLs by GREG HYLAND, & more!

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TECHNIC hot rod builder PAUL BORATKO and editor JOE MENO diagram instructions on adding functions to your models, shop-talk with LEGO TECHNIC designers, and more surprises to keep your creations moving at top speed! Plus Minifigure Customization by JARED BURKS, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, BrickNerd DIY Fan Art by TOMMY WILLIAMSON, and more!

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LEGO ARCHITECTURE with JONATHAN LOPES, a microscale model of Copenhagen by ULRIK HANSEN, and a look at the LEGO MUSEUM being constructed in Denmark! Plus Minifigure Customization by JARED BURKS, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, BrickNerd DIY Fan Art by TOMMY WILLIAMSON, MINDSTORMS building with DAMIEN KEE, and more!

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BRICKJOURNAL #31
Building LEGO bricks WITH character, with IAIN HEATH and TOMMY WILLIAMSON, Manga-inspired creations of MIKE DUNG, sculptures by Taiwanese Brick Artist YO YO CHEN, Minifigure Customization by JARED BURKS, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, BrickNerd DIY Fan Art by TOMMY WILLIAMSON, MINDSTORMS building, and more!

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BRICKJOURNAL #32
LEGO ARTISTRY with builder/photographer CHRIS McVEIGH; mosaic builders BRIAN KORTE, DAVE WARE and DAVE SHADDIX; and sculptors SEAN KENNEY (about his nature models) and ED DIMENT (about a full-size bus stop built with LEGO bricks)! Plus Minifigure Customization by JARED K. BURKS, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, MINDSTORMS building, and more!

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BRICKJOURNAL #33
LEGO ROBOTS! A talk with MINDSTORMS EV3 builders MARC-ANDRE BAZERGUI and ANDY MILLUZZI, designer LEE MAGPILI, CHRIS GIDDENS with his amazing robot sculptures, plus Minifigure Customization by JARED BURKS, step-by-step "You Can Build It" instructions by CHRISTOPHER DECK, BrickNerd DIY Fan Art by TOMMY WILLIAMSON, other looks at MINDSTORMS building, and more!

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Paul Lee: Making LEGO Comics

Interview by Joe Meno
Art provided by Paul Lee

Paul Lee has worked in the comics industry for over 25 years. Most notably, he's worked on issues of Batman, Green Arrow, Buffy the Vampire Slayer and Conan. Now he's a comic artist for the LEGO Group as well as an AFOL! BrickJournal was able to talk to him about his art and building.

Background

BrickJournal: When did you start building?

Paul Lee: I started building as a child, of course. I went through my dark ages as most people do, though I would always pick up a small set here and there. I came out of my dark ages with the first wave of *Star Wars* licensed LEGO sets and began collecting again. When my oldest son turned 3 years old, I began building a lot more as we played with the LEGO together.

When did you get into LEGO Illustration?

About 7 years ago, I began burning out on mainstream comics. I was losing my enthusiasm for the industry. At that point, I was a pretty active AFOL. While thumbing through a *LEGO Club Magazine*, I saw that they use a lot of comics. It occurred to me that I could do comics work for the *Club Magazine*.

Did your building and drawing work off of each other?

I do think my art background definitely helps my building. I have some sense of design and composition. I use my training to plan the color blocking and I am very particular about details and creating the right angles and shapes.



Paul Lee's fold-out illustration for the Batman 75th Anniversary comic, first released at San Diego Comic-Con 2014.

In the past, when working on comics, I sometimes would build small set pieces out of LEGO to plan backgrounds for comic panels, especially when I was dealing with a tricky camera angle.

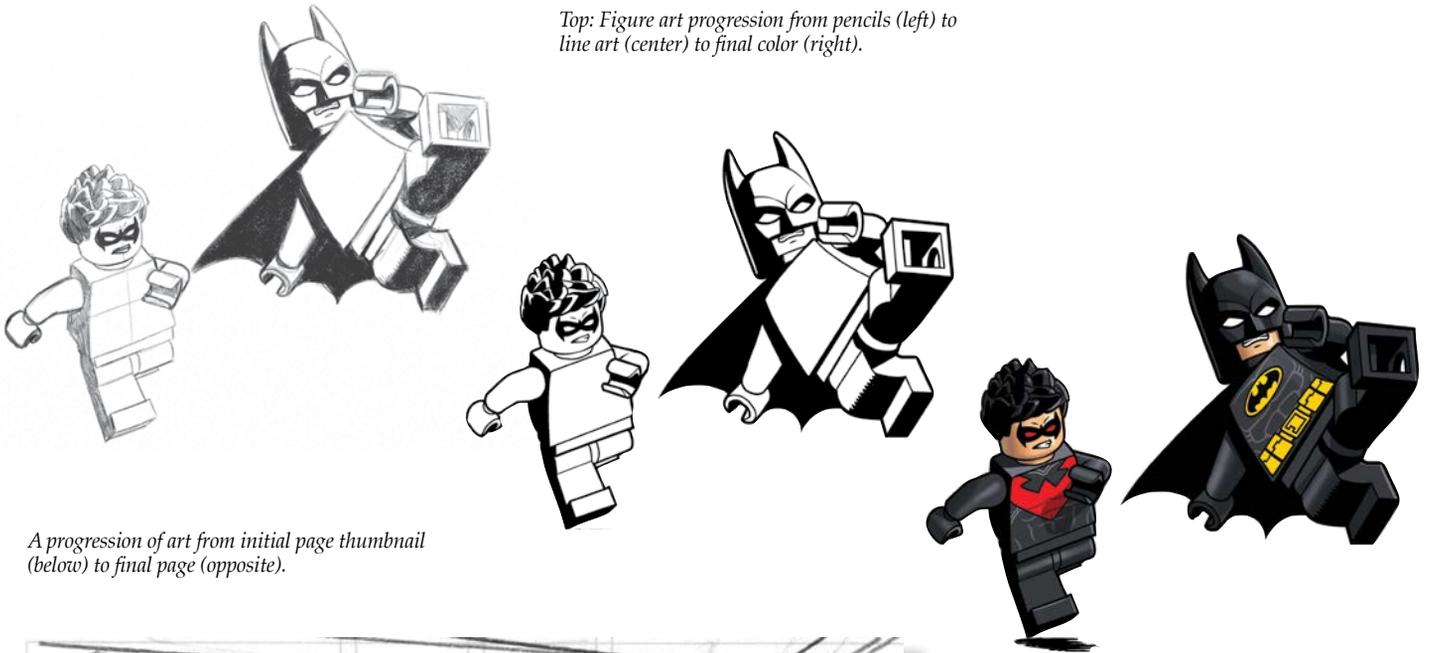
As a painter, I have always focused on the human figure, so I have a particular understanding of human anatomy and motion. I think that's why as a builder, I tend to favor Mechas and robots. I use my knowledge of anatomy to make creations that emulate the possibility and articulation of humans.

What was your big break?

In my experience, there never really is a "big break." Everything is about putting in effort and being persistent. Having worked for years as a freelance illustrator and comic artist, this is pretty much the way it works. When I decided that I wanted to do LEGO comics, I went around getting information about finding the right person to talk to. It was at a San Diego Comic-Con that I approached people manning the LEGO booth. Eventually I got the e-mail of the art director of the *Club Magazine*.

I then sent an e-mail expressing my interest in doing comics work. I sent them my portfolio and comic samples. It took about year after I first contacted them before they gave me a sample script to try out. As I recall, it was an Atlantis script. Not long after that, I got my first gig.

Top: Figure art progression from pencils (left) to line art (center) to final color (right).



A progression of art from initial page thumbnail (below) to final page (opposite).



Technique

How do you draw LEGO minifigures?

My biggest secret for drawing minifigures and LEGO comics in general is that I use LEGO Digital Designer. For minifigures, I make them in LDD and pose them, rotating the camera as needed and taking screen shots. I take shots at multiple angles and edit them together in Photoshop to be able to bend limbs in directions that they normally don't bend.

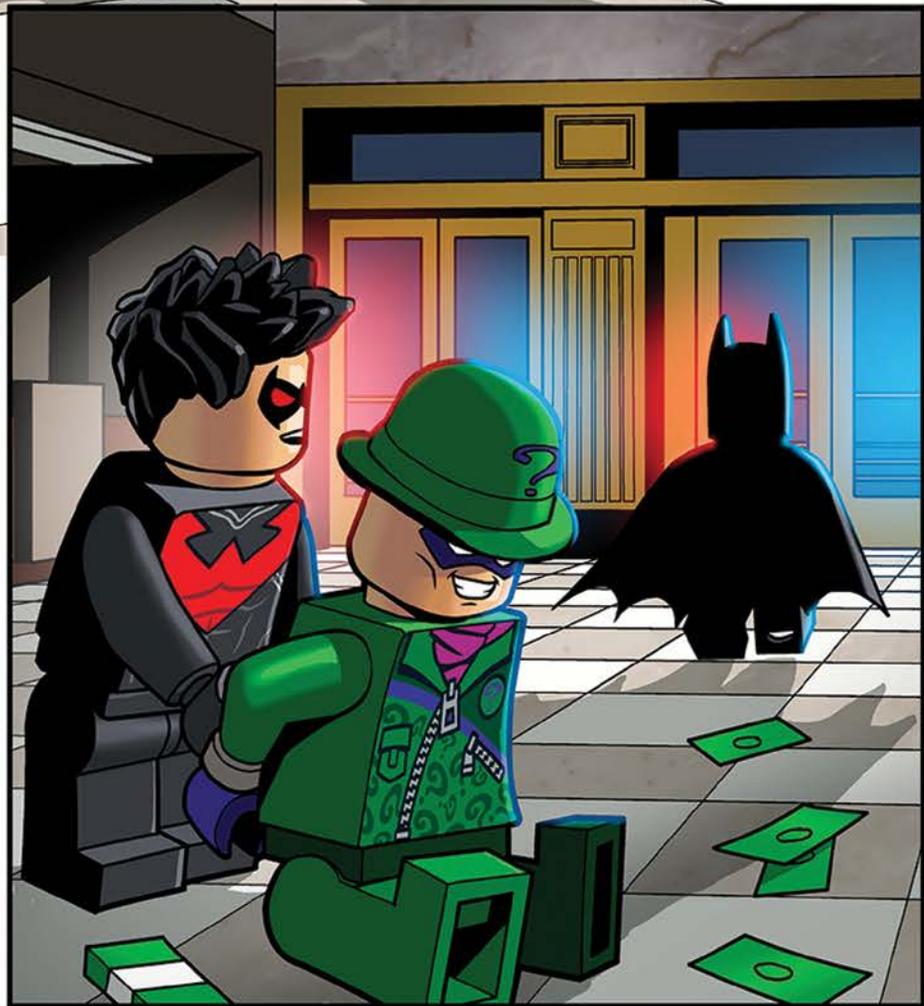
While this may seem like a cheat, it is the most efficient way to make sure I stay on model and that the drawn figure retains the right proportions and looks like an actual figure. Trying to render figures by eye tends to lead to figures that are out of proportion and off-model.

I do the same for the rest of the sets featured, including the vehicles. Ultimately, the comics for the *LEGO Club Magazine* are a form of advertising. The stories are meant to highlight particular themes and sets. So, I take great pains to render the figures and sets accurately. I think it is the best way to represent the product and give a sense of what the play features are.

How do you create your LEGO comics?

The Art Director of the *Club Magazine* sends me a script, usually for a 2-page comic. I read over the script and let the Art Director know what assets I need. Often the comics are for sets that haven't been released yet, and sometimes they

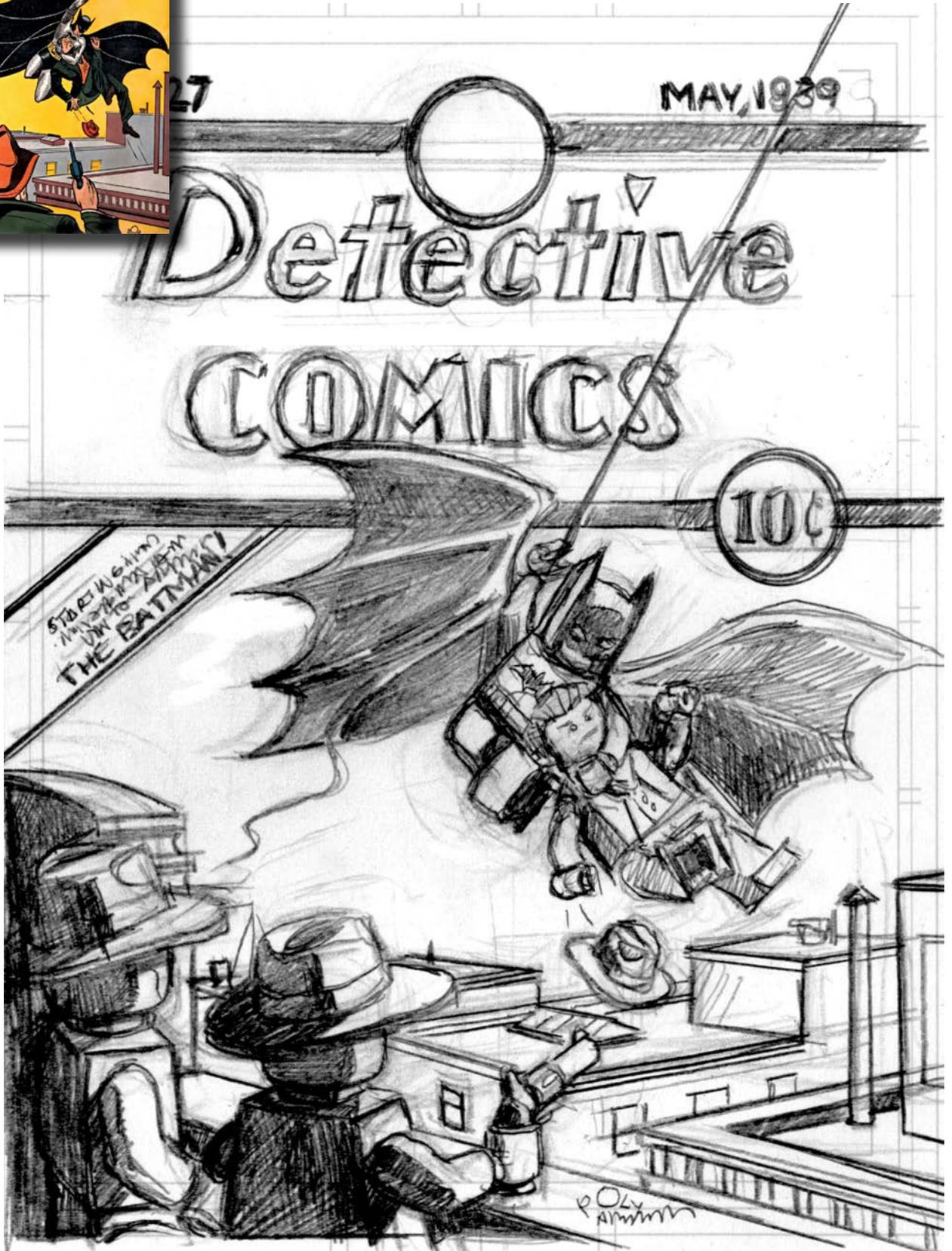
(Continued on page 26)





Left: The original cover to Detective Comics #27 (May 1939), which featured the first appearance of Batman. TM & ©DC Comics.

Below and next page: Preliminary pencils and final art for the LEGO Batman comic.



No. 27

MAY, 1939

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STARTING THIS ISSUE:
THE AMAZING AND
UNIQUE ADVENTURES OF
THE BATMAN!





Paul's stretch Hummer.



haven't even been revealed to the public yet. So, in order to know what the new sets look like, I get the instructions, product shots and deco designs.

I then do a loose thumbnail on the script page itself and then turn the thumbnails into a pencil layout, and scan it into a digital file. These layouts are then sent to the various people who need to approve the comics.

It's around this time that I build the required sets in LDD and do screenshots.

I use ArtRage, a natural media simulation program, to tighten the pencils and add needed details. I bring the LDD screen shots and pencils together in to Manga Studio 5 Ex, a great program designed specifically for making comics. In Manga Studio, I ink the art work, creating the black and white line drawing. I do this at a very high resolution, 600dpi, in order to make sure the line art prints nice and crisp. I also take an extra step to ink different elements on different layers; for example, I ink figures in the foreground separate from the background. This allows for greater flexibility if last-minute changes are needed, as sometimes happens. With each element on a separate layer, I can move or change elements without having to redraw the whole panel or page.

After everything is inked, I move on to the color stage. First I do what is called "flattening" where I select different areas in the image and bucket fill them with color. This step is just to block out the colors. When everything is flattened, I go back and render shadows and highlights to make the image more dynamic and to make it pop. The last step is to add whatever special effects might be needed, like glows or explosions or swooshes.

Then, I send the files in to LEGO. They add the lettering and title graphics. Often the comics are printed in different languages, so they handle the translations.

Do you have any favorite LEGO characters?

I am particularly fond of the Superhero theme. It must be due to my comics roots. So I am really lucky that I get to draw the comics for that theme.

Any characters that you want to draw as minifigures?

Especially with superheroes, there are always really cool heroes that aren't official figures yet. So I am always interested in depicting new comic characters as minifigs.

Building and Community

What is the theme you build in the most?

I would probably be considered a spacer at heart. I grew up with Classic Space as my sets. As I said before, I have a fondness for building mechas, which are usually lumped in with space. That being said, I have built many MOCs that wouldn't exactly fall into the space category. I just like to build.

You're an artist and a LEGO Ambassador. What does that entail?

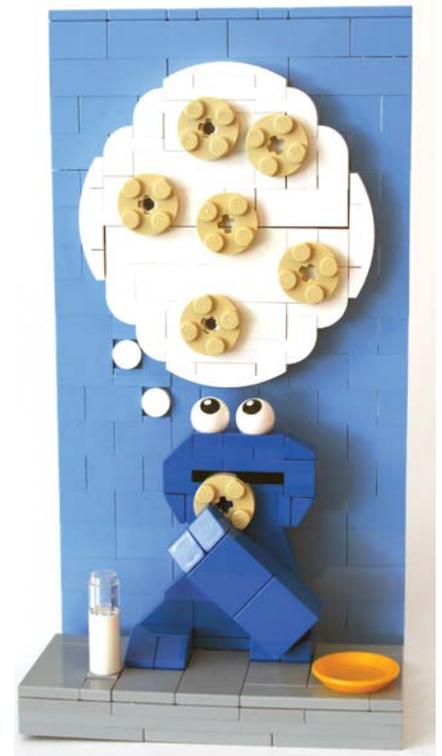
LEGO Ambassadors serve as a liaison between LUGs and CEE, the division of LEGO that interacts with the fan community.



Dropsuit model with Galidor figure head.



Rear view of dropsuit.



And Cookie Monster.

I've since been made a Workgroup Leader in the newly revamped LEGO Ambassador Network. As one of the Workgroup Leaders, I hope to help improve the relationship between LEGO and the Fan Community and find ways to work together, productively.

What is the part of the hobby and community you like the best?

What I love the most about the hobby and the fan community is the incredible creativity the community has. There is no end to the inventive and clever ways AFOLs have devised to make the most amazing creations. I also love the people in the community. Almost all the AFOLs I've been lucky enough to meet in person have been truly wonderful people.

What part of the hobby and community do you like the least?

The part that I like the least is the negativity and the sense of entitlement that certain fans have and are very vocal to express. I feel that this negativity harms the interests of the community as a whole. While everyone has the right to feel however they want and to express it, I think that the fans who are happy are too busy enjoying building to spend time on the internet complaining. It's only the angry fans that tend to be motivated to post rants. The side effect of this is it gives what I believe is a false impression that the majority of fans are unhappy.

While I do think there is always room for improvement in the LEGO/Fan Community relationship, I would rather focus on productive solutions and accomplishing goals, than just complain.

Any parting thoughts for the budding LEGO artist or builder?

Whether building or art, the best advice I have is to practice, practice, practice. The more you do something, the better you get at it. 🧱

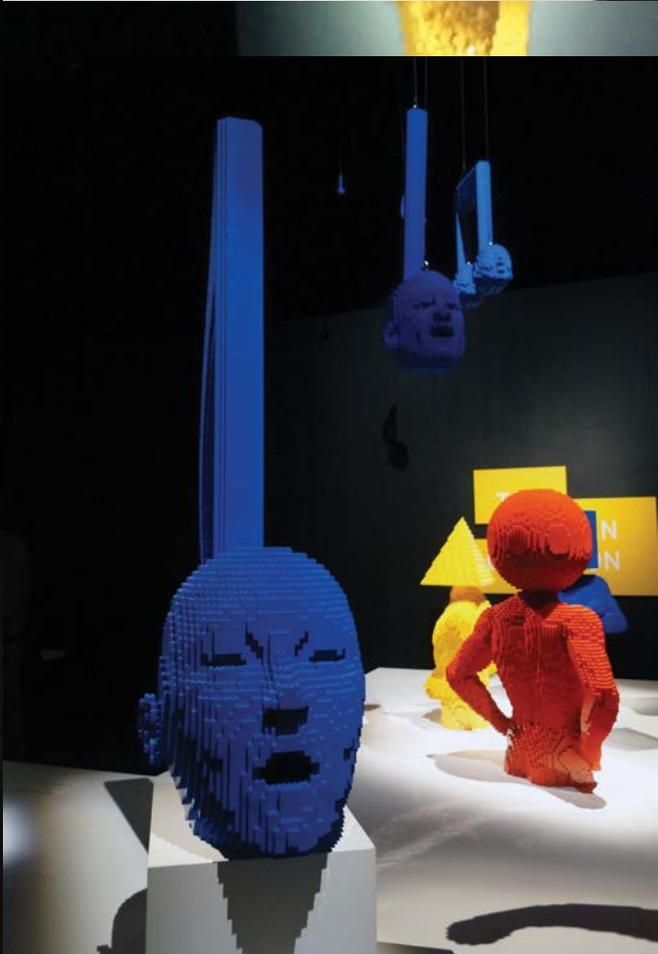
People

A Look at

The Art of the Brick



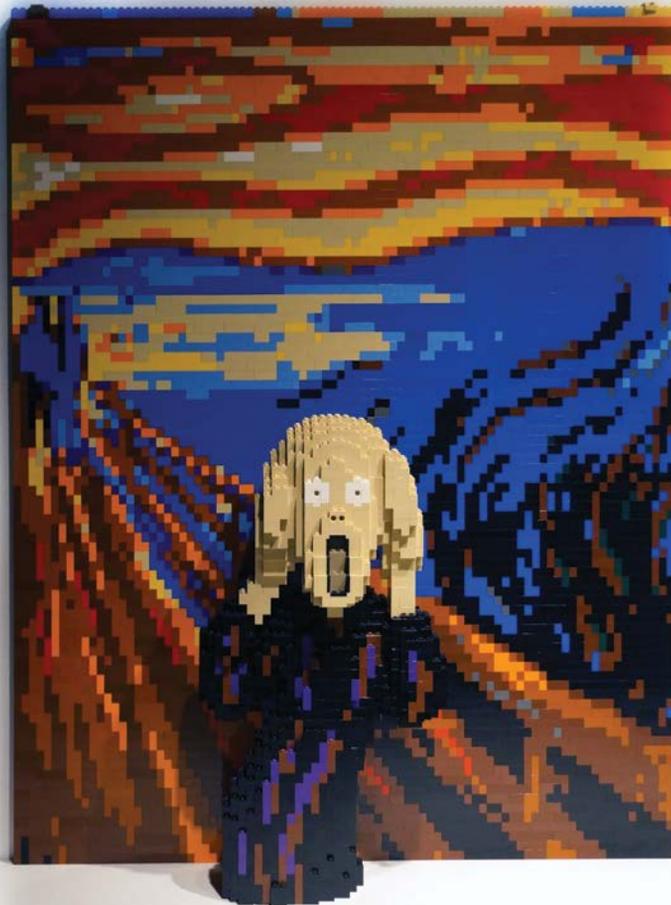
Interview and Photography by Joe Meno





ALEGO rendition of cave paintings.

Edvard Munch's *The Scream*, built in LEGO bricks.



LEGO Certified Professional Nathan Sawaya has not only built models for clients, but also has various art exhibits traveling the world. One of them, *The Art of the Brick*, had a display in New York City. *BrickJournal* paid a visit to the exhibit and interviewed Nathan about his show.

BrickJournal: *This is a traveling show, so where has it gone, and where is it planned to go?*

Nathan Sawaya: *The Art of the Brick* has been to many parts of the globe, including Australia, Asia, Europe and North America. The exhibition just opened in Boston and will be there for several months.

How did this display start? Was it a commission or your vision?

I had the opportunity to put together a solo exhibition at an art museum a few years ago. The show started small, and has grown over the years.

You built different LEGO models for different art forms, from mosaic to sculpture. How does LEGO building fit with these types for media, as it is basically a 3-D medium and some of the forms you created were for the 2-D medium?

For part of *The Art of the Brick* exhibition, I took on a new type of project where I tried to replicate some of the most famous works of art from art history. So for some of the sculpture replicas, I replicated them in 3-D, and for some of the paintings, I replicated them in 2-D. But I also played around with taking certain elements from the original 2-D paintings and replicating them in 3-D. For example, with Edvard Munch's painting *The Scream*, I created the background as a 2-D mosaic, but the screaming figure as a three-dimensional sculpture. Or with the painting *American Gothic*, I created

the background image of the farmhouse in 2-D, but the older couple holding the pitchfork in the foreground of the painting as a 3-D sculpture. It was a fun way to play around with many different techniques of building for the different works of art. In all cases, I hope it is a great way to get kids interested in art history, through a medium they love.

How did you select the models?

Different works of art were selected depending on different themes we were trying to convey throughout the exhibition.

You have had a running motif with the human figure—what is your fascination with that?

The human figure as a sculpture allows me to explore certain emotions. I also enjoy the surrealism that can come with a human figure created from bricks.

Most of your technique is classic stacking. Is there a reason behind that, besides it being easier to build?

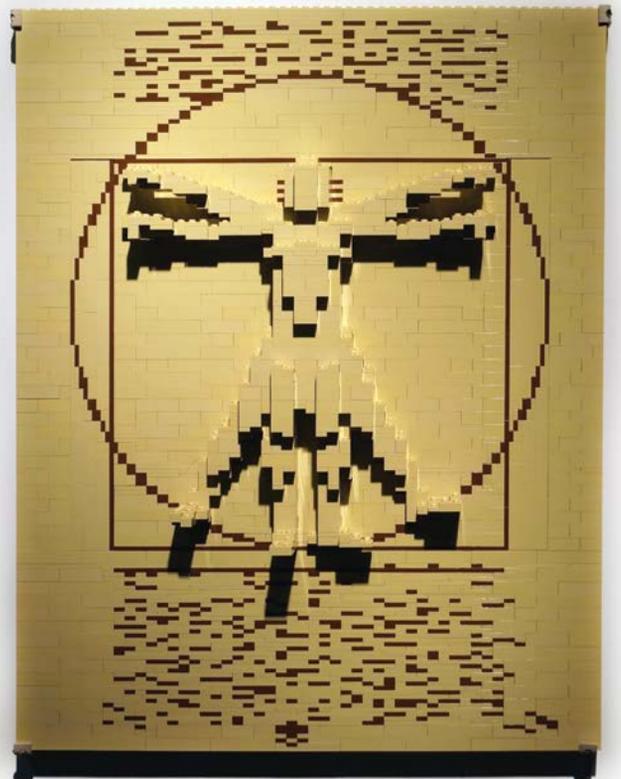
I started stacking bricks when I first learned how to build with LEGO. I guess I am a child at heart.

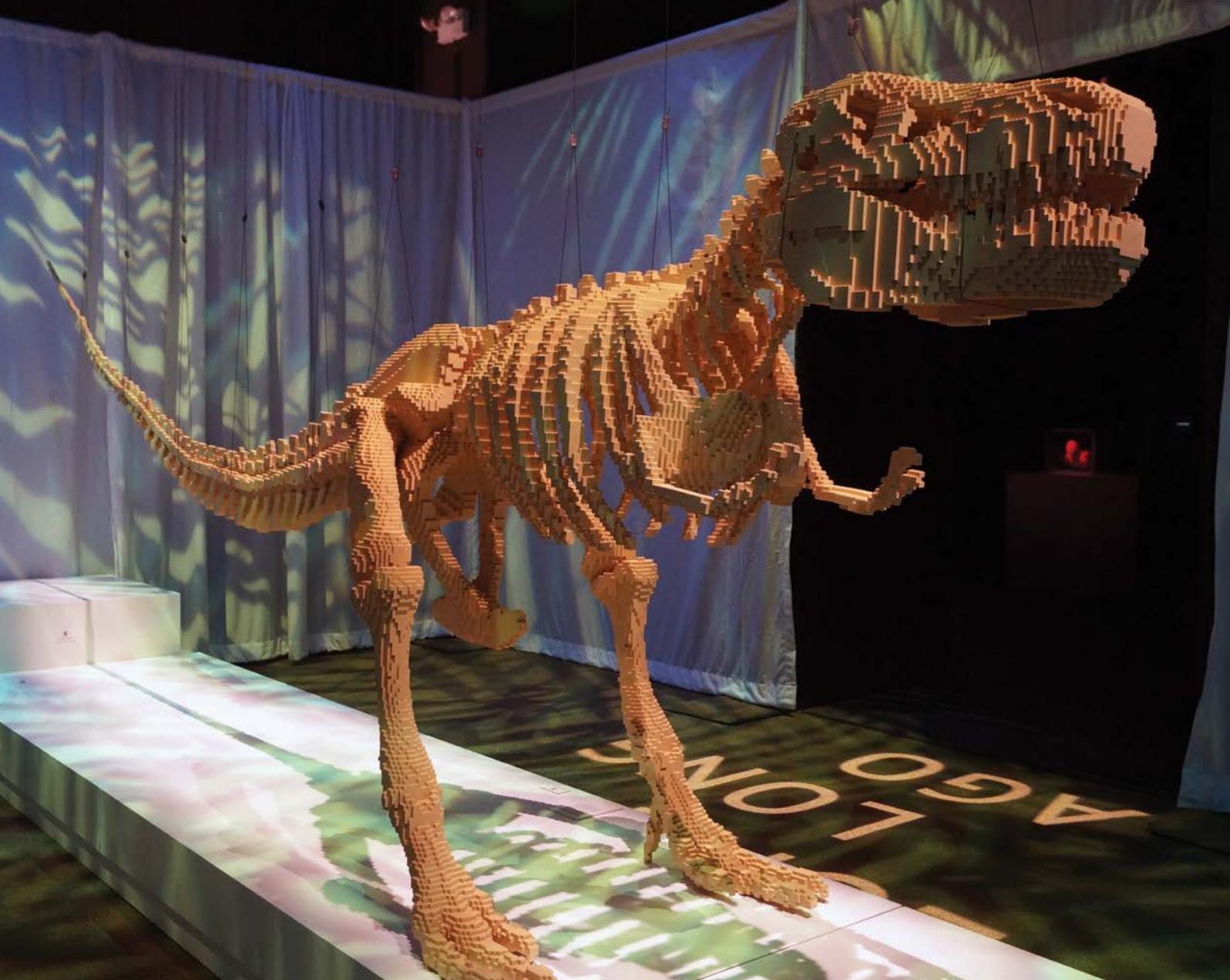
The Discobolous, a Roman sculpture.



Nathan's treatment of American Gothic, by Grant Wood.

Vitruvian Man, by Leonardo Da Vinci.





A replica of a Tyrannosaurus Rex skeleton.

One of Nathan's many original works based on the human form.

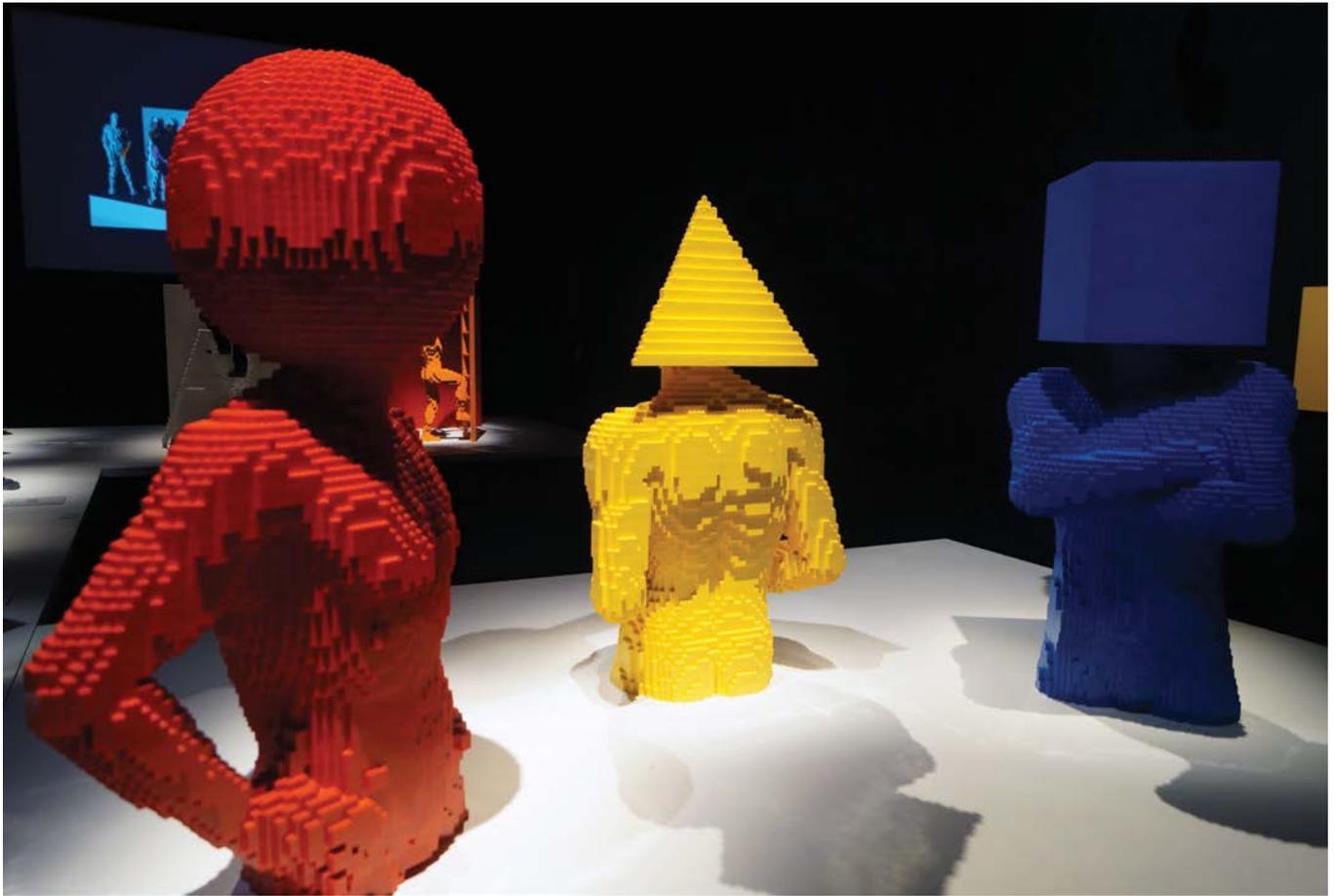


How do you design your models? Making the dino skeleton must have been different from making the Egyptian statues, for example. What approaches did you use to design a sculpture?

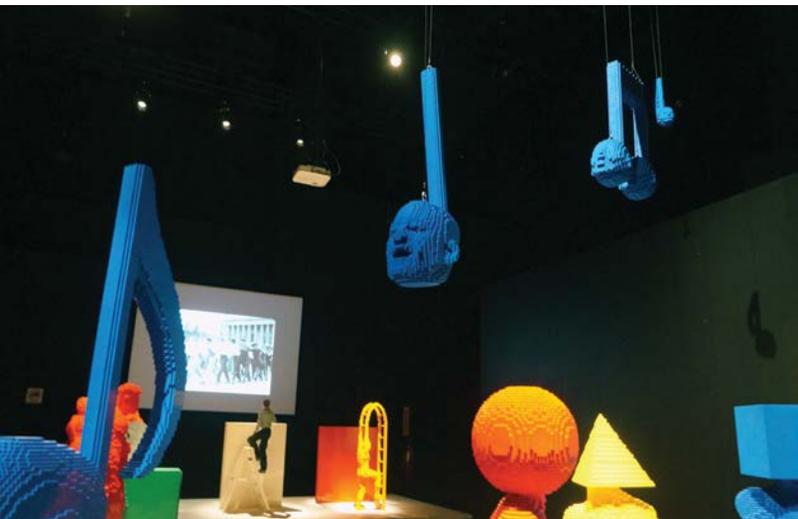
There are different approaches. For the Tyrannosaurus Rex skeleton replica, I bought a three foot T-Rex Skelton model that sat on my desk in my studio all summer. For something like the replica of the Sphinx, I looked at a lot of photos of the Sphinx from all different angles. But for one of my original pieces that is not a replica, it is a different process altogether (that usually starts with doodling). In my new book, *The Art of the Brick: A Life in LEGO*, I write about the process and inspiration that went into many of my different artworks over the years.

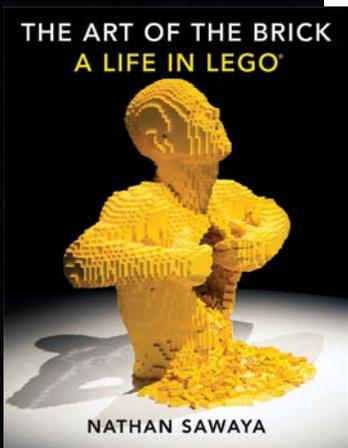
Where do you draw inspiration from building?

Inspiration comes from everywhere. Having multiple art exhibitions allows me to travel quite a bit. I get to meet many different people, see different locations and experience different cultures. I can draw on these encounters for inspiration.



More examples of Nathan's explorations of the human form.







Nathan's red dress model and its source photo (right).

Getting back to design: How did you design the red dress model and display, with the floating bricks?

Because I ship my sculptures all over the world, I have to glue them together to make sure they arrive in one piece. This means that if a section of a sculpture doesn't look right, and the glue is already set, I have to chisel those sections apart. I try to go into detail about the Red Dress sculpture in the new book, but the short version is that I really struggled with the Red Dress. I wanted it to appear like the dress was flowing fabric, but it didn't always look right. I kept having to chisel it apart, again and again. By the time I was done working, there were more discarded red bricks on the ground than in the actual sculpture.

What is your favorite model at the display?

That is like asking someone to pick a favorite child. I can't do it. They are all my favorite. I put a lot of time and effort into each of the sculptures, with the hope that people who visit the exhibition enjoy all of the art and are inspired. My real goal is to inspire others. I love it when people tweet at me after visiting the exhibition and show me what they were inspired to create. 

[Nathan's new book, The Art of the Brick: A Life in LEGO, is available at Amazon.com, and at his website, www.brickartist.com]



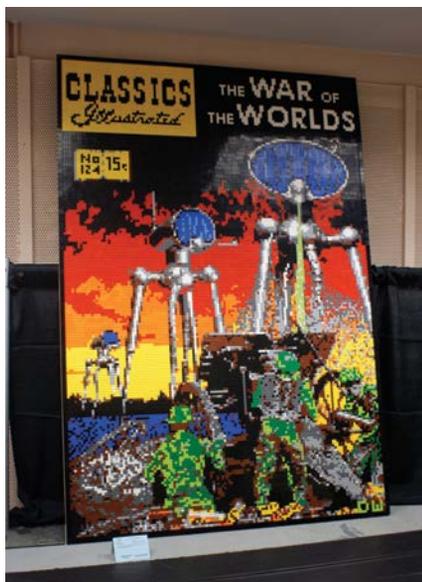
Below: Lady Liberty shows her heart at The Art of the Brick.



Building

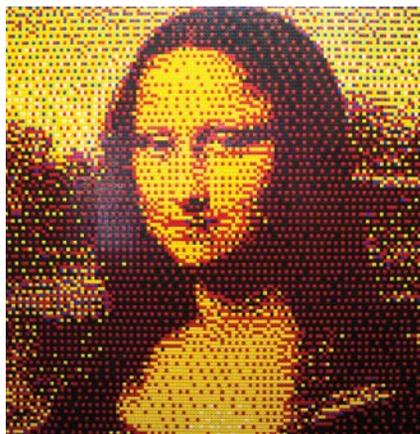
Exploring Mosaics

Article by Dave Ware
Photography provided
by the artist as noted



War of the Worlds by Dave Ware.

LEGO mosaics are a fun and interesting way to bridge the gap between the worlds of toy and art. They take on a number of forms and styles, catching the eye and firing the imagination. Through bright colors and stark contrast, they draw the viewer in to their subject, whether Fine Art or pop culture. More and more artists are working with LEGO as a medium, and the works themselves are becoming more elaborate and decorative. They have moved from simple shapes and letters to photo-realistic representations of life. As with most themes within the LEGO world, fans and artists have taken the basic idea and evolved it in a number of interesting ways. Here are some of the more familiar Mosaic styles:



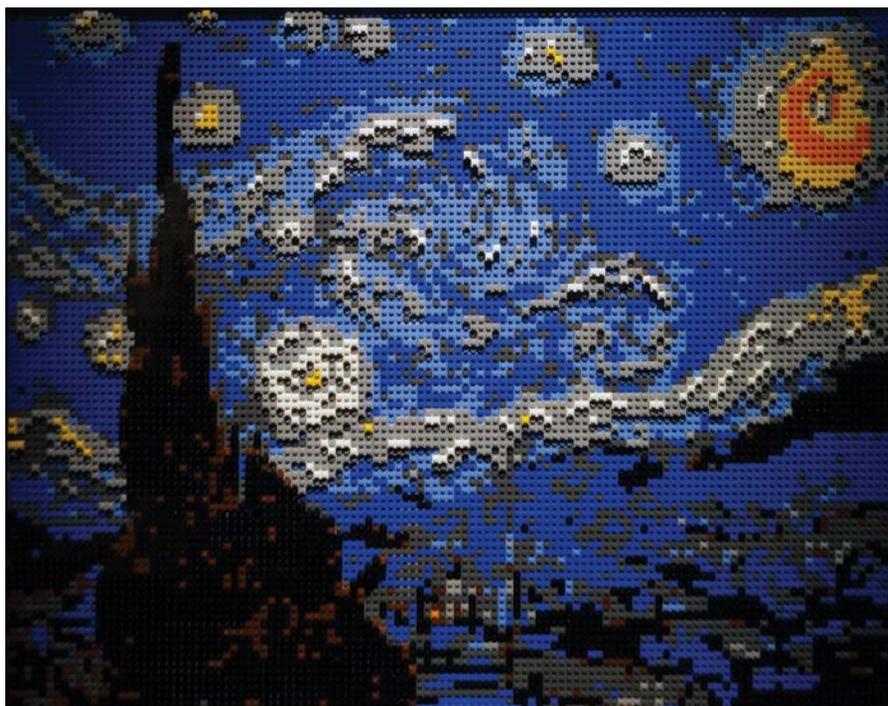
A close-up Mona Lisa, by Eric Harshbarger.



Zelda Stained Glass by Remy & Alyse Gagne.

Studs Out

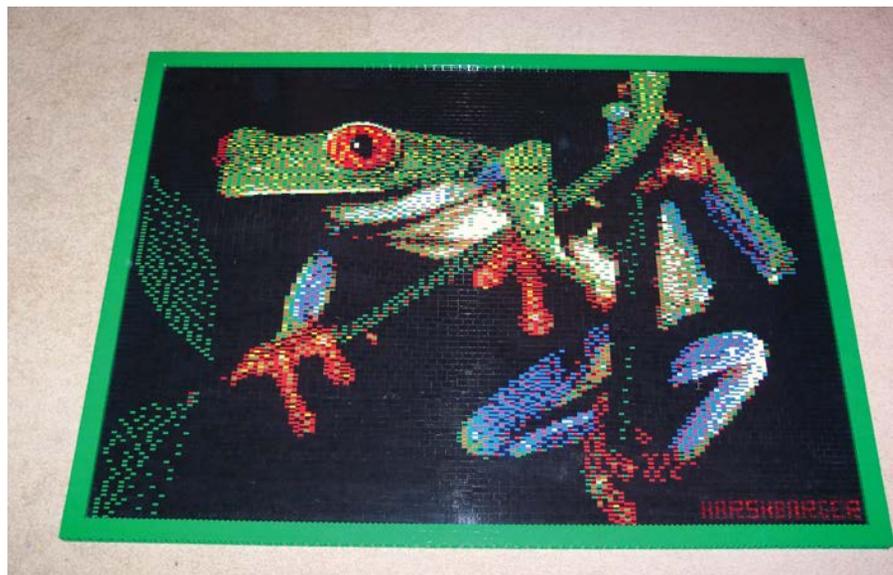
Studs Out is the most common type of mosaic. Simply put, the studs on the LEGO bricks face out, toward the viewer. This gives the piece the familiar LEGO look, a “bumpy” exterior. They can be built with either plate or brick, depending on the individual’s choice, each having its advantage. Brick is easier to come by in a variety of colors, and plate is lighter (a concern for larger pieces). Studs Out mosaics are usually built on baseplates, whether 15x15 inch (48x48 stud ‘Extra Large’ baseplates), or 10x10 inch (32x32 stud ‘Large’ baseplates). Larger pieces use a number of the baseplates, and are locked together either by larger bricks set over the seams, or by securing the baseplates next to each other. Generally, either small screws through the studs, or ABS glue or epoxy are used to secure the baseplates to a backing board (to provide strength and rigidity). Pretty much every group-built mosaic you’ve seen at events and world-record competitions are built Studs Out. I enjoy working on Studs Out the most, because it “feels” like LEGO. You can run your hand across the piece and feel that bumpy texture. There’s something about the Studs Out method that appeals to the child in me: Simple, basic, wonderful.



Starry Night by Nathan Sawaya.
Photo by Joe Meno.

Studs Up

Studs Up mosaics are created by building the piece from the “ground up”. They are usually 2 studs thick, and the studs face “up”. The viewer is looking at the side of the brick. The main advantage that Studs Up mosaics have are the ability to provide more detail through the use of plate. Three layers of plate will make up one layer of brick, meaning that where a Studs Out mosaic can only add finer detail by building a larger piece, a Studs Up mosaic can simply use various colors of plate to add fine lines, etc. Larger pieces can become difficult to deal with, as the pressure needed to secure the next layer of plate or brick gets more difficult the higher the “wall” gets. Studs Up pieces have a shiny look, and have the advantage of being able to support themselves. If a backing board is needed, it can be glued or epoxied, and screws can be placed through Technic bricks (on the back side of the piece) to add support. Studs Up provides more opportunity for fine detail, though it can be much trickier to work with. Small pieces are fine, but larger mosaics can be a bit unwieldy to work with, requiring the build to put pressure on the piece, normally pulling downward (after it reaches a certain height). It’s just a bit “fiddly,” really, unless you’re making them four studs thick, for instance.



Agalychnis callidryas (Tree Frog) by Eric Harshbarger.



Batman and Robin by Marianne Asanuma.



Scott Pilgrim by Dave Ware.



Silent Guardian by Bruce Lowell.



Girl With The Pearl Earring by Nathan Sawaya.

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Spider-Man by Thorsten Bonsch.



LEGO Logo
by Flickr user tikitikitembo.

Loose

Loose mosaics are unique in that they are not attached to a board or even themselves. Simply put, they are pieces that are scattered loosely on a canvas or board. They are difficult to move, and tricky to deal with. One could glue the scattered pieces down; this is certainly uncommon, though. The lack of connected points creates an advantage in shaping or forming the piece. Loose mosaics are very eye-catching, and usually not long for the world, like a drawing in the sand. I've only built one of these; they're tricky to maneuver, and impossible to move (without gluing, etc.). Nice, pretty, but are they really mosaics, or more just showy art?



Batman/Joker by Arthur Gugick.

Lenticular

Lenticular mosaics are made using "cheese slopes" (1x1 slopes) to create two separate pictures in the same piece. This creates an effect of one picture changing in to the other when the piece (or the viewer) is turned. They are quite eye-catching when seen online, or in motion. When viewed straight on, there is a sensation of disjointedness, but Lenticular mosaics are a wonderful innovation. I've personally never built one, as that aesthetic doesn't fit my style, but they're certainly very beautiful.



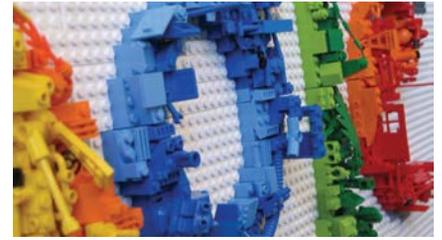
Harry Potter/ Voldemort by Josh Hall.

Mixed Media

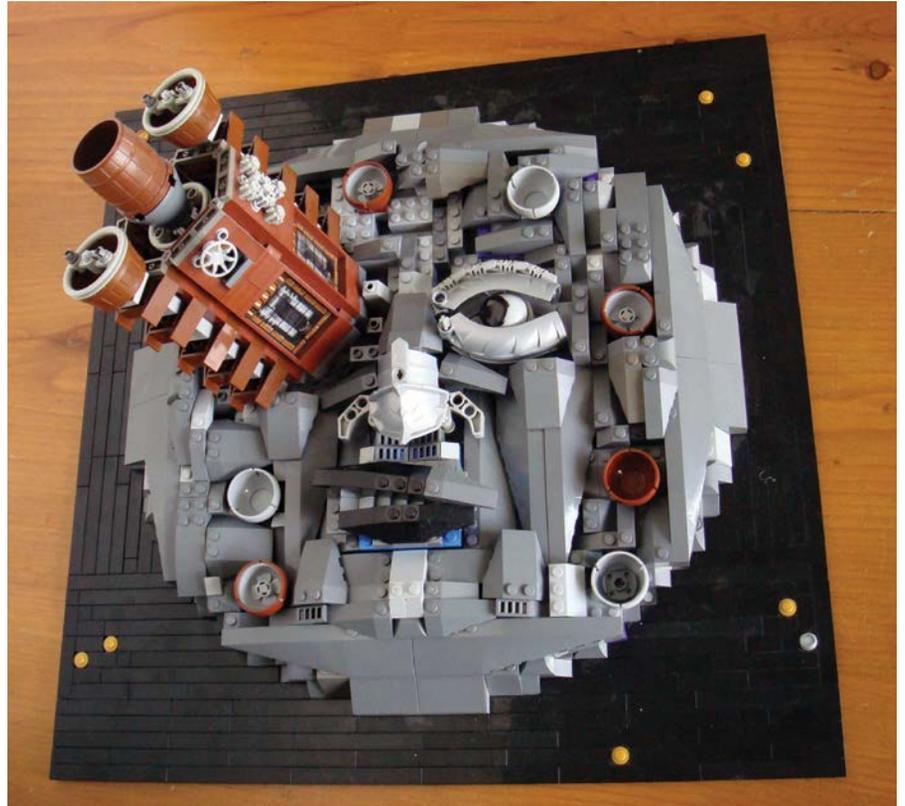
Mixed Media mosaics can be any of the above types, using a variety of pieces, rather than simply using tile, plate, or brick. The wider selection of pieces allows for very interesting work, more natural curves, details, etc. There's a point at which they stop being traditional mosaics, and become MOCs of their own, but they're often really something special. I've done a bit of experimenting with curved pieces and raised pieces, and it's definitely an area I'd like to do more in. It involves a lot more in the way of piece selection, and requires the "palette" to become much larger. It's an area that has yet to be fully explored, and certainly the most exciting one for mosaics. 



Google logo by Sean Kenney (detail at right).



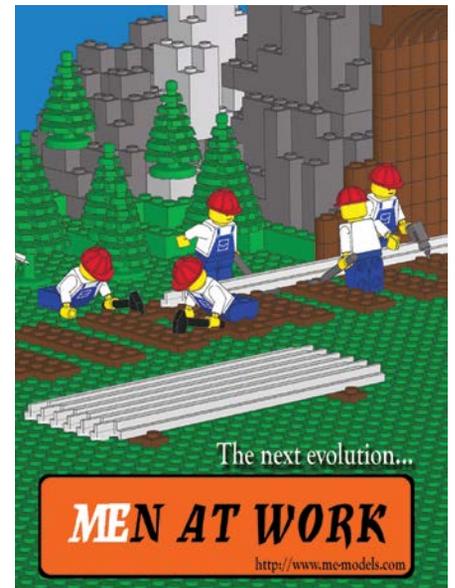
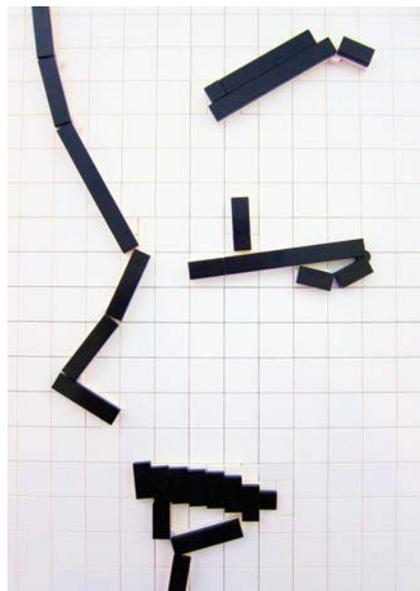
Classic Space Logo in flowers by Jason Allenan.



To the Moon by Guy Himber.



Catwoman by Mark Anderson.
Detail is shown at right.



Why Mosaics?

Dave Ware asks some of the best LEGO mosaic artists about their mosaics and why they build!

Article by Dave Ware

Photography provided by artists as noted



Right: Dave's surfboard.
Below: The Rocketeer.



Dave Ware

What do you love about making LEGO mosaics?

I'm addicted to the small pieces and bright colors. I think I might be part Maggie. I really enjoy taking an image and recreating it in a different form, and the reaction that it gets when it really works.

Which style of mosaic do you tend to work in?

I primarily work in Studs Out. I think I've built about 70 pieces or so in that style. I've built a few Studs Up; I find them to be a bit cumbersome to build, not as enjoyable as Studs Out. Lately I've been expanding part selection and working with levels more, with mixed media.

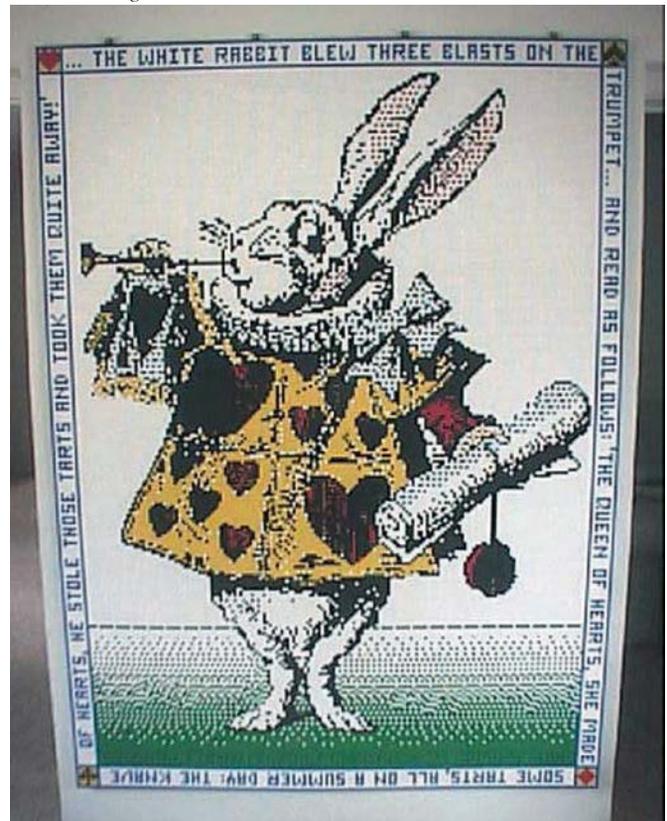
Which of your pieces is your favorite (or most notable)?

I think *The Rocketeer* owns my heart; it was one of the early pieces I made that really went a step beyond anything I'd done before. It's one of the few pieces I regret taking apart after I finished it. One day I'll make another version of it. I recently made a surfboard that I'm crazy about—I just really love the colors in it. I doubt it will receive great acclaim from the community in general, but I built it out of a love of surfing and LEGO, and that's enough for me.

Which mosaic by someone else is your favorite (or caught your eye)?

I was really taken by a lot of Eric Harshbarger's work; he was one of the few people who was posting pictures online and describing his work early on. His *White Rabbit* mosaic is a favorite of mine. I also like Dave Shaddix's *Sunrise Launch*; it has a lot of really nice color in the smoke and flames. Brandon Griffith's *Back to the Future* is really special as well, and pretty brilliant.

Eric Harshbarger's White Rabbit.



Tobias Reichling

What do you love about making LEGO mosaics?

It is a connection between building LEGO, drawing a picture (painting/art) and calculating (doing mathematics). And I like to surprise the people (non AFOLs) by showing the mosaics. Most of them know LEGO from their childhood, but nobody guess that such mosaics are possible while using standard LEGO bricks.

Which style of mosaic do you tend to work in?

Just normal plates/bricks on baseplates (Studs Out).

Which of your pieces is your favorite (or most notable)?

Albert Einstein and my Euromap.

I also made the building instructions for the two world record holding mosaics at LEGOWorld Copenhagen in 2010 (83.58 square meters in size) and 2011 (117.6 square meters in size).

Which mosaic by someone else is your favorite (or caught your eye)?

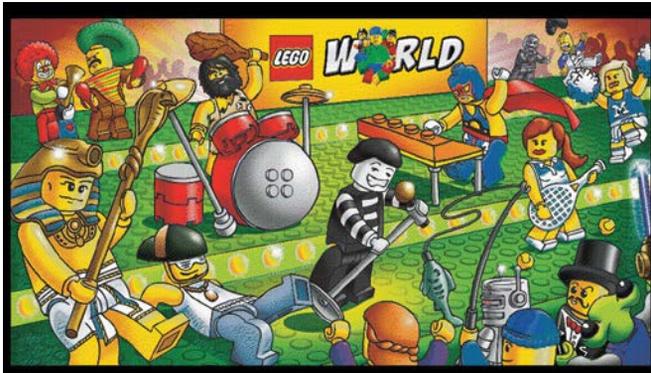
Eric Harshbarger's *Girl* mosaic, as it uses a very crazy technique of using printed tiles to create color and shades.



Einstein by Tobias.



Euromap by Tobias.



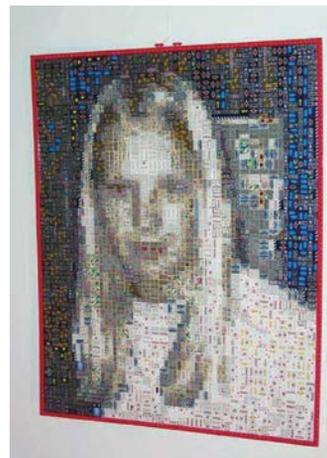
Mosaic for LEGOWorld Copenhagen 2011.



Mosaic for LEGOWorld Copenhagen 2010.



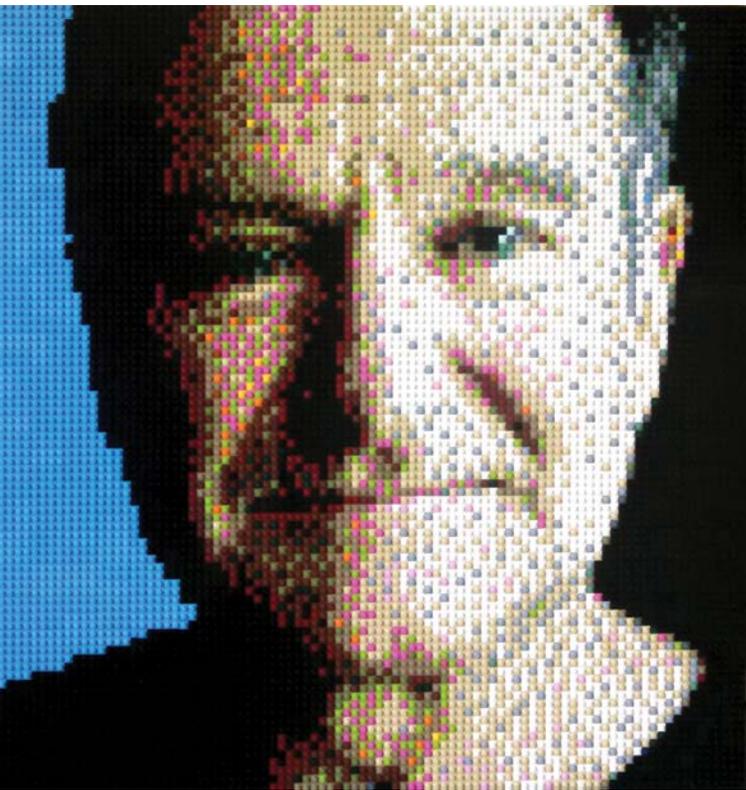
Tobias on the mosaic for LEGOWorld Copenhagen 2011.



Eric Harshbarger's *Girl*, which uses printed tiles to visually mix colors.



Dave Shaddix's Sunrise Launch.



Dave Shaddix's tribute to Robin Williams.

Dave Shaddix

What do you love about making LEGO mosaics?

There is actually a wide spectrum of things that I absolutely love about LEGO mosaics (and LEGO in general). I find the process, from the drawing board to completion, quite therapeutic. Taking a concept and turning it into something real, something that has color and life and that can be seen and enjoyed by people in their homes, at events, exhibits or shows is quite fulfilling and gratifying. Most of all, I love it when someone is looking at my work (or really any LEGO mosaic, sculpture, etc. in general) and says, "Oh wow, that's LEGO?".

Which style of mosaic do you tend to work in?

I've done a few Studs Up/sideways pieces, but really prefer to build Studs Out. Although you can achieve a little more detail using other techniques, I really enjoy the feel of a Studs Out mosaic. There is nothing more "LEGO-ey" than the stud; facing them all at the viewer is my way of embracing the medium and saying, "Hey, this is LEGO!". Plus, people are compelled to touch a Studs Out mosaic... and I let them.

Which of your pieces is your favorite (or most notable)?

Until a few weeks ago, it was a 60" x 60" mosaic titled *Sunrise Launch*, which is on permanent display at the Challenger Learning Center in Peoria, AZ. That changed when I heard about Robin Williams' death. He came into my life as a quirky alien living in Boulder, CO and he has been near and dear ever since. Although I've never met Robin, he's always been the funny man with vices, demons and a big heart. We could identify with him on so many different levels, he was the most human of us all. I started working on a 30" x 30" mosaic of Robin that night (in a cathartic frenzy) and finished it late Wednesday afternoon. I slept very little those nights and produced a beautiful piece of work in a short amount of time. I think it's my very best work, it's my favorite, and I hope that I never have to build another piece like it again.

Which mosaic by someone else is your favorite (or caught your eye)?

First, I really need to tip my hat to Sean Kenney; his work is what I first saw when I started picking up LEGO as an adult. I had recently left an office job (I was an IT guy) that I hated, and became an outdoor guide in northern Arizona. Because Sean had recently left his job in the same manner, I felt a kinship with him. I have always admired his work and attitude.

Dave Ware's *Rocketeer* came along shortly after. I remember staring at pictures of that thing in awe and thinking, "Oh wow, that's LEGO?". I guess I've been chasing that feeling ever since.

I still regard myself as the new kid on the block, and frequently look to artists like Sean Kenney, Dave Ware, Mariann Asanuma, Arthur Gugick, Ryan McNaught, and Nathan Sawaya for advice and inspiration. Their work still makes me step back and say, "Wow." Thank you all for your help, support and inspiration.

Nathan Sawaya

What do you love about making LEGO mosaics?

I love using LEGO bricks like paint. It is fun to explore 2-D art forms, playing with light and shadow.

Which style of mosaic do you tend to work in?

I work in all different styles of mosaics. For my art history project which tours with *The Art of the Brick*, different techniques were used for the different works of art—for example, the Rembrandt replica is Studs Up, the Monet replica is Studs Out, the *Great Wave of Kanagawa* has layered relief.

Which of your pieces is your favorite (or most notable)?

It is hard to pick a favorite because we all put in so much

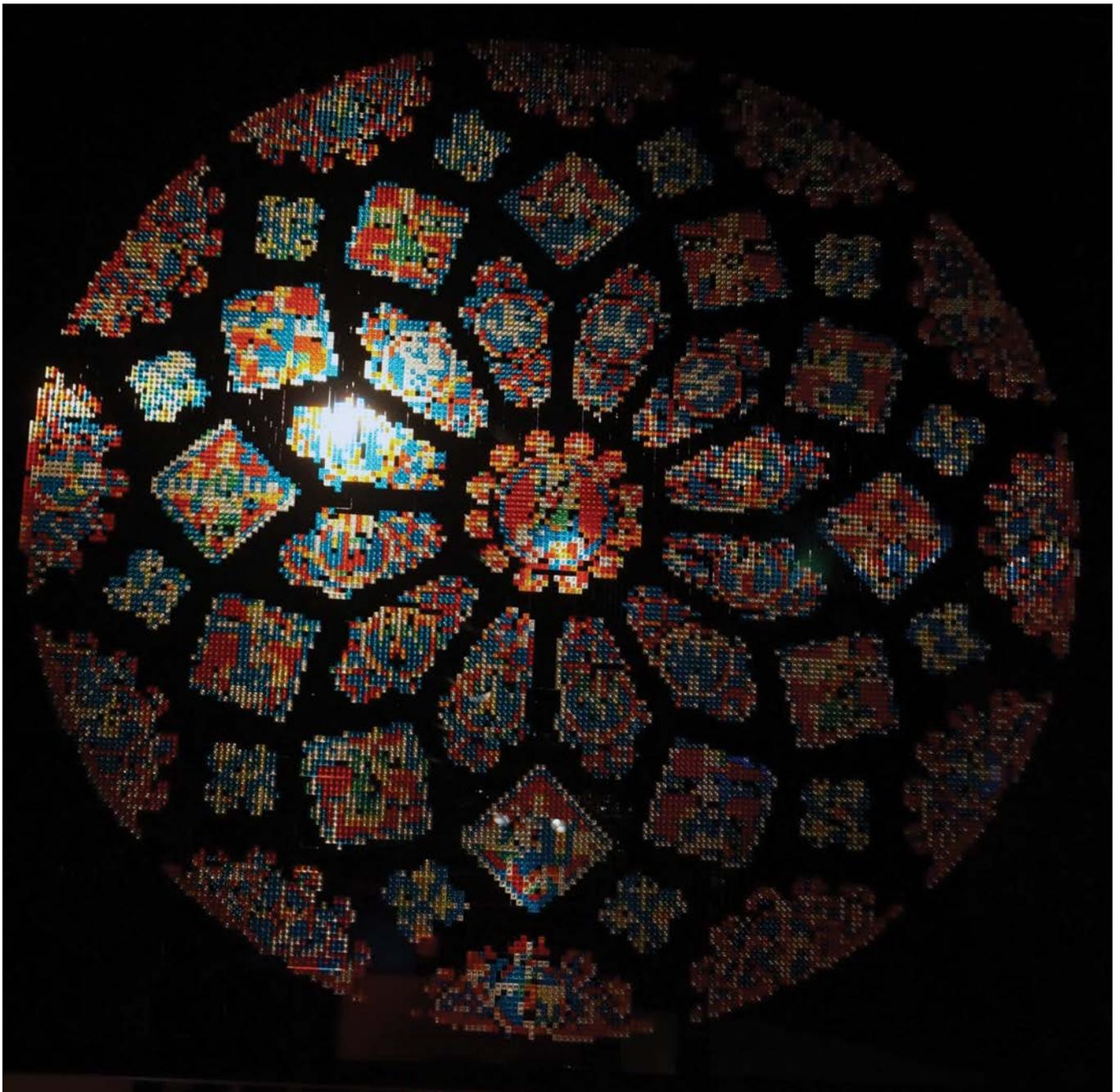
time on these projects. If I have to pick one, it would be the stained glass mosaic that is a replica of the *North Rose Window of Chartres*. The back is made up of transparent baseplates to allow the light pass through.

Which mosaic by someone else is your favorite (or caught your eye)?

There are so many great mosaics out there. At every festival and show there are more and more amazing works of art.

I particularly like the lenticular mosaics, where the mosaics are made up of columns of facing roof pieces. The result is this fantastic experience for the viewer where they see one image from one angle, but then a completely different image from another angle.

Nathan Sawaya's North Rose Window of Chartres.





Brandon Griffith's ...see your enemy...

Brandon Griffith

What do you love about making LEGO mosaics?

I feel making LEGO mosaics is my strongest artistic outlet. It's about taking an image that already means something significant to me and transforming it into a piece of art that evokes those same feelings from the original, but with so much more.

Which style of mosaic do you tend to work in?

I don't tend to do flat 1-level mosaics, I tend to expand them more into a 3-D form. Some end up being a hybrid of sculpture and mosaic.

Which of your pieces is your favorite (or most notable)?

The most notable piece I have ever done is probably my *Back to the Future* piece. It combines several different layers and dimensions, so much so, that it takes on a new life when viewed from different angles.

My personal favorite is *...see your enemy...* which is based on *The Matrix*. It utilizes layering of translucent pieces on top of solid color pieces and, of course, multiple layers.

Which mosaic by someone else is your favorite (or caught your eye)?

One mosaic I wish I thought of and is simply brilliant is *Cortana: A Holographic Mosaic* by Sean and Steph Mayo (seen at right).



Back to the Future art.



Mariann Asanuma

What do you love about making LEGO mosaics?

Making LEGO mosaics are like designing puzzles. It's the challenge of the puzzle and seeing the image emerge in LEGO form that makes it fun for me.

Which style of mosaic do you tend to work in?

I build SNOT—Studs Not on Top—mosaics (Studs Up), although I don't like that term. I prefer calling it twisting and turning of bricks. I don't just use bricks in my mosaics, I use tiles, cheese slopes, headlight bricks, Technic bricks, whatever parts work to make the mosaic a more accurate portrayal of the actual image. My mosaics are not pixelated like many LEGO mosaics are; they are more like portraits or true non-LEGO mosaics.

Which of your pieces is your favorite (or most notable)?

That's a tricky question. I'd like to say that my latest mosaic is my best. In some ways that's true, as I keep getting better and more complicated. Compared to my early mosaics 12 years ago, my mosaics today are better—there are more colors, more elements. A few of my favorites are my 10th and 11th *Doctor Who* mosaics and the mosaic of my friend's *Baby Colby*. Although these are my favorites, the one I feel as the most important is my *Remembering 9/11* mosaic that I made for the tenth anniversary of 9/11.

Which mosaic by someone else is your favorite (or caught your eye)?

Brandon Griffith's *...see your enemy...* —it was the first time I'd seen layers of just one color of transparent parts creating an image by how thick the layers of transparent parts were. 



Remembering 9/11, by Mariann Asanuma.



Baby Colby.



The Tenth and Eleventh Doctors Who.

People

Brian Korte: Making Mosaics at Brickworkz

Interview by Joe Meno

Photography provided by Brian Korte



Brian Korte.

There is a growing number of LEGO builders who make a living producing LEGO art. One of these is Brian Korte, founder of Brickworkz LLC, who is now not only doing mosaics, but also LEGO building sessions for children and adults. BrickJournal interviewed him about how he started out.

BrickJournal: *How long have you been making LEGO mosaics? What was your first mosaic?*

Brian Korte: My first LEGO mosaic was made in 2004—it was a wedding portrait for my good friends, made from more than 13,000 LEGO elements. I built my next mosaic in 2005 to commemorate a cross-country road trip I had just completed. An art gallery in Richmond, VA offered to display my work if I was interested in making more. I spent the next few months building about a dozen more large-scale LEGO portraits, created some business cards and set up a website, and Brickworkz LLC was born officially on January 1, 2006.

What got you into building, and did you do things besides mosaics?

I have always loved playing with my LEGO collection—from DUPLO when I was a toddler until the time I had my own castle and space sets as a boy. Recently, my mosaic customers have approached me with sculpture requests, so I have dabbled with creating small-scale LEGO sculptures. The challenge of perfecting the structure and stud-orientation with aesthetics is really intriguing. My goal building sculptures is to design them the way I think a LEGO team would—where everything ties together well and nothing looks out of place.

What got you into specializing in building mosaics?

Believe it or not, I was a prolific cross-stitcher. During my dark ages, I slid my LEGO collection under the bed and would work on creating my own cross-stitch patterns on graph paper, and later digitally. The progression to LEGO mosaics was very similar, pairing an image down to its essential color palette, determining how to scale detail down to single studs (or X's)... it's a very similar technique. Both are equally frustrating when you have worked about 20 minutes and realize that everything you've built was slightly off by one and needs to be undone and shifted to the left! :-)

How do you work with clients in creating a mosaic?

We first determine the image they wish to portray in LEGO form. Whether it is a company logo or a family portrait, there are some key things we look for to determine what would look best as a LEGO mosaic. I provide them with size/pricing options that would work for the image they send. Once the final design is approved, the build begins. They receive regular updates and photos of the progress from the very beginning. Most of the time, my LEGO portraits are gifts for other people. Giving my customers insight into the build helps them to tell the story to the recipient. Sometimes we arrange for a time-lapse video of the entire build. I like to tie in some personal touches that they would appreciate.

How long does it take to make a mosaic?

The design process takes anywhere from a few minutes for a simple logo design to hours with portraits. I don't particularly care for the quick conversion tools—dithering an image might look more photo-realistic, but doesn't end up looking as good in LEGO form. I use a variety of methods to maintain the contrast while pairing down the color palette, and often work through several draft renditions before making a final decision. It comes down to a simple principle: Would I hang this mosaic in my own home? If not, I let the customer know that the image isn't going to work.

The build process goes quickly now that I have a system in place. Duration of the build depends on the size and complexity of the piece, and sometimes I bring in reinforcements to meet deadlines. I enjoy the builds—much like cross-stitching, the process is tedious and allows me a lot of time to think.

Wrapping and shipping a piece usually doesn't take too long—I have a few standard-sized LEGO mosaic portraits, so I'm prepared for all wrapping/packing scenarios with those, but when something custom comes along, it also means I'm in the garage, figuring out how to create a sturdy way to freight ship, or piecing together boxes to help a mosaic survive an international flight, that kind of thing. There's always a creative challenge to figure out. I enjoy that.

What's been the hardest mosaic you have done?

The Guinness World Record from 2007 now lives at the Plastic Toy and Brick Museum—I was delighted to be a part of that, creating the design for the 44-foot long LEGO truck. Planning the build was quite a challenge. I had an idea of the colors in their inventory, and I knew how large the previous world record was (in order to beat it), so I had those variables to work with.

The time it took to consider all of the variables in a mosaic with more than 1.2 million LEGO elements was quite a challenge. For example, with a standard size mosaic, a photo of a flower in the background of a picture will end up getting sized down to a few LEGO studs—it's my job to make those few studs



Brian working on a mosaic which is now in a legal office in Richmond, Virginia.



A LEGO mosaic portrait of a newly married couple.



Baby Molly, a 30" x 30" LEGO mosaic portrait by Brickworkz.

suggest to the viewer that they're really a flower. But with this project, everything was so large, that each pixel in the stem of the flower had its own LEGO stud. There are 525 XL baseplates in the design of the piece. The original design took a few weeks of tediously poring through each plate to ensure that it would look great. In the design, I designed the whole trailer of the truck to be gray, and am really pleased with [owner Dan Brown's] idea to have kids fill the gray space. He also used Eric Harshbarger's *San Francisco* mosaic to help fill some of the space.

Because of the immense complexity, I'd have to say that was the hardest. Unlike all other LEGO world records, this one wasn't taken down—everyone can see it still at the museum.

What's been your favorite?

I have two favorites. I designed a large mosaic—60" x 45" of the cockpit of the *Millennium Falcon* with Han and Chewbacca going into light speed—for a really lucky little boy in Texas. His parents wanted an heirloom that would look cool even when their son grew up. The piece ended up looking so good as a LEGO mosaic that I had a hard time sending it out! :-)

Falcon, a 60" x 45" LEGO mosaic—one of Brian's favorites.





Building a 27,000-piece mosaic for the Johnson & Johnson Center for Innovation in Cambridge, Massachusetts.

My other favorites are mosaics that are gifts for families who have lost a loved one. LEGO mosaic portraits of children who have passed away give families a sense of peace and a fond memory of something their child used to cherish. I am always so honored to be able to help with someone's grieving process. Those projects always have a special meaning to me.

How has business grown?

Substantially! Brickworkz LLC started eight years ago. 2014 has been our best yet for business. What started on a folding card table in an apartment now takes up several rooms and closets in my house. People all over the world order LEGO mosaic portraits through my website (www.brickworkz.com) and I have encountered international shipping, freight shipping, customs... all things I never considered back then.

Brickworkz has expanded business into corporate settings with corporate team-building events. I regularly share news and images on social media sites like Facebook and Twitter to keep old fans interested and help new fans learn about the process.

I was single in 2006, and now have a wife and two children (and a third coming this Thanksgiving!), so juggling family time with Brickworkz was a challenge, but in every measurable way, Brickworkz continues to grow with the family. What a fun ride!

Any advice for budding LEGO artists?

I am honored when people e-mail me asking how they can start their own LEGO businesses. My advice to them (and anyone reading this) is just to start. You have to start building.



A rainbow trout, designed to look like a trophy, complete with a hinged tail.

Just build! You will make mistakes and learn from them. You will learn ways to improve and become more efficient, but none of that can happen until you start building.

So play well! 



You can go to Brickworkz' website at www.brickworkz.com or scan this QR code!
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Building

Minifig Customization 101: The Fantastic Four!

by Jared K. Burks



Right: *The Fantastic Four*, rendered by co-creator Jack Kirby. TM & © Marvel Characters, Inc.

The Fantastic Four is one of the first superhero teams created in the world of comics, dating back to November 1, 1961, long before most readers of this column were ever born. This team was created by the powerhouse duo of Jack Kirby and Stan Lee. The team consists of several different members throughout its long run, but is primarily composed of Reed Richards (Mister Fantastic), Susan "Sue" Storm (Invisible Woman), Johnny Storm (Human Torch), and Ben Grimm (The Thing). This group of individuals gained their powers when accidentally exposed to cosmic rays during a scientific mission to outer space.

In order to adequately capture these characters in LEGO form, one must capture the special powers and personality quirks. The special powers make this team perfect for creation in LEGO, if only LEGO had all the parts needed. This article will demonstrate how I solved the problem of creating the parts I needed to adequately capture these characters. Before I dive into the details, though, let's reflect on all of their special abilities received as a result of the cosmic ray exposure, and their quirky personalities for those unfamiliar with the comic book series.

Mister Fantastic is a scientific genius, who after being exposed to cosmic rays is able to stretch, twist, and reshape his body into inhuman proportions. Reed serves as the leader and father figure of the group and is pragmatic, authoritative and dull. Reed carries the guilt for the failed mission where everyone was transformed—particularly over Ben Grimm (The Thing) due to his massive alteration.





The Invisible Woman is Reed's girlfriend. As her name suggests she is able to bend and manipulate light to make herself invisible. This talent develops and she is able to generate force fields, which she uses in both defensive and offensive functions. Sue is the heart of the group.



The Human Torch is Sue's younger brother. His exposure allows him to control fire, which in turn allows him to transform his body into flame and take flight. Due to his age Johnny is typically portrayed as brash, rebellious, and obnoxious.



The Thing is Reed's college roommate and best friend. Ben's exposure transformed him into a monstrous rock covered humanoid with super-strength. The Thing is angry and self loathing as he feels trapped by his conversion. He is portrayed as gruff, short tempered, and is given a caustic sense of humor.

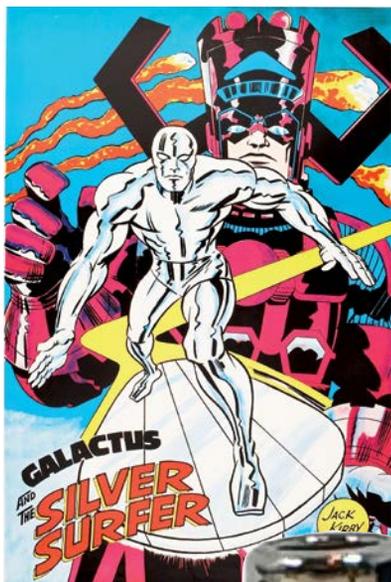
Creating the Fantastic Four

Trying to capture these characters and their powers in LEGO is a challenge. They become heroes out of an unfortunate accident. The concept of an alter ego is completely abandoned with these heroes as they live their lives in the public eye; as such they are rarely shown out of costume. Therefore I felt it was important to show them in more of a battle mode than merely in costume; this translates to powers in full bloom.

Mr. Fantastic needs to be large, stretching and reaching. This means we have to look to one of the more rare LEGO figures to create this effect: Woody from the *Toy Story* sets. Woody had extended legs and arms; while this will make Mr. Fantastic taller, it will not make him appear to be stretched. In order to give the stretched appearance we must alter a LEGO 1x2 brick.

1. Paint Woody's arms blue.
2. Paint hair with white temples for "wise" statesman look.
3. Paint or Sharpie arms and legs for gloves-boots appearance. (*Special tip:* There are chemical-resistant Sharpie markers that are more permanent than typical Sharpies, and which work perfectly for this task.)
4. Using a 1x2 brick, sand the sides to give a pinched or stretched appearance. Taper from top to bottom to bring in the bottom of the brick to make it end as the torso would if it were connecting to the hips.
5. Create simple waterslide decals to recreate the Fantastic Four uniforms, and apply. Make sure to cover from top of the torso to the new bottom created by the addition of the brick.





The Invisible Woman and the Human Torch are more difficult to portray in full power mode. These two figures require the most time to create as the figures should appear invisible and on fire, respectively. This means new parts must be created as LEGO has not made transparent torsos, legs, etc.

1. Use merged and molded LEGO figure parts to create custom transparent parts. The information on how to create silicon molds was presented in this series previously, it can be found in more detail in *Minifigure Customization²: Why Live in the Box?*, available from TwoMorrows Publishing.
2. Cast transparent clear and transparent orange figures. Again, casting has been previously covered in this series or can be found in greater detail in either *Minifigure Customization: Populate Your World!* or *Minifigure Customization²: Why Live in the Box?*, both available from TwoMorrows Publishing.
3. Create simple waterslide decals to recreate the Fantastic Four uniforms, and apply. While one would think it best to use transparent prints, these still need to be under-printed in white to allow the designs to be noticed on these complex figures. Note that while a Sharpie was used to create the glove-boot look on Mr. Fantastic, decals will be needed for these two that match the altered appearance of their activated costumes.

Many would argue that the Thing should be portrayed in Hulk scale Big Fig form, however I do not agree. While these figures are interesting, I don't believe they fit into the LEGOverse particularly well. The LEGO Minifigure is not anatomically correct, lacks musculature, and has a unique scale. When the Big Fig was created, many of the quaint qualities of the minifigure were abandoned. I think LEGO could have gone a different route here, keeping true to the qualities of the minifigure, but I digress. Since I decided to use the traditional figure for The Thing, it will require the most complex waterslide decal of the group, because of his altered rock form.



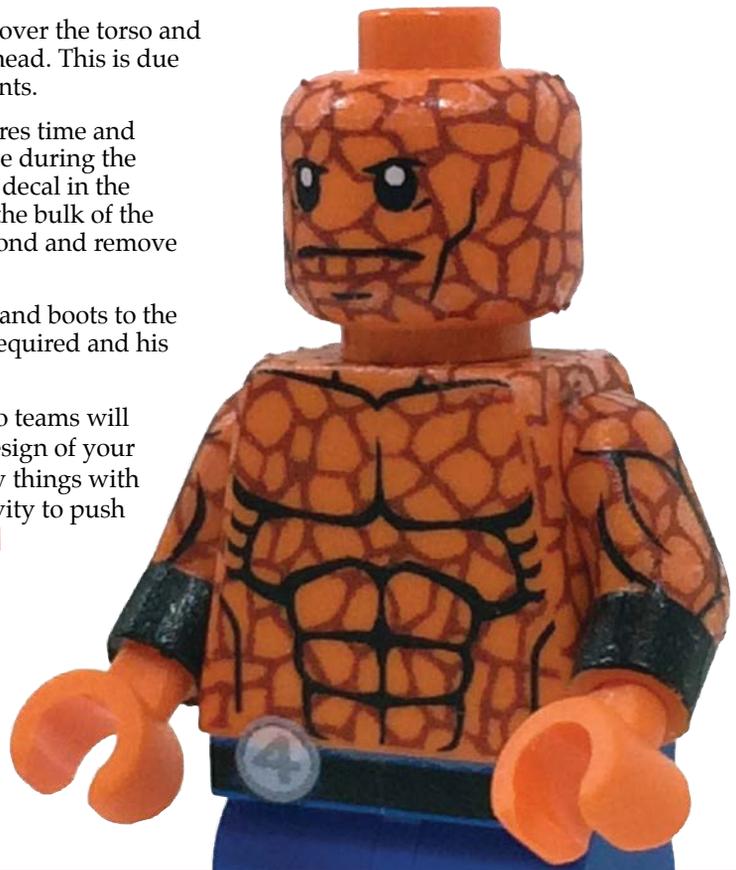
Left: Minifig of the Silver Surfer, a character from the Fantastic Four comics (as drawn by artist Jack Kirby above), with chrome skin. TM & © Marvel Characters, Inc.

1. Because of the Thing's rocky appearance, we can't simply cover the torso and call it a day. The design must wrap around the torso and the head. This is due to the fact that the Thing is commonly shown just wearing pants.

2. Wrapping the torso and head in waterslide decal film requires time and patience. The arms are likely the most complex; take your time during the application and use plenty of water. Only when you have the decal in the proper location should you use a dry cotton swab to remove the bulk of the water. Then use the decal softening solution to improve the bond and remove any wrinkles in the decal.

3. Finally, use the chemical-resistant Sharpie to add gauntlets and boots to the figure. Since the Thing is made of rock, gloves are not really required and his hands are a bit clumsy.

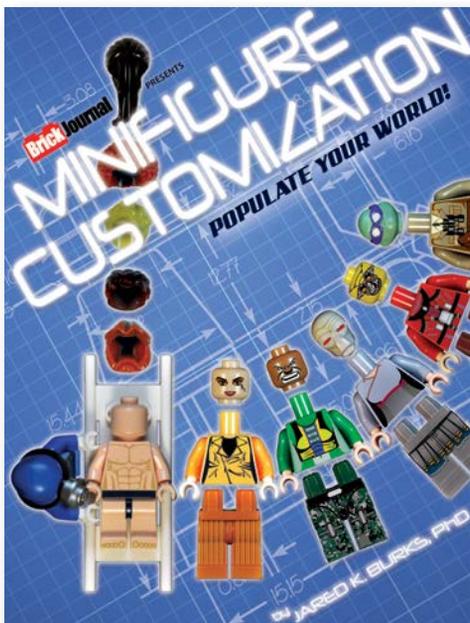
Now that the Fantastic Four are created, what other superhero teams will you make? Be sure to add attitude as well as powers to the design of your superheroes. Don't be afraid of experimenting and trying new things with your figures. Keep thinking outside the box, using that creativity to push the bounds of the LEGO parts into new realms of existence. 



You can view Jared's webpage by going to <http://www.fineclonier.com/> or scanning this QR code!

Come back next issue for more Minifigure Customization!

Get both books on minifigure customizing!

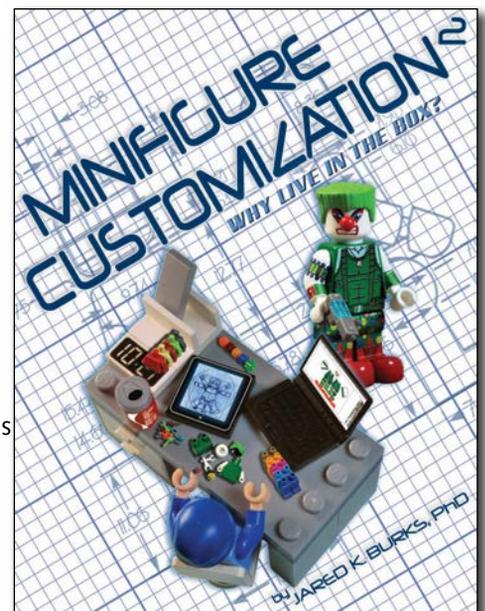


BRICKJOURNAL columnist JARED K. BURKS' book **MINIFIGURE CUSTOMIZATION: POPULATE YOUR WORLD!** shows a wide range of techniques you can use to alter the lovable LEGO® Minifigure. And the sequel, **MINIFIGURE CUSTOMIZATION²: WHY LIVE IN THE BOX?**, offers even more techniques to alter minifigures!

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Building

MINDSTORMS 101: Powered Attachments

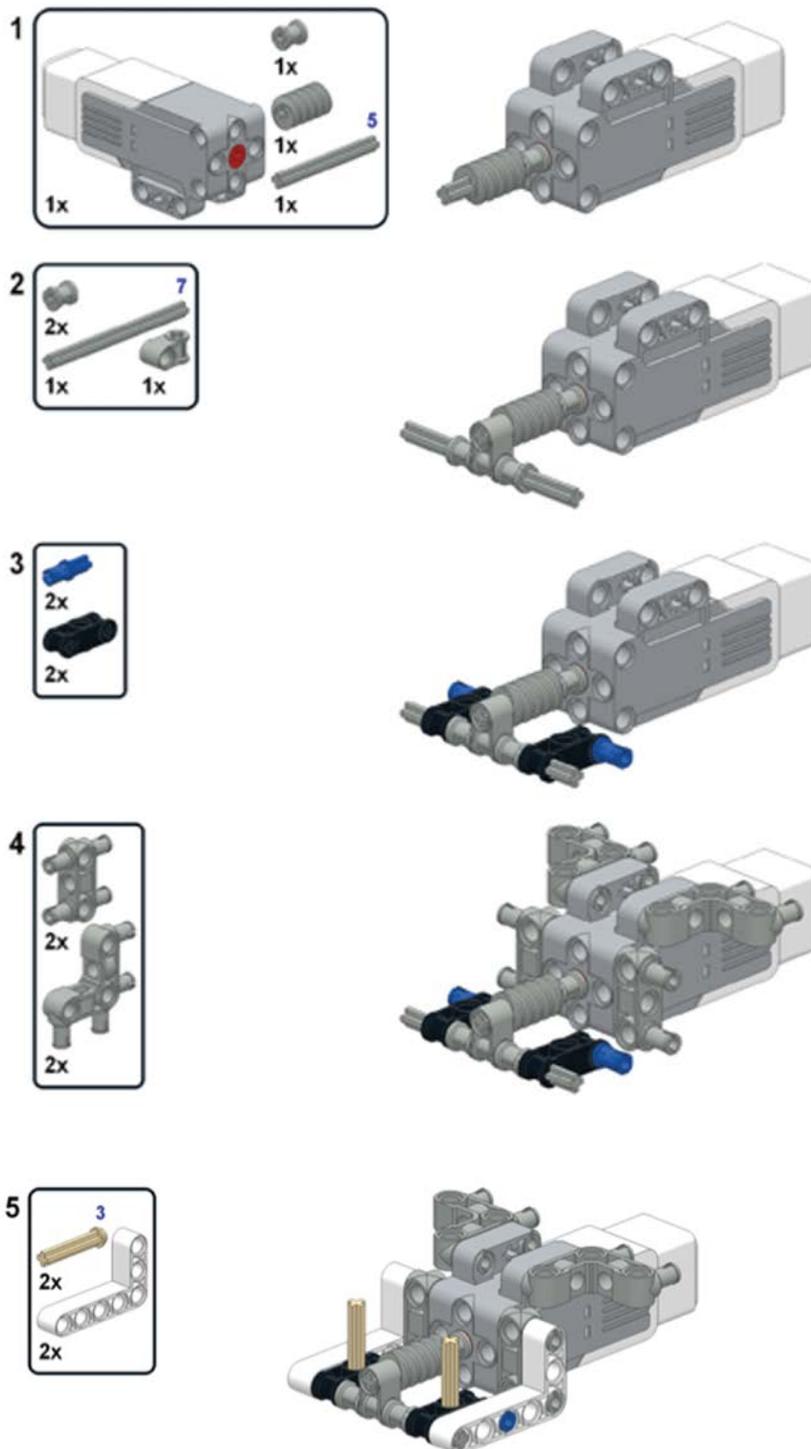
Article and art by Damien Kee

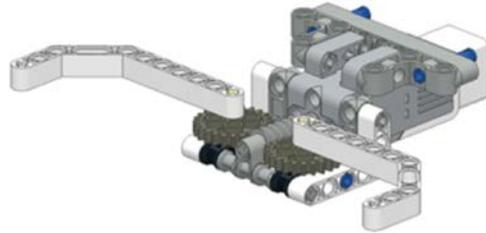
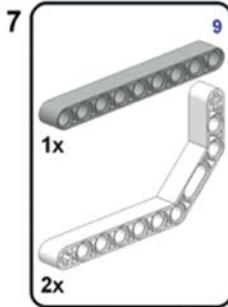
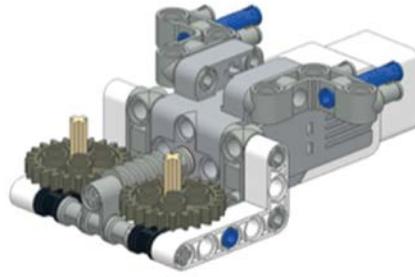
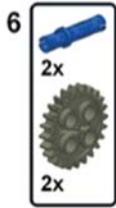
In past installments of our MINDSTORMS articles, we looked at how to program your robot to turn, and how to use sensors to control a robot's actions. This time, we will use a gripper attachment to pick up objects. To get started, grab your RileyRover or RetailRover from the last lesson. In fact, any two-wheeled robot will be fine for this activity.

If you've been following along with our previous articles, you'll be familiar with making your robot drive around, as well as some basic use of the sensors. This article will now focus on the Medium Motor that you get with the EV3 kit and how it can be used as a powered attachment for your robot.

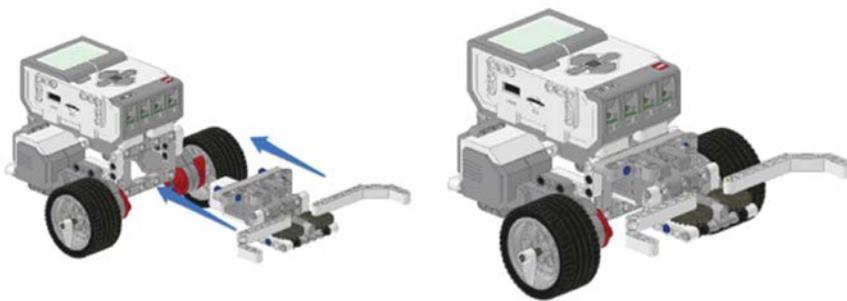
This is a condensed version of a chapter from my *Classroom Activities for the Busy Teacher: EV3* book. For this article, I'll be using my Gripper design from the RileyRover build.

Gripper Attachment



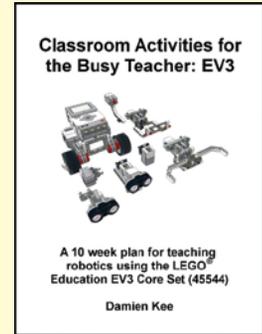


Attach the Gripper to the front of the Robot



Gripper attached to Riley Rover.

Dr Damien Kee has been working with robotics in education for over 10 years, teaching thousands of students and hundreds of teachers from all over the world. He is the author of the popular "Classroom Activities for the Busy Teacher" series of robotics teacher resource books.



You can find more information at www.damienkee.com or contact him directly at damien@damienkee.com. Or you can scan the QR code below!



Medium Motor Block

The gripper works by spinning the Medium Motor. The worm gear that is attached to the axel of the Medium Motor then slowly closes or opens the gripper claws.

To make the gripper open and close, we will use the Medium Motor Block from the Actions palette. Unlike the Move Steering Block, this block will only control a single motor, in our case the Medium Motor. Connect it up to Port D on you EV3 with one of the spare cables.

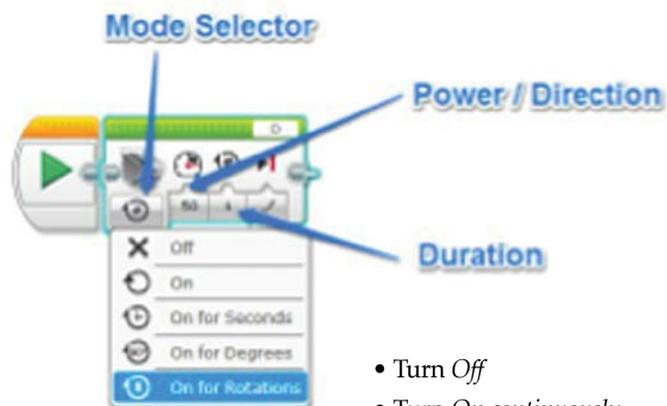
Medium Motor Block



Programming Tip:

'On for Seconds' is often a better choice than either the 'On for Rotations' or 'On for Degrees' modes as it prevents the program from locking up if the gripper cannot close completely because of an unexpectedly large object to grab.

The block is used in a very similar way to the Move Steering Block, with the ability to change the speed, direction and the power level. In the Mode Selector area you can choose one of the following options for your Medium Motor:



- Turn Off
- Turn On continuously
- Turn On for a set number of Seconds
- Turn On for a set number of Degrees
- Turn On for a set number of Rotations

For this particular design, if you apply a positive power to the Medium Motor, the gripper opens. If you apply a negative power, the gripper closes. If you apply power for too long in either direction, the gripper will hit its physical limits and will probably pull itself apart! Be careful!

I found through careful trial and error (and lots of self-destroyed grippers) that opening and closing of the grippers took around 4 seconds at full power. Take some time with your version to see what works best.



Close Gripper for 4 seconds

Why Time Based?

So why do we choose to open and close the gripper based on a certain number of seconds? Wouldn't it be easier to calculate a specific number of rotations?

'On for Seconds' is often a better choice than either the 'On for Rotations' or 'On for Degrees' modes as it prevents the program from locking up if the gripper cannot close completely because of an unexpectedly large object to grab. In other words, if the gripper motor is programmed to close for six rotations, but grabs the object after only four rotations (and cannot keep closing), then the program will never reach the required six rotations and will never be able to move on to the next programming block. The program will be stuck at this particular block.

If the gripper motor is programmed to close for four seconds (as in the above example), then even if the object is grabbed after three seconds, the program can continue on after the four seconds has passed.

What Can We Do Now?

Our first task: Drive up to a can, grab it, turn around, drive somewhere else and open the gripper.



(Note: This will only work if the can is located exactly 4 rotations of the wheels away from the robot. Do lots of testing to get this just right!)

Next Challenges

Challenge 1: Somehow attach the Colour Sensor to your robot so it can detect different floor colours. Place the can on a black piece of paper. Program your robot to drive up to the black paper, grab the can and turn around. Then have your robot drive to the edge of the table (hint: colour sensor = 'no colour') and drop the can over the edge.

Challenge 2: Build some different types of powered attachments; levers, pom-pom wavers, TV remote control button pusher, light switch turner-on, letterbox opener. Use your imagination!

Good luck! 



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Tommy Williamson is no stranger to *BrickJournal*, having been featured previously for his Jack Sparrow miniland scale figure. Since then, he has gone farther into building, making some remarkable *Star Trek* props and other models. He's now doing this column for *BrickJournal*. Here, Tommy takes a little

time out from his busy schedule at BrickNerd.com to make a model of his choosing for the magazine.

About this issue's model:

This issue's model symbolizes man's struggle with his inner demons while illustrating the dichotomy of color and positive versus negative...don't you hate that artsy-fartsy stuff? Don't get me wrong, I still consider building with LEGO an art form, and I consider myself an artist (even if it feels a bit presumptuous) but there are some artists out there that take themselves way too seriously. I for one like to remember always that first and foremost, LEGO is a toy. So go build, play, make and create... and always have fun! 

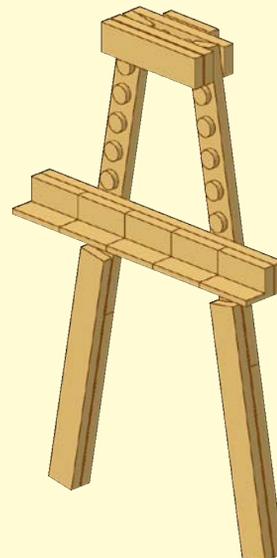
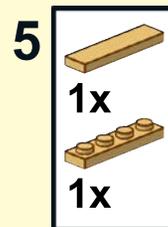
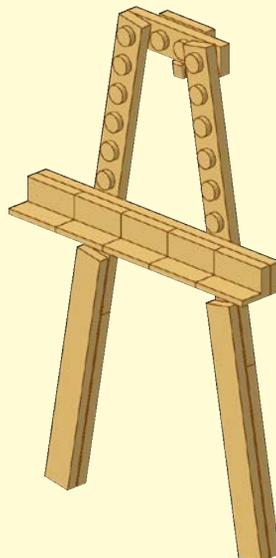
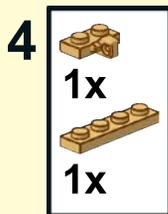
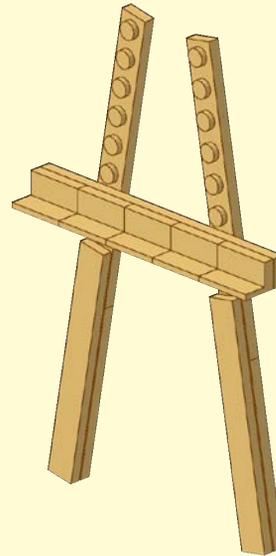
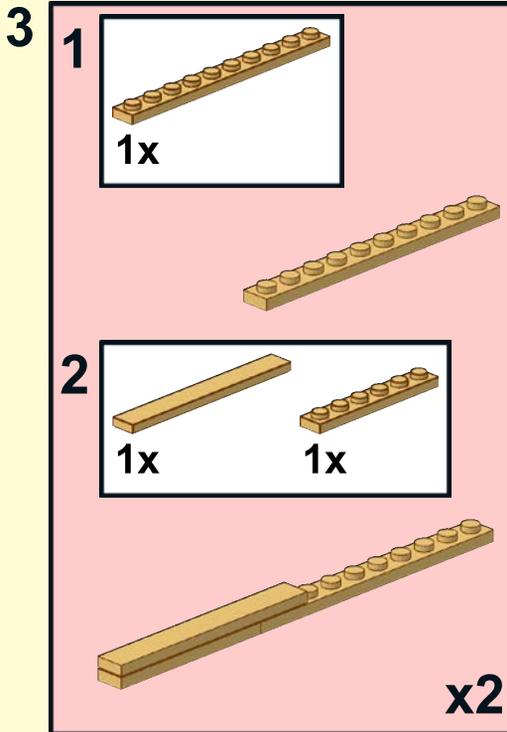
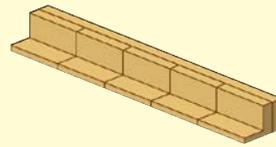
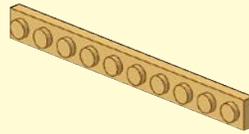
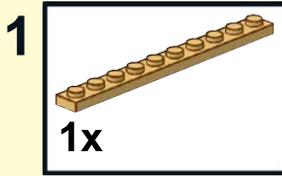


Parts List (Parts can be ordered through Bricklink.com by searching by part number and color)

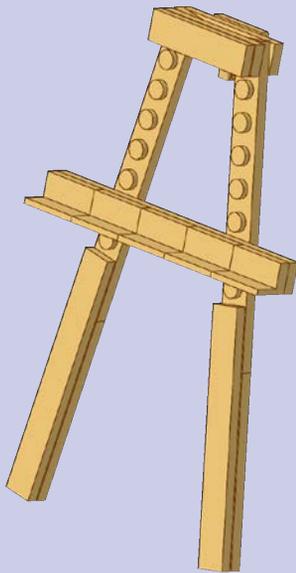
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4	87087.dat	White	Brick 1 x 1 with Stud on 1 Side
1	3004.dat	White	Brick 1 x 2
2	3622.dat	White	Brick 1 x 3
4	3023.dat	White	Plate 1 x 2
4	3710.dat	White	Plate 1 x 4
1	3069b.dat	White	Tile 1 x 2 with Groove
2	3008.dat	Red	Brick 1 x 8
1	44302.dat	Tan	Hinge Plate 1 x 2 Locking with Dual Finger on End Vertical
1	44567.dat	Tan	Hinge Plate 1 x 2 Locking with Single Finger On Side Vertical
5	4865a.dat	Tan	Panel 1 x 2 x 1 with Square Corners
3	3710.dat	Tan	Plate 1 x 4
2	3666.dat	Tan	Plate 1 x 6
4	4477.dat	Tan	Plate 1 x 10
1	2431.dat	Tan	Tile 1 x 4 with Groove
3	4162.dat	Tan	Tile 1 x 8
1	3004.dat	Yellow	Brick 1 x 2
2	3023.dat	Yellow	Plate 1 x 2
1	3023.dat	Black	Plate 1 x 2
2	3710.dat	Black	Plate 1 x 4
1	3460.dat	Black	Plate 1 x 8
2	2431.dat	Black	Tile 1 x 4 with Groove
1	4162.dat	Black	Tile 1 x 8
1	87087.dat	Dark Purple	Brick 1 x 1 with Stud on 1 Side
1	3622.dat	Dark Purple	Brick 1 x 3
1	3010.dat	Dark Purple	Brick 1 x 4
2	3710.dat	Dark Purple	Plate 1 x 4

Art and Easel

*Design and Instructions
by Tommy Williamson*



1



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2

1

2

1x

1x

1

- 1x 1x black Technic brick with hole
- 1x 1x white Technic brick with hole
- 3x 1x white Technic brick with hole
- 1x 1x white Technic brick with hole

2

- 1x 1x white Technic brick with hole

3

- 1x 1x black Technic brick with hole

4

- 1x 1x yellow Technic brick with hole
- 2x 1x yellow Technic brick with hole

5

- 2x 1x red Technic brick with hole

6

- 1x 1x black Technic brick with hole
- 1x 1x black Technic brick with hole

7

- 1x 1x white Technic brick with hole
- 2x 1x white Technic brick with hole
- 1x 1x white Technic brick with hole

8

- 1x 1x white Technic brick with hole
- 1x 1x white Technic brick with hole
- 1x 1x white Technic brick with hole
- 2x 1x white Technic brick with hole

9

- 1x 1x black Technic brick with hole
- 1x 1x dark blue Technic brick with hole

10

- 1x 1x dark blue Technic brick with hole
- 1x 1x dark blue Technic brick with hole

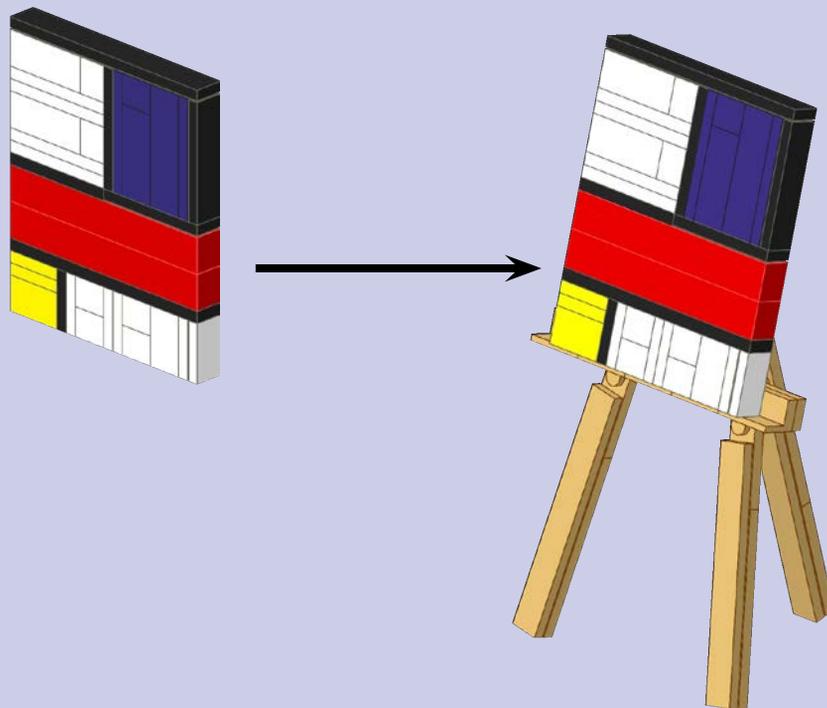
11

- 1x 1x black Technic brick with hole
- 1x 1x dark blue Technic brick with hole
- 1x 1x dark blue Technic brick with hole

12

- 1x 1x black Technic brick with hole

3



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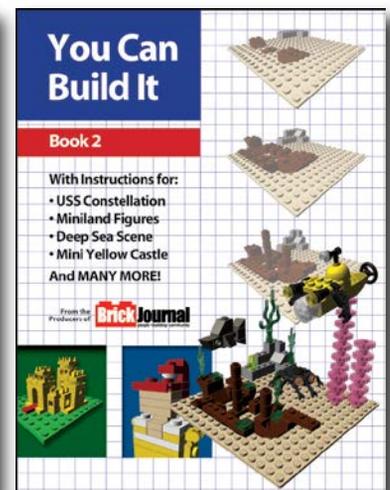
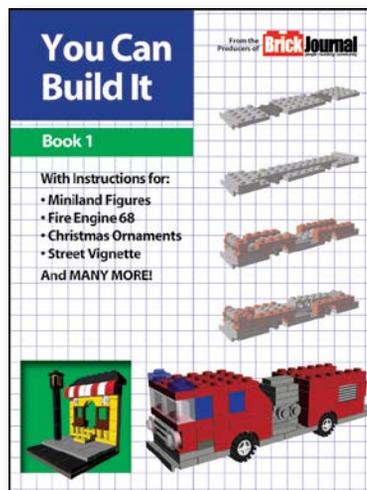
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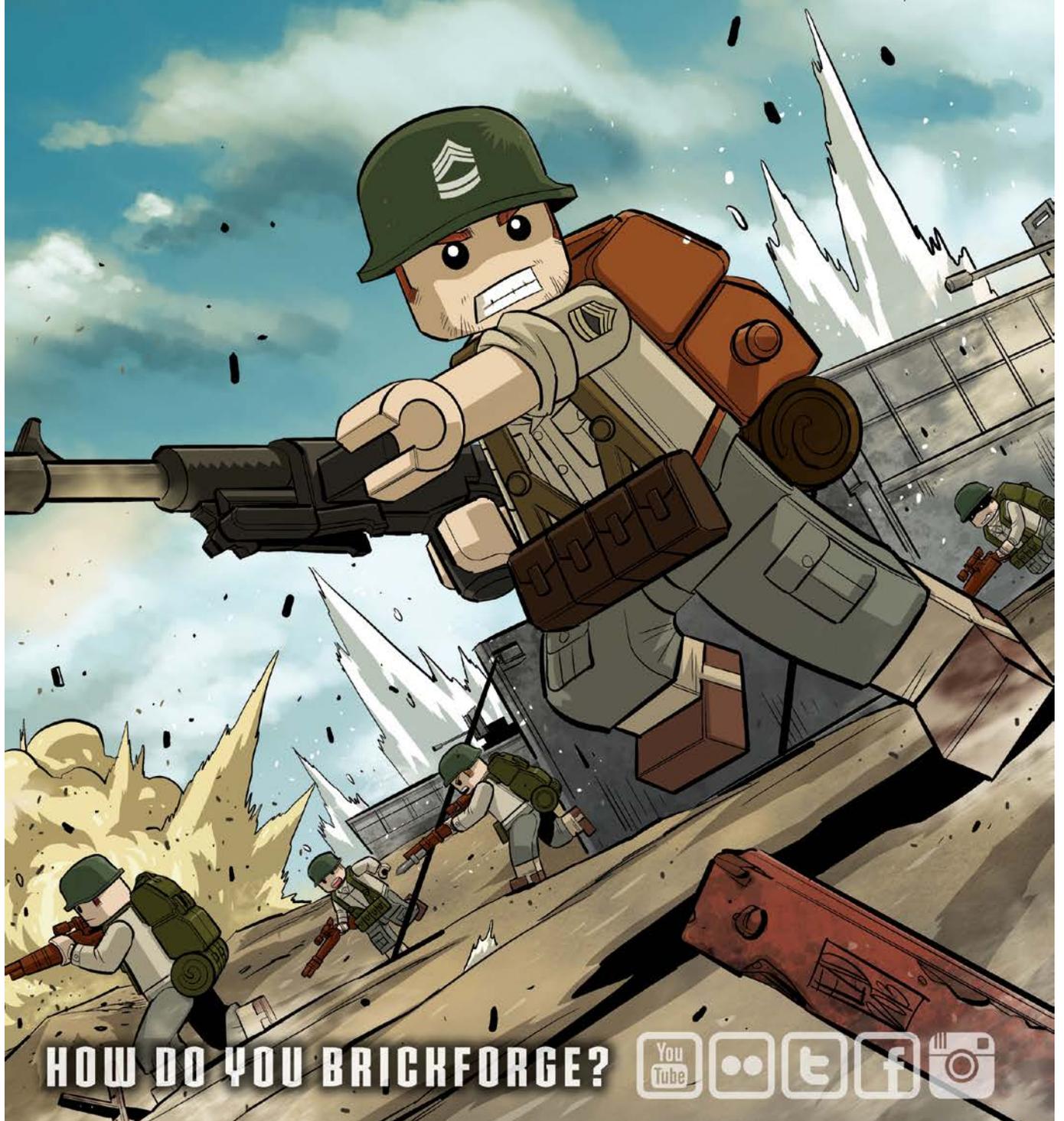
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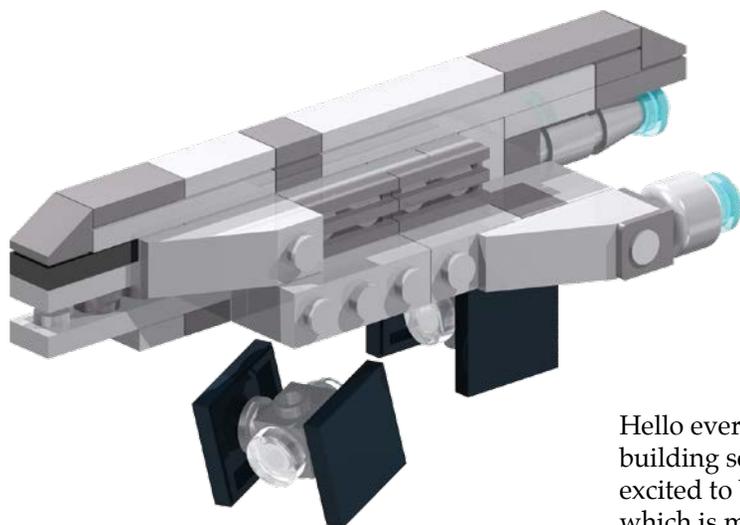
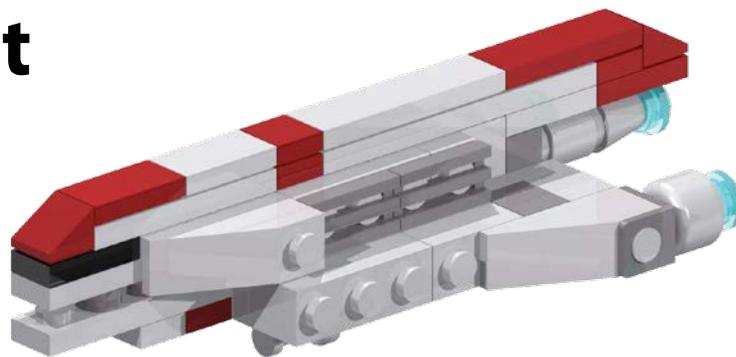


HOW DO YOU BRICKFORCE?



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MINI Model



MINI Gozanti Cruiser

*Design and Instructions
by Christopher Deck*



You can view Christopher's webpage by going to www.deckdesigns.de or scanning this QR code!

Hello everybody, and welcome back to our mini model building series in this new issue of *BrickJournal*! I am excited to build this little *Star Wars* spacecraft with you which is more popular than it seems. Although only having short screen time, the Gozanti Cruiser already appears in *Episodes I* and *II* of the prequel trilogy. It further has many appearances in the *Clone Wars* TV series, and also appears in the new *Rebels* series as an Imperial transport version.

In this article we want to build the original version from the prequel movies, but it can very easily be modified to obtain the Imperial transport version which is also able to house a couple of rock-on TIE fighters. The main hull is identical for both versions—just replace all dark red pieces by dark bluish gray ones to get the Imperial touch. While the original Gozanti Cruiser has two antennas on the underside, the Imperial transport version has two racks for the attachment of the TIE fighters. By having enough 1x1 clip plates on the underside, we can simply rotate the two tap pieces that were used for the antennas to work as attachment racks for the fighters.

To complete the modification process, the side panels have to be slightly modified as the Imperial transport version has extended wings. That's easily being done by the addition of very few extra bricks. So, with the instructions below you can build two versions of the Gozanti Cruiser. I hope you will enjoy building this, and see you next time! 

Parts List

(Parts can be ordered from Bricklink.com by searching by part number and color)

Gozanti Cruiser

Main Hull

Qty	Color	Part	Description
1	Light-Bluish-Gray	3005.dat	Brick 1 x 1
1	Light-Bluish-Gray	3062b.dat	Brick 1 x 1 Round with Hollow Stud
1	Dark-Bluish-Gray	4070.dat	Brick 1 x 1 with Headlight
3	Light-Bluish-Gray	52107.dat	Brick 1 x 2 with Studs on Sides
1	Light-Bluish-Gray	59900.dat	Cone 1 x 1 with Stop
2	Light-Bluish-Gray	3024.dat	Plate 1 x 1
3	Dark-Red	3024.dat	Plate 1 x 1
1	Trans-Light-Blue	4073.dat	Plate 1 x 1 Round
2	Dark-Bluish-Gray	4073.dat	Plate 1 x 1 Round
3	Light-Bluish-Gray	60897.dat	Plate 1 x 1 with Clip Vertical (Thick C-Clip)
1	Trans-Black	3023.dat	Plate 1 x 2
1	Light-Bluish-Gray	3023.dat	Plate 1 x 2
1	Dark-Red	3023.dat	Plate 1 x 2
1	Light-Bluish-Gray	3623.dat	Plate 1 x 3
1	Light-Bluish-Gray	3710.dat	Plate 1 x 4
1	Light-Bluish-Gray	3666.dat	Plate 1 x 6
1	Light-Bluish-Gray	4477.dat	Plate 1 x 10
2	Dark-Red	54200.dat	Slope Brick 31 1 x 1 x 0.667
2	Light-Bluish-Gray	4286.dat	Slope Brick 33 3 x 1
2	Light-Bluish-Gray	4599b.dat	Tap 1 x 1 without Hole in Spout
1	Dark-Red	3070b.dat	Tile 1 x 1 with Groove
1	Dark-Red	3069b.dat	Tile 1 x 2 with Groove
1	Light-Bluish-Gray	3069b.dat	Tile 1 x 2 with Groove
1	Dark-Red	63864.dat	Tile 1 x 3 with Groove
1	Light-Bluish-Gray	2431.dat	Tile 1 x 4 with Groove

Side Panels

Qty	Color	Part	Description
2	Dark-Bluish-Gray	42446.dat	Bracket 1 x 1 - 1 x 1
2	Light-Bluish-Gray	3622.dat	Brick 1 x 3
2	Light-Bluish-Gray	3626c.dat	Minifig Head with Closed Stud
4	Light-Bluish-Gray	3024.dat	Plate 1 x 1
2	Trans-Light-Blue	4073.dat	Plate 1 x 1 Round
2	Light-Bluish-Gray	3623.dat	Plate 1 x 3
2	Light-Bluish-Gray	3021.dat	Plate 2 x 3
2	Light-Bluish-Gray	3040a.dat	Slope Brick 45 2 x 1 without Centre Stud
2	Light-Bluish-Gray	60481.dat	Slope Brick 65 2 x 1 x 2
4	Dark-Bluish-Gray	2412b.dat	Tile 1 x 2 Grille with Groove

Gozanti Imperial Transport

Main Hull

Qty	Color	Part	Description
1	Trans Black	3023.dat	Plate 1 x 2
1	Dark-Bluish-Gray	4070.dat	Brick 1 x 1 with Headlight
3	Dark-Bluish-Gray	3024.dat	Plate 1 x 1
2	Dark-Bluish-Gray	4073.dat	Plate 1 x 1 Round
1	Dark Bluish Gray	3023.dat	Plate 1 x 2
2	Dark Bluish Gray	54200.dat	Slope Brick 31 1 x 1 x 0.667
1	Dark Bluish Gray	3070b.dat	Tile 1 x 1 with Groove
1	Dark Bluish Gray	3069b.dat	Tile 1 x 2 with Groove
1	Dark Bluish Gray	63864.dat	Tile 1 x 3 with Groove
1	Trans Medium Blue	4073.dat	Plate 1 x 1 Round
1	Light Bluish Gray	3005.dat	Brick 1 x 1
1	Light Bluish Gray	3062b.dat	Brick 1 x 1 Round with Hollow Stud
2	Light Bluish Gray	4733.dat	Brick 1 x 1 with Studs on Four Sides
3	Light Bluish Gray	52107.dat	Brick 1 x 2 with Studs on Sides
1	Light Bluish Gray	59900.dat	Cone 1 x 1 with Stop
2	Light Bluish Gray	3024.dat	Plate 1 x 1
3	Light Bluish Gray	60897.dat	Plate 1 x 1 with Clip Vertical (Thick C-Clip)
1	Light Bluish Gray	3023.dat	Plate 1 x 2
1	Light Bluish Gray	3623.dat	Plate 1 x 3
1	Light Bluish Gray	3710.dat	Plate 1 x 4
1	Light Bluish Gray	3666.dat	Plate 1 x 6
1	Light Bluish Gray	4477.dat	Plate 1 x 10
2	Light Bluish Gray	4286.dat	Slope Brick 33 3 x 1
2	Light Bluish Gray	4599b.dat	Tap 1 x 1 without Hole in Spout
1	Light Bluish Gray	3069b.dat	Tile 1 x 2 with Groove
1	Light Bluish Gray	2431.dat	Tile 1 x 4 with Groove

Side Panels

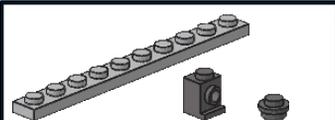
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2	Dark Bluish Gray	42446.dat	Bracket 1 x 1 - 1 x 1
2	Dark Bluish Gray	3005.dat	Brick 1 x 1
4	Dark Bluish Gray	2412b.dat	Tile 1 x 2 Grille with Groove
2	Trans Medium Blue	4073.dat	Plate 1 x 1 Round
2	Light Bluish Gray	3005.dat	Brick 1 x 1
2	Light Bluish Gray	3004.dat	Brick 1 x 2
2	Light Bluish Gray	3622.dat	Brick 1 x 3
2	Light Bluish Gray	3626c.dat	Minifig Head with Closed Stud
4	Light Bluish Gray	3024.dat	Plate 1 x 1
2	Light Bluish Gray	3623.dat	Plate 1 x 3
2	Light Bluish Gray	3021.dat	Plate 2 x 3
2	Light Bluish Gray	4286.dat	Slope Brick 33 3 x 1

TIE Fighters

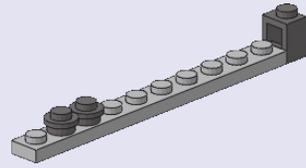
Qty	Color	Part	Description
2	Trans Clear	98138.dat	Tile 1 x 1 Round with Groove
2	Trans Light Blue	4073.dat	Plate 1 x 1 Round
4	Black	3068b.dat	Tile 2 x 2 with Groove
4	Light Bluish Gray	4073.dat	Plate 1 x 1 Round

Gozanti Cruiser

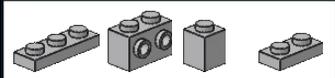
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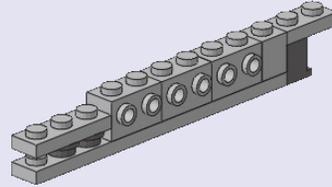
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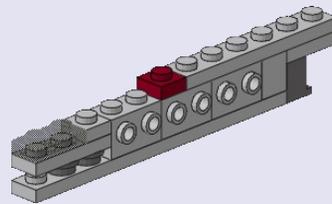
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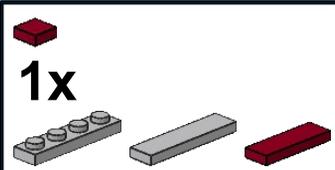
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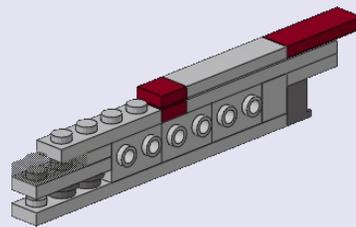
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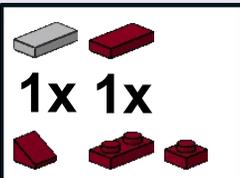
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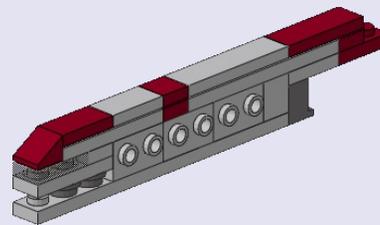
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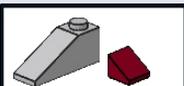
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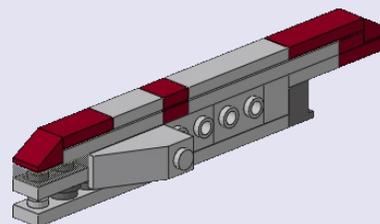
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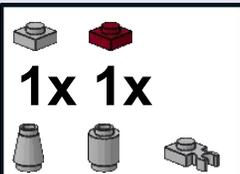
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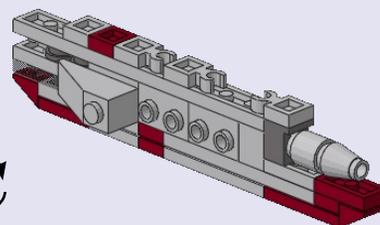
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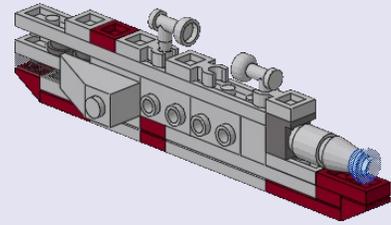
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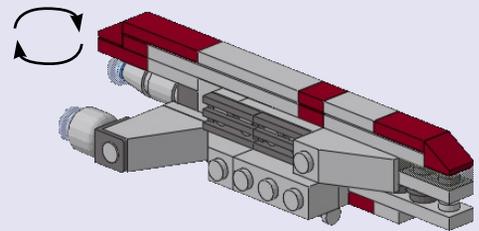
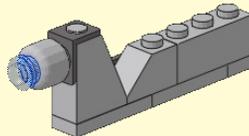
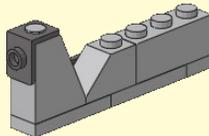
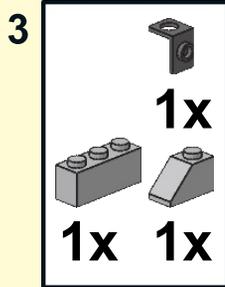
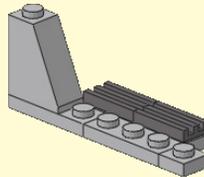
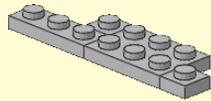
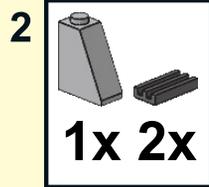
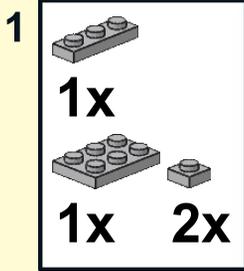
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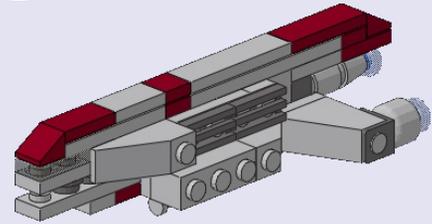
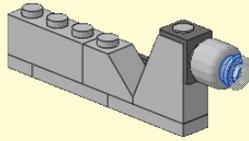
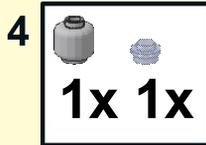
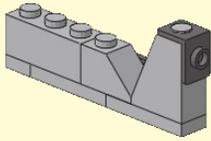
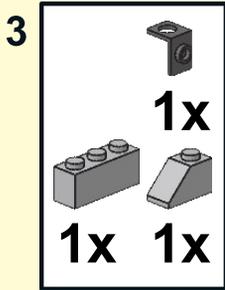
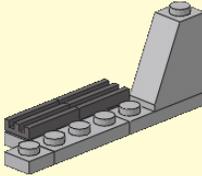
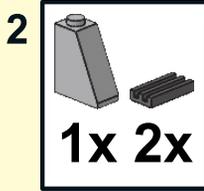
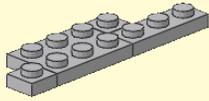
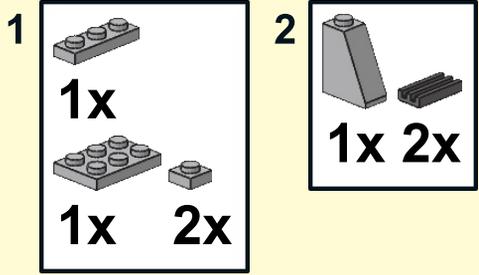
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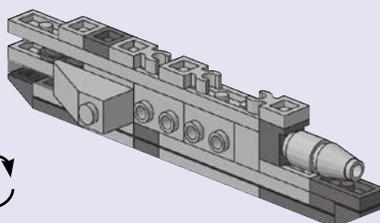
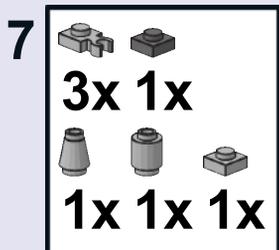
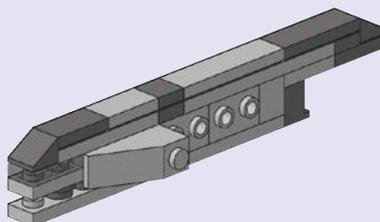
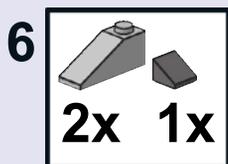
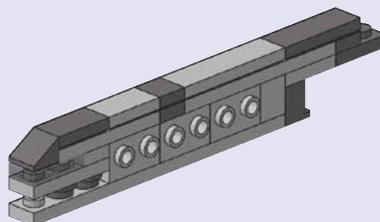
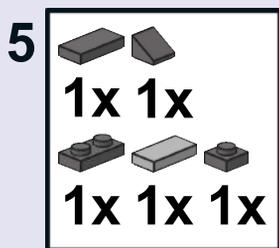
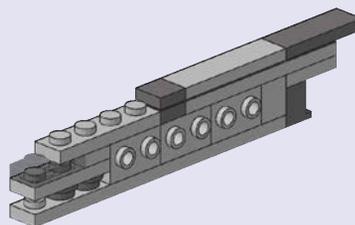
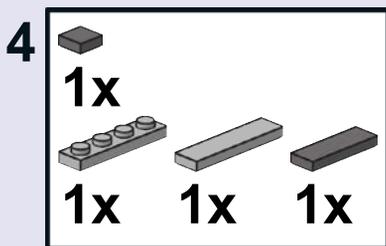
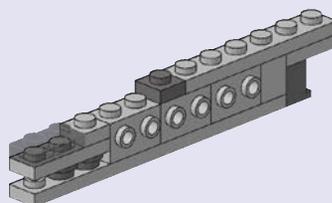
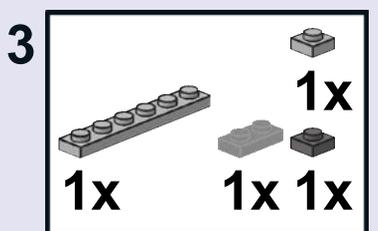
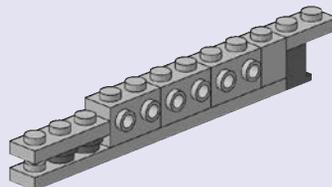
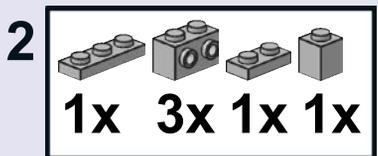
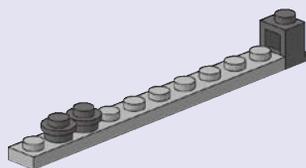
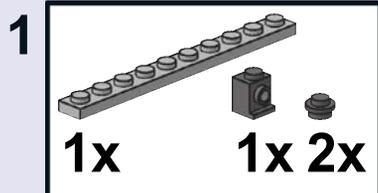
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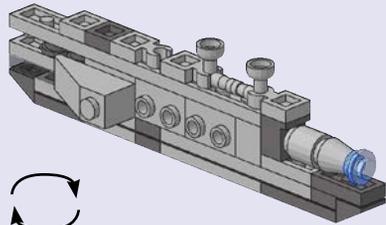
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Gozanti Imperial Transport



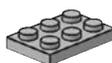
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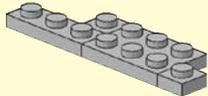
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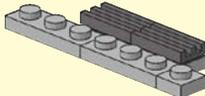
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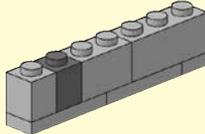
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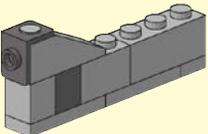
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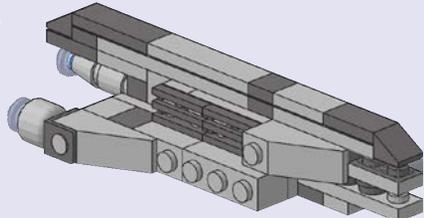
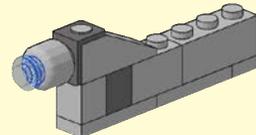
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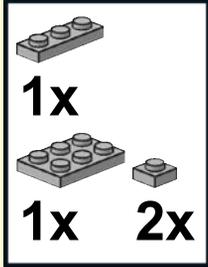


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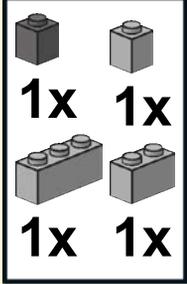
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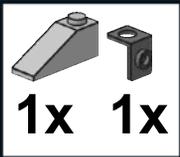


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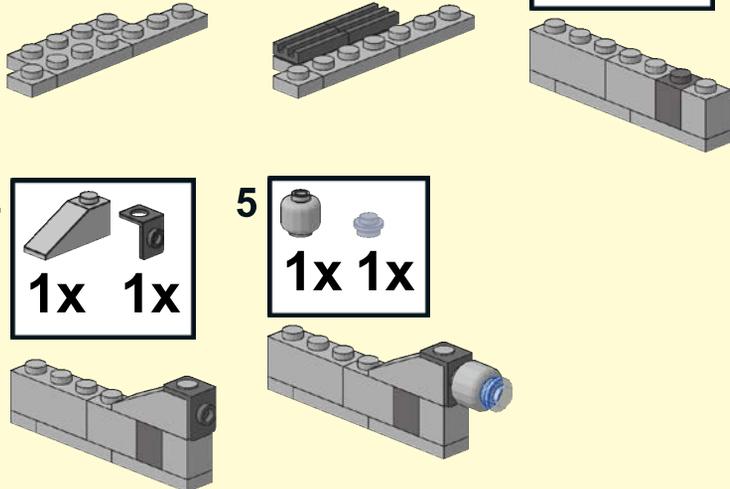
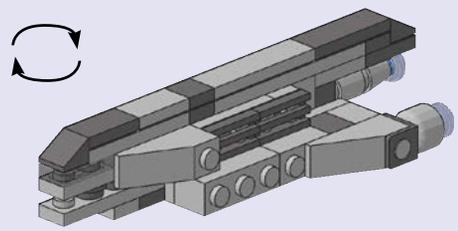
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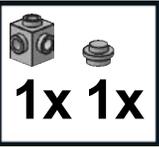
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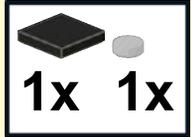
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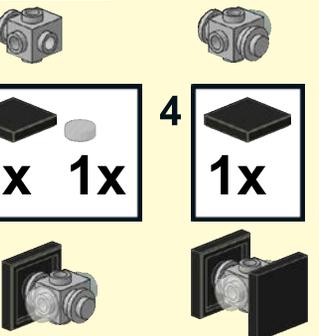
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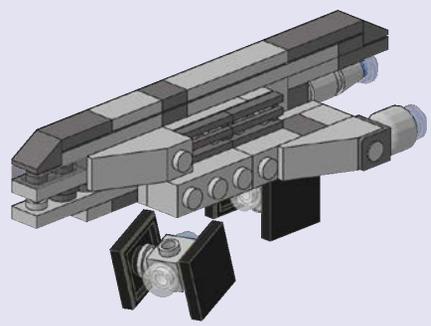
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Community



The Bacteria Busters. From left to right: Kate Gagliano, Rhyann Clarke, Earle Arnold, Sonia Clark, Erin Stone, Will Henderson, Jennifer Edmondson, Sarah Edmondson, and Riley Niven.

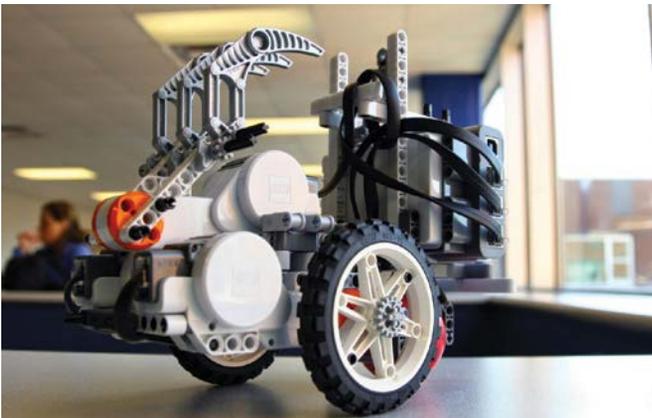
FIRST® LEGO® League's Lessons

Article and Photography by Sarah Edmondson



Erin Stone lining the robot up on the Robot Game table.

Bacteria Buster's robot, which used a ball as a rear caster.



What I remember most from my first year of FIRST LEGO League (FLL) is a strange lack of fear. I was completely confident in our project's ability to wow the judges, and our robot's absolute perfection on the table. We were one of the top two teams in the FLL program at my elementary school, and all the parent volunteers who had judged us before had been amazed at our knowledge and ability. How could we not be one of the most successful teams at our regional competition? There was simply no way.

Or so I thought. Our team, the Bacteria Busters, did not advance to the state competition that year. We did not win any awards, and we were disappointed by the rubrics we received later. The robot and Core Values scores were okay, but the project was not logical, according to the rubrics.

I felt awful. I'd played a large role in creating our project, and I'd been utterly sure of our security in getting amazing scores. Now, I felt that my small, fifth grader shoulders carried the weight of our failure.

But factor this in. This was our teacher, Ms. Sonia Clark's first time incorporating FLL into our gifted program. My parents, the coaches, had no idea what they were doing. Neither did any of the teams. We literally had to start from scratch with learning the programming and building for the robot, and figuring out what we were supposed to do with the project. We didn't even know that the judges gave out rubrics until the day of the competition! Getting to go to the regional competition was the only thing anyone from our school advanced to that year. The other team on our track, the Germ Fighters, didn't even advance to regionals. The reason rookie teams participate in FLL the first time is to learn what happens at competitions so they can grow on that next year, but we were such rookies, we didn't even know that.

My team was in fifth grade that year. After the competition, we graduated from elementary school, meaning we couldn't participate in FLL through school anymore. One of our teammates moved to a different middle school than the one the rest of us were attending. All the boys who were on either team with us girls lost interest in FLL. For most people, that would be it. The story would be over.



The Techie Tweens. From left to right: Earle Arnold, Rhyann Clarke, Caroline Edmondson, Sarah Edmondson, Teagan Fringer, Kristin Bruffey, Kate Gagliano, Erin Stone, and Emily Prins.

Not for us. The girls who had been on the Bacteria Busters and Germ Fighters wanted to try again. My parents decided to coach a new, out-of-school team and invited all the girls who wanted to continue doing FLL to participate. Almost everyone agreed, and we became the Techie Tweens!

Older and wiser about FLL, we immediately set to work on creating a robot, dubbed Penelope, and coming up with a better project. That year's theme was Senior Solutions, and we came up with a problem and solution that many we interviewed agreed would make sense. Giving classes to seniors about how to use technology of the digital age was the final decision. Meanwhile, Penelope was becoming smarter, faster, and more successful on the field. And we worked together better than we had on separate teams at school, which boosted our Core Values performance. When the first competition arrived, we were infinitely better than last year. And when we participated in the same regional competition where the Bacteria Busters crashed and burned, we were shocked to win the first place champions award!

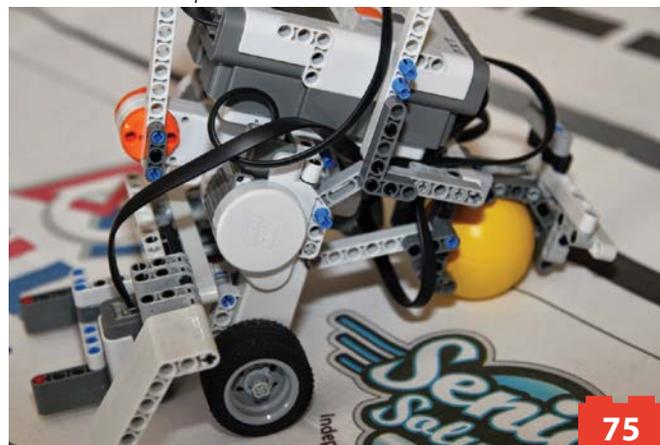
The Techie Tweens moved on to the North Carolina State competition, which was our ultimate goal. At that competition, we didn't win any awards, but we went home with smiles on our faces. We had learned from last year's mistakes, and our hard work had paid off.

The theme for the 2013-14 season was Nature's Fury. Our new team, the Weather Whiskers, jumped right into the fray, discovering that many people didn't know what to do with their pets when a hurricane struck their homes. We wanted to educate people about this pressing problem, but instead of



The Techie Tweens' robot, Penelope, on the Senior Solutions game table.

A closer look at Penelope.

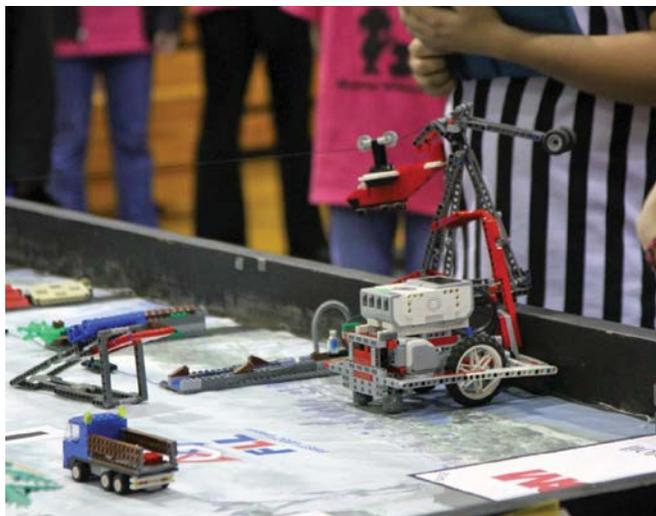




The Weather Whiskers getting ready to practice. From left to right: Earle Arnold, Erin Prins, Rhyann Clarke, Kate Gagliano, Sarah Edmondson, Caroline Edmondson, Erin Stone, and Emily Prins.



Flashmob!



Penelope 2.0 on the Nature's Fury robot game board.

holding a class, we created and performed an informative flash mob for our solution. We built a new robot and christened her Penelope 2.0. We worked hard, dedicating many weekends and vacations to improving on all three aspects of FLL and making this season the best one ever.

Penelope 2.0 continually had the highest score on the table at competitions, and the judges were impressed with her design and programming. We worked well as a team and always scored high in Core Values. And the judges loved our flash mob, a song and dance number set to "Don't Stop Believing" by Journey but with educational lyrics. We didn't assume we would do great at every competition we went to that year, but that's exactly what happened.

Then the state competition arrived. We performed our best, and eagerly awaited the results. Astoundingly, we won second place in the state! Then, as if things couldn't get any better, we were invited to participate in the North American Open Invitational in LEGOLand California!

In the five months between State and California, we completely rebuilt Penelope and did all we could to make the project even better, performing the flash mob so many times that I could have done it in my sleep.

During that time, our team became even more tight-knit than before. We had started this together, and we would finish it together. Before we knew it, May had arrived, and with it, our Californian adventure.

LEGOLand was amazing. When we weren't being judged or running Penelope, we explored the theme park and befriended people from all over the country and all over the world. We got an okay result on the robot's run and performed the flash mob in an eight-foot by ten-foot hotel room (cramped, but fun). We marveled at the life-sized LEGO models, learned about other teams' ideas for project and robot, and had a blast riding the park's many rides. Everyone created their own special memories, and we all had a wonderful time.

At the closing ceremony, we didn't expect any awards since every team at the invitational is a regional champion. We didn't win anything for Core Values or for robot design. For the project, the team who won second place for presentation was called out. Then first place. Cheers erupted from the Weather Whiskers as our name was announced! We ran a victory lap around the stage and posed with the trophy for pictures, hardly believing it. I half expected to wake up and discover that it was all just a wonderful dream. But it wasn't.

After that, we returned home to North Carolina. The season was over, and we dismantled Penelope 2.0. But the Weather Whiskers aren't done. There's one more year for us before we age out, and we plan to make the most of it, whether we win again or not.

Being a part of FLL has definitely taught my friends and I a lot. We learned not to be too confident in a situation where we were new and unsure of what we were doing. That first year, my confidence crossed a line into arrogance, and that arrogance wasn't a good thing to have. We learned that hard work and patience pays off. That was proven when we won regionals a mere year after coming home empty-handed. My sister and I learned that we needed each other in order to succeed, something that I hadn't been so willing to understand. And we all learned that even when you're really good, you can't be perfect. Penelope 2.0 didn't perform as well as expected in California, and that disappointed those of us who had worked for months to make her perfect. The fact is, you can't make anything absolutely perfect. Nothing is without flaw. It's not an easy lesson to learn, but it's a valuable one.

The most important thing we learned, however, is what really matters in an FLL competition. The trophies are big, shiny, and attractive, but they aren't the most valuable thing you can take home. FLL is all about the journey. The lessons you learn, the teamwork you build, the memories you create. The Core Values are more important than the project or the robot, and I'm incredibly thankful that FLL allowed me to learn that I'm not the same person I would be if I hadn't done FLL. I'm someone unafraid to try something new where success isn't guaranteed.

Now if you'll excuse me, I have some LEGO to build. 

The Weather Whiskers at LEGOLand.



Erin Stone and Rhyann Clarke get Penelope 2.0 ready for a robot run.



The Weather Whiskers making friends at LEGOLand.

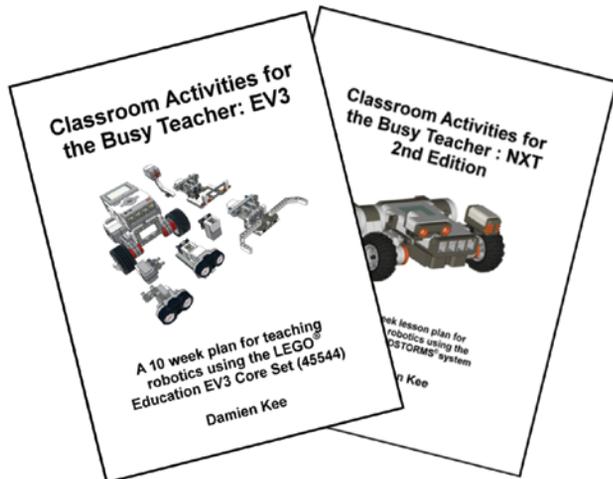


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Last Word



Why yes, that is a LEGO surfboard!



Visiting The Art of the Brick.

This never ends. Really.

I'm not talking about the work that goes behind each issue, but that is an ongoing effort. I'm talking about where the LEGO fan community is going.

It wasn't too long ago that the idea of becoming a LEGO Artist was viewed with a bit of skepticism. The thought of making a LEGO mosaic for pay was not taken seriously, nor was building sculptures for museums. How times have changed.

Now there are museum and art displays and events where LEGO builders can show, tell and teach others how to build and see what can be done with LEGO. And a lot can be done, from making a simple car with a few pieces to a robot that can do... oh wait, that's *next* issue!

So it never ends.

And that is good.

See you next issue, when the robots take over! 

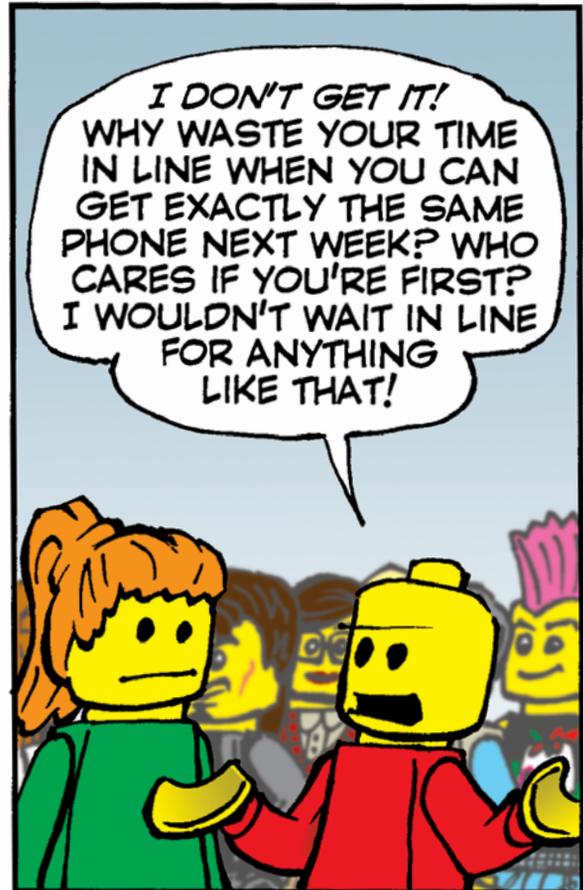
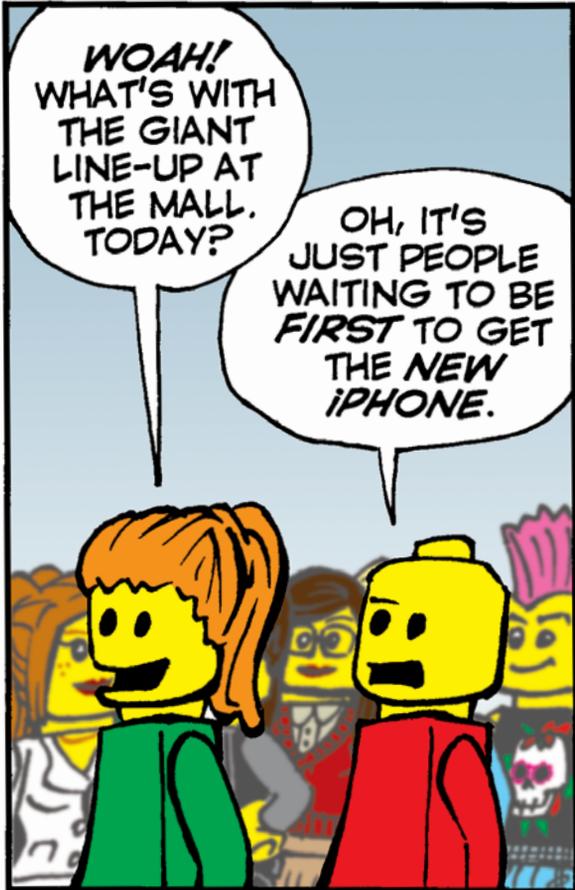


Dedication is not thinking about making a door out of LEGO bricks, nor actually building it to work. Dedication is removing the door from home, and making a door frame to display at a LEGO convention! Built by Dan Hermann, by the way.

KAMINOAN'S www.fineclonier.com
FINE CLONIER DECALS

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The advertisement features a blue background with a space-themed scene. In the foreground, five LEGO minifigures are displayed: a red and white character, a purple character, a tan character holding a pink lightsaber, a red and white character on a motorcycle, and a grey character. The text "KAMINOAN'S" is in blue, "FINE CLONIER DECALS" is in white, and the website "www.fineclonier.com" is in white. At the bottom, the tagline "Kaminoan's Fine Clonier. For all your minifig decal customization needs." is written in white.





Bricks for Everyone!



iPod Touch 4th Gen.



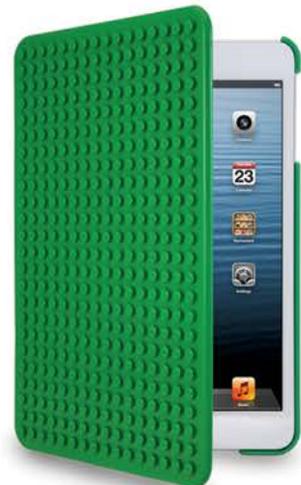
iPhone 4 & 4S



iPhone 5 & 5S



iPhone 6



iPad Mini & iPad Mini with Retina display

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