

BUILD YOUR OWN

ADVENTURE!



“THERE ARE NO LIMITS TO WHAT YOU CAN BUILD. THIS IS YOUR ADVENTURE, SO JUMP RIGHT IN AND GET BUILDING!”

LEGO BRICKFEST

SUMMER CAMP 2016

INCORPORATING DAILY FREE PLAY:

When students arrive at the center have them free-play for the first 45 minutes to 1 hour. Anything is available in iLearn for play.

TIP: SET UP “INSPIRATION STATIONS”



This is where students can get inspired by adding to existing LEGO cities and making them their own by building and adding in their own custom creations.

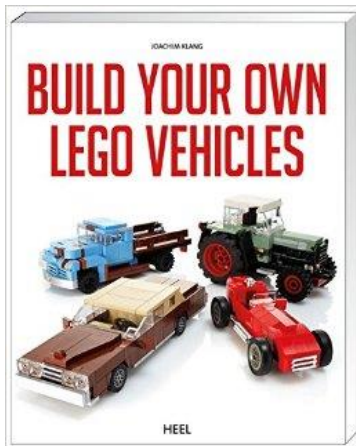
Day one: **NEED FOR SPEED**



**PUT YOUR
NOTIONS IN
MOTION!**

**BRICKFEST CHALLENGE:
FLYING TO THE
HEIGHTS OF
DESIGN!**

DESIGN YOUR OWN CAR!



A great resource for this activity may be a book such as *Build Your Own LEGO Vehicles*.

The car can be a replica of a real car,

a fantasy car (like GeekPerson's Flying Car), a mini car, or a floating car... if you don't have wheels. Of course, transportation design is not just limited to cars. There are also motorcycles, marine craft, airplanes, commercial transport such as semi-trucks, small personal mobility vehicles, and public transit like buses and trains. The horizon's the limit!



Not only is your goal to make it look awesome, but also add cool features and details that add even more playability. Ex. Include landing gears, a landing pad, and even a power cell behind the seat in the cockpit:

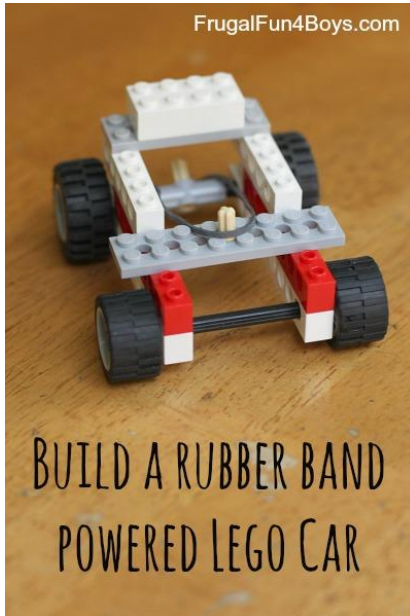


No kits.... well actually the end goal is no kits. There are kids who are most comfortable following directions and sticking to them exactly. For those kids a challenge like this might be overwhelming. Try having him (or her) change one or two details from the kit. Maybe the colors of the bricks or adding something on that wasn't specified in the directions. Gradually encourage more and more changes.



BRICKFEST CHALLENGE: RUBBER BANDS & ROCKET CARS!

YOU'VE GOT THE POWER! PUT THAT CAR IN MOTION



Make a cool rubber band powered car, a rocket car, or try your hand at the motors and see what you can make.

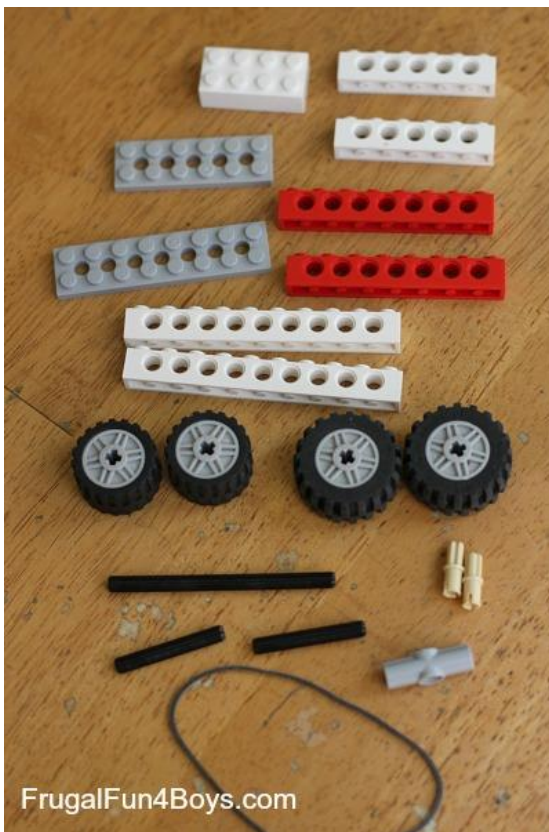
RUBBER BAND POWERED CAR #1:

The picture below shows the pieces needed to build this car.

This rubber band car will travel pretty far because



of its design – you wind it up, and then the rubber band comes completely loose as it rolls forward, allowing it to travel as long as it has momentum.



Step 1: Attach the two short axle pieces to the gray piece as shown. Add connector rods as shown.



Step 2: Attach the two 10-dot

pieces and two wheels to the axle. These will be the back wheels.

Step 3: Add the longer axle and two more wheels to the front of the car. The tan colored connector rods (one in the back axle and one on the top of the car) will hold the rubber band.

Step 4: Build up the back of the car to make it look like the back.



Step 5: Load the rubber band. Wrap it around the front post and the back post, and turn the wheels to tighten.

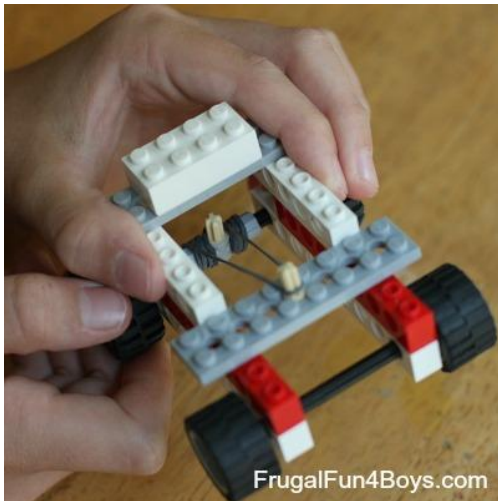
front post and the back post, and turn the wheels to tighten.

Let go, and let it roll!



RUBBER BAND CAR #2

This car does not travel as far because of the design. It stops itself when it has unwound to the full length of the rubber band. The benefits are that it does funny tricks and that the Lego bricks in this car



are easier to find. It would also be fun to

have kids build this version and experiment with changing the length of the rubber band to see the effect on the car.



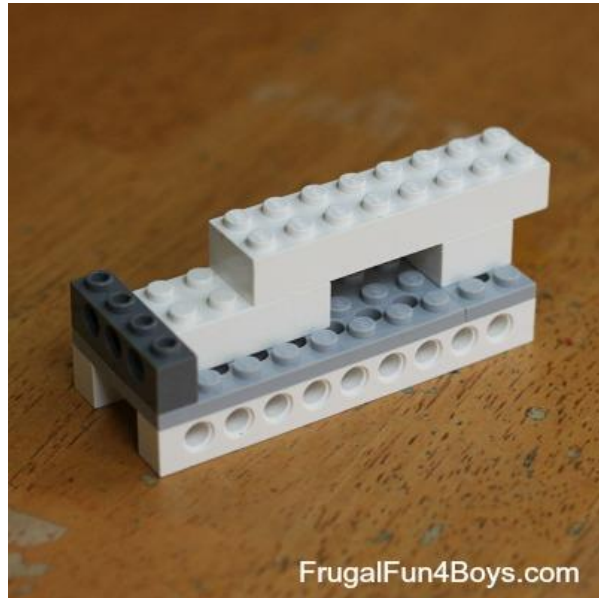
Step 1: Find two 10 x 1 bricks with holes in the sides.





Step 2: Cover those two bricks with flat bricks. Our flat bricks had holes in them, but that is not necessary. Add a 4 x 1 brick on the front. Again, ours has holes but it's not necessary.

Step 3: Add more bricks to the top as shown.



Step 4: Connect the two rubber bands “luggage tag style.”

Step 5: Slide the rear axle through the last hole on each of the 10 x 1 bricks. Put on the wheels. Attach the rubber band to the rear axle as shown.

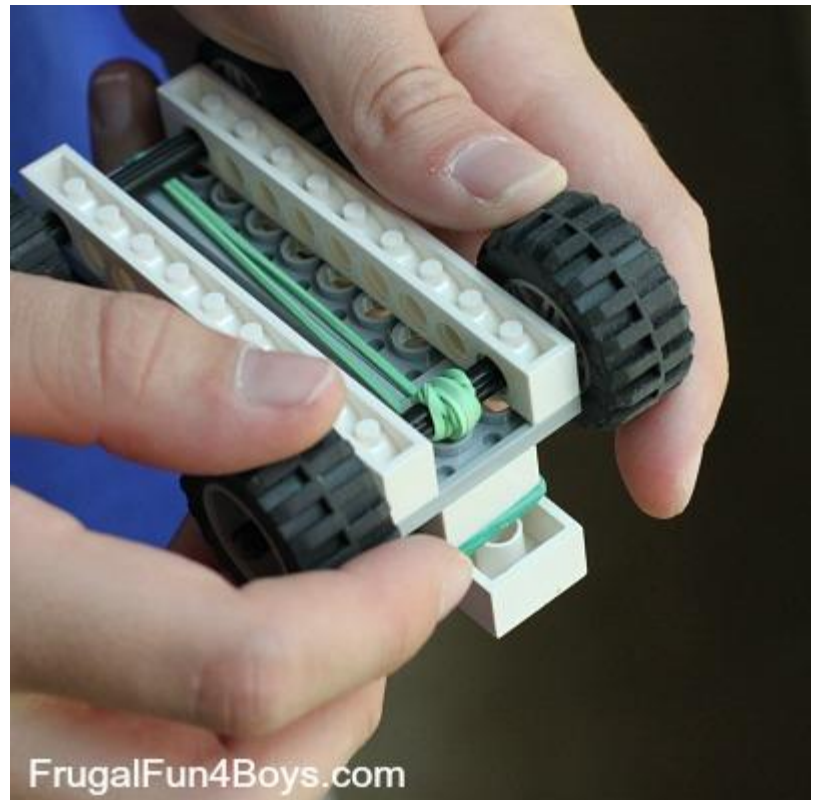


Step 6: Stretch the rubber band around the front of the car and around the top bricks as shown. Do this before you put on the front wheels as the rubber band needs to run *under* the front axle.



as shown. Do this before you put on the front wheels as the rubber band needs to run *under* the front axle.

To wind up the car, turn the rear axle. Or, you can actually pull this car back and let it go!





BRICKFEST CHALLENGE: ROCKET CAR!

This activity requires adult help and supervision. You know best whether your children are old enough for this project or not.

Using this basic design students should be able to build rocket powered Lego cars that travel over 20 feet. (Samples of two car styles are shown...the possibilities are endless!) The key to success is to use an empty Tacky Glue bottle (we used the 4 oz. size). Fill the bottle about 2/3 of the way with water. Drop in two Alka Seltzers (we cut them in half to fit them in) and quickly screw on the lid.

The pressure builds for about 30 seconds and then the cap blows off the tip and the car shoots forward!

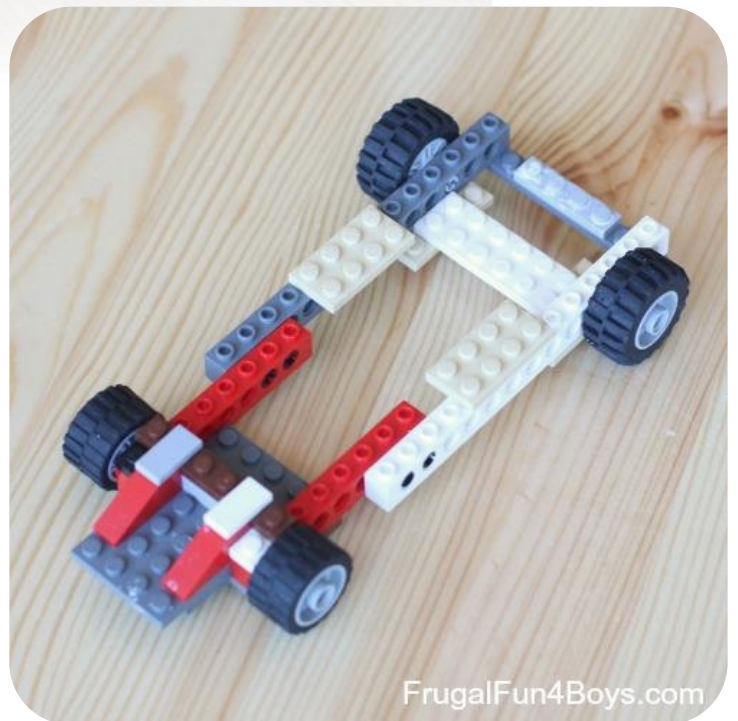
Car 1

A view of the car without the Tacky Glue bottle follows.





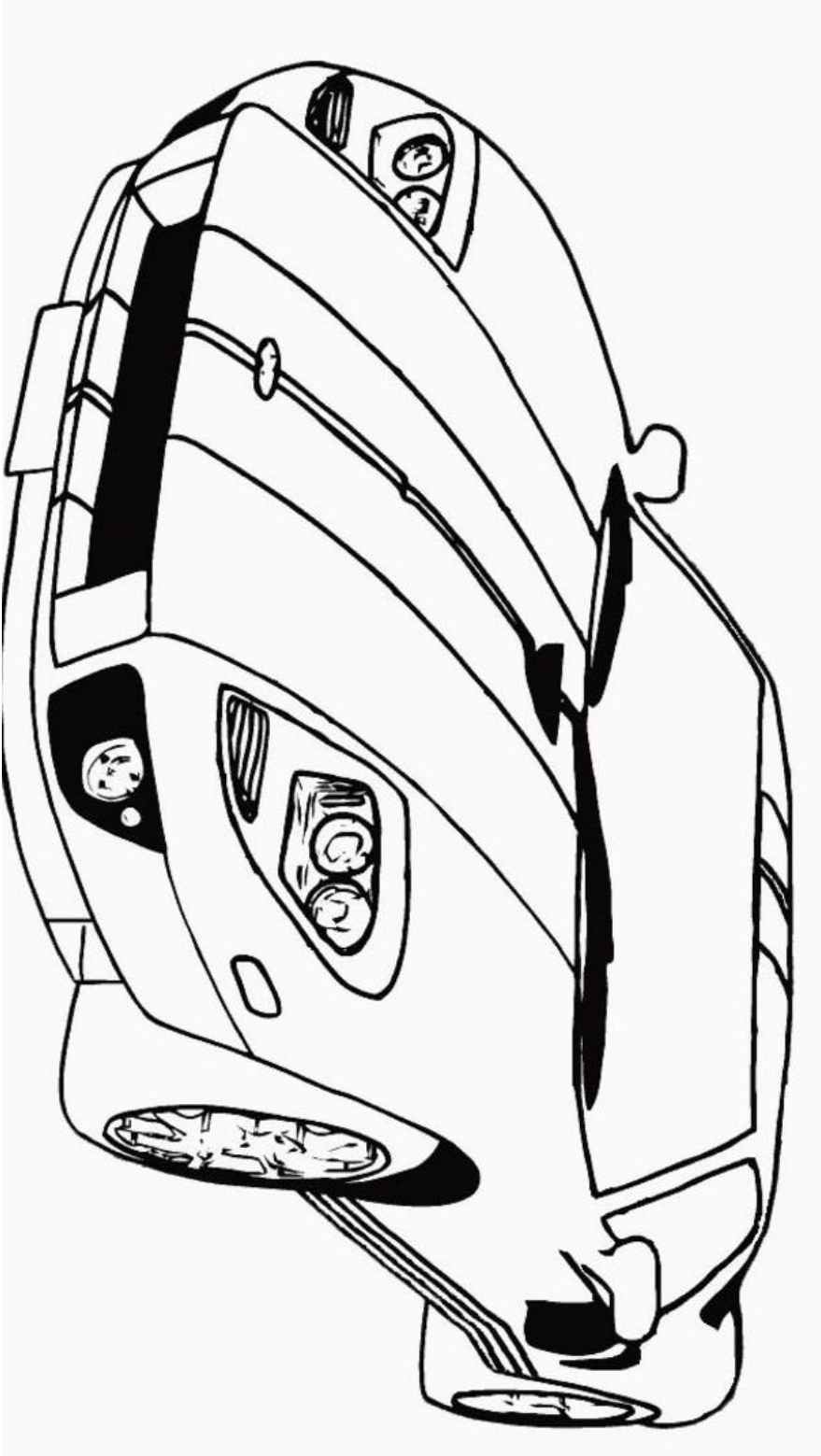
Car 2:



TIPS:

- Make sure the car is lightweight.
- Make sure that the car is strong enough to handle having the glue bottle attached with a tight rubber band and strong enough to withstand the launch.
- Make sure that the wheels of the car still spin freely when the Tacky Glue bottle is filled with water. The water adds quite a bit of weight, and if it touches the wheels or causes other pieces to touch the wheels, the car won't go very far!
- You want the nozzle of the glue bottle to be as low to the ground as possible so that the force is located on the same plane as the wheels. This helps to overcome the friction between the wheels and the ground.
- Put a towel behind the car to catch the cap when it comes off – otherwise you might be hunting for it for a while!
- Quite a bit of water sprays out along with the CO₂ gas, so this is a good outside project.
- You may need to dry off the bottle in between runs. We found that if the bottle was wet, it was harder to screw the lid on tightly and the lid would end up leaking. If it leaks, you won't get enough pressure built up to blow off the cap.
- We had two Tacky Glue bottles, and one worked better than the other. The one that worked the best was an older one that we had on hand. Our new Tacky Glue bottle would sometimes swell from the pressure, and yet the cap had still not released after two minutes. We ended up just releasing the cap ourselves. I really don't think that the plastic bottle would explode, but just be aware.

Moving on to Car Design- Students draw and color their perfect ride!



BRICKFEST CHALLENGE:

OFF TO THE RACES!



Race your favorite of your custom built LEGO derby vehicles down a [35-foot long] timed track.

LEGO RACE LANES FOR CARS

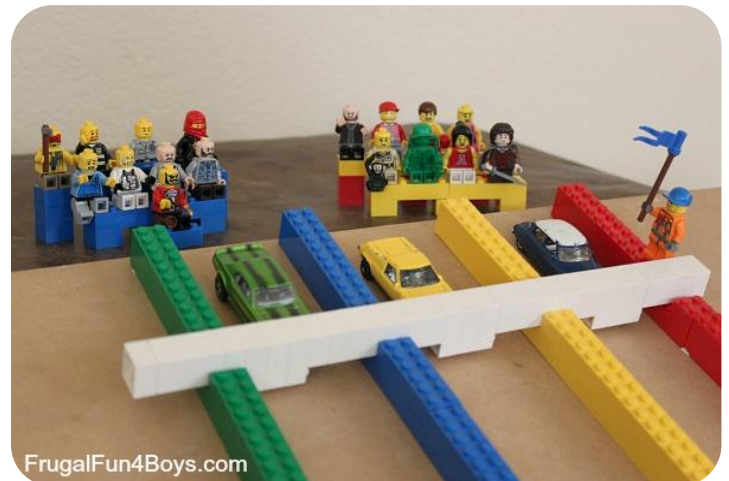
Release all the cars at once!

Challenge the students by having them design a ramp for racing their cars. They'll need to build race lanes out of Legos and find a way to release all the cars at once!

In the sample image they attached the Lego lanes to the board with sticky tack (poster putty).

Lift up the white bar, and the cars go racing down the track!

Here's a close-up of how the car release works:

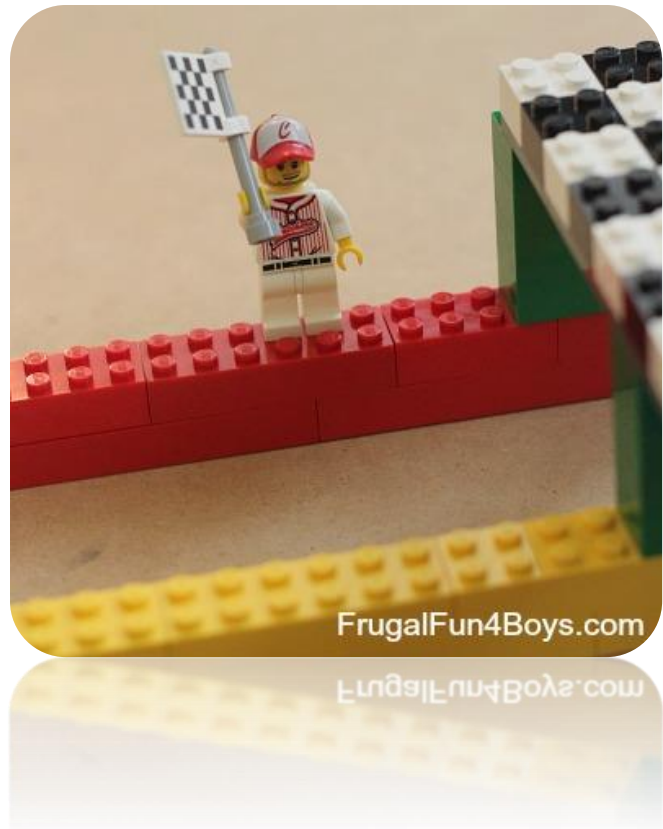


Each race lane has a notch left open in it for the white bar to sit on. The builder built the white bar vertically and then laid it on its side, so it does not stick to the bricks in the lanes at all. He used white 2 x 2 bricks and 2 x 3 bricks.

Build a finish line by making a pattern of black and white bricks on top of several flat pieces.

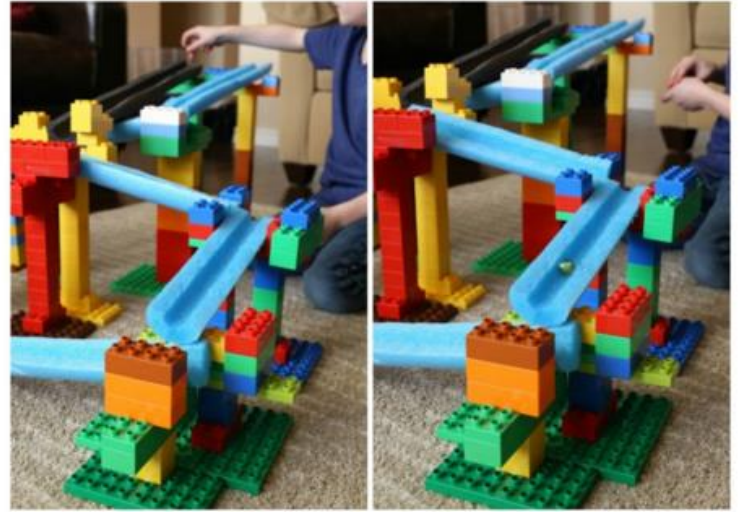
NOTES:

- The lanes are attached to the base with [poster putty](#).
- We also tried racing Lego cars, but because of their rubber wheels they often go crooked and don't race very fast. Hot Wheels were more fun. However, building and racing Lego cars is a fun challenge! Just make your race lanes wider.



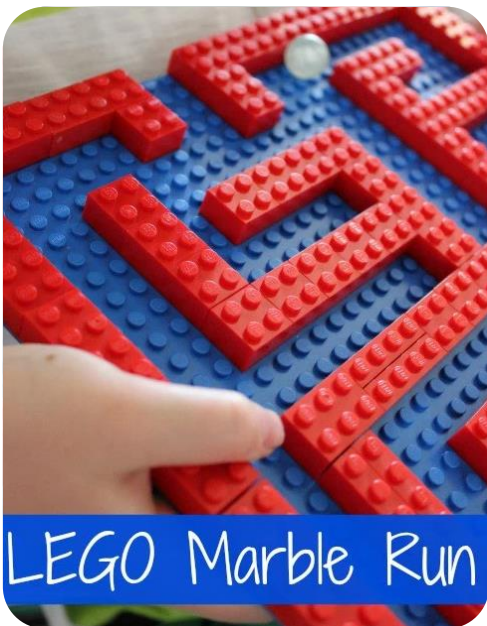
Day Two:

Amazing Mazes & Great Escapes



BRICKFEST CHALLENGE: Amazing Mazes— ESCAPE THE MINOTAUR!

LEGO DUPLO MARBLE RUN!



LEGO Marble Run

LEGO Marble Run

Our LEGO heroes are facing off against the dreaded Monster of the Maze...the Minotaur! Can they find their way through the tricky maze or will they face the Minotaur's Gaze?!

Challenge students to create a maze that a marble can run through including turns, tunnels, and dead ends to make the maze difficult to navigate. Then, time how long it takes to get the marble through the maze without helping it (only tilting the large base piece).





Then time other students using the same maze and see who wins! The players will need luck, skill, and wit to be the first to escape! It's a race to the finish line with a monster hot on your heels!



Challenge students to build it so that it will last at least 30 seconds. The longer the better!

As always with LEGOs: Build it, play it, and then make it better!

BRICKFEST CHALLENGE:

WHO'S YOUR HERO?

Help the Brickfest Heroes escape the Minotaur and defeat the galaxy's worst villains and monsters by designing and building your own Hero to join our new secret unit. Because intelligence, observation and curiosity are characteristics prized above all else in the Brickfest Team, we've adopted the slogan "Knowledge Is Strength".



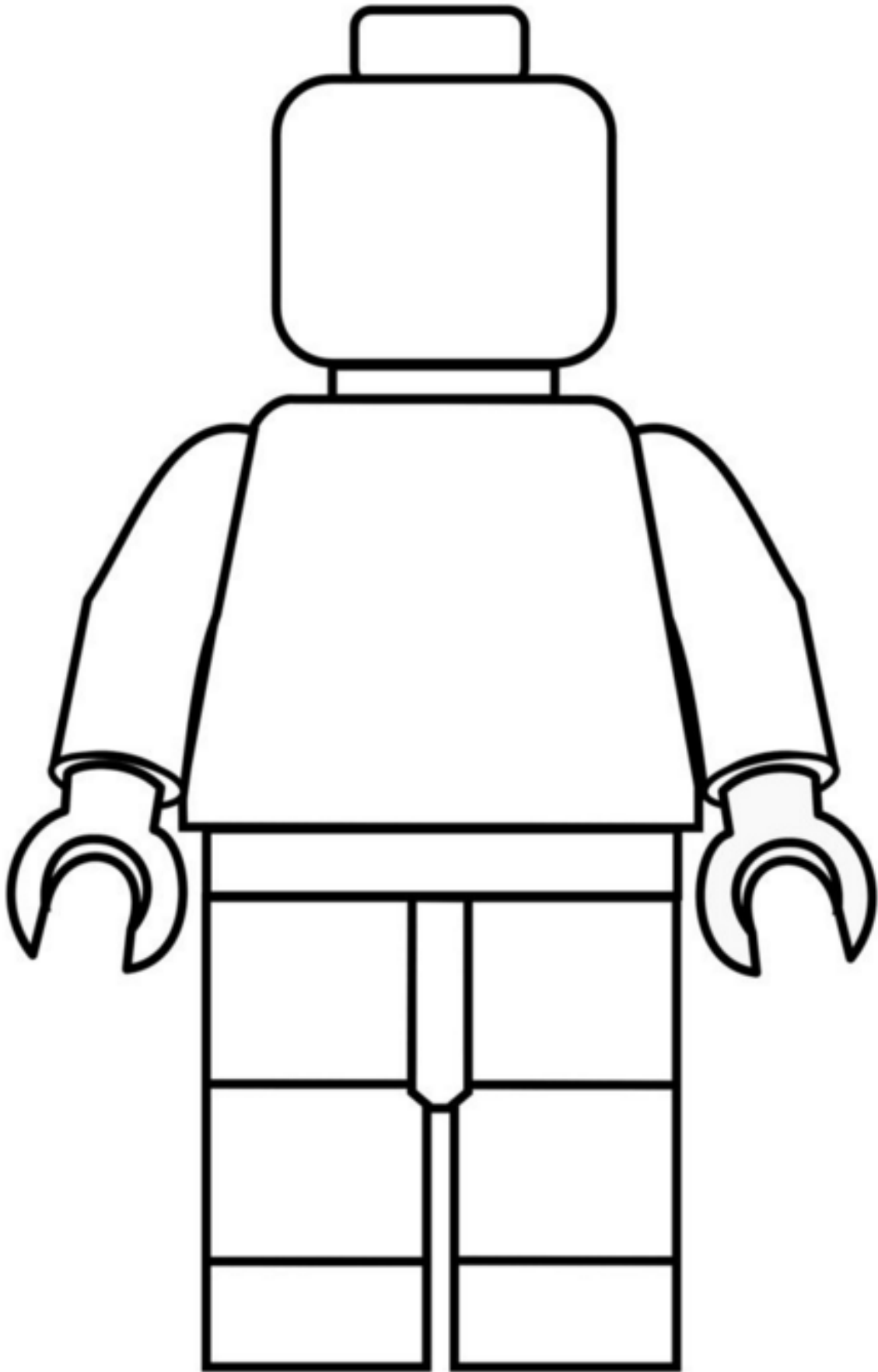
BUILD AND DRAW

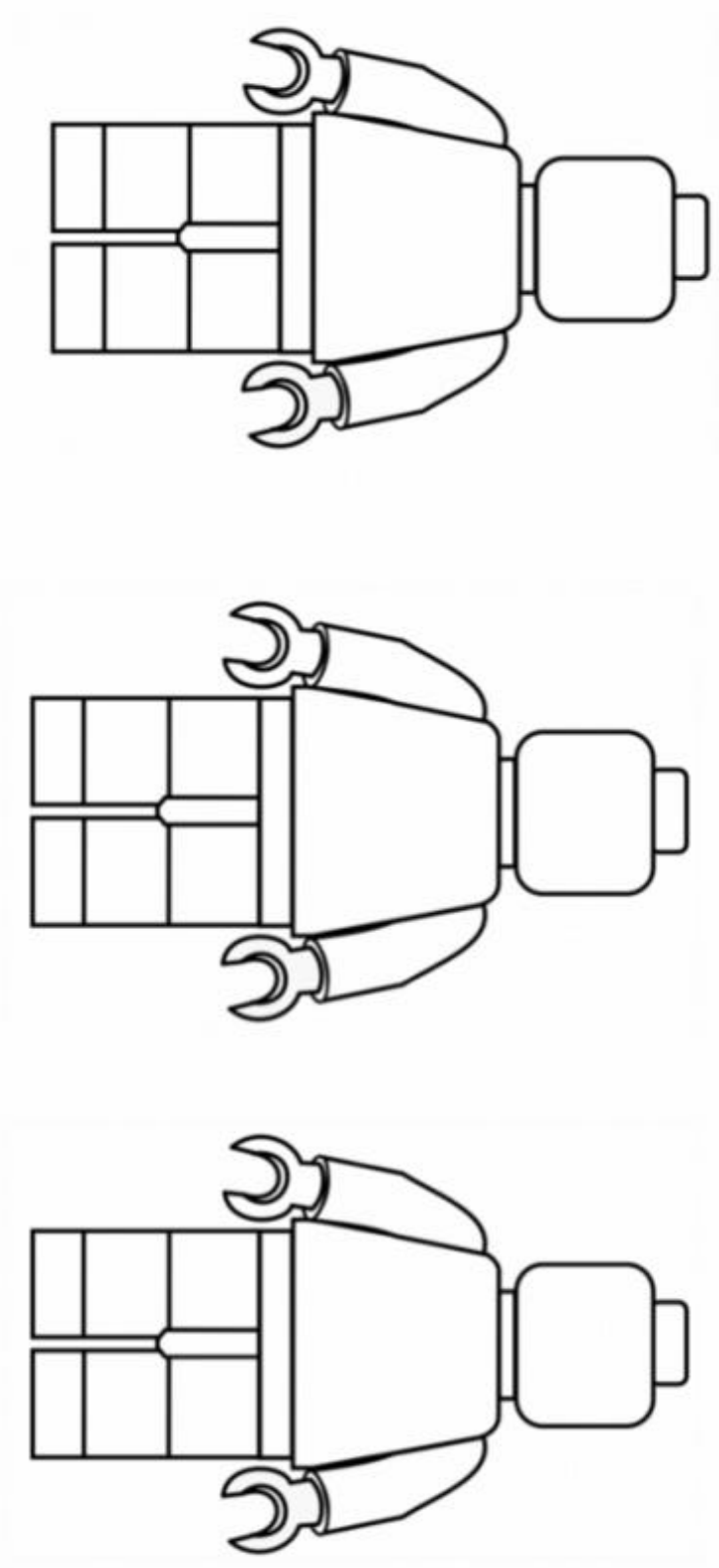
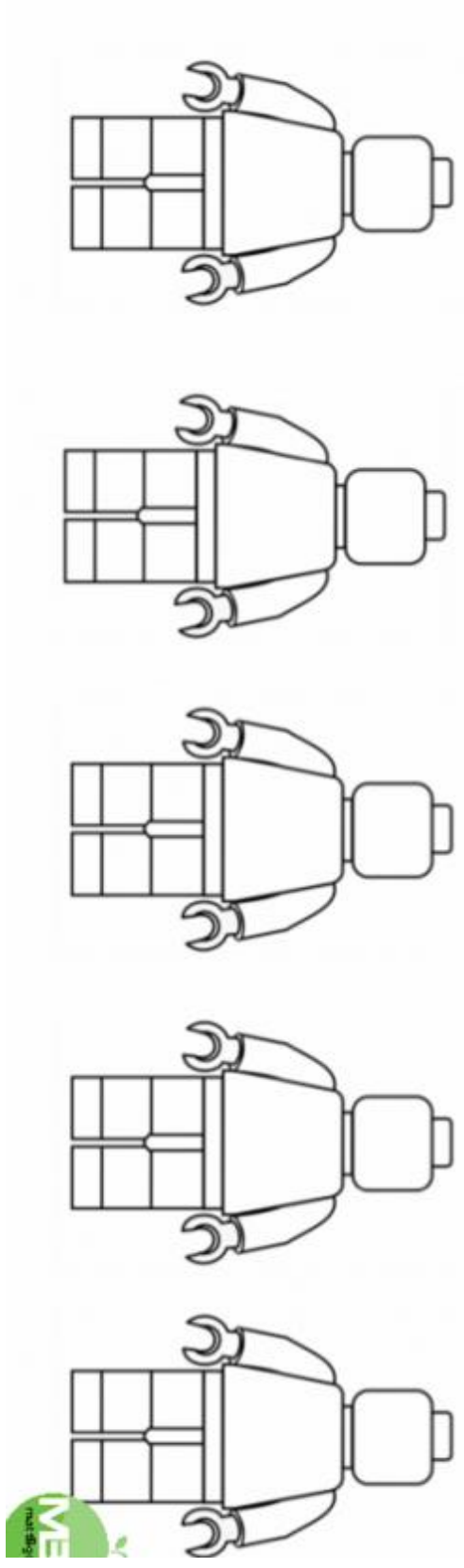
Before you can draw your character, it helps to plan it. To plan what character you want to create, you may want to consider these following questions:

- What is your character's name?
- Is your character a human, alien, animal, superhero?
- What is the gender of your character?
- What is your character's job?
- Does your character have any hobbies?
- Does your character have any superpowers?
- What does your character wear?
- Does your character have / wear any accessories?
- How can your character move? What forces does your character use to do this?
- How does your character travel?

After answering each of these questions, draft your character on a rough copy template, then when you think your character is ready, create a good copy, and color it in making it beautiful. Remember, be creative and use your imagination!







BRICKFEST CHALLENGE: GREAT ESCAPE!

HELLO? HELLOOO? IS ANYONE OUT THERE...?



BREAKING NEWS! LEGO Man GETS STUCK in a Canyon!

The challenge is to find a LEGO Man and drop him into the bottom of the Grand Canyon (a trashcan) and then devise a solution using LEGOs to get the LEGO man out of the trash canyon!

The majority of students will begin by building a staircase, but when asked to try building a solution without stairs (as LEGO man would get tired if he had to climb up all those stairs) they build elevators. When asked if they can find a solution that does not involve stairs or elevators, we have found that there are a variety of very interesting solutions.

BRICKFEST CHALLENGE: RIDING THE

LINE

Here's a simple truism: Playing with Legos on the floor is cool, but playing with Legos flying through the air is cooler.

MATERIALS:

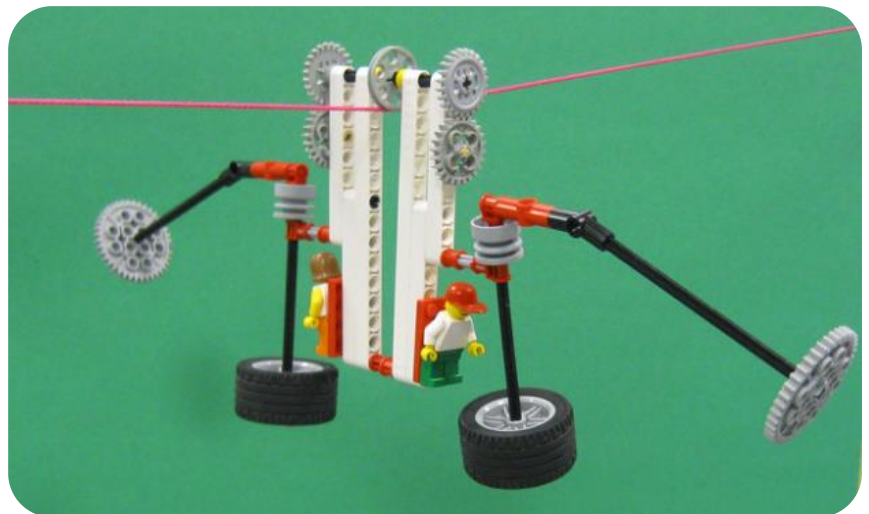
- LEGOS
- Wheels: We need these if they want to create a pulley that hangs off the line. The Classic set contains some, but for more creative options, try the Technics vehicle sets or the Crazy Contraptions set.
- Various kinds of cord (ex. floss, yarn, kite string, parachute cord, etc.) Parachute cord creates less friction and, in Lego Hero zip lining less friction is better.
- Clamps



Getting started with a lego zip line:

Our heroes need a way to make their great escape from their latest adventure. Perhaps your idea is to build something for your LEGO hero to sit in as he zips down the line. This is a great opportunity to test out those master builder skills!

To build a machine to travel on the string, you might (or might not!) need at least one wheel and some technic pieces to add weight so that the vehicle balances (you will need that for sure). It can take several experiments to get the balance right.



If your string is over a hard floor, the vehicles can crash in pretty dramatic fashion too.

STEPS

1. *Build A Flying Machine:* The specifics of your contraption will be dictated by the wheel you use for your pulley and how it connects to the other pieces. This will also determine how it needs to be weighted to balance properly on the line, as well as how ridiculous it will look (since



“ridiculousness”

can often equal “engagement”).

2. *String The Line’s High Side:* You want the start point to be higher than your students’ head, but not so high that they can’t reach it, so find a piece of furniture, door knob, or railing that qualifies and tie it off.
3. *Experiment with Angles:* Have them hold the line’s end point at different angles while you test the machine, so they can see what happens when the line is steep and tight versus when it’s flat and slack.
4. *String the Low Side:* Once you’ve determined the ideal angle, tie it off.

5. *Experiment with The Machine:*
Encourage modifications like different kinds of pulleys, or increasing the machine's carrying capacity.

Have fun making zip lines of different lengths and different slopes. Try all sorts of variations. Test whether big wheels are faster than smaller wheels. Does more weight make the vehicles go faster? A stopwatch helps with that experiment.

Remember: You can attach them at both ends, but also show students how they can be the other anchor for the zip line. By keeping tension on the line and moving their arm up and down, they can control the slope of the Lego zip line, making the Lego hero(es) travel back and forth. But be careful! If you don't keep the cord tight our heroes might get stuck! The design possibilities are endless!

WHAT THEY'LL DISCOVER:

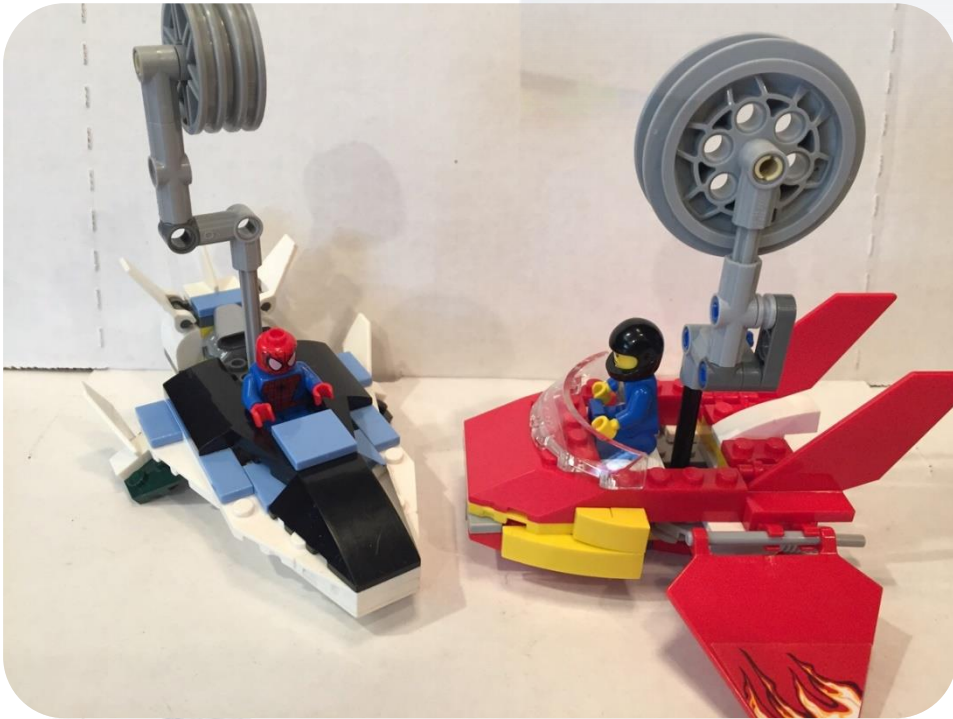
- *speed up the Lego man by increasing the angle of the slope*
- *slow down or stop the Lego man by evening out the angle of the slope*
- *return the Lego man by decreasing the angle of the slope*
- *gravity works to pull the Lego man down the zip line but the angle of the slope can slow gravity*



- *tension on the cord is needed to maintain travel*

Tip: In order for the mini-figures (by themselves) to stay on the zip line, they need to be holding a gun or something else that can go across both hands.

**EXTENSION:
CREATE ZIP
LINE RACERS
FOR YOUR
HEROES!**



BRICKFEST HERO

CHALLENGE:

TARGET

ACQUIRED!

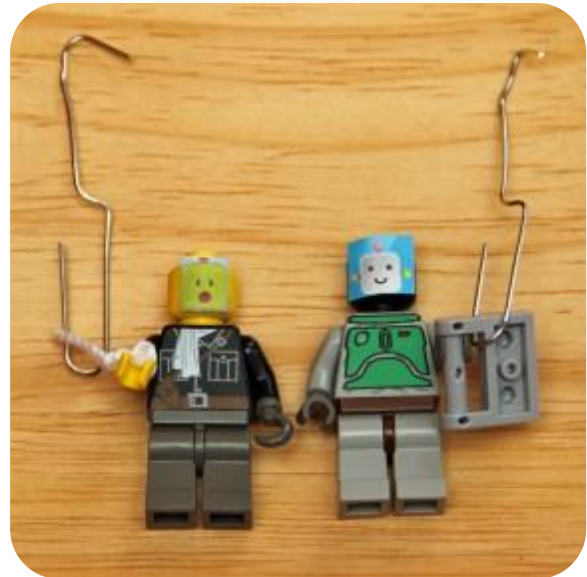
Now, we're going to game-ify the whole thing with this [clever format](#) from Piikea Street.

Let's zipline our heroes into a field of targets!

Note: This would be fun to incorporate into an already constructed LEGO city. Can they hit the target?

Here's how to set up the game:

1. Create some targets, ex. a 5-pointer, two 3-pointers, and three 1-pointers. Plastic food also makes good targets to knock down.
2. Your heroes will need a paperclip to zip line with. If you don't have Lego parts for the paperclip to hook onto, simply tie a loop around one of their wrists.
3. Place an adult-sized chair and a kid-sized chair at least six feet apart. Tie some string from one chair to the other.



4. Set up your playing field under the string and let the games begin!



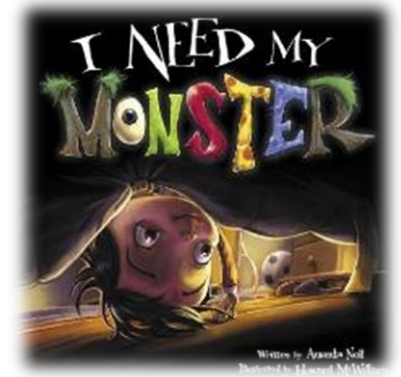
5. To play: Allow a player to zip their hero down the string. Have your child strum down on the string to send the brick buddy flying. To gain some points, their hero needs to land on (or near) a target. Don't forget to keep track of your points!



Day 3: ARE YOU MY MONSTER?

Some fun books to introduce the day are *I Need My Monster* by Amanda Noll, *Monsters Don't Eat Broccoli* by Barbara Jean Hicks, and *Have You Seen My Monster?* by Steve Light

Today is the day for all you monster-lovers out there. You know who you are - you love scales and slime and all things that spook and scare...we're about to find monsters everywhere!



BRICKFEST CHALLENGE:

MUSICAL MONSTERS

This Brickfest challenge involves combining ideas to create an elaborate monster! To do this every young engineer starts by building their own monster while music plays in the background. Then when the music stops everyone must pass their monster to the left. When the music begins again, kids add onto a fellow Brickfest member's design. At the end every monster will be unique because of the variety of ideas!

A fun book to go along with this activity for your young builders is the *LEGO® NEXO KNIGHTS™ - Book of Monsters*

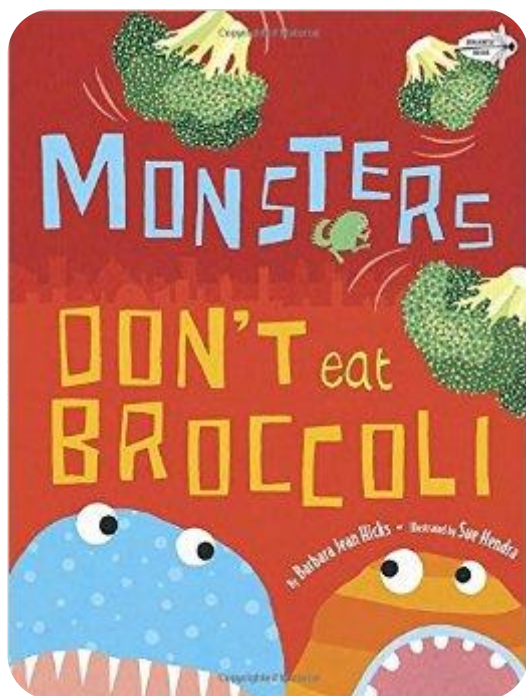


FrugalFun4Boys.com



FrugalFun4Boys.com

Tip: With some hot glue, googly eyes, and some stickers (ex. [Inanimate Office Supply Stickers](#)), you can upgrade your Duplo Legos into a fun monster building set that can be used over and over again!



BRICKFEST CHALLENGE:

MONSTERS DON'T Eat BROCCOLI!

“Fum, foe, fie, fee, Monsters don’t eat broccoli!”

Monsters are a favorite subject for any art project! Read *Monsters Don't Eat Broccoli* to the students. Then, Lego City skyscrapers would make a fantastic backdrop for our hungry monsters. Lesson instructions and images via Patty @ DeepSpaceSparkle.com. All Rights Reserved.

SUPPLIES

- 12" x 18" white drawing paper for background
- 12" x 18" colored construction paper for monster
- Oil pastels (black and colored)
- White, red and green tempera paint (or any color of your choice)
- paper towel rolls cut into sections
- Colored paper scraps
- Liquid watercolors

THE MONSTER

1. Squirt some colored tempera paint into flat trays and place on tables along with a paper towel roll section for each child.

2. After drawing a monster with a black oil pastel, dip cardboard roll into paint and stamp circles onto monsters.

3. If you have texture rollers and/or rubber stamps, you can apply the paint in this manner as well. Some kids like to do both.



4. Place monster on drying rack. We'll come back to him a bit later to add the details.



THE CITY

5. On the white piece of paper, draw skyscrapers with the oil pastel. Draw rectangles across the bottom first. Then, add a second layer of skyscrapers behind the first row.

6. Add squares and rectangles for windows. You can chose to color in some windows or leave them uncolored.

7. Fill the skyscrapers and sky with liquid watercolors. If you don't have liquid watercolors, pan watercolors are fine. Set aside to dry.



PUTTING IT ALL TOGETHER

Cut out the monster and glue to the background paper. Now it's time for some fun! Set out a tray of colored paper scraps and add eyes, teeth, spikes, extra arms and legs, stripes or anything else that you think would make your monster happy!





BRICKFEST CHALLENGE:

GET YOUR HEAD IN THE CLOUDS!

A SECRET LAIR UP IN THE AIR?

Our monsters have built a secret lair, but because their land is filled with dangerous heroes our monsters have decided we must build up instead of out. The challenge is to help them solve their problem by constructing the tallest LEGO skyscraper that we can while maintaining stability.

Ten minutes later, the LEGO builder is told that their tower must be able to withstand the heroes' attack (a shake test)

Discuss the qualities of a tall tower that is able to withstand the heroes' assault versus a tower that collapsed after the attack.





Glow-in-the-dark
Slime

Glow in the dark
Slime
apumpkinandaprincess.com



BRICKFEST CHALLENGE: MONSTER SLIME...

As a thank you for building their Tower of Power our monsters have given us their secret recipe to make glow in the dark monster sludge! It makes any lair beyond compare (and monsters like it in their hair—though I wouldn't recommend you try it there!)

Print the monster slime labels on sticker or some type of adhesive paper (ex. full page shipping labels—they adhere really, really well—you can find them at those ginormous office supply stores). Cut out around the label shapes.



Stick the labels to your slime containers—the round label on the container lid, and the band fitted around the lower part of the jar/container.

Glow-in-the-dark slime recipe

-makes about 2 cups

- 2 Elmer's white glue bottles (4oz)
- 3-4 tablespoons glow in the dark paint
- Water
- Neon food coloring
- 1 teaspoon borax
- 1/2 cup warm water

Step one: Pour the white Elmer's glue into a bowl. Fill the empty bottles with warm water, place the lids back on and

shake the bottles (this will help remove any remaining glue inside the bottle and make it easy to measure your water). Pour the watery glue into the bowl and mix with a spoon.

Step two: At this point you want to add food coloring to your glue (I used a neon green from McCormick).

Step three: Stir in the glow in the dark paint into your glue mixture.

Step four: In a small bowl mix 1/2 cup of warm water with 1 teaspoon of Borax (the warm water will help dissolve the borax).

Step five: Mix the borax water and glue mixture together with a spoon, but but don't be afraid to use your hands to fully mix the two together.

The special ingredient that makes the glue turn into slime is the borax. Play around with the



amount to get the perfect consistency, if you prefer a runny slime use less borax. Also, when you first began mixing the glue and borax water the slime will be VERY runny and a weird texture, don't freak out! The more you play with it the better the consistency will turn out.

In case you're wondering I tried this recipe with two different glow in the dark paints. We preferred the one on the right from Americana but the Glo-It from DecoArt also worked well with smaller batches.



These monster slime instructions & labels were created by Holly Keller of Beeper Bébé. It is intended for personal use and may not be reproduced, copied, or re-used without permission from Holly Keller/[Beeper Bébé.](#)

Day FOUR: BRICK BY BRICK



**BRICKFEST
CHALLENGE:**

BUILDING

BRIDGES

Your Brickfest Hero wants to visit his LEGO friend in England. To get across the ocean that separates the U.S. and England, your LEGO man

can only drive. Challenge students to build a bridge that is strong and sturdy so no LEGO people fall into the ocean (or sink).

Discuss how to make supports for the bridges using trusses and arcs. Build a bridge that looks really nice and can hold up the most weight possible. The longer the better!

In order to cross the ocean your bridge must be at least 1 foot 6 inches across, look like a bridge and be able to hold lots of weight. Make it strong!

Judging includes how creative you are, how nice it looks, how long it is and how much weight it can hold.



BRICKFEST CHALLENGE:

TWIST & WHIRL!

LEGOS GET 'FAIRLY' AMUSING!

Amusement parks are filled with fun rides that involve lots of physics and engineering to make them spin, roll, turn and rock.

Challenge your Brickfest Engineers to create minifig scale amusement park rides, such as a Ferris wheel, roller coasters, free fall drops, amusement park carousels, bumper cars, trains, and other fun rides and put them all together to create their own Amusement Park. Experiment with gears to set things in motion!

You can have students focus in all of the following areas, or divide students into groups that are responsible



fore one of the following aspects of a whole group Amusement Park.

RIDE BUILDERS – Use plans or your imagination to create 5 different rides for your amusement park.



RESEARCH &

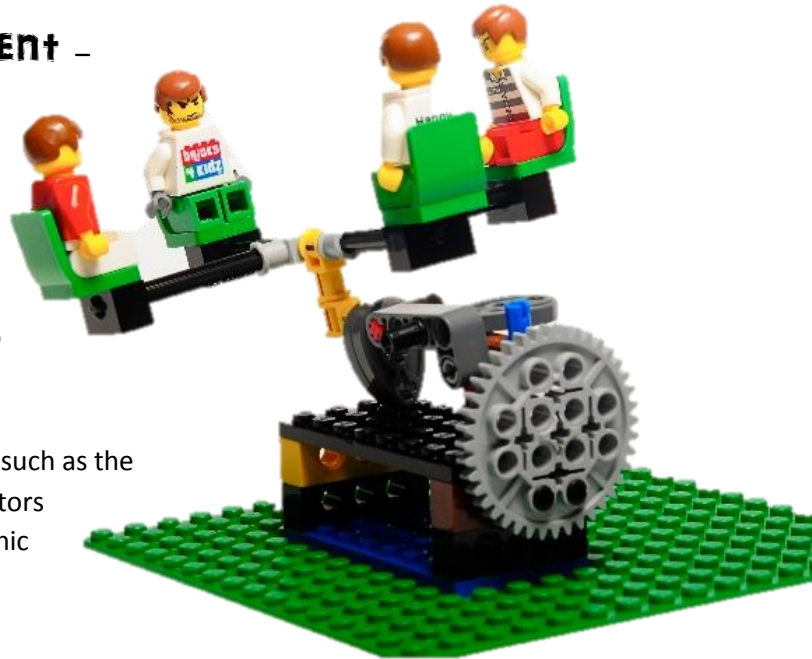
DEVELOPMENT – Design and create a new unique ride for the amusement park. Use lots of different parts and use the motors and batteries to motorise the ride if you want to.



FACILITIES

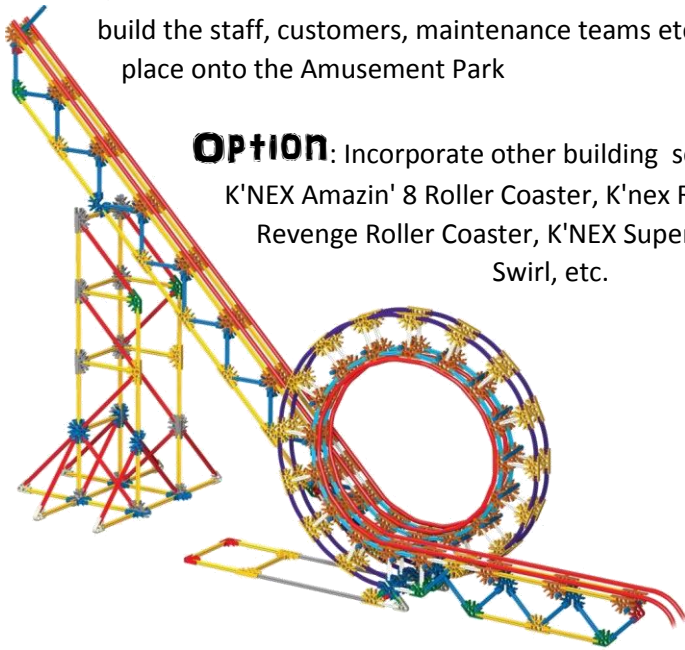
MANAGEMENT –

Don't forget to include things like bathrooms, food trucks, plants, walking paths, ticket offices & shops in your amusement park or you'll have some very unhappy lost, hungry, and impatient attendees!



PEOPLE MANAGEMENT – Select and build the staff, customers, maintenance teams etc to place onto the Amusement Park

OPTION: Incorporate other building sets such as the K'NEX Amazin' 8 Roller Coaster, K'nex Raptors Revenge Roller Coaster, K'NEX Supersonic Swirl, etc.



BRICKFEST CHALLENGE:



SKEE BALL!

**IN HONOR OF OUR AMUSEMENT PARK, LET'S PLAY A
CLASSIC CARNIVAL GAME!**

YOU WILL NEED...

- Lego Font Numbers
- Yellow Poster Board
- Red Poster Board
- Blue Poster Board

- Green Poster Board
- tape
- Scissors
- Small Balls to toss/Legos

STEP 1:

Print the Skee Ball numbers printable in the Lego Font from the free file from Tip Junkie.

STEP 2:

Cut the poster boards to desired length and height, ex. to the height of the Lego Font numbers.

Length: Cut 3 lengths of the poster board for the red. Then make the rest of them around 4 inches smaller than the next one.

Staple them into hoops.

STEP 3:

How To Play:

Set up the skee ball hoops a few feet away from the player. The length will depend on the age of the player. Have the players take turns throwing a ball or Lego into the skee ball hoop.

Keep score individually, as a team, or just play for fun.

5

10

20

15

25

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Day FIVE: DREAM BIG!

BRICKFEST CHALLENGE:

BUILD YOUR LEGO DREAM HOUSE!

Maybe it's a Castle high on a cliff filled with knights, dragons, wizards, princesses and secret treasures. Deep in a jungle that's old dark and wet where there are adventures still to be met? Or a dark



cave deep under the earth filled with adventure, good friends, and mirth. Perhaps it's on land or under the sea? It can be wherever your imagination wants it to be.



Whatever your dream is, build it, play with it, and make it

better! Then we'll put them together to create a city or a town or a place on the moon! You decide!

Now, unleash your creative abilities to make your dream house as cool as possible!



BRICKFEST CHALLENGE: EXPLORER BOTS!



WHEELS UP! WHEELS OFF?

CREATING **NEW** TRANSPORTATION DEVICES

If we're going to travel from dream to dream it's going to take a mode of travel that's never been seen. Some of us might live up in space, in the desert, or some other strange place...so how to get there, what to do? We're

going to need an invention from you!

Task students with making a new and ecological form of transportation using everything they've learned.

Perhaps they'll choose a specific task from one of their adventures (jungle battle, going underground, volcano quest, etc.). How would they tackle that challenge?

WHAT WILL YOU BUILD?



IDEAS: An additional constraint can be that no wheels are allowed, this gets students to really start thinking outside of the box!

You may see many great new inventions as well as innovations involving wind power and other power sources.

RESOURCE: For ideas for challenges and 'adventures' have students look at the book released by DK Publishing; *LEGO Ninjago: Build Your Own Adventure*

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Snake Surprise
It's not easy struggling through the snow and ice, but it all seems worthwhile when Jay finds a treasure chest! There's something very odd about it being here, though, and Zane is the first to suspect a trap. He leaps into action just in time as the Anacondrai launch their latest attack on the ninjas!

TREASURE CHEST
The box of treasure is covered with a flag attached to a pole. A variety of curved and wide bricks forms the rocky base of the box. Use Technic for each side of the box. Use small colored bricks and other materials.

Snake Snowmobile
No one's told the ninja team the location of the Anacondrai attack! Their super-quiet snowmobile has made the job so easy to spy through the snow—no fire, no noise, so they can target any nearby target.

TREASURE CHEST (continued)
The base of the chest is made with a 1x4 brick and a 1x4 brick with a hole. Use a 1x4 brick with a hole for the top. Use a 1x4 brick with a hole for the sides. Use a 1x4 brick with a hole for the bottom.

ICE GLIDER
The Anacondrai should know better than to challenge Zane while he's out on his power ice glider. Use a 1x4 brick with a hole for the base. Use a 1x4 brick with a hole for the sides. Use a 1x4 brick with a hole for the bottom.

REAR DEFENSES
The crew of giant bases armed the back of the ice glider. They can use as good a shot as the glider can get. Use a 1x4 brick with a hole for the base. Use a 1x4 brick with a hole for the sides. Use a 1x4 brick with a hole for the bottom.

WHAT WILL YOU BUILD?
• Use a 1x4 brick with a hole
• Use a 1x4 brick with a hole
• Use a 1x4 brick with a hole

REAR VIEW
The glider is wider than you see here. Use a 1x4 brick with a hole for the base. Use a 1x4 brick with a hole for the sides. Use a 1x4 brick with a hole for the bottom.

REAR DEFENSES (continued)
The crew of giant bases armed the back of the ice glider. They can use as good a shot as the glider can get. Use a 1x4 brick with a hole for the base. Use a 1x4 brick with a hole for the sides. Use a 1x4 brick with a hole for the bottom.

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Cave Hazards
Deep in the cave, the Ninja find a pair of lanterns. When they light them, they see a glimpse of a tunnel but this is not an animal—it's a digging machine. It looks like the Anacondrai are making an underground base. The Ninja follow an Anacondrai worker to see where he goes. Will they spot the rockfall trap in time?

LANTERNS
Zane and Kai find some lanterns to light their way. These are built with clear bricks and transparent bricks that you could use to find paths of light to make the lanterns glow. Try using orange or yellow pieces to create a glowing lamp.

ROCKFALL TRAP
This accident structure lies at the bottom of the cave. The platform on top holds a collection of bricks ready to drop onto any victim below. The foot of the platform slides out to release the bricks.

HAND DIGGER
The Ninja spy an Anacondrai worker making tunnels with this hand-digger. It has long wheels for scooping through the earth, and a 1x2 plate with handles so a minifigure can hold on to it.

WHAT WILL YOU BUILD?
• Use a 1x4 brick with a hole
• Use a 1x4 brick with a hole
• Use a 1x4 brick with a hole

LAMP PARTS
To make a lantern, start with a 1x4 brick with a hole. Use a 1x4 brick with a hole for the top. Use a 1x4 brick with a hole for the sides. Use a 1x4 brick with a hole for the bottom.

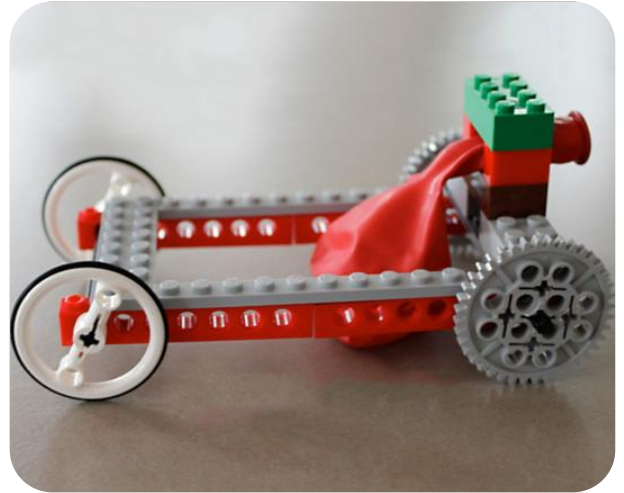
WORKING
For a working trap, use a 1x4 brick with a hole for the base. Use a 1x4 brick with a hole for the sides. Use a 1x4 brick with a hole for the bottom.

LEGO NINJAGO
Masters of Spinjitzu

BUILD YOUR OWN ADVENTURE

WITH LLOYD MINIFIGURE AND EXCLUSIVE NINJA MECH
BOOK INCLUDES MORE THAN 50 BUILDING IDEAS

Building Toy
Ages 6+



SAMPLE IDEAS OF:

EXPLORER BOTS!

BRICKFEST CHALLENGE!:

EVERYTHING IS AWESOME!

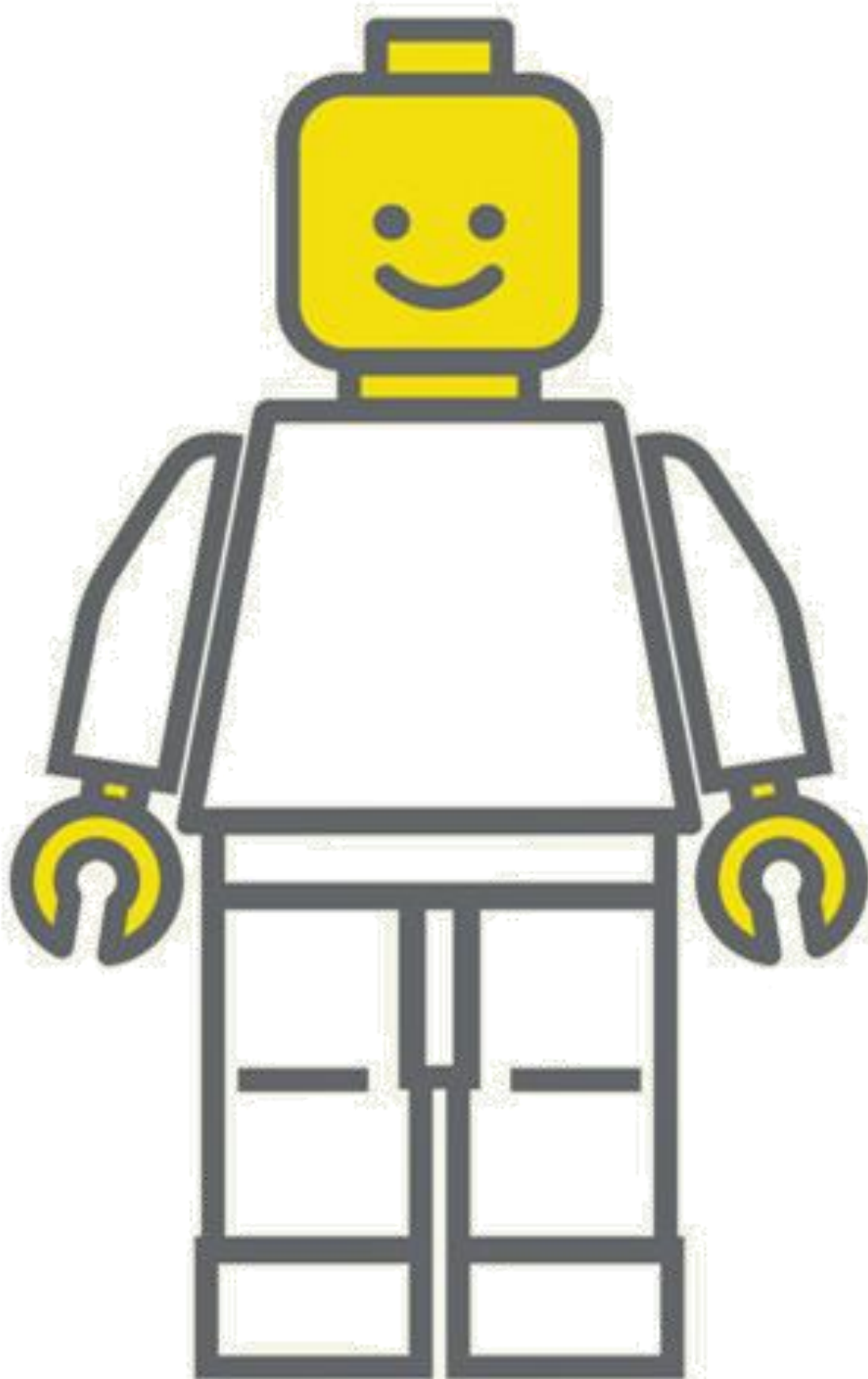
SCREENPRINT T-SHIRTS



MATERIALS:

- Mini-figure Template
- Tshirts
- Screens
- Paint (Yellow, Black, White (if using dark tshirts or to make grey))
- Sharpies
- X-acto Knives
- Squeegees
- Transparencies





BUILD YOUR OWN ADVENTURE!

LEGO Camp Supply List

Day One: NEED FOR SPEED

Challenge: Flying to the Heights of Design

- Book: Build Your Own Lego Vehicles
- Paper
- Pencils
- Legos
- Mini-figures
- Lego Wheels

Challenge: Rubber Bands & Rocket Cars

Rubber Band Cars

- Rubber Bands (thin)
- Mini-figures
- Legos
 - Axles
 - 10 dot pieces
 - Wheels
 - Connector rods
 - 10x1 bricks with holes in the sides
 - 4x1 bricks
 - Flat bricks

Rocket Powered Lego Car

- Mini-figures
- Tacky Glue Bottles (4 oz)
- Rubber Bands
- Alka-Seltzer Tablets
- Towels
- Legos
 - Axles
 - 10 dot pieces
 - Wheels
 - Connector rods
 - 10x1 bricks with holes in the sides
 - 4x1 bricks
 - Flat bricks

Challenge: Off to the Races

- Cardboard or other material for race tracks
- Legos for constructing race lanes, etc.
- Mini-figures
- Poster Putty
- Optional: Hot Wheel Cars

Day Two: Amazing Mazes & Great Escapes

Challenge: Amazing Mazes—Escape the Minotaur!

- Legos
- Duplos
- Mini-figures
- Marbles
- Pool Noodles (cut in half)

Challenge: Who's Your Hero?

- Printable Templates
- (Optional) Lego Character Books for inspiration
- Art Materials: Crayons, Markers, etc.

Challenge: Great Escape!

- Small Trashcans
- Legos
- String
- Lego Mini-figures

Challenge: Riding the Line (Lego Ziplines)

- LEGOS
- Mini-figures
- Wheels: We need these if they want to create a pulley that hangs off the line. The Classic set contains some, but for more creative options, try the Technics vehicle sets or the Crazy Contraptions set.
- Various kinds of cord (ex. floss, yarn, kite string, parachute cord, etc.) Parachute cord creates less friction and, in Lego Hero zip lining less friction is better.
- Clamps

Challenge: Target Acquired!

- Targets
- Paperclips
- Mini-figures
- Paper & Pencil for tracking Points

Day THREE: ARE YOU MY MONSTER?

Challenge: Musical Monsters

- *I Need My Monster* by Amanda Noll
- *Have You Seen My Monster?* By Steve Light
- Duplo Legos
- Hot Glue/Glue Guns
- Inanimate Office Supply Stickers
- Googly Eyes
- Music

Challenge: Monsters Don't Eat Broccoli

- Book: *Monsters Don't Eat Broccoli* by Barbara Jean Hicks
- 12" x 18" white drawing paper for background
- 12" x 18" colored construction paper for monster
- Oil pastels (black and colored)
- White, red and green tempera paint (or any color of your choice)
- paper towel rolls cut into sections
- Colored construction paper scraps
- Liquid watercolors

Challenge: Get Your Head in the Clouds!

- LEGOs
- Mini-figures
- Cardboard or something to use as a base for each tower (to make the shake test easier)

Challenge: Monster Slime!

- Elmer's white glue bottles (4 oz size)
- Glow in the dark paint (several TBS per batch), ex. Americana Glow in the Dark Paint
- Neon food coloring
- Borax (ex. 20 Mule Team)
- Warm water
- Small canning jars with lids
- Mailing label paper
- Printed labels (on mailing label or adhesive paper)
- Scissors

Day Four: BRICK BY BRICK

Challenge: Building Bridges

- LEGOs
- Mini-figures
- Weights of some kind

Challenge: Twist & Whirl

- LEGOs
- LEGO motors
- Mini-figures
- Gears
- Optional: Amusement Park K'Nex Sets

Challenge: Skee Ball

- Lego Font Numbers
- Yellow Poster Board
- Red Poster Board
- Blue Poster Board
- Green Poster Board
- tape
- Scissors
- Balls to toss/Legos

Day Five: DREAM BIG!

Challenge: Build Your Lego Dream House!

- LEGOs
- Mini-figures
- Base Plates

Challenge: Explorer Bots!

- LEGOs
- LEGO motors
- Mini-figures
- Balloons
- Gears
- Book: *LEGO Ninjago: Build Your Own Adventure*

Challenge: Screen-print a T-shirt

- Mini-figure Template

- Tshirts
- Screens
- Paint (Yellow, Black, White (if using dark tshirts or to make grey))
- Sharpies
- X-acto Knives
- Squeegees
- Transparencies

EXTENSION CHALLENGES!

CREATE YOUR OWN MINI FIGURE SOAP

<http://www.justcraftyenough.com/2011/11/project-lego-soap/>

Project – Lego Soap



Using glycerine soap base that is available at the craft store makes this project really pretty simple. It's not like you are making homemade soap from scratch. You are just coloring, scenting and shaping the soap. Silicone ice cube trays made perfect molds because the soap just pops out of them and they come in lots of fun shapes.

Lego Soap

Supplies:

- Silicone Lego ice cube trays – The [Lego Minifigure Ice Cube Tray](#) is available

online and at Lego stores. The [Lego Ice Bricks Tray](#) appears to only be available online currently.

- Clear glycerin soap base
- Serrated knife
- Pyrex measuring cup or other microwave safe vessel with a spout
- Red, yellow and blue coloring for soap
- Fragrance for soap (optional)
- Alcohol in a spray bottle

How To:

Make the mini-figs & Lego blocks:

Make sure your ice cube tray is clean and dry.

Cut the soap base into chunks, a little less than one cup chopped will fill one mini-fig ice cube tray, just over one cup for the Lego block tray. Try to cut the glycerin base into chunks about 1/2", so it melts quicker.



Put the chunks into the measuring cup. Microwave on high for 40 seconds, stir. If the soap base has not completely melted microwave in 10 second segments until done. Don't be tempted to just do it for longer it will boil up and you will have a lot more bubbles to get out of the soap.

Stir in the color. For the blue we used 6 drops, red took 12 drops, yellow took 3 drops, green took 3 drops yellow and 6 drops blue. Stir in a few drops of fragrance if you choose, careful not to overdo it!

Carefully pour the soap base into the ice tray. You want to move quickly, so the base is still nice and liquid, but you want to try to fill the molds as close to the top as possible. Mist the top of the soaps with the alcohol, this will help get rid of any bubbles. We found it's good to mist and wait a few seconds and then mist again if needed.

Bubbles on soap before spraying...no bubbles after spraying.

Manage Type 2 Diabetes

Find Out About How to Treat Type 2 Diabetes. type2-diabetes-info.com



Let the soap sit until completely cool, (1/2 to 1 hour). We wanted to make numerous batches so we sped up the cooling process by moving the trays into the fridge after they were firm.

Gently press the soaps from the molds. The silicone makes this easy as it easily pulls away from the soap. Glycerine soap will sweat, so store it in an airtight container or wrapped in plastic wrap.

LET'S BOUNCE!

Homemade Bouncy Ball



2 cups

Measuring spoons

A stir stick

2 tbsp hot water

1/2 tsp borax

1 tbsp glue

1 tbsp corn starch

Food coloring (optional)

Pour the water and borax into the first cup and stir the mixture until it is dissolved.

Pour the glue, cornstarch and food coloring into the second cup and mix. Then add the mixture from the first cup into the second cup.

Let the ingredients sit for 15 seconds then stir.

Once the mixture becomes difficult to stir, scoop it out of the cup, and roll it into a ball. Enjoy

MATERIALS TO MAKE A BOUNCY BALL

*Note: The first time we did this experiment we followed Anne Marie Helmenstine's instructions on About.com [here](#). We were disappointed that 1) clear glue did not make a translucent bouncy ball and 2) the ball wasn't that bouncy. So, we modified the experiment a few times until we got a **Super Bouncy Ball**. The ingredients listed below

are from the original recipe, but we encourage you to try our version, which **reduces the cornstarch to 1/2 tablespoon, adds the food coloring to the second cup** instead of the first cup, and **mixes the second cup's ingredients first** before adding the borax solution from the first cup.

- two cups
- measuring spoons
- a coffee stir stick (or something to stir the solutions)
- 2 tablespoons warm water
- 1/2 teaspoon borax (find it in the laundry detergent section of your local store)
- 1 tablespoon glue
- 1 tablespoon corn starch
- food coloring (optional)
- plastic bag (for storing your ball)

HOW TO MAKE A BOUNCY BALL

STEP 1

Pour the water and borax into the first cup and stir the mixture until it is dissolved. We used just boiled water from the kettle, so it was more hot than warm.



STEP 2

Pour the glue, cornstarch, food coloring, and 1/2

teaspoon of the mixture from the first cup into the second cup. We got the best results when we mixed the glue, cornstarch, and food coloring first, and *then* poured in the borax mixture.



STEP 3

Let the ingredients in the second cup interact on their own for about 15 seconds, then stir.



STEP 4

Once the mixture becomes difficult to stir, scoop it out of the cup, and roll it into a ball. Voila!

Super easy. Super bouncy.

