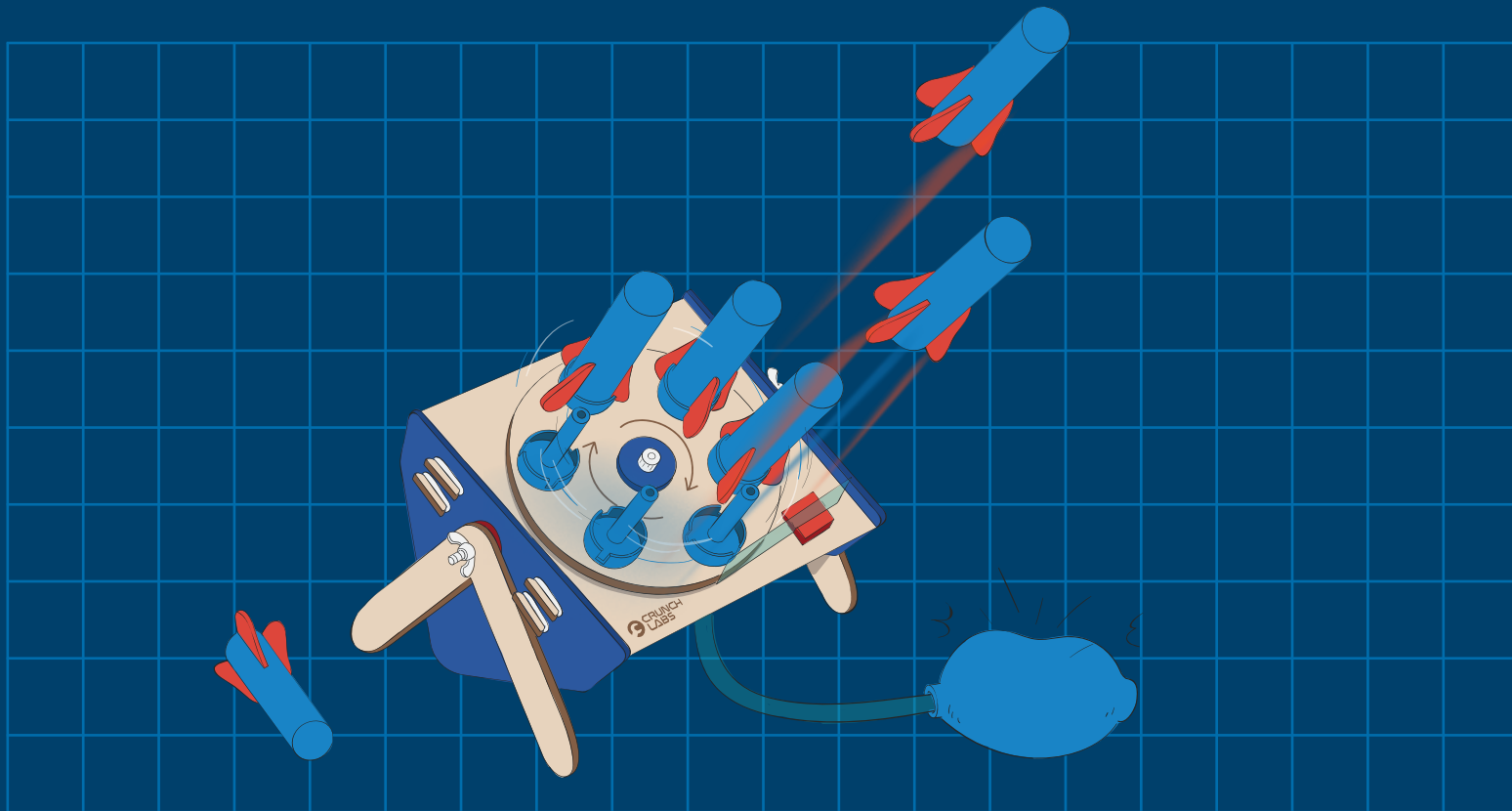




BUILD
BOX



STOMP ROCKET



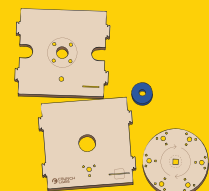
NEW VIDEO UNLOCKED

BUILD ALONG & LEARN WITH MARK ROBER



[CRUNCHLABS.COM/STOMP](https://crunchlabs.com/stomp)

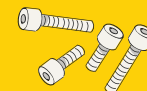
PARTS



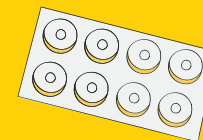
wood pieces



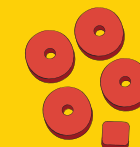
side pieces



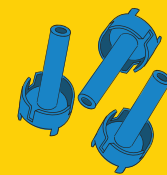
bolts



adhesive foam



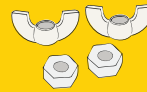
adhesive wood



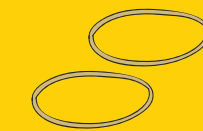
nozzles



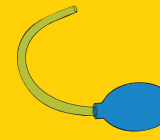
o-rings



nuts



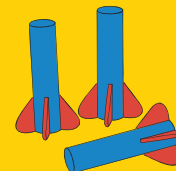
rubberbands



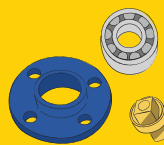
pump



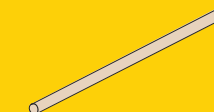
eye nut



rockets



bearing kit

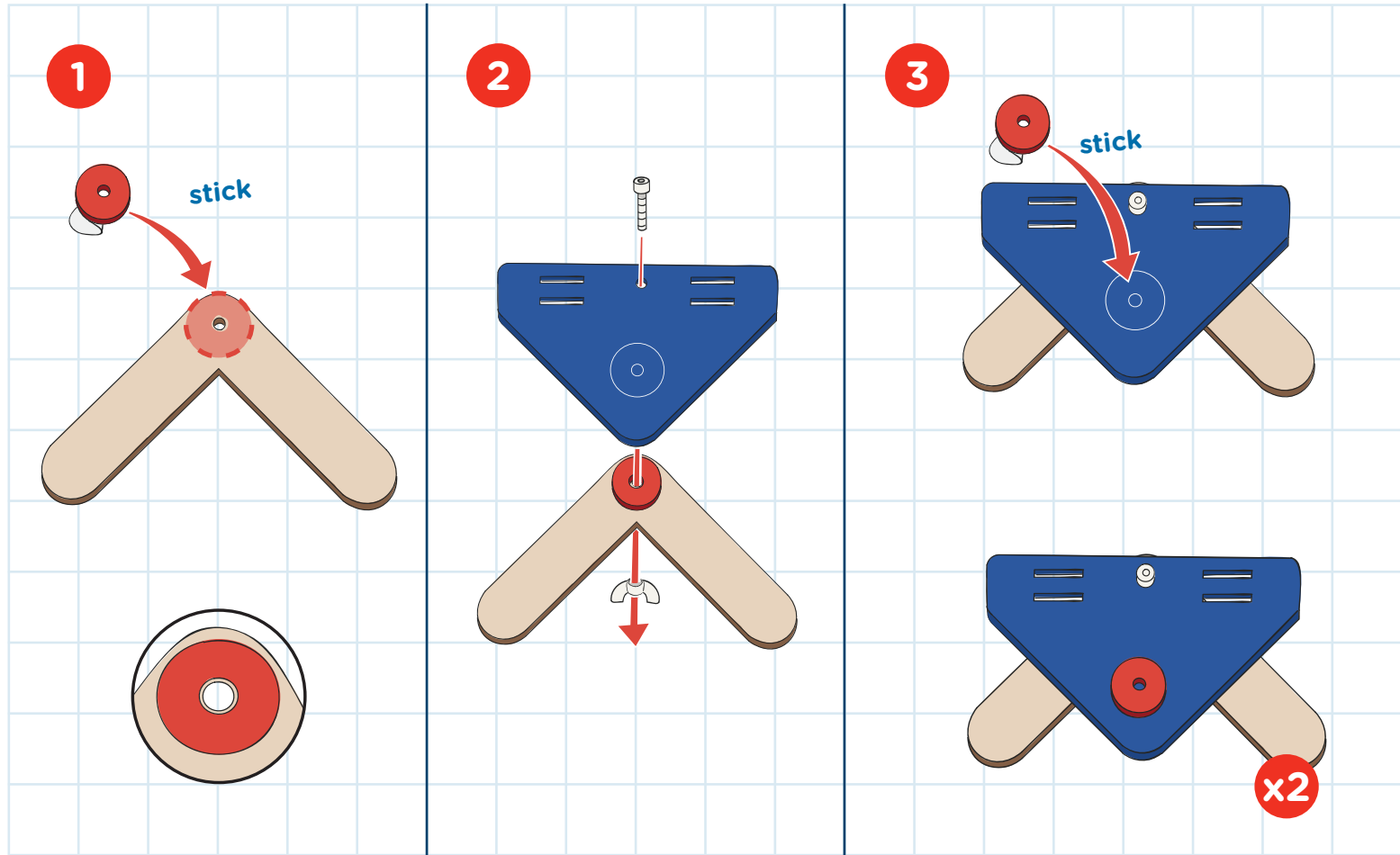


dowel

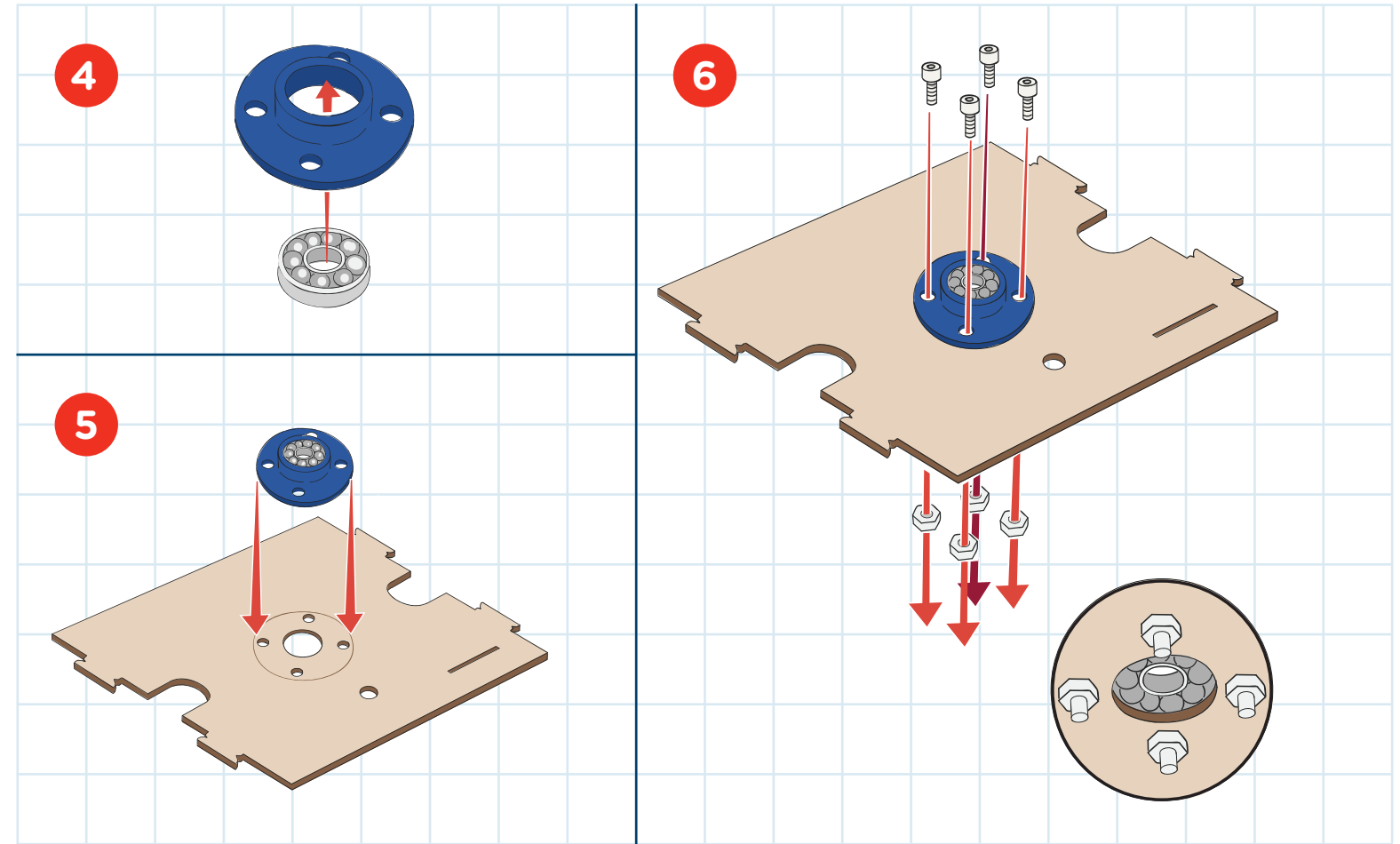


stopper

BUILD

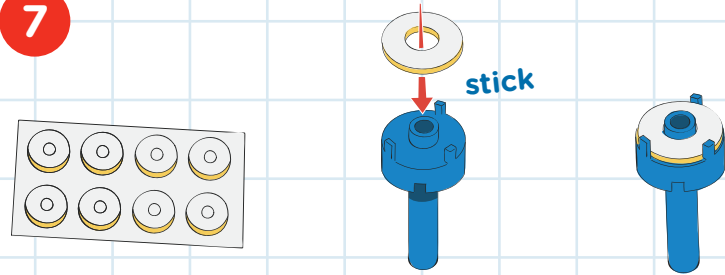


BUILD

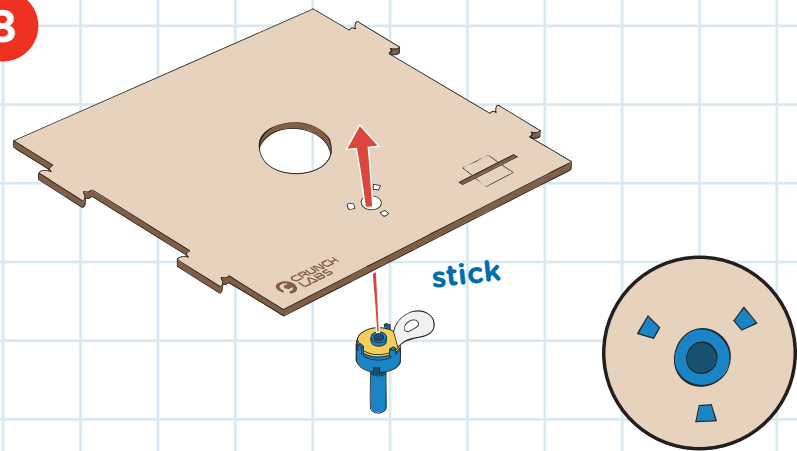


BUILD

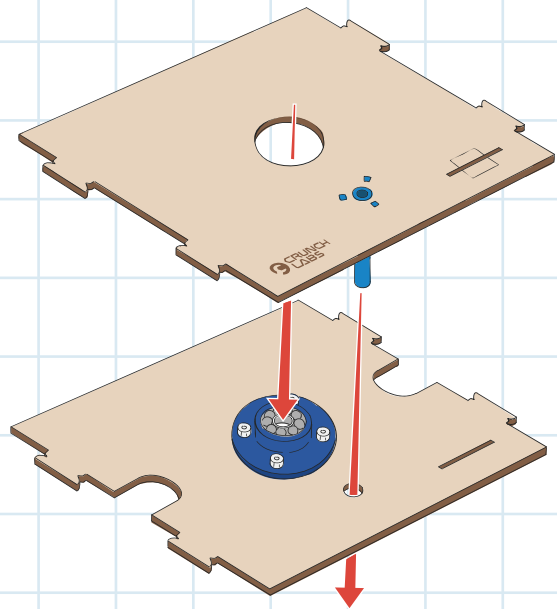
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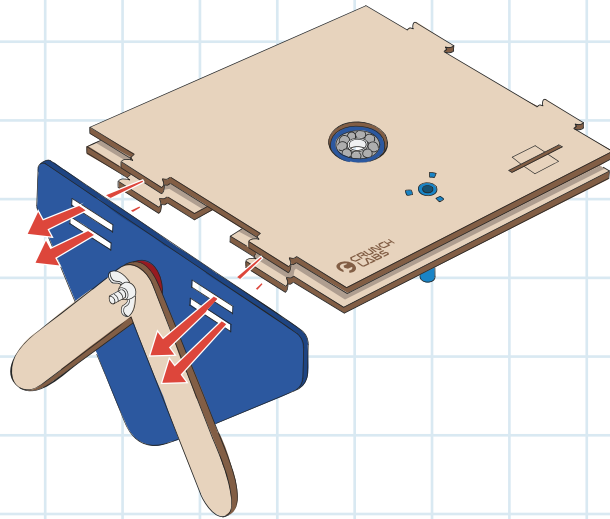
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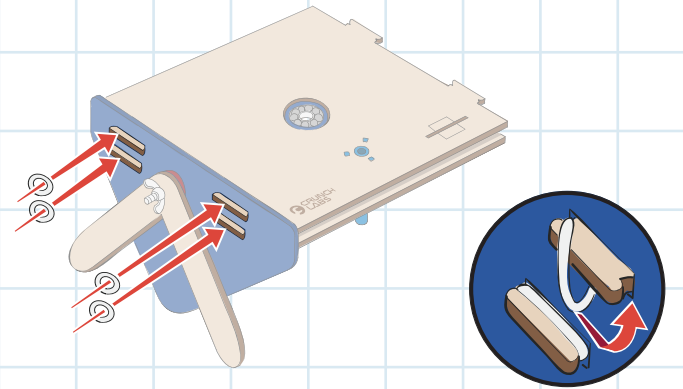
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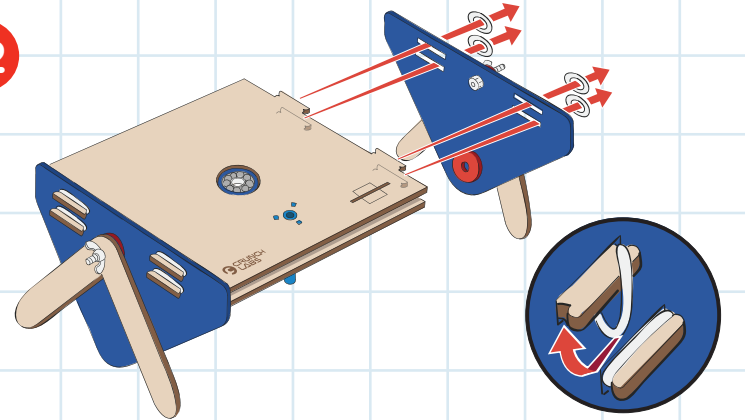
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11



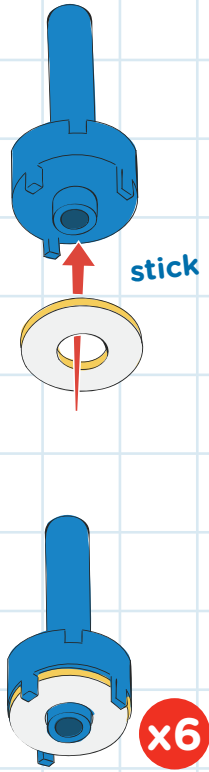
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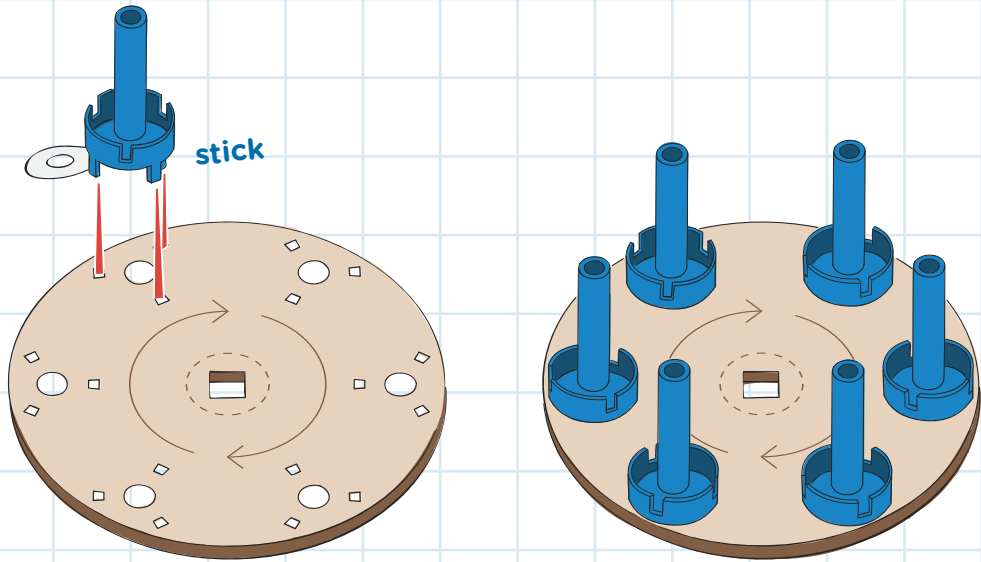
BUILD

BUILD

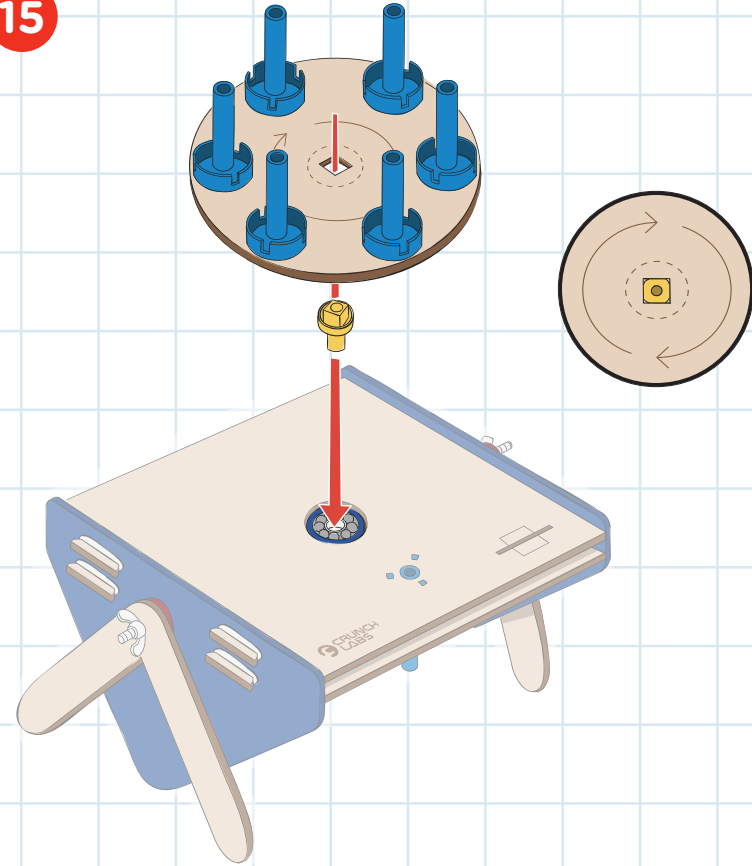
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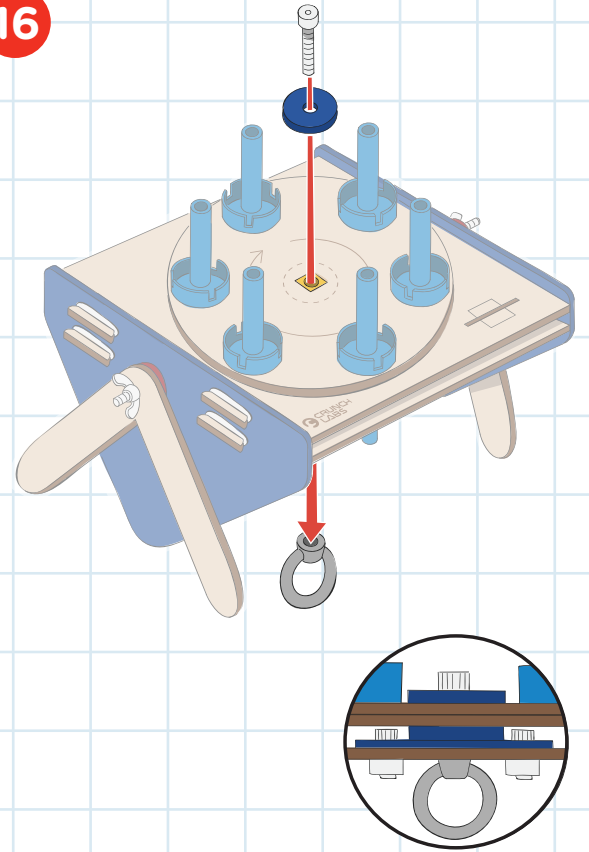
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15

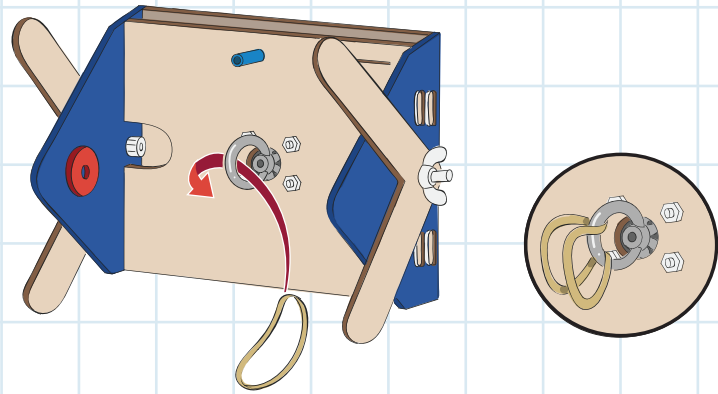


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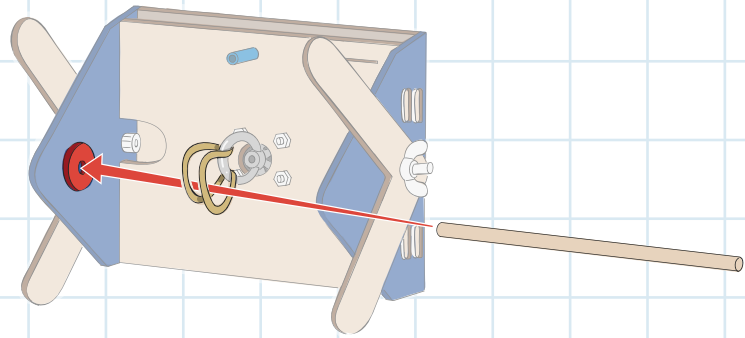


BUILD

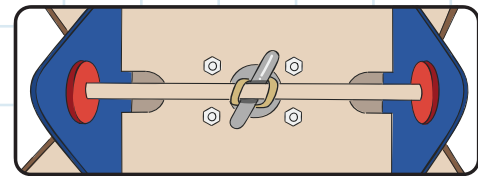
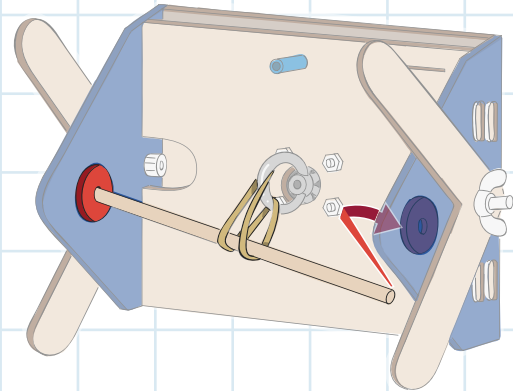
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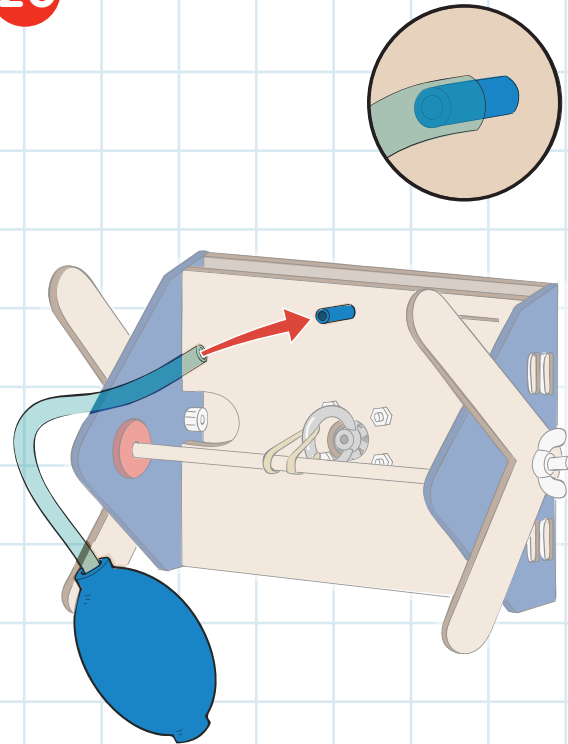
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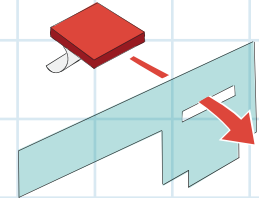
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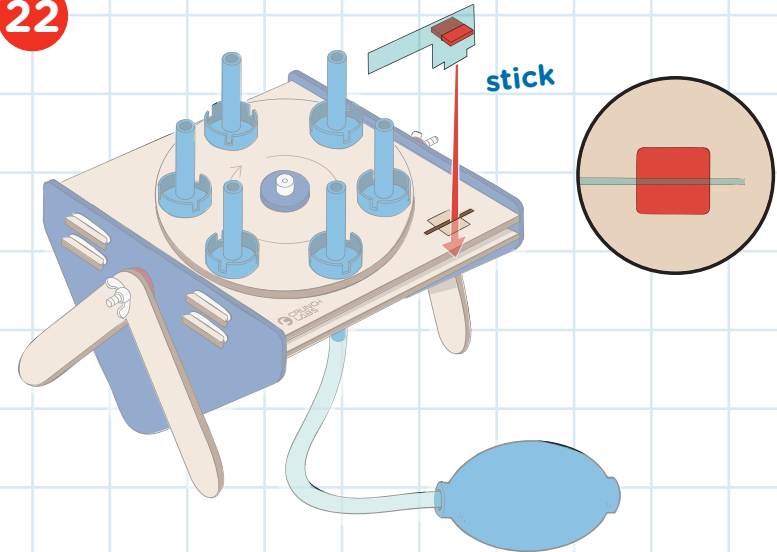
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21

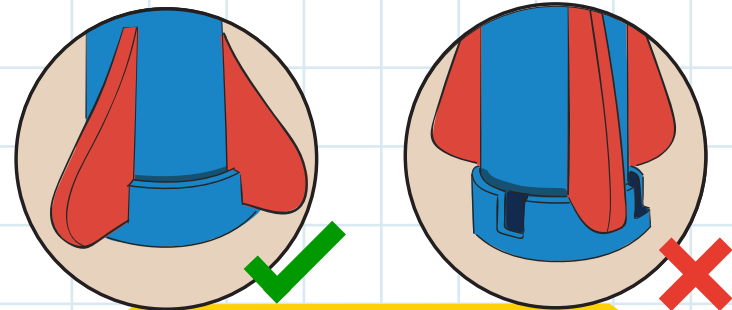
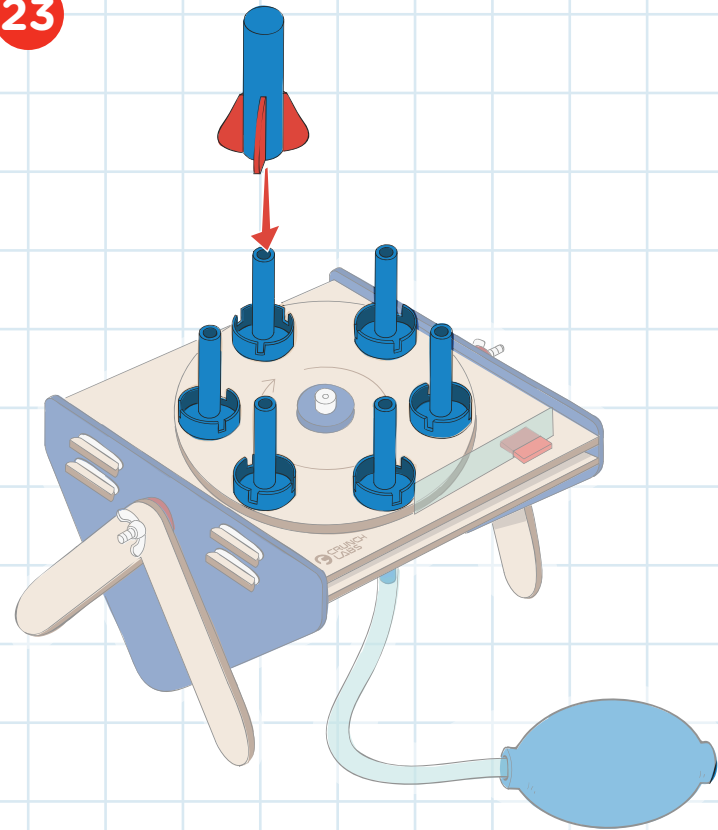


22



BUILD

23



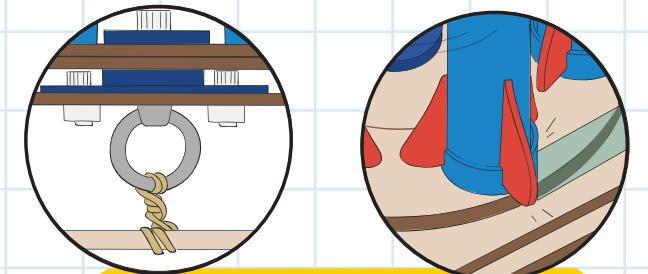
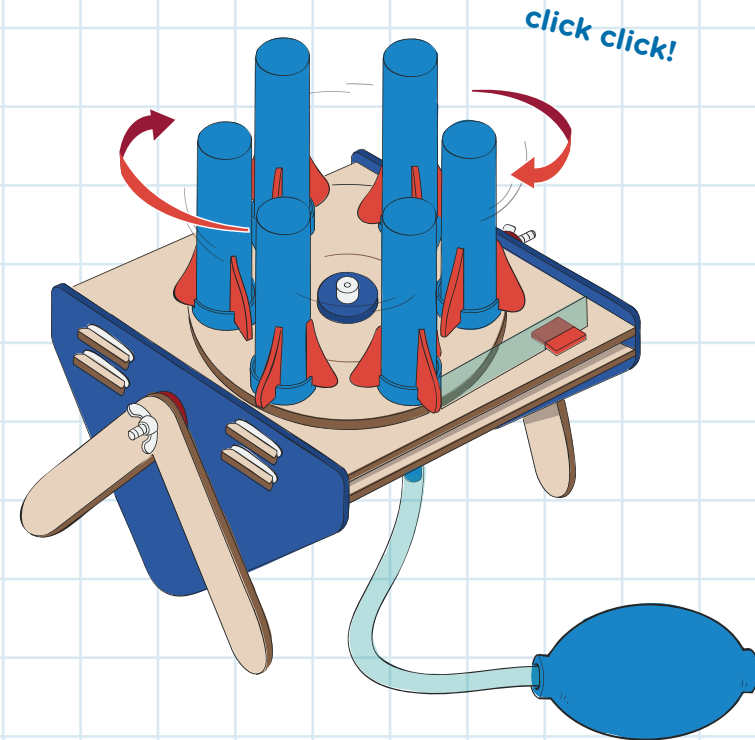
PRO TIP!

Slide the rocket fins into the cutouts in the nozzle. The cutouts prevent each rocket from spinning in place. This is called **rotational constraint**.

BUILD

24

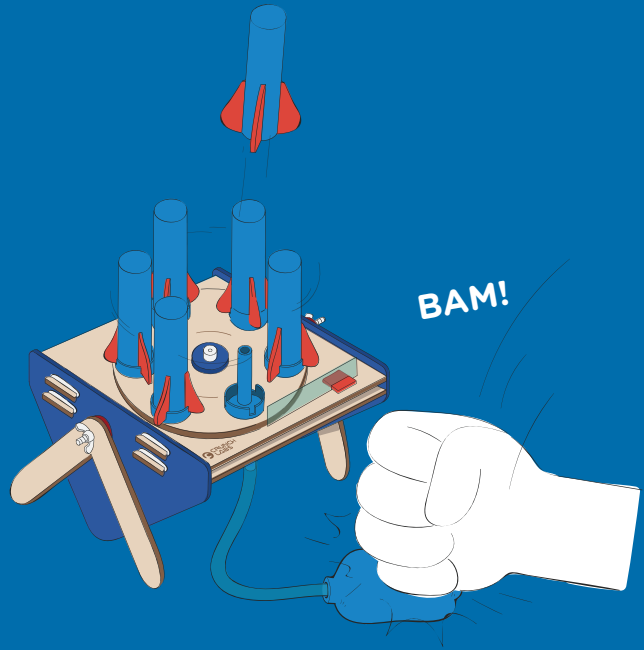
SPIN x3



PRO TIP!

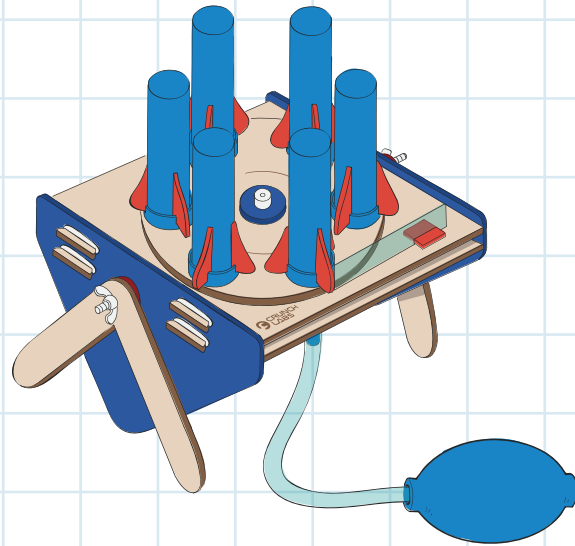
As you wind up the rockets, the **rubber band** stores energy. When you let go, the rubber band wants to release energy, but the **plastic stopper** prevents the rockets from unwinding. When a rocket hits the stopper, it gets perfectly aligned with the pump hose. This is called **indexing**.

TEST



Having trouble? Watch the video at crunchlabs.com/stomp

BUILT!

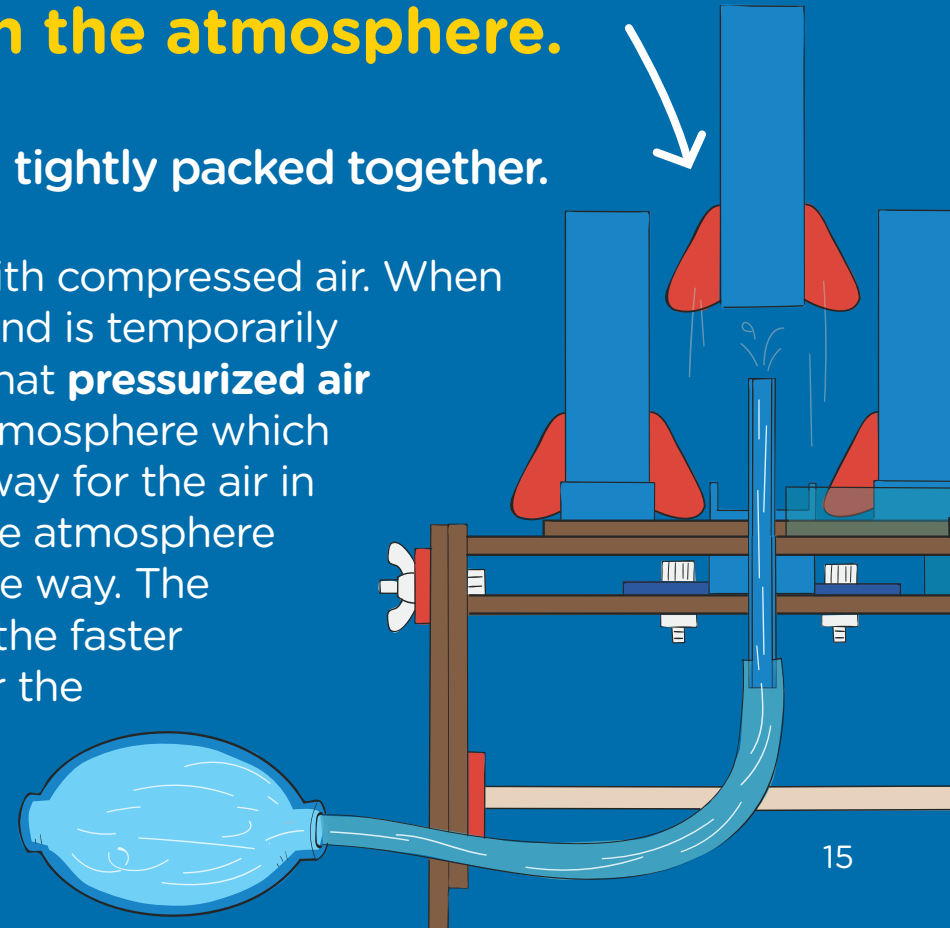


THINK

Compressed air is a volume of air that holds a greater pressure than the atmosphere.

Basically, it's air that has been tightly packed together.

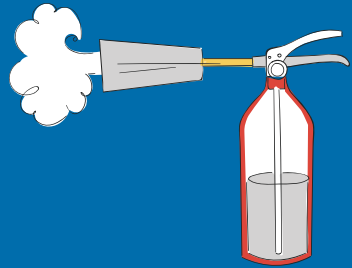
Your stomp rocket is powered with compressed air. When you stomp on the pump, your hand is temporarily pressurizing the air inside of it. That **pressurized air** wants to escape back into the atmosphere which is at a **lower pressure**. The only way for the air in the pump to escape back into the atmosphere is by moving the rocket out of the way. The harder you stomp on the pump, the faster the air will escape and the higher the rocket will launch.



THINK

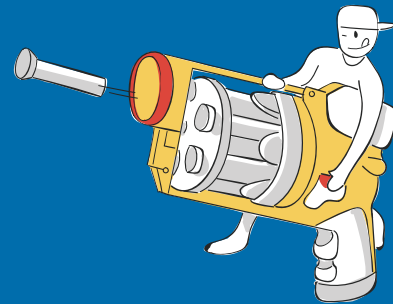
Find compressed air in other objects!

Compressed air is a powerful way to **transfer energy**. All sorts of tools and toys use compressed air to accomplish different goals.



PUT OUT THE FIRE!

Fire extinguishers use compressed gasses to help spread anti-fire agents. Whether they spread water, gasses, or chemicals, all fire extinguishers rely on **high pressure** to effectively extinguish fires.



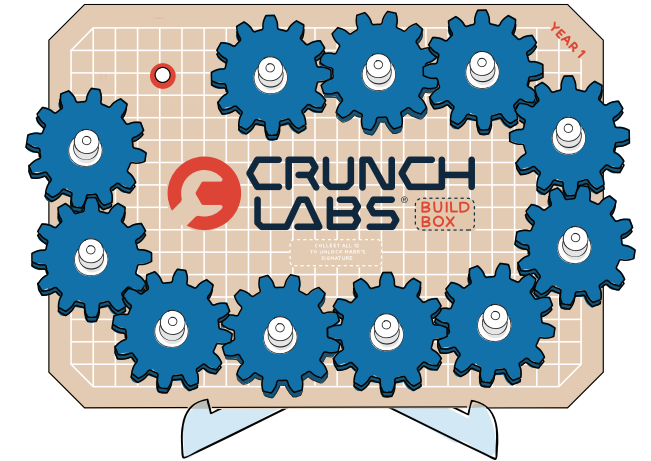
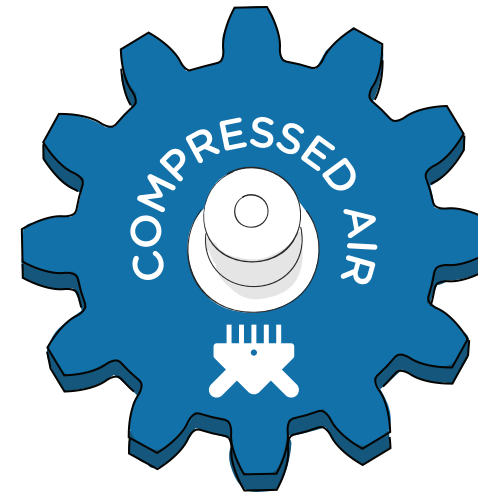
PACKS A PUNCH

Mark once built the world's largest nerf gun! Nerf guns use springs and pistons to quickly compress air. The **tightly packed** air is forced to escape through the barrel and pushes the nerf dart with it.

THINK

CONGRATULATIONS!

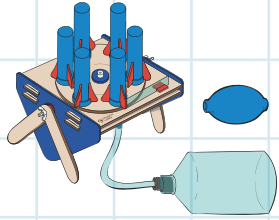
You earned a gear badge for compressed air



Don't forget to add your gear badge to your gear train!

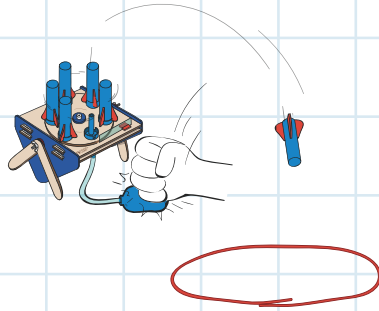
CRUNCH

It's crunch time! Use your engineering superpowers to keep building.



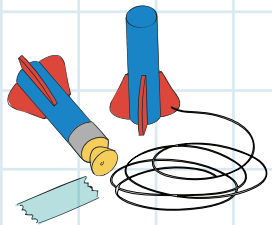
SWAP YOUR PUMP

Swap out your pump with bottles, bags or any other items you may find around your house.



TARGET PRACTICE

Set up obstacles around your room and see if you can land a rocket inside of them. Boxes and baskets might be a good place to start.



ROCKET SCIENTIST

Modify your rockets by adding a safe material such as a suction cup or a lightweight thread. Invent a game that showcases your modifications!

SHOW OFF YOUR BUILD



Share your funniest moments & coolest mods!
[#crunchlabs](#) [@crunchlabs](#)    



WARNING: Do not aim at eyes or face. Do not discharge an object other than the projectile provided with this toy.

SWEEPSTAKES

Each CrunchLabs build box contains the chance to WIN a trip to visit CrunchLabs with Mark Rober! Sadly, you are not a prize winner this time. Check inside your next build box for another chance to win.

Trip includes roundtrip transportation and two (2) night's hotel accommodations for a family of four (4). Approximate value: \$4,500. NO PURCHASE NECESSARY. Open to legal U.S. residents, 18 years of age or older. Void where prohibited. For complete Official Rules, including promotion end date and information on how to obtain a free game ticket, visit www.crunchlabs.com/win.

This toy is intended for use by children over the age of eight years. These instructions contain important information, do not throw away.