

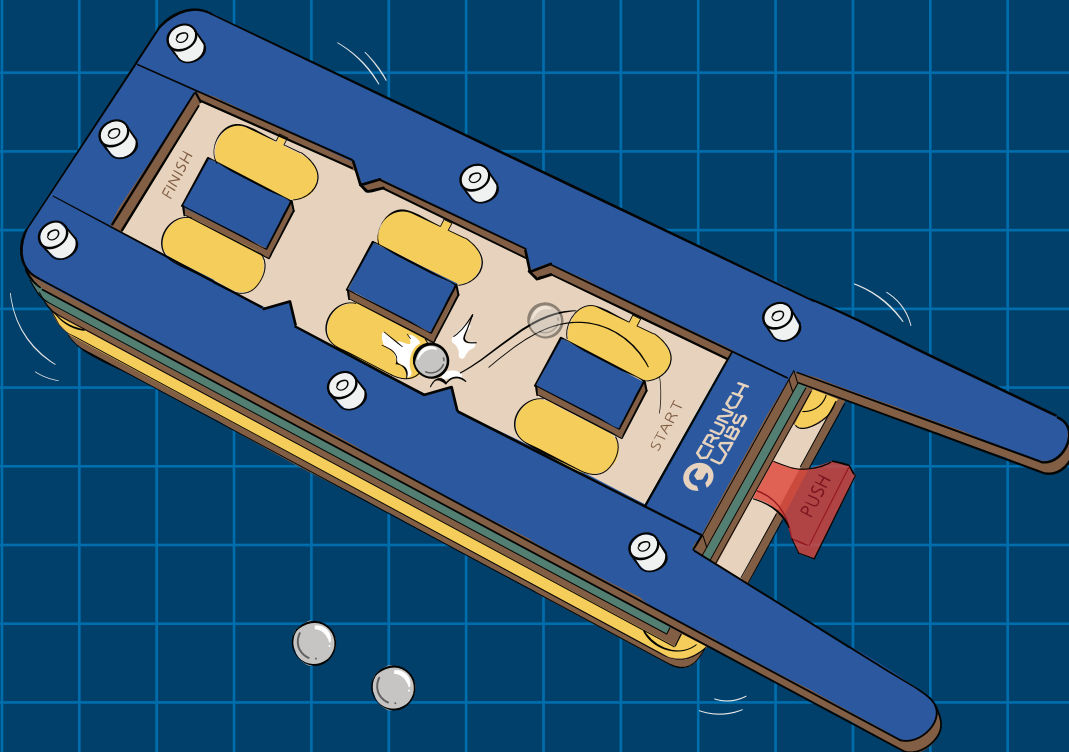


BUILD  
BOX



TRAP  
DOOR

# MAZE



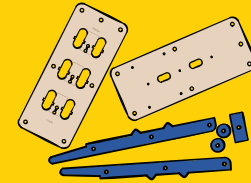
# NEW VIDEO UNLOCKED

BUILD ALONG & LEARN WITH MARK ROBER

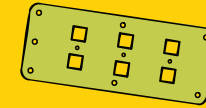


[CRUNCHLABS.COM/MAZE](https://crunchlabs.com/maze)

## PARTS



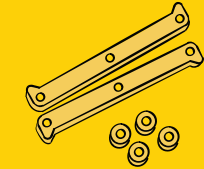
wood pieces



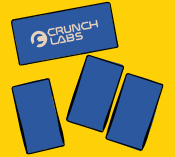
plastic sheet



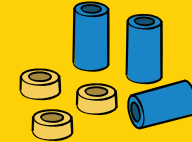
acrylic rack



foam spacers



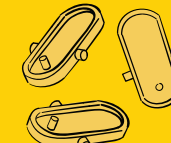
adhesive wood



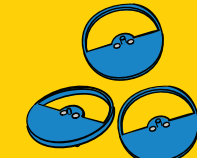
spacers and standoffs



nuts



trap doors



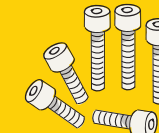
spindles



elastic cords



adhesive foam



bolts



foam hemisphere



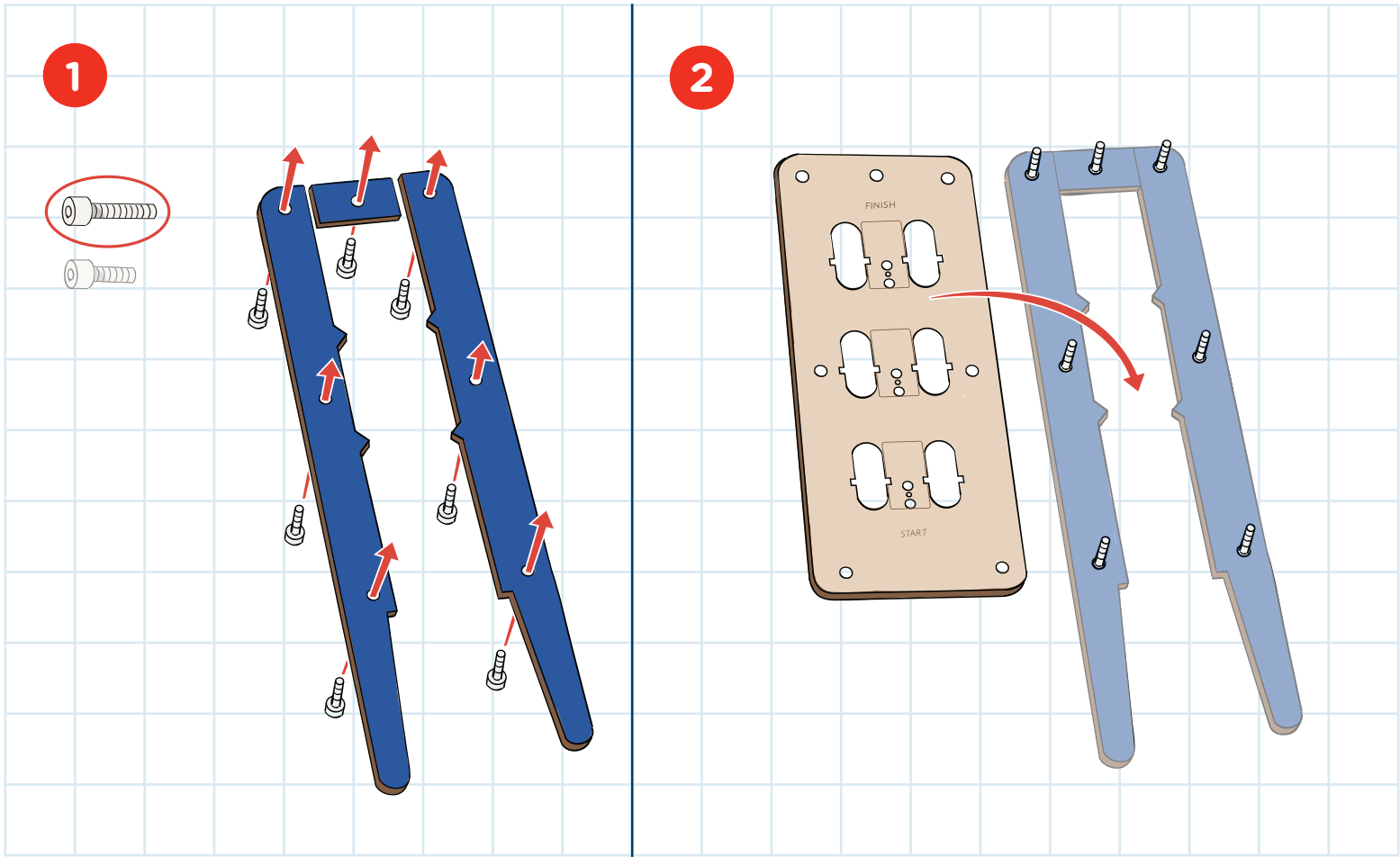
metal discs



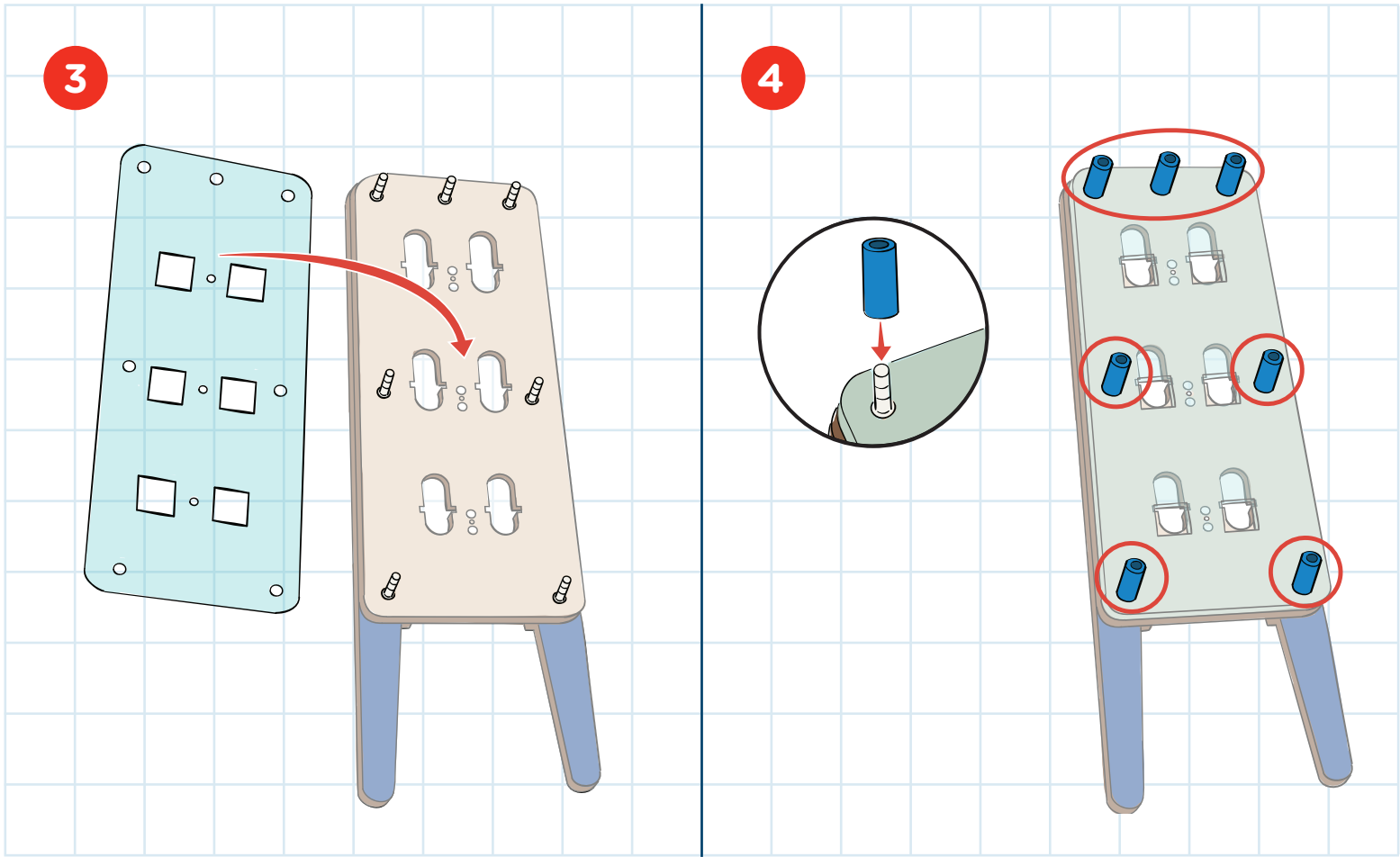
ball bearings

For missing and replacement parts, visit "My Account" at [crunchlabs.com](https://crunchlabs.com) and we'll ship them to you for free.

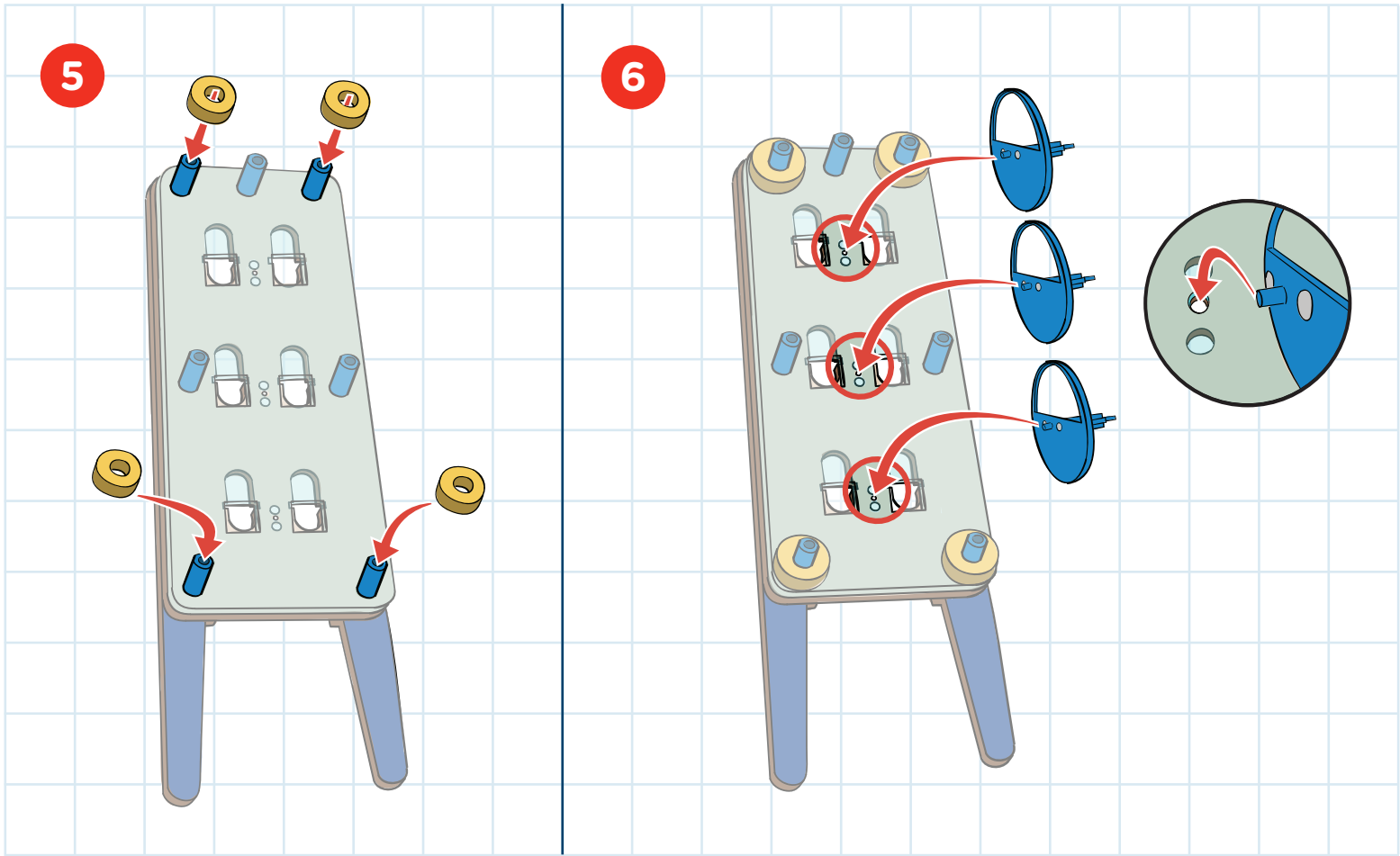
BUILD



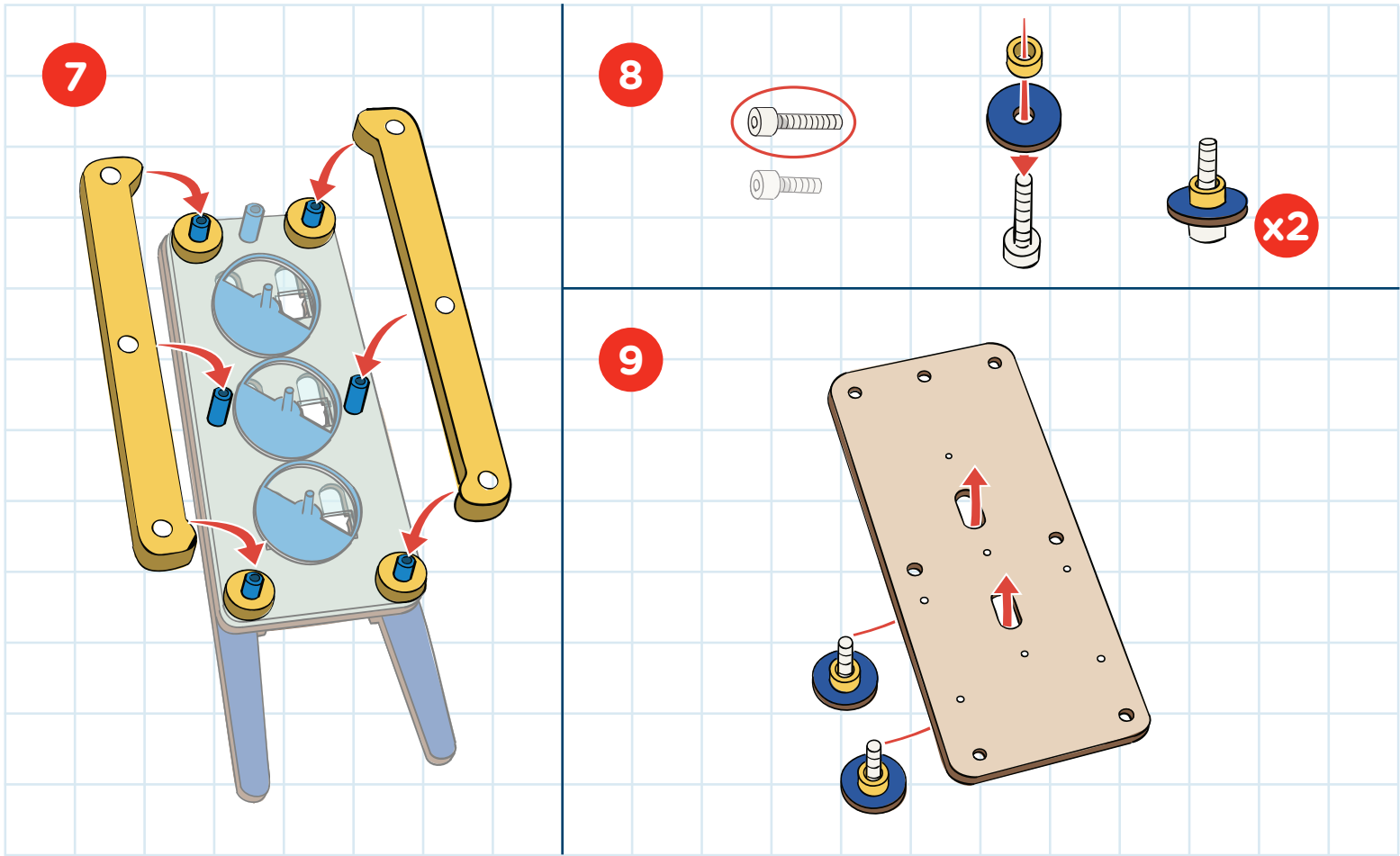
BUILD



BUILD



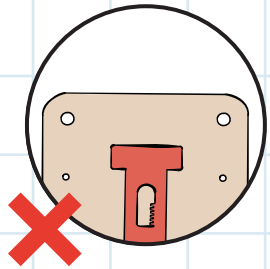
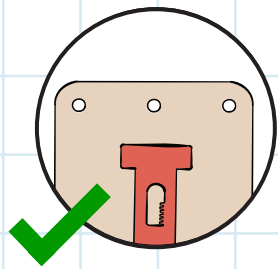
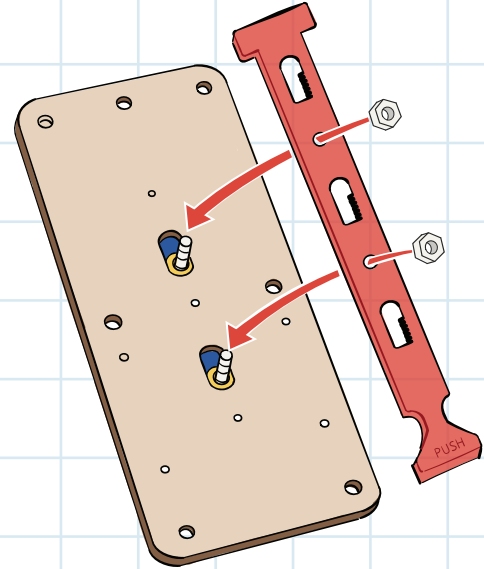
BUILD





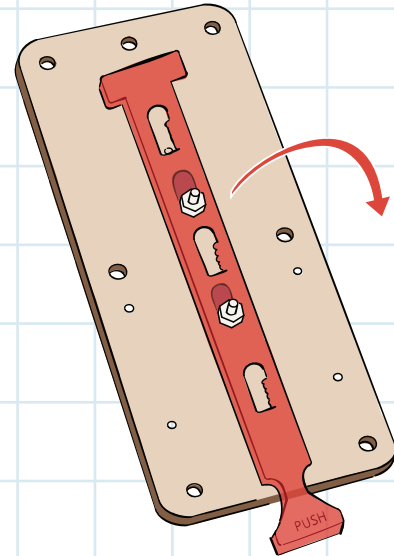
## BUILD

10

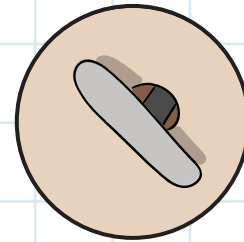
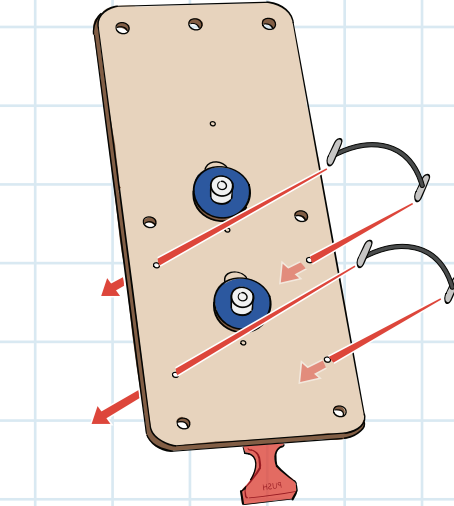


11

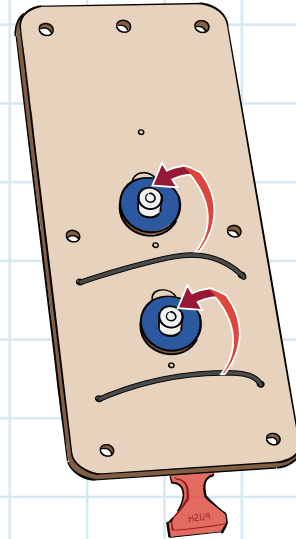
FLIP!



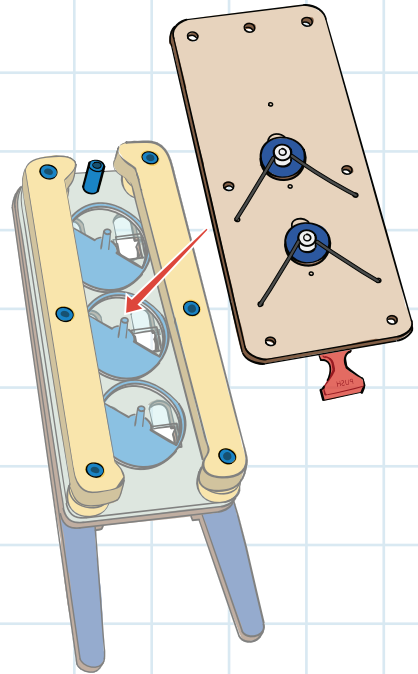
12



13



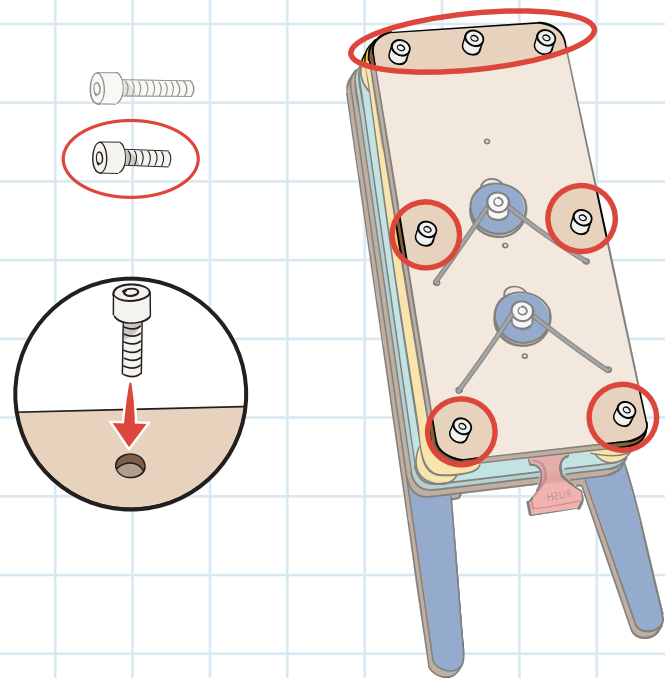
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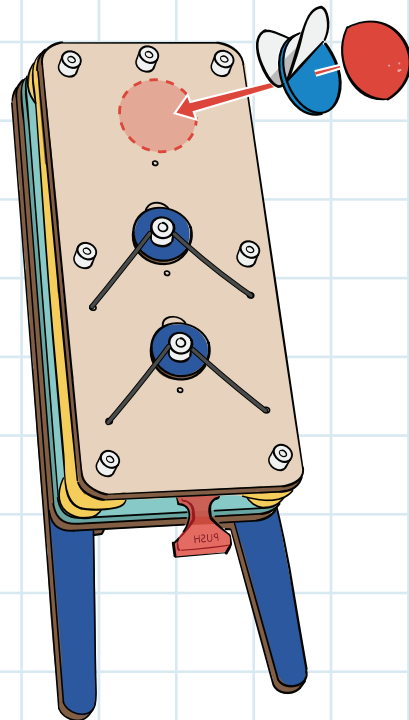
## BUILD

## BUILD

15

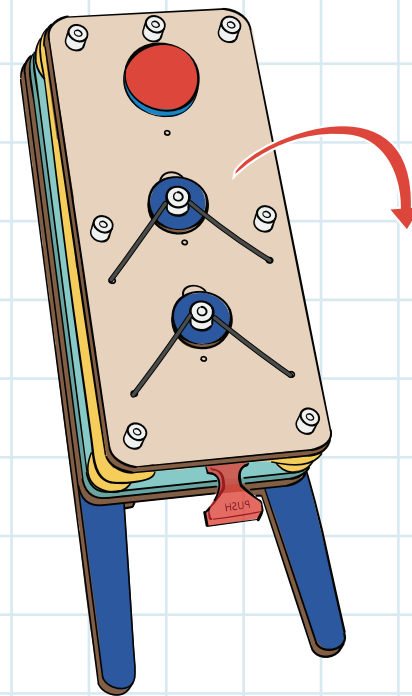


16

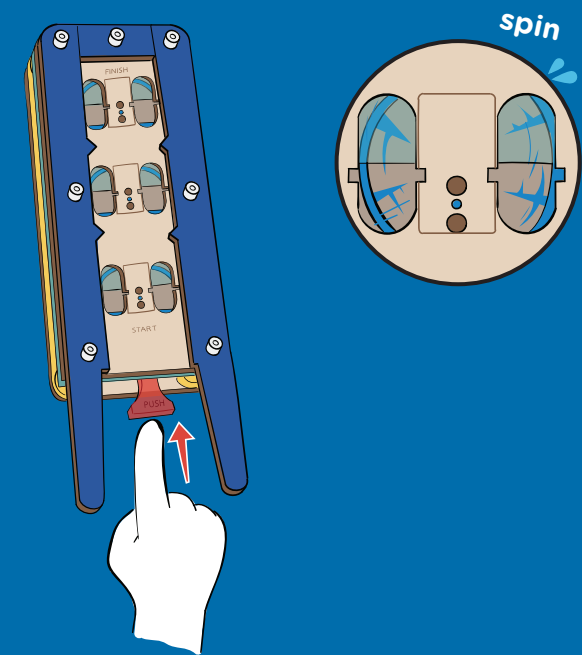


17

# FLIP!

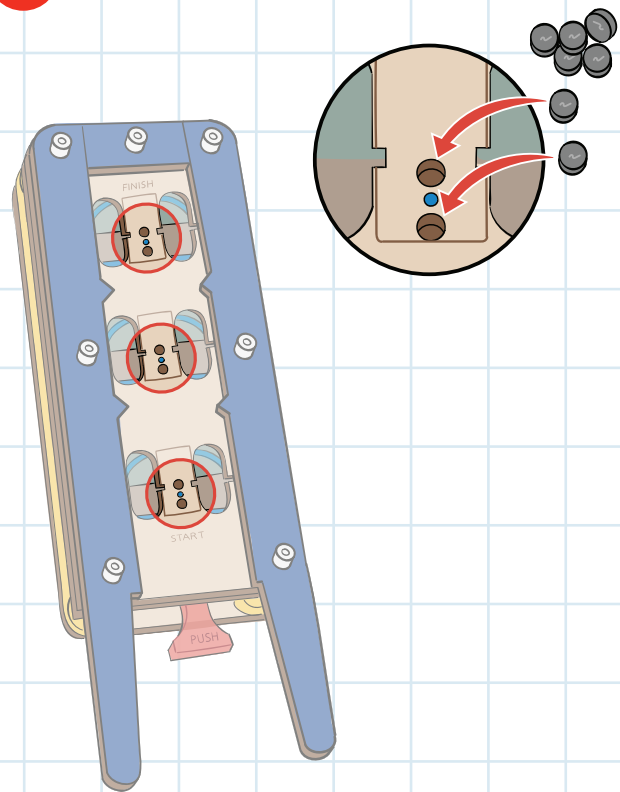


# TEST

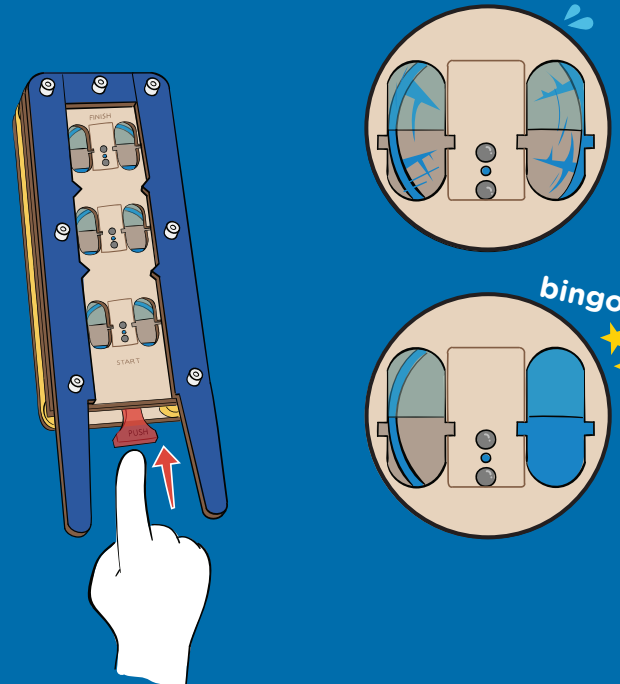


# BUILD

18



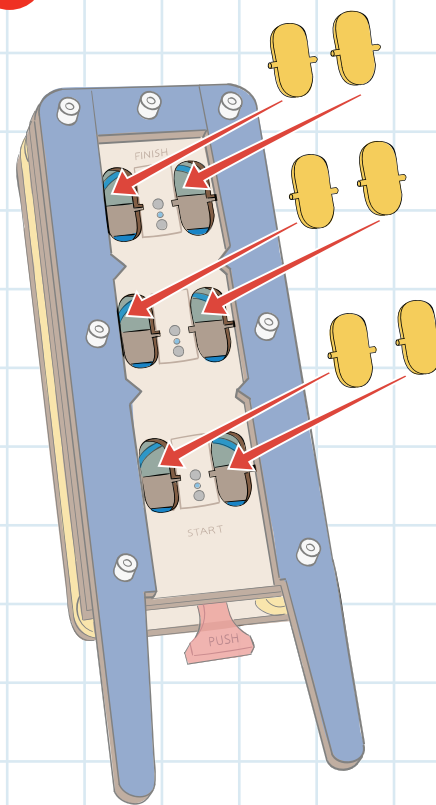
## TEST



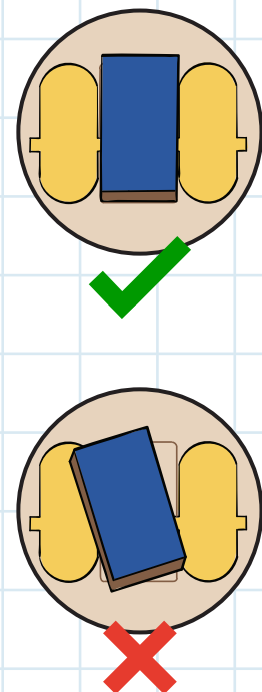
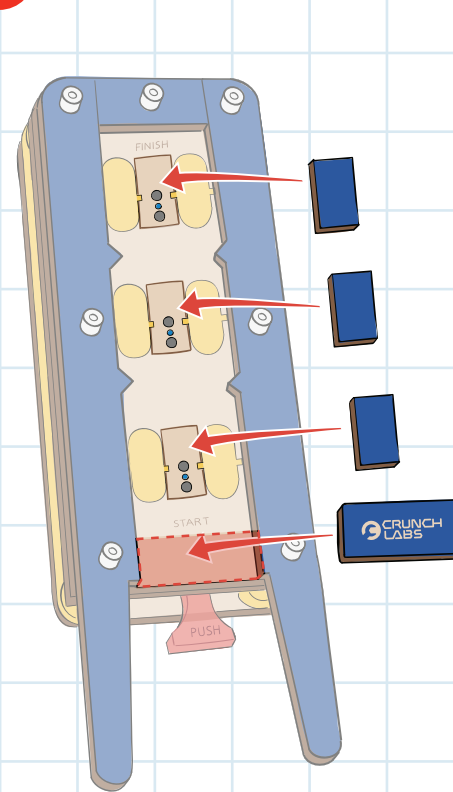
Having trouble? Watch the video at [crunchlabs.com/maze](https://crunchlabs.com/maze)

# BUILD

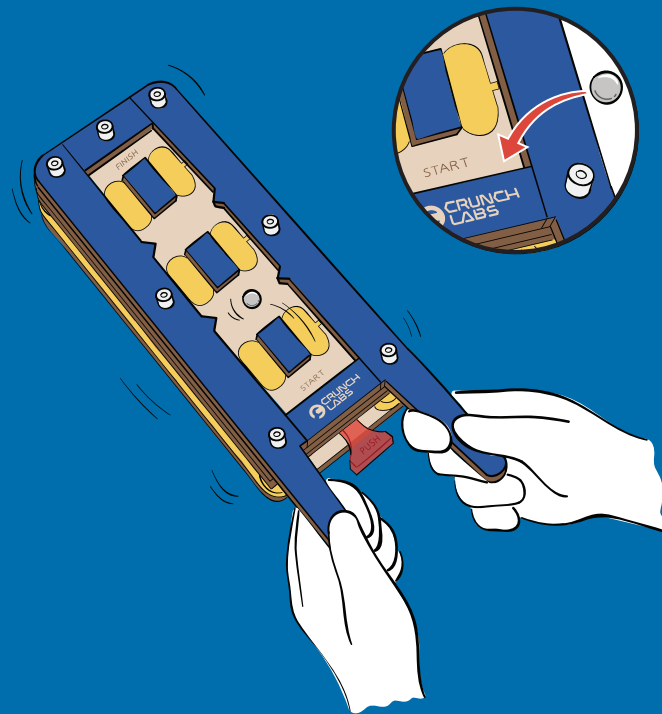
19



20

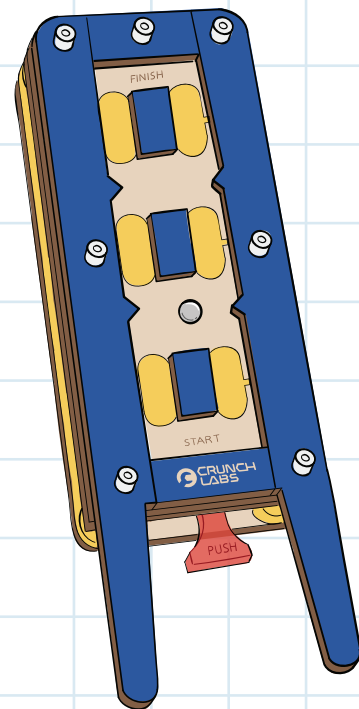


## TEST



Having trouble? Watch the video at [crunchlabs.com/maze](https://crunchlabs.com/maze)

## BUILT!

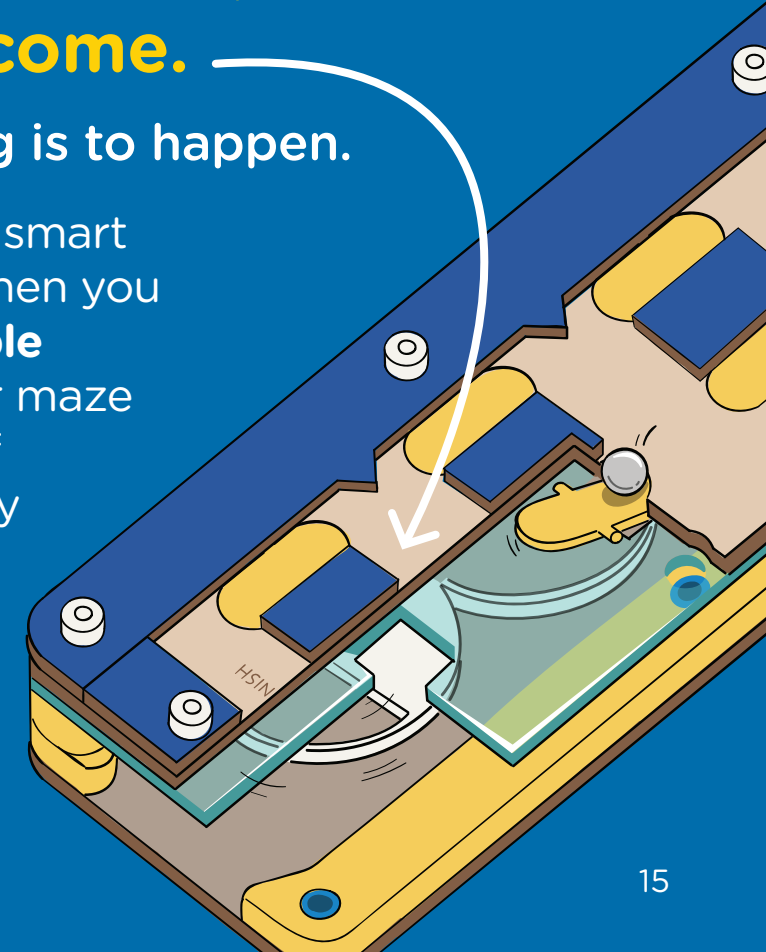


## THINK

**Probability** is a number that represents the likelihood of an outcome.

Basically, it's how likely something is to happen.

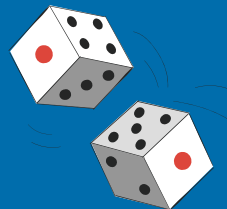
Probability is a tool that helps us make smart guesses about the world around us. When you flip a coin, there are two equally **possible outcomes**, head or tails. Your trap door maze is similar to flipping a coin. Each pair of doors you pass through has two equally possible outcomes. Half of the time the left door will be trapped and half of the time it will be the right door. Finishing the maze has the same probability as flipping a coin and getting heads 3 times in a row!



THINK

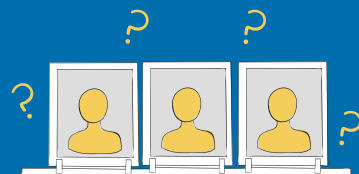
## Find probability in other objects!

Probability is naturally occurring in almost every aspect of life. With a large enough sample size, and the proper measuring equipment, engineers can accurately determine the probability of anything.



### TESTING YOUR LUCK

Ever wonder which sum is the most common result when rolling a pair of dice? The “sum” is the number you get when we add the numbers on both dice together. In this case, the sum of 7 is the most common because there are more ways to get 7 than any other number.



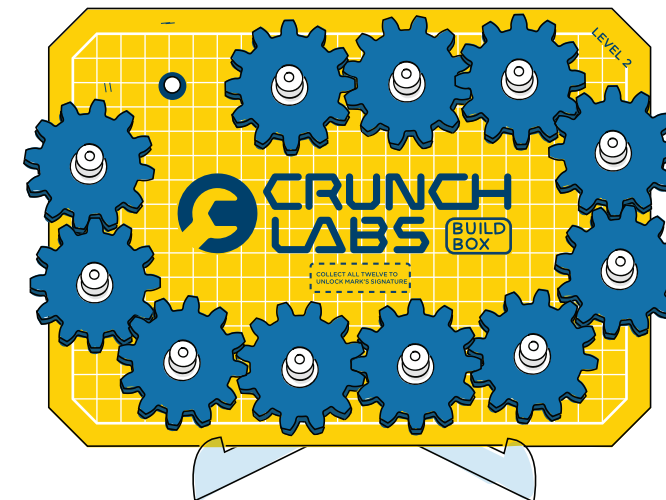
### GUESS WHO

In Mark’s video on the game “Guess Who”, he came up with a special guessing strategy to win more games. Mark used bell curves to predict that he would win almost every time!

THINK

# CONGRATULATIONS!

You earned a gear badge for probability

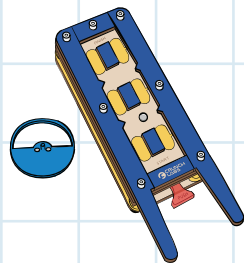


Don't forget to add your gear badge to your gear train!



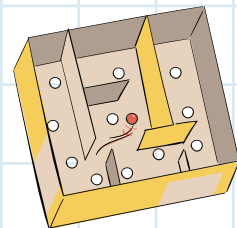
# CRUNCH

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



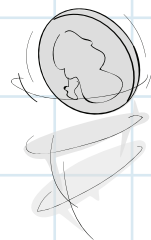
## PRANK

You can prank a friend by showing them your maze, but removing one of the spindles first. That way the maze is impossible to complete!



## CREATE YOUR OWN MAZE

You can make your own marble maze with cardboard and hot glue. Poke holes in the cardboard to create obstacles and add a start and finish line.



## COUNT YOUR FLIPS

Probability isn't perfect. You can test this by flipping a coin and recording the outcomes. But over time, the more you flip, the more even your counting will get.

# SHOW OFF YOUR BUILD



Share your funniest moments & coolest mods!  
**#crunchlabs @crunchlabs**    



**WARNING: CHOKING HAZARD** - Toy contains a small ball. Not for children under 3 yrs.

### **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](http://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.

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