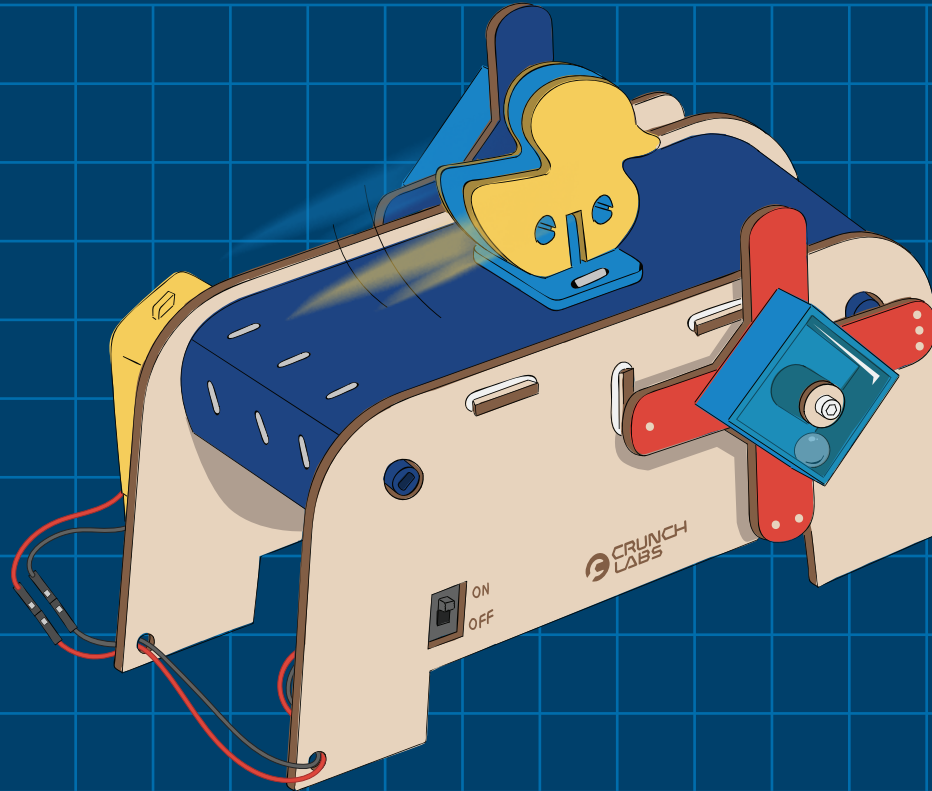




BUILD  
BOX



DUCK GAME



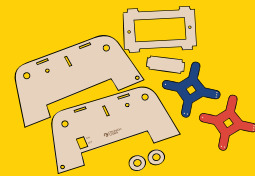
# NEW VIDEO UNLOCKED

BUILD ALONG & LEARN WITH MARK ROBER

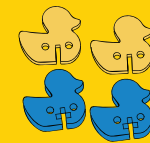


[CRUNCHLABS.COM/DUCK](https://crunchlabs.com/duck)

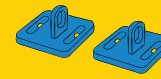
## PARTS



wood pieces



duck pieces



hinges



rivets



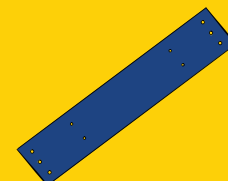
small dowels



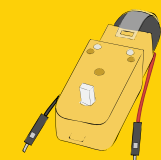
o-rings



elastics



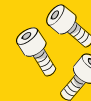
belt



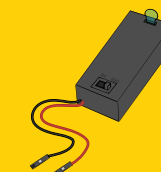
dc motor



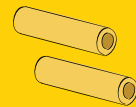
adhesive foam



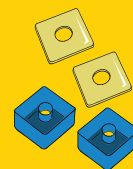
bolts



battery pack



standoffs



chambers pieces



rollers



rubber bands

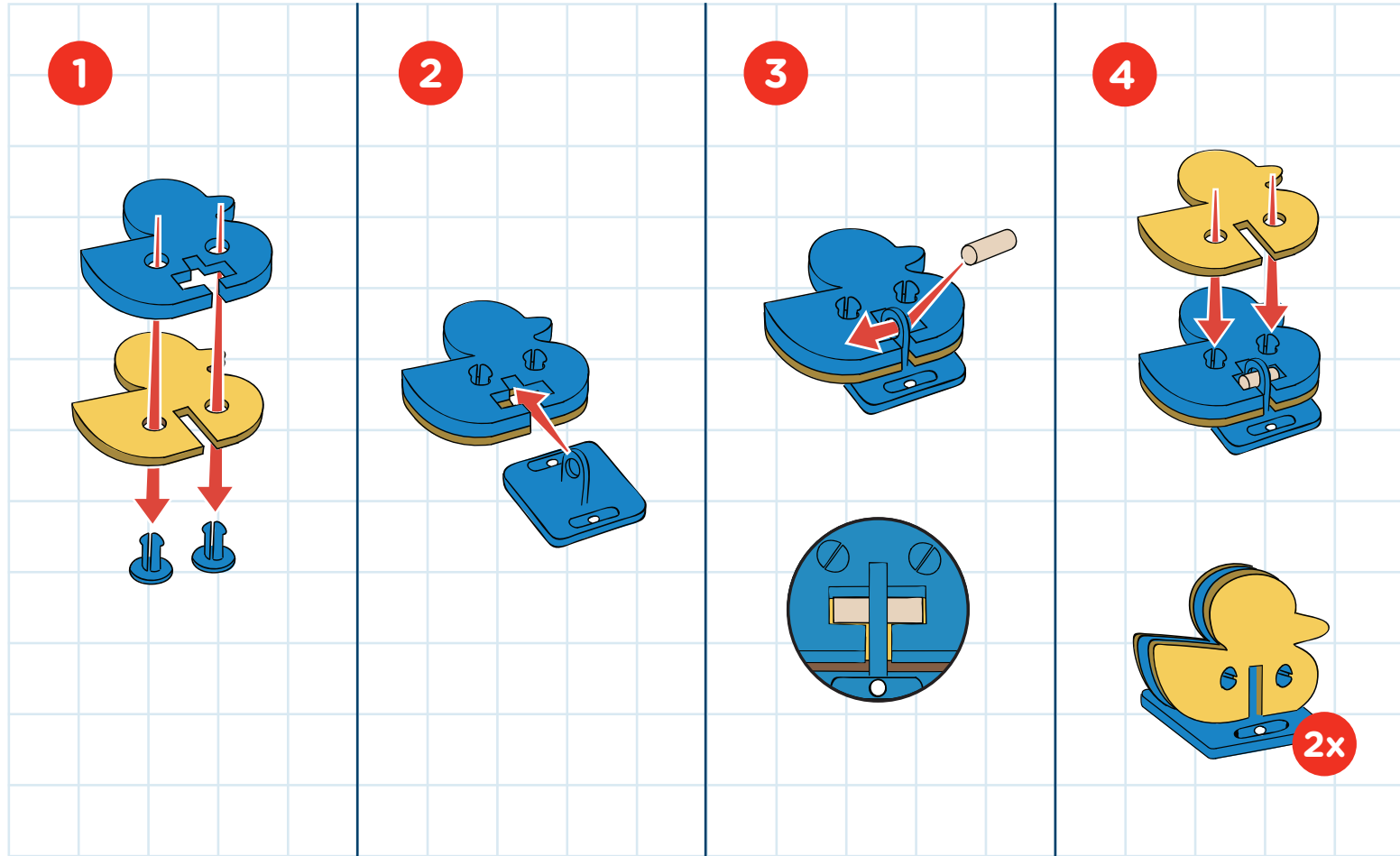


ball bearings

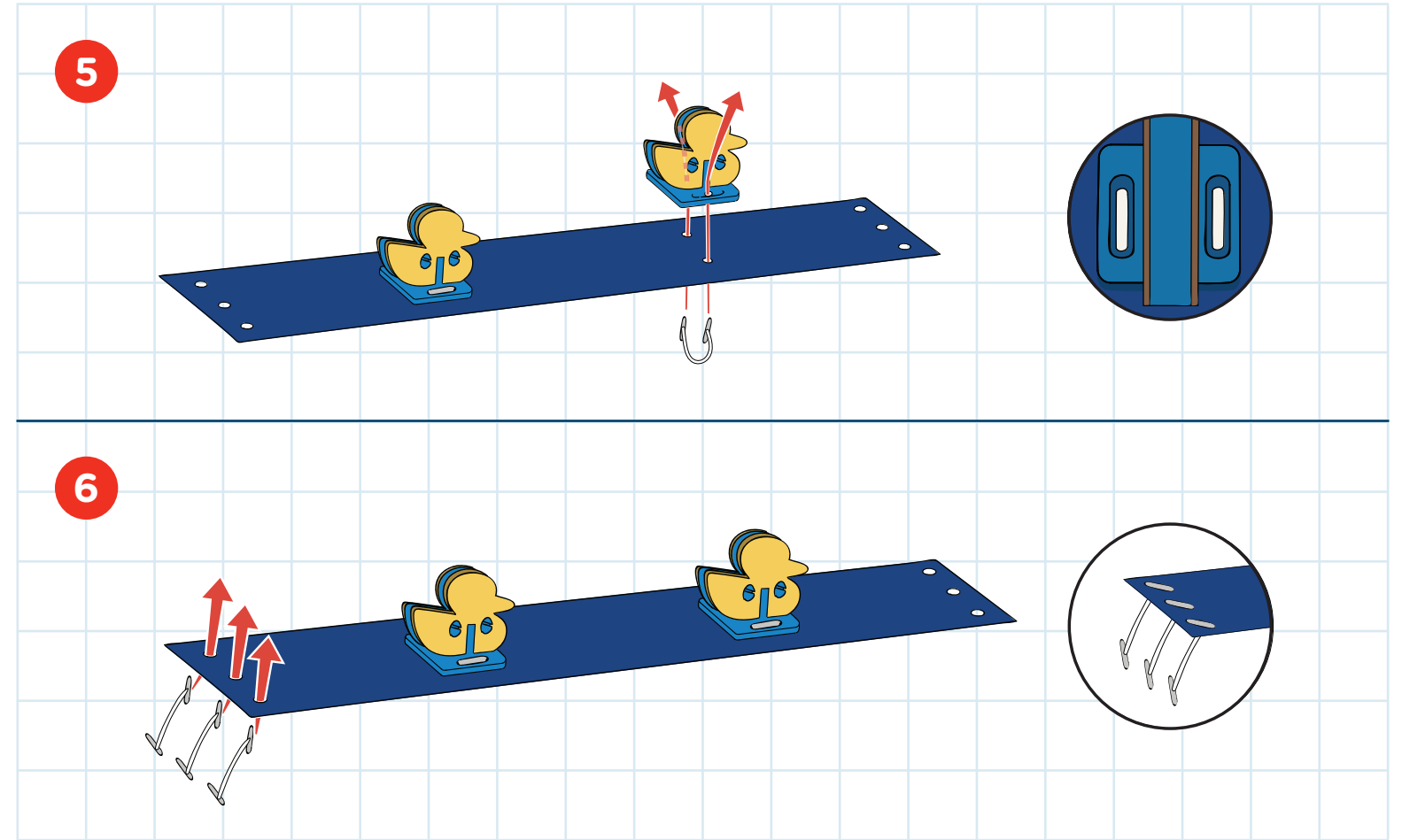


party blowers

# BUILD

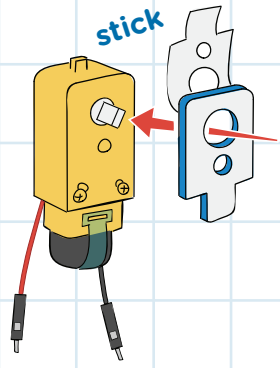


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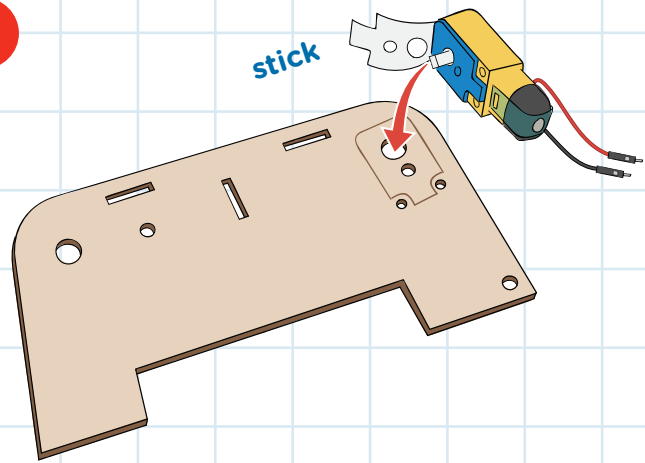


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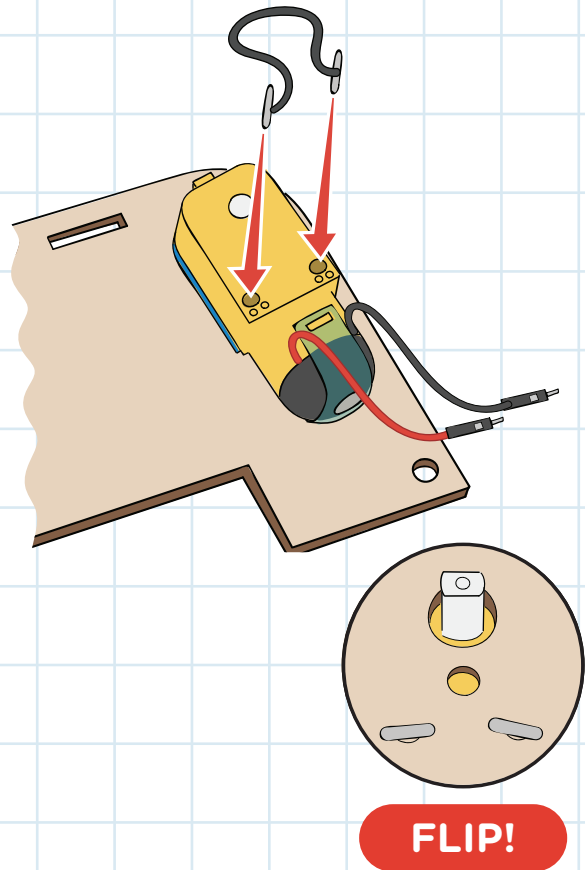
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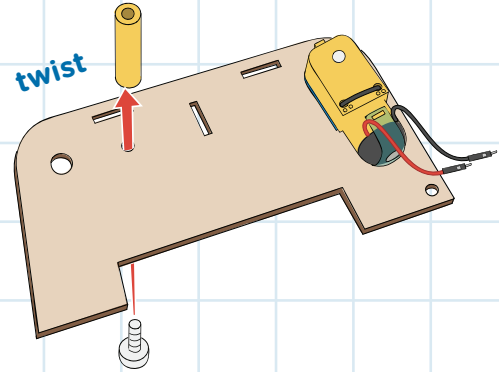
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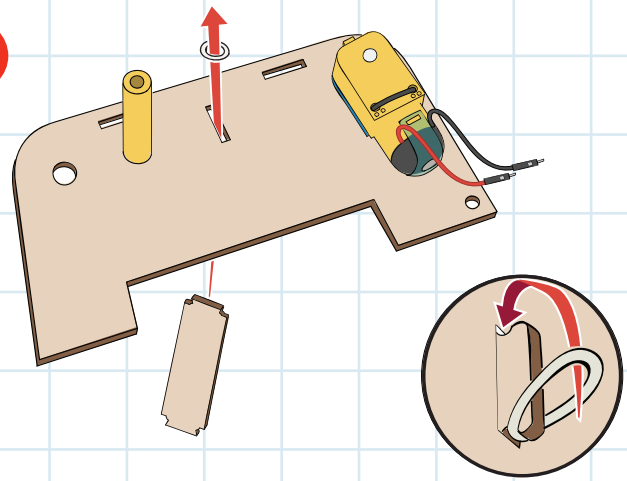
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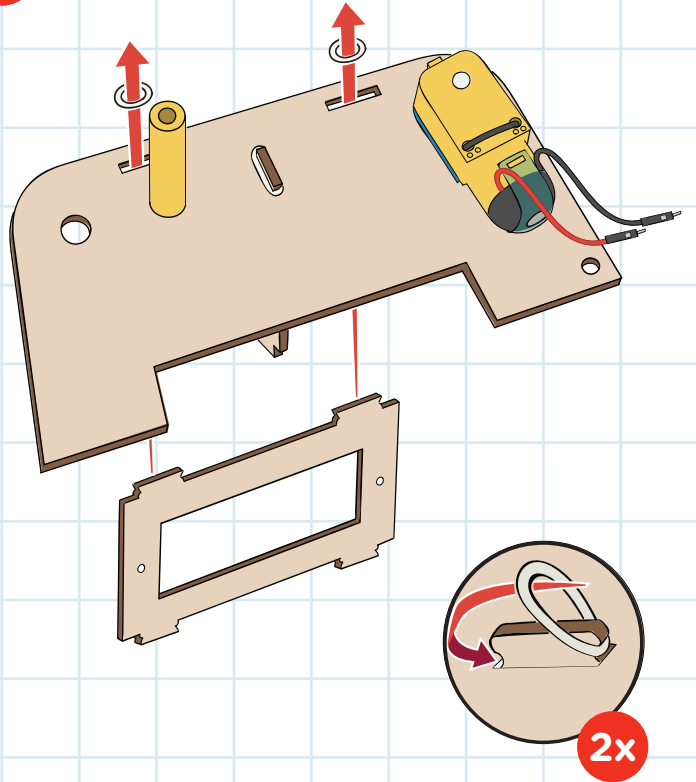
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11



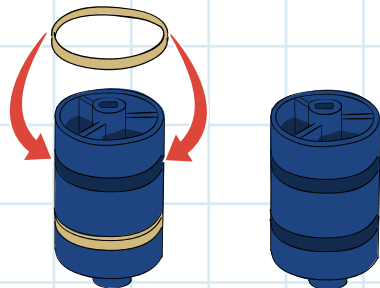
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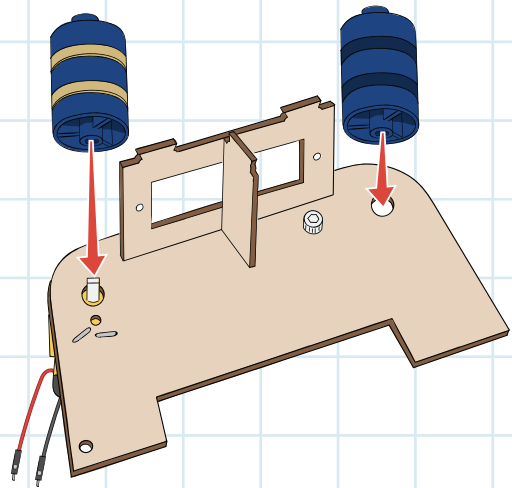
# BUILD

# BUILD

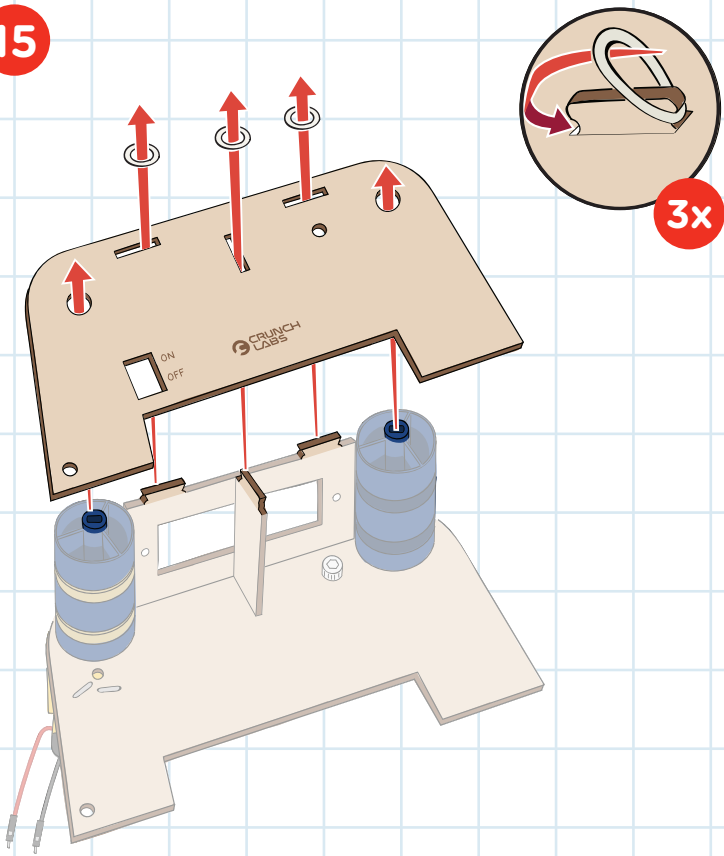
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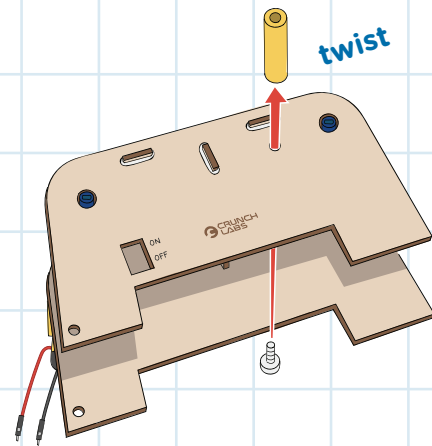
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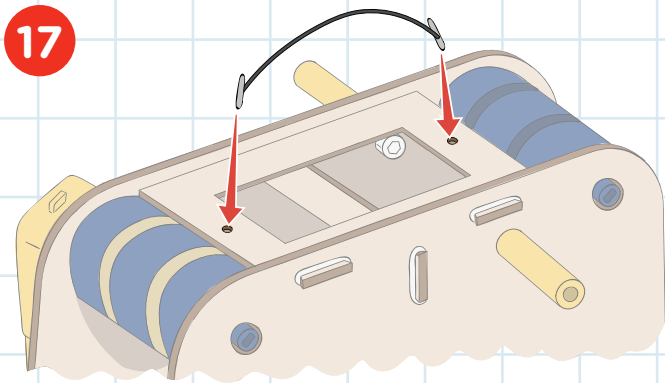
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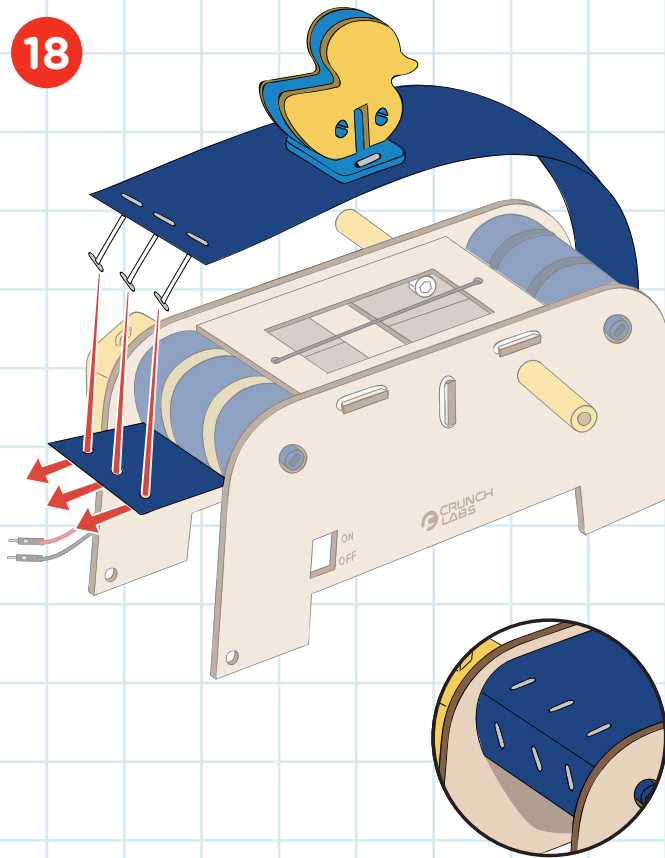
16



17



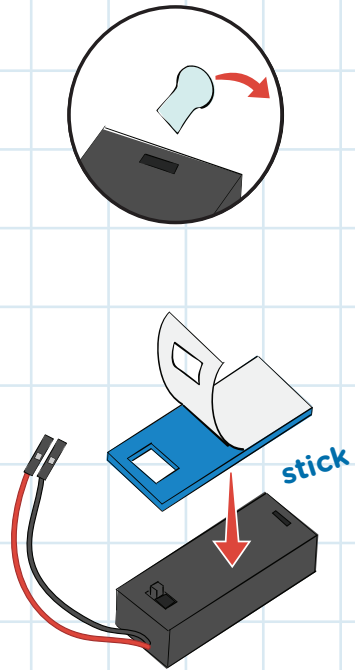
18



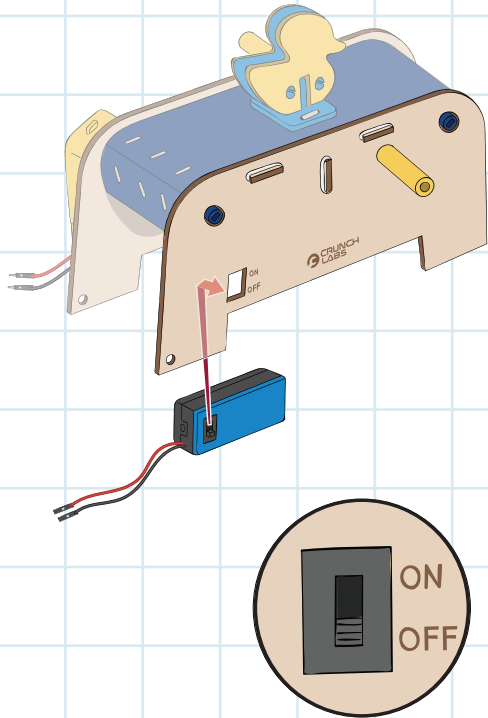
# BUILD

# BUILD

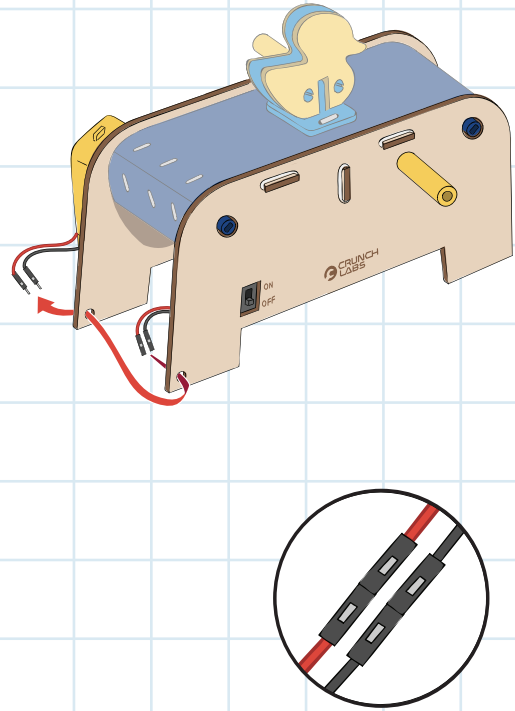
19



20

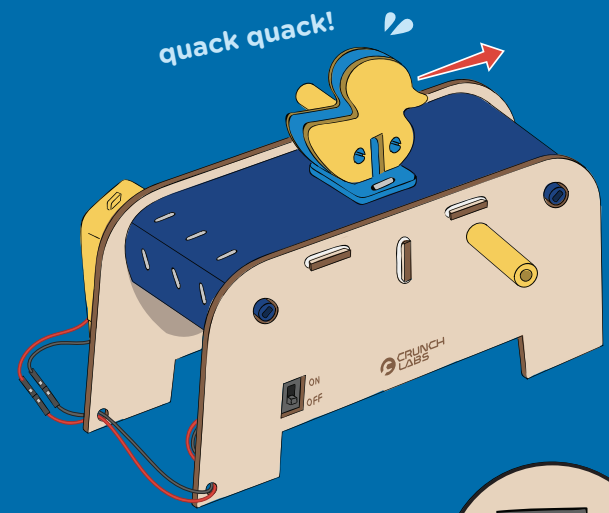


21



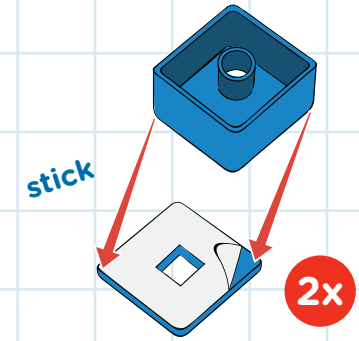
# BUILD

## TEST

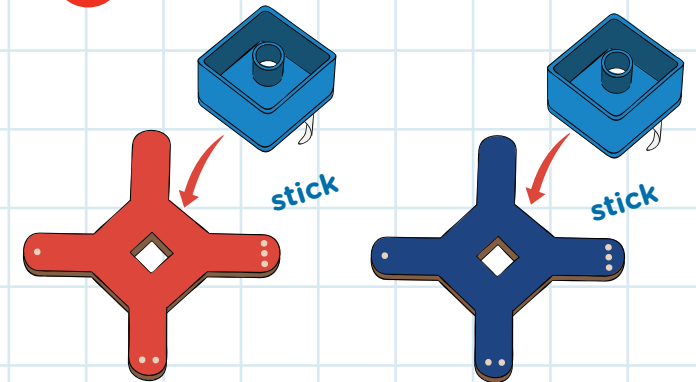


Having trouble? Watch the video at [crunchlabs.com/duck](http://crunchlabs.com/duck)

22

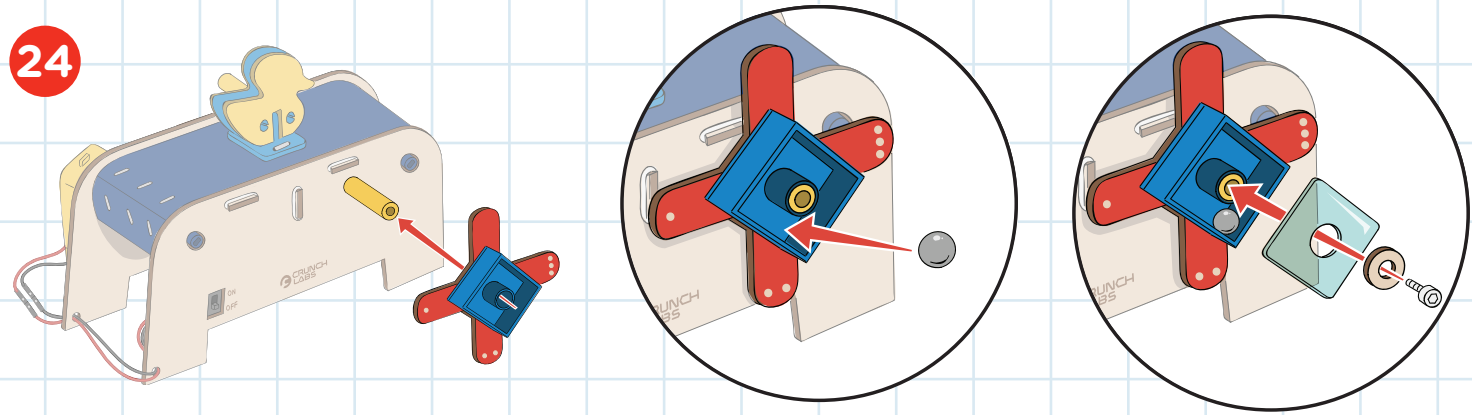


23

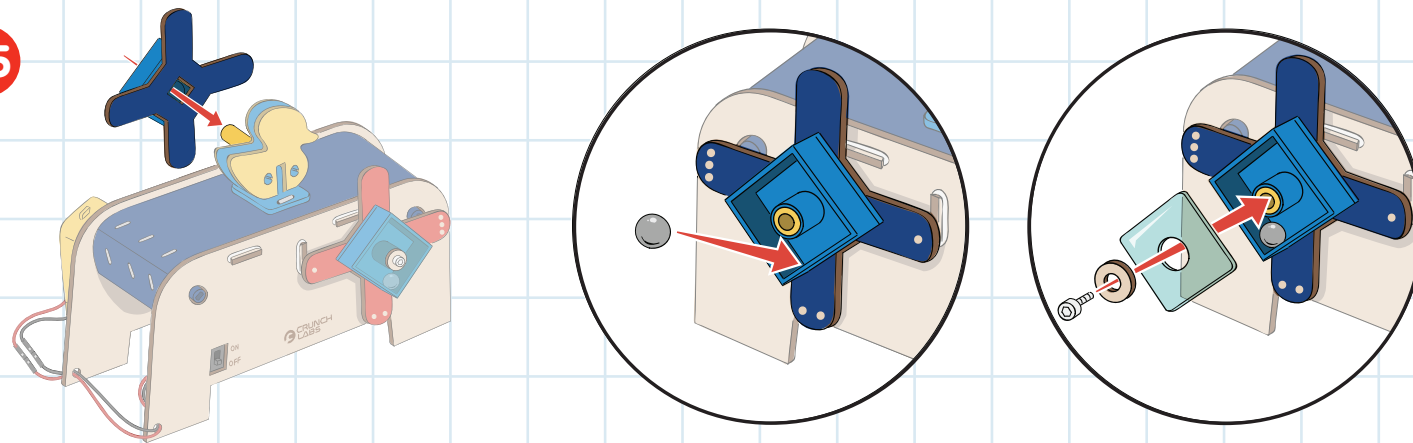


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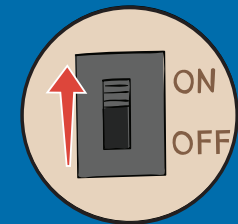
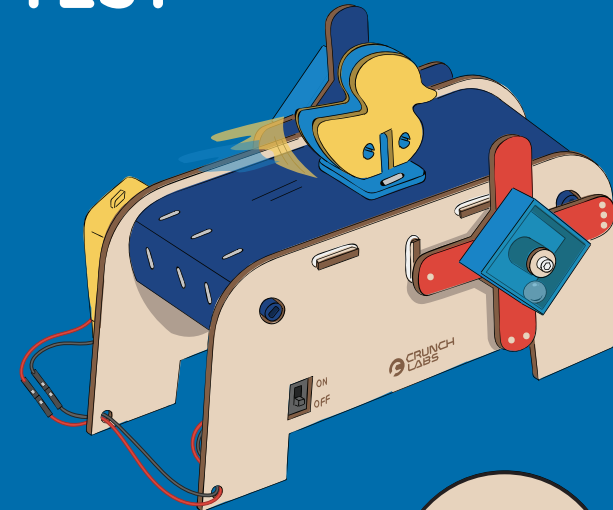
24



25

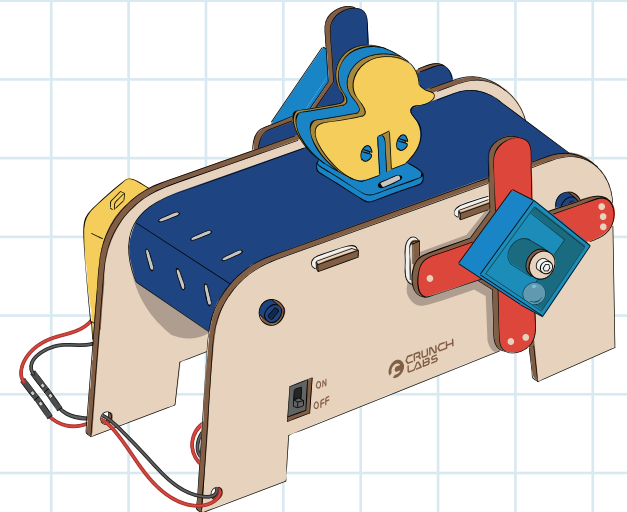


# TEST



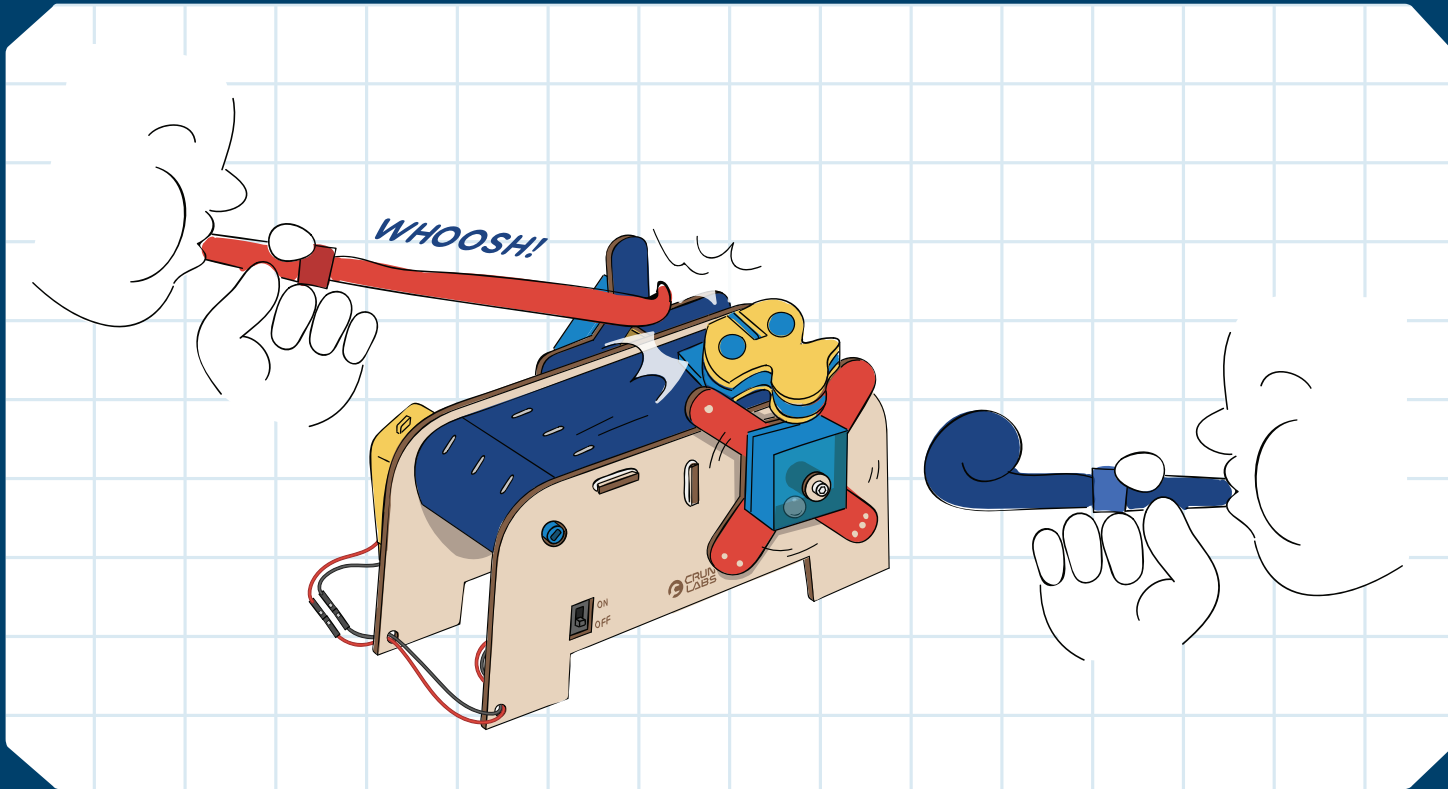
Having trouble? Watch the video at [crunchlabs.com/duck](http://crunchlabs.com/duck)

BUILT!



# GAME TIME

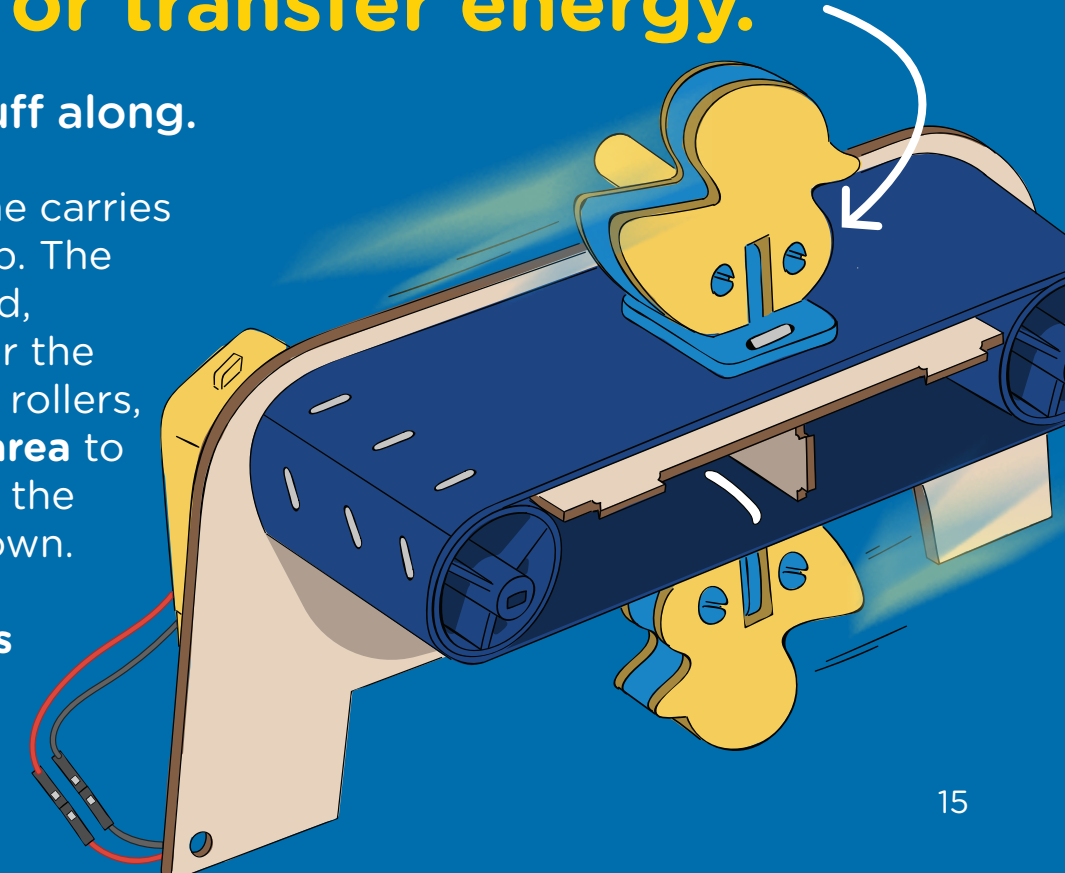
Test the range of your party blower!  
Find a friend and see who can score 3 points first.



A **belt** is a loop of material used to carry objects or transfer energy.

Basically, belts move stuff along.

The **belt** on your Duck Game carries the ducks in an endless loop. The rollers drive the belt forward, bringing the ducks along for the ride. Because there are two rollers, the ducks have a **long flat area** to float. As the belt continues, the ducks are flipped upside down. Whether or not they were knocked over, gravity **resets** them back to standing!

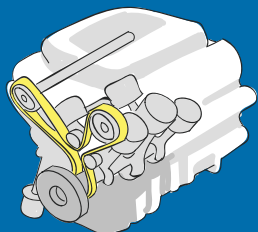




THINK

## Find belts in other machines!

Belts are useful for all sorts of machines. Belts can be used to **transfer rotational energy**, from one thing to another, or as a surface to **transport objects**.



### TIMING BELTS

Timing belts are used in most gas-powered vehicles. They are attached to multiple pulleys on the motor and they make sure that everything is **rotating in sync**.



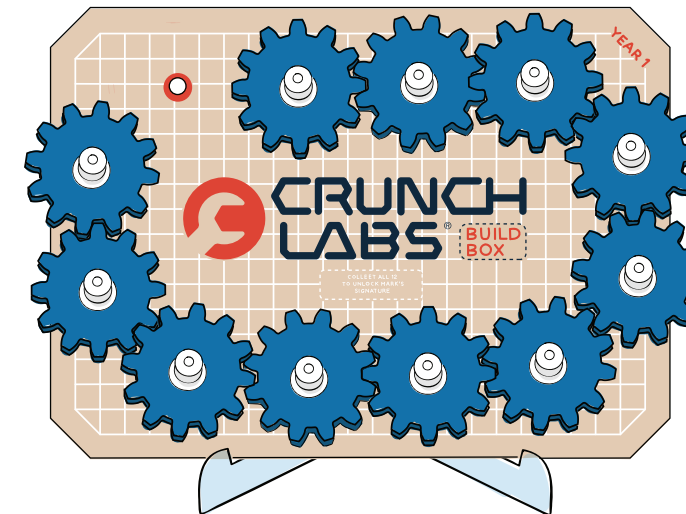
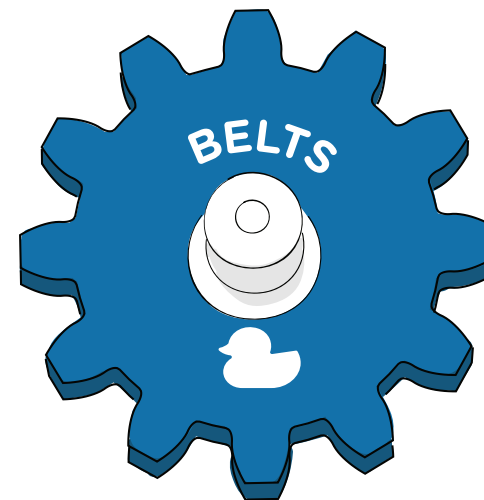
### DOMINO ROBOT

Mark used a few belts to help load a TON of dominoes into his domino robot. Belts are often a very efficient way to **move a lot of stuff** in a predictable way.

THINK

# CONGRATULATIONS!

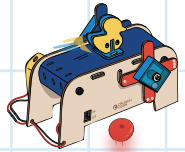
You earned a gear badge for belts



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

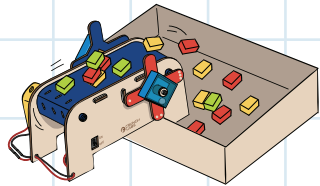
# CRUNCH

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



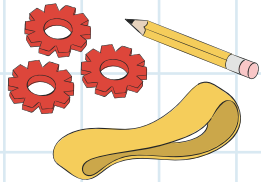
## LONG RANGE

Try using other toys to knock the ducks over. How far back can you score from?



## CONVEYOR BELT

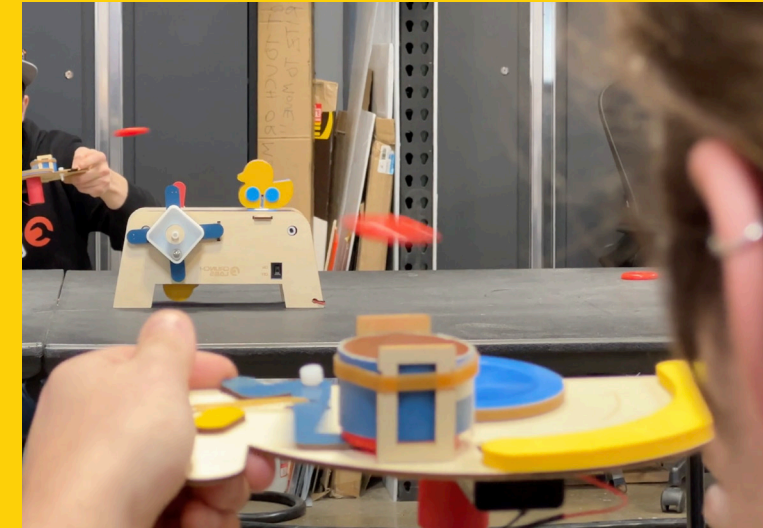
Remove your ducks and try moving other objects with your conveyor belt! Experiment with angles, shapes, and weights.



## BELT IT OUT

Try making your own conveyor belt! What does it move? How does it work? Pro tip, paper towel rolls make great rollers for prototyping.

# SHOW OFF YOUR BUILD



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



**WARNING:** Improper assembly can short circuit battery.

#### **BATTERY SAFETY**

Remove exhausted battery. Do not mix old & new battery. Do not mix alkaline, standard (carbon-zinc), or rechargeable battery. Do not recharge non-rechargeable battery. If using rechargeable battery, remove them from the toy before charging. Rechargeable battery should be charged under adult supervision. Do not short-circuit supply terminals. Do not connect this toy to a power supply greater than two AA battery. **How to remove battery:** 1. Remove screw and lid from battery pack. 2. Remove battery. **How to insert battery:** 1. Remove screw and lid from battery pack. 2. Insert a new battery into the battery pack with correct polarity (+ and -). 3. Replace lid and secure the screw on the battery pack.

#### **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.