Manuals+ — User Manuals Simplified.

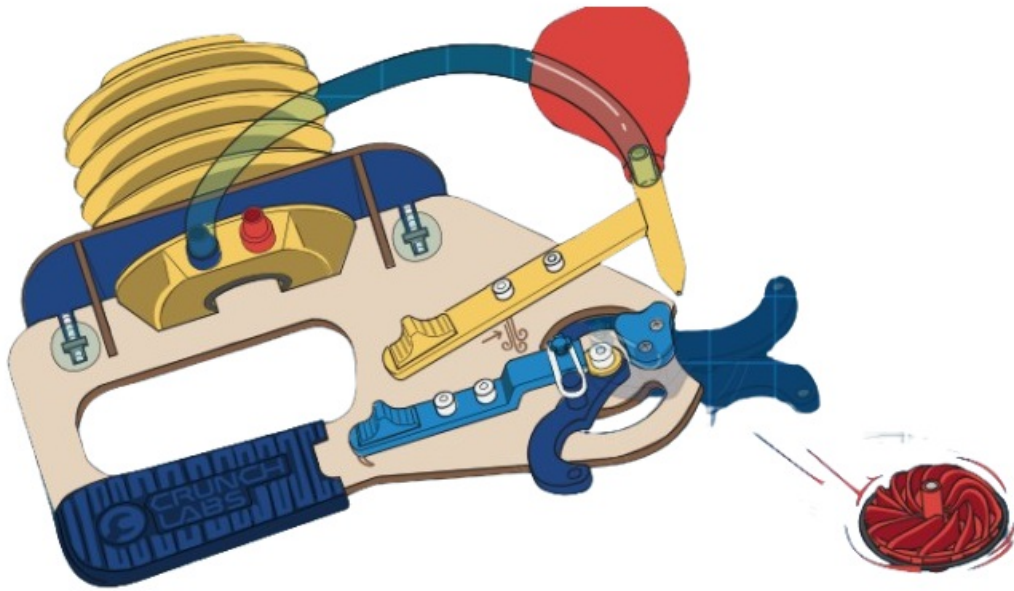**SPINv2 Turbine Top**

CRUNCHLABS SPINv2 Turbine Top Installation Guide

CRUNCHLABS SPINv2 Turbine Top

NEW VIDEO UNLOCKED

BUILD ALONG & LEARN WITH MARK ROBER

- **CRUNCHLABS.COM/SPIN**

PARTS

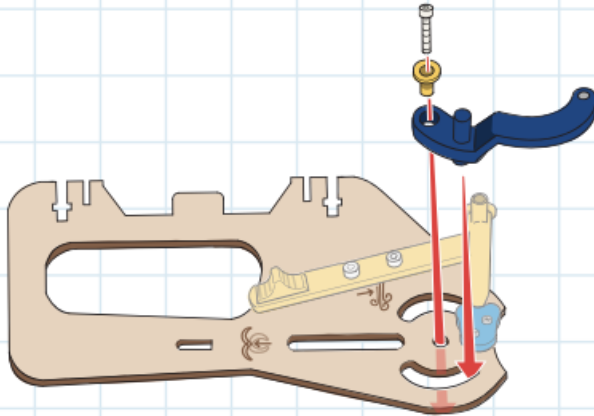|				
wood pieces	nozzle	release toggles	magnetic arms	tops
shoulder washers	**plastic** nuts and bolts	**metal** nuts and bolts	stopper	bellows and tube
o-rings	clear sticker sheet	balloons	paper straws	handle

For missing and replacement parts, visit "My Account" at crunchlabs.com and we'll ship them to you for free.
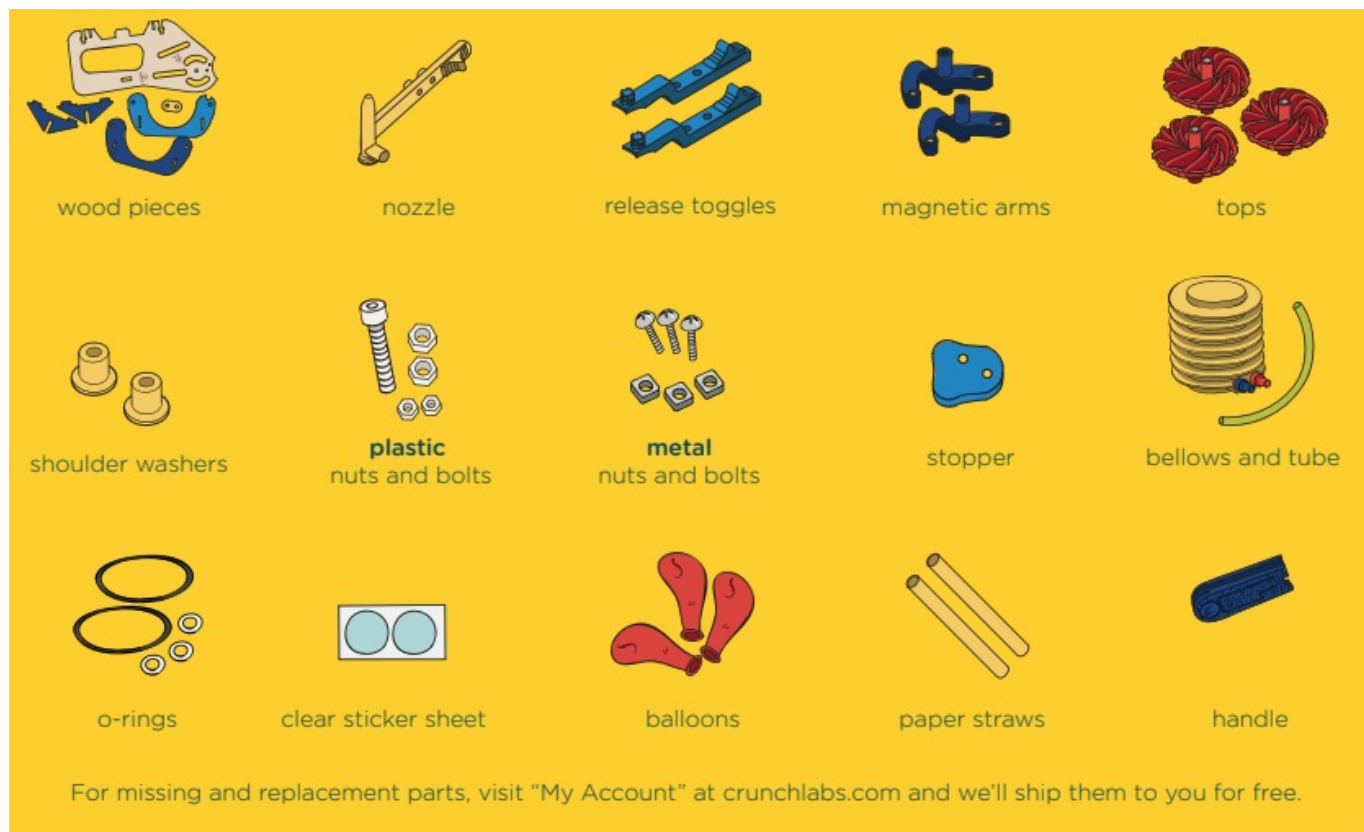
INSTALLATION INSTRUCTION

BUILD

1

twist

PRO TIP! ▸▸

Find this **wood piece**. It has a special wrench to help you tighten your nuts and bolts.

2

twist

3

4

twist
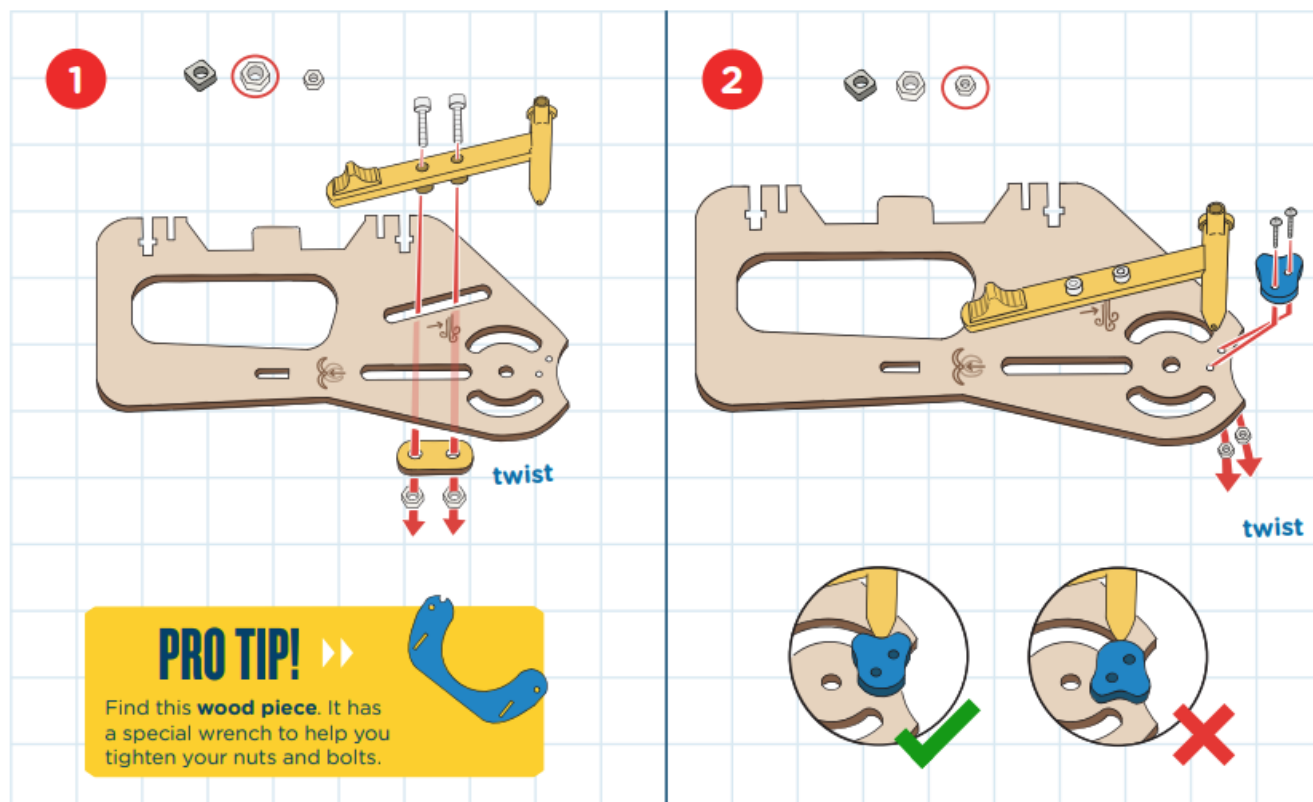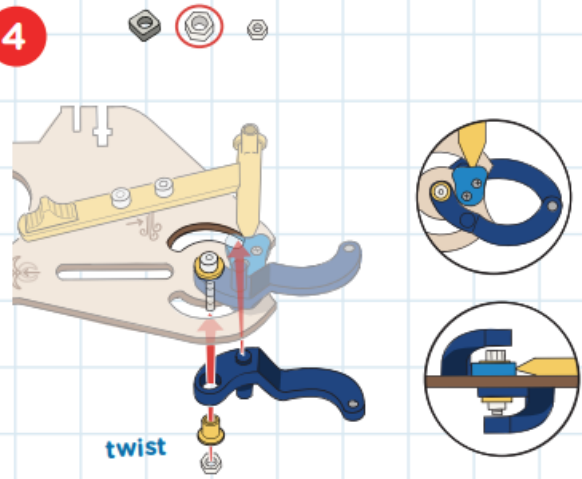
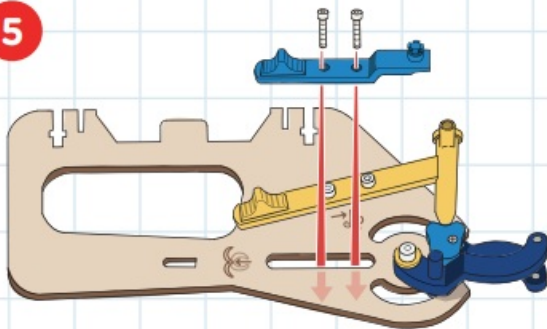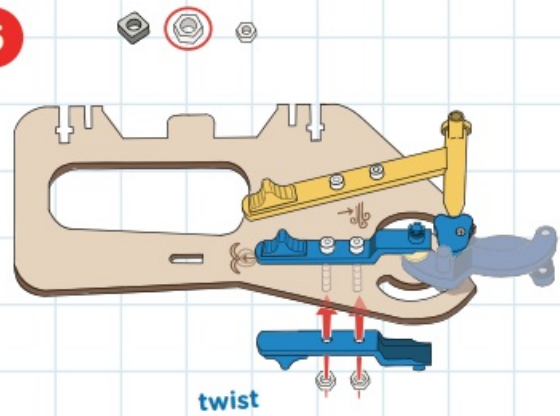## PRO TIP! ▸▸

After tightening the bolt with the wrench, the magnetic arms should still **move freely**.

5

6
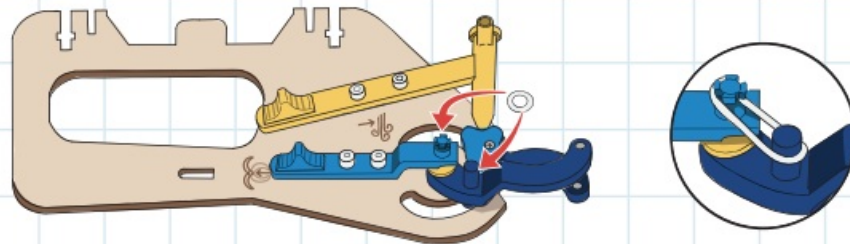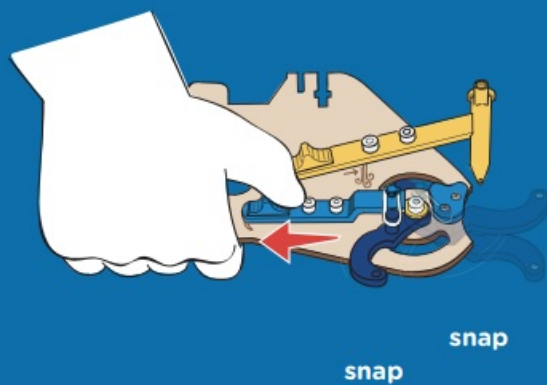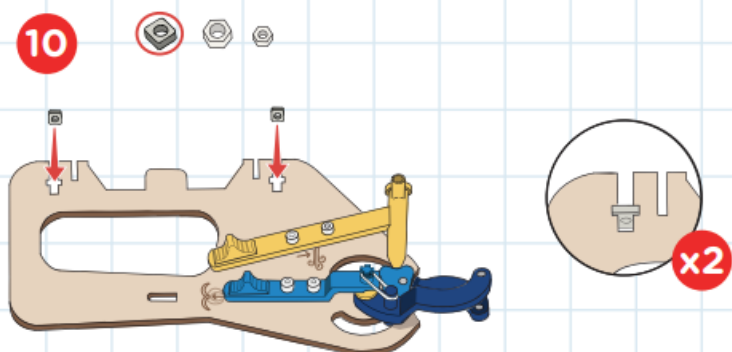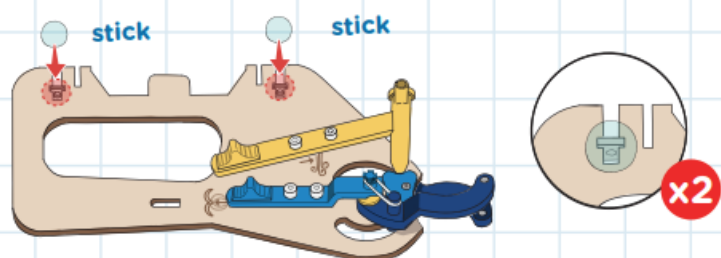
twist

7

8

FLIP
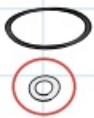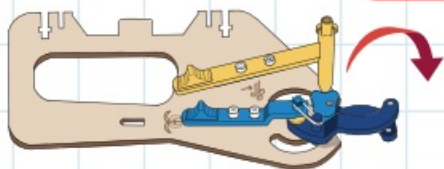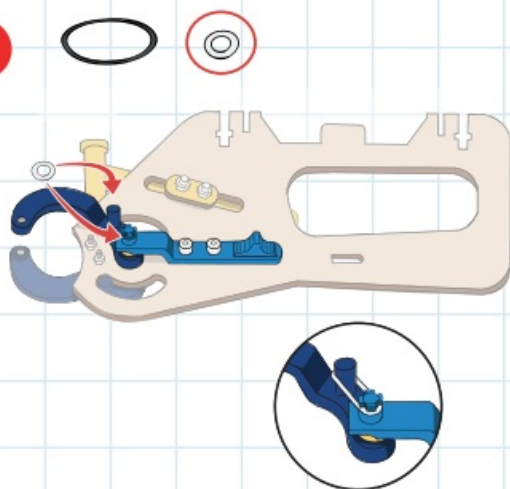
9

TEST

snap

snap

10

x2

12

11

stick   stick

x2

13

14

✔ ✘

15

x4

16

17

twist twist

18

19

TEST

press
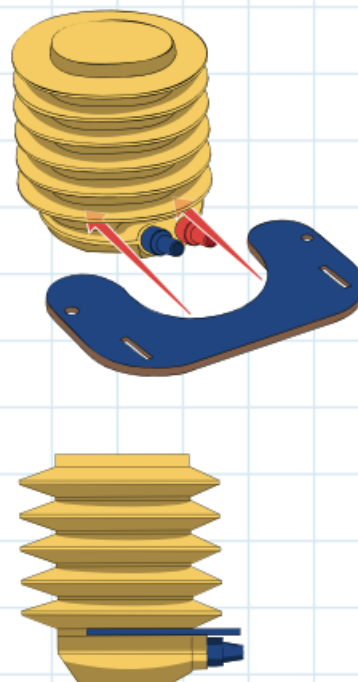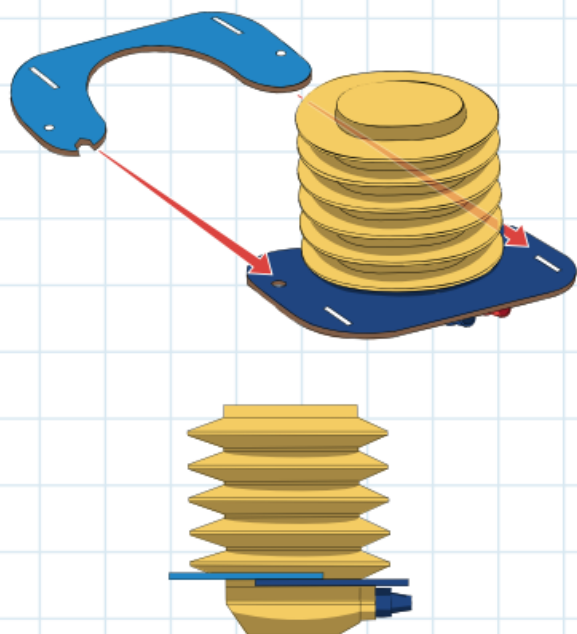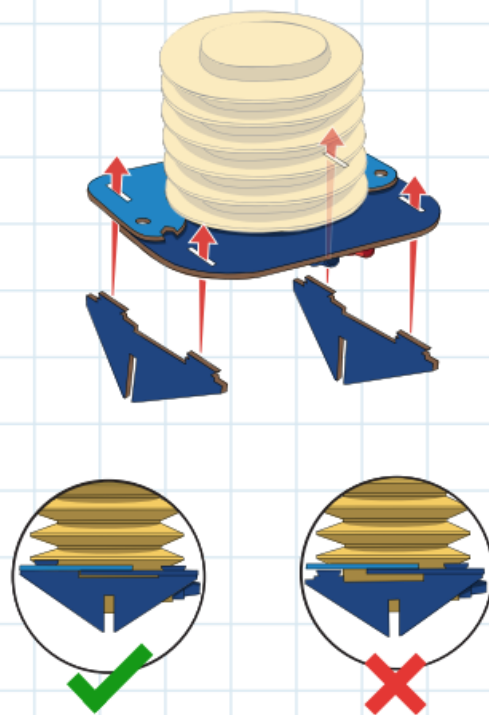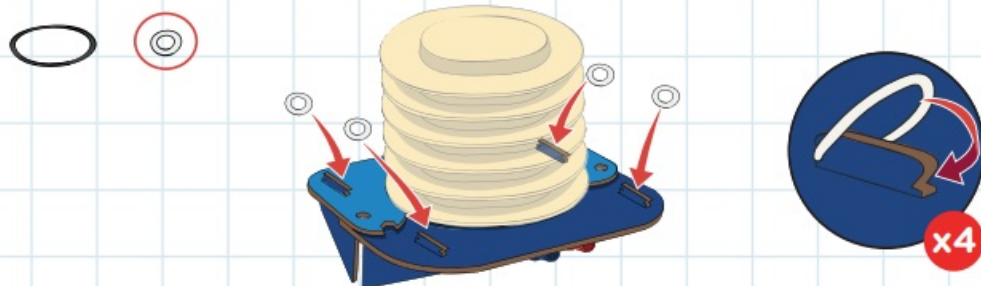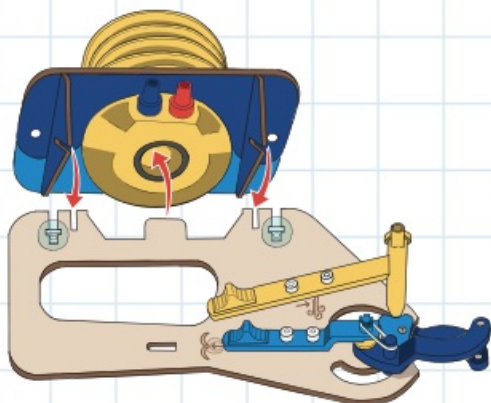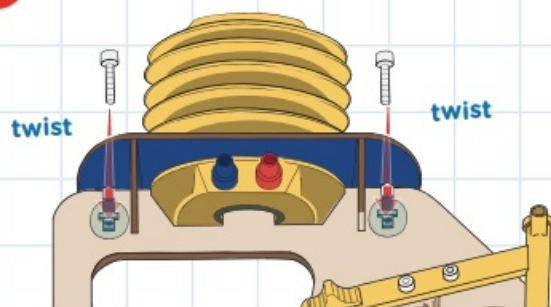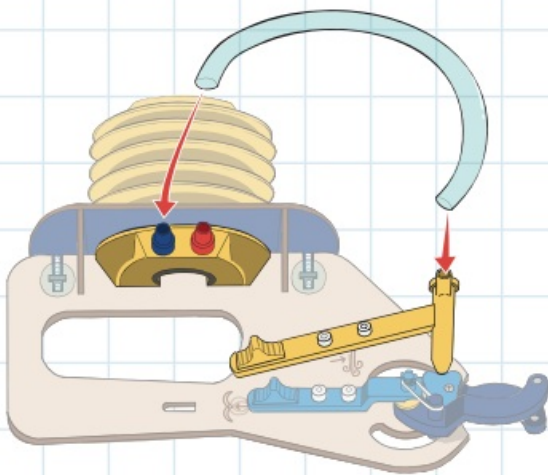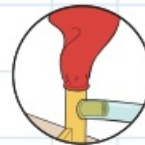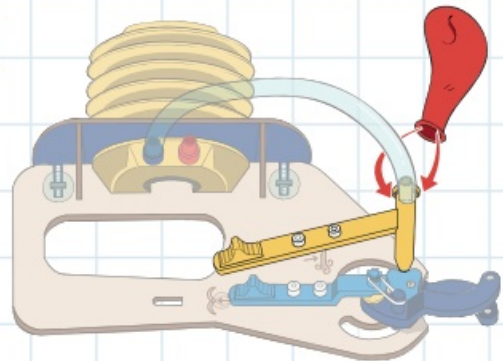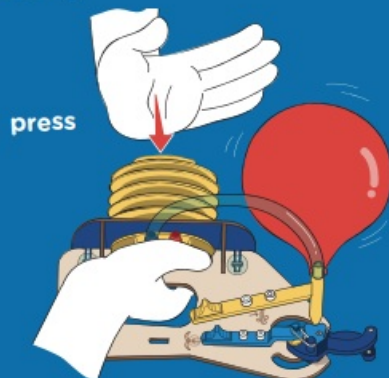
pfft

release air

retain air

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

20

21

22

BUILT!
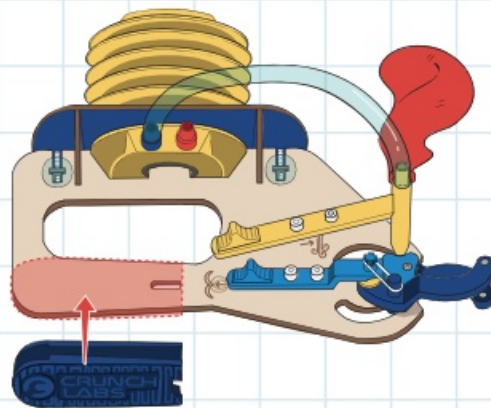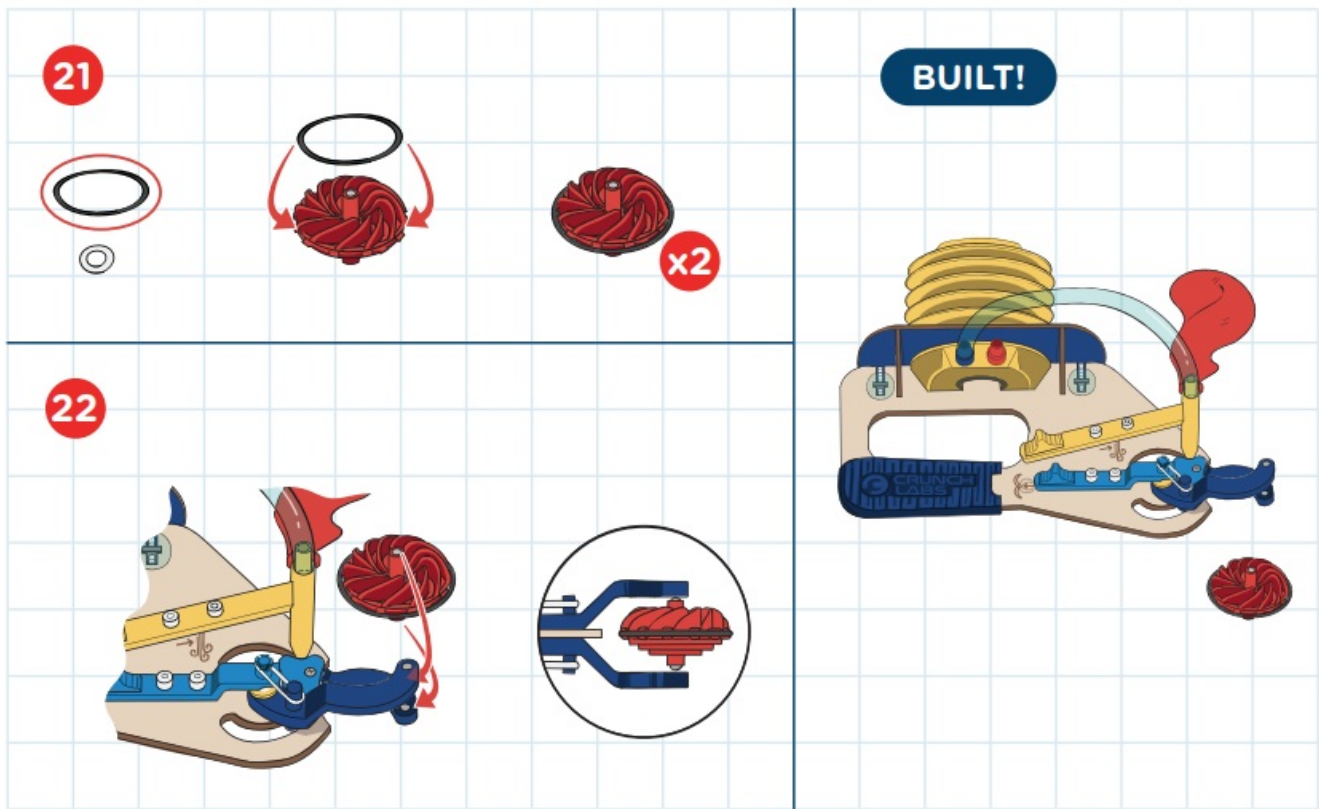
TEST

inflate balloon
by squeezing
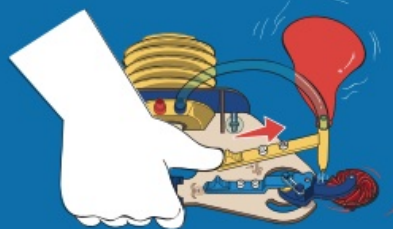
release the air to
spin your top

fire when ready!

psshh
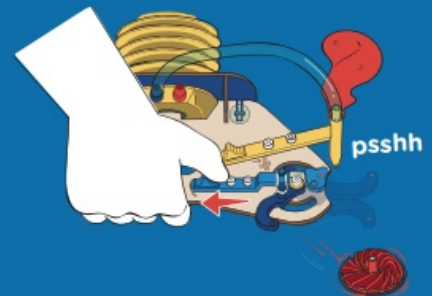
Having trouble? Watch the video at crunchlabs.com/spin

A turbine is a wheel or rotor that uses blades to extract energy from the flow of fluids. Basically, turbines use the flow of water or air to make stuff happen

Deep inside hydroelectric dams, high behind a windmill's blades, and held lightly in the hand as a colorful pinwheel, you'll find turbines. Unlike a fan, which uses energy to move air, a turbine captures energy from air. Windmills and dams use turbines to convert breezes and flowing water into electricity that can charge your phone or light your home.
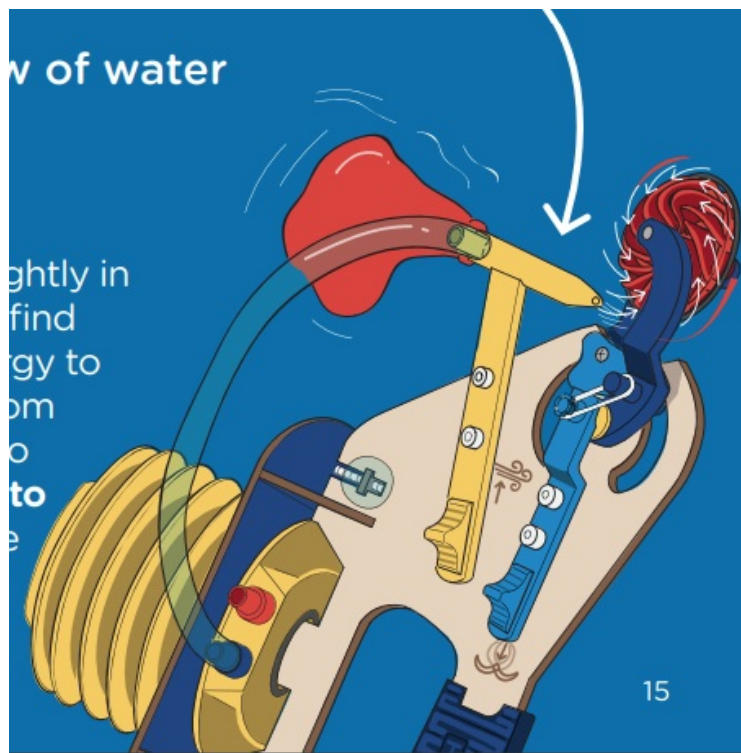
Turbines use curved blades to catch fluids like water, steam, and air. In Turbine Top, the balloon blows air into the top's blades, causing it to speed up!
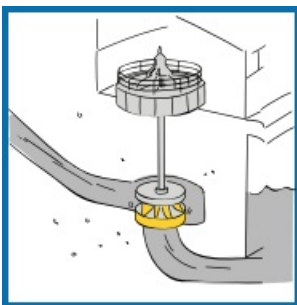
TURN TO POWER

Turbines are super common wherever electricity is generated. Hydroelectric plants use water flowing downstream to spin turbines and generate power.
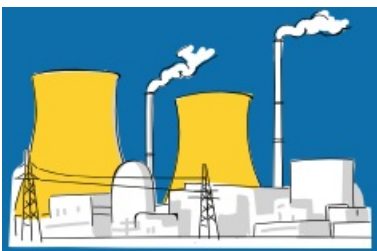
EVERYTHING RUNS ON TURBINES

Even coal, natural gas, and nuclear plants use turbines. Energy-dense fuels are used to heat water into steam, which pushes past the blades of massive rotors, causing them to spin. Unless your electricity comes from a biomass plant or solar farm, it's likely you have a turbine to thank!

CONGRATULATIONS. You earned a gear badge for turbine
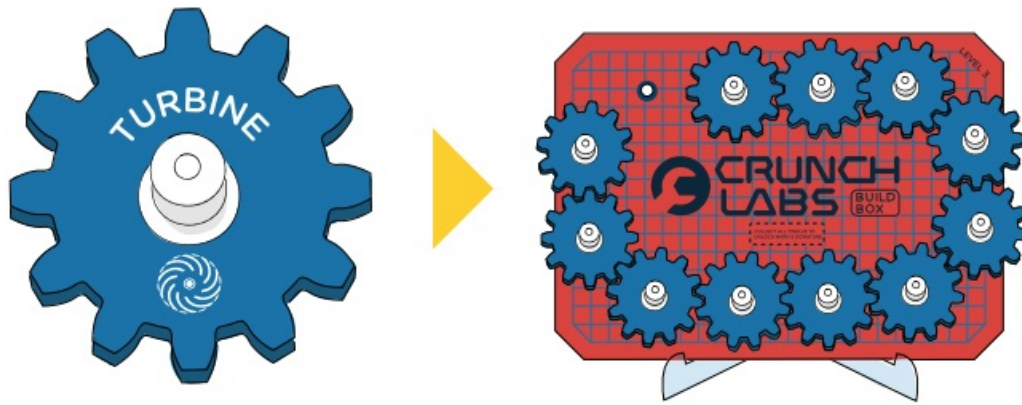
Don't forget to add your gear badge to your gear train!

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

TOP TIME TRIAL
How long can you keep your top going? What's the best surface to release tops onto for long-duration spins?

TOP TARGET
Turn the top sideways to create a rolling projectile! Set up other build box builds to create chain events, or mask off "goal" areas on a table and keep score.

THE LAST STRAW
Battle your friends to see who can use the included straws to keep their top spinning the longest. Up the ante by allowing opponents to blow on each other's spinning tops in reverse directions to slow them down!
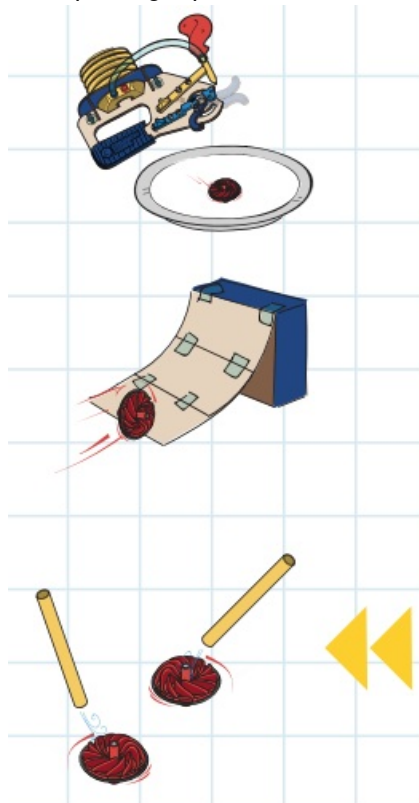
SHOW OFF YOUR BUILD
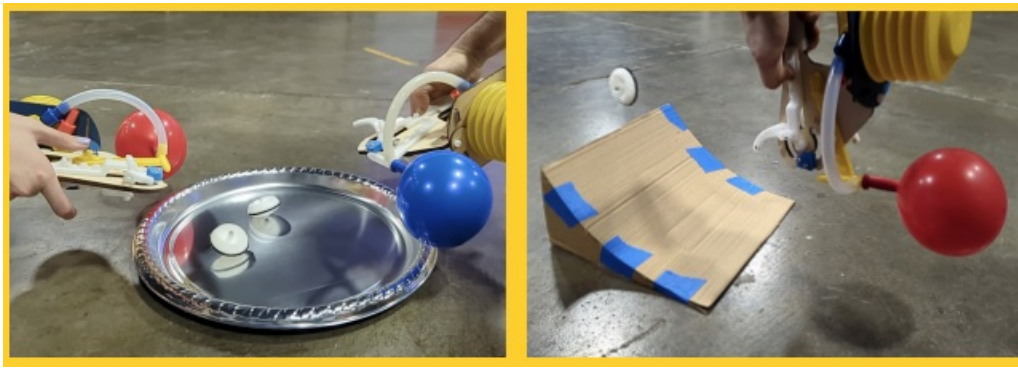
WARNING: CHOKING HAZARD: Children under 8 years can choke or suffocate on uninflated or broken balloons. Adult supervision is required. Keep uninflated balloons from children. Discard broken balloons at once. Made of natural rubber latex.

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. NO PURCHASE NECESSARY Can to leg tus. esidens, ever on age ronder. void where prohibited. or compere Official Rules, including the 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 them away. 2024 CrunchLabs LLC, All Rights Reserved.

Specifications

- Wood pieces
- Nozzle
- Release toggles
- Magnetic arms
- Tops
- Shoulder washers
- Plastic nuts and bolts
- Metal nuts and bolts
- Stopper
- Bellows and tube
- O-rings
- Clear sticker sheet
- Balloons
- Paper straws
- Handle

Product Usage Instructions

Build Process:

1. Twist the wood pieces together to assemble the base.
2. Use the special wrench to tighten the plastic and metal nuts and bolts securely.
3. Ensure the magnetic arms can still move freely after tightening the bolts.
4. Continue building by twisting and attaching components as per the manual.

5. Pre-stretch the balloons before placing them over the nozzle for easier inflation later.

Testing and Completion:

6. Follow the manual to complete the build process.
7. Inflate the balloons by squeezing and releasing the air to spin your top.
8. Fire the top when ready for action.

FAQ

Q: What should I do if I encounter difficulties during the build process?
A: If you face challenges, refer to the video tutorial available at crunchlabs.com/spin for visual guidance on assembly.

Q: How can I extend the spinning duration of my top?
A: Experiment with different surfaces for releasing tops to find the best one for long-duration spins. You can also engage in a top-time trial to challenge yourself.

Q: How can I engage in interactive top-spinning activities with friends?
A: Set up a top target challenge by turning the top sideways to create a rolling projectile. Create chain events with other build box builds or compete with friends using included straws to keep tops spinning, adding a twist by allowing opponents to blow on each other's tops in reverse directions.

Documents / Resources

CRUNCHLABS SPINv2 Turbine Top [pdf] Installation Guide
SPINv2 Turbine Top, SPINv2, Turbine Top, Top

References

- **CrunchLabs: Where kids & adults learn to Think like Engineers™**
- **CrunchLabs Build Box Platinum Ticket Sweepstakes**
- **User Manual**