



Disney  
**BIG  
HERO  
6**

# BAYMAX ROCKET FIST

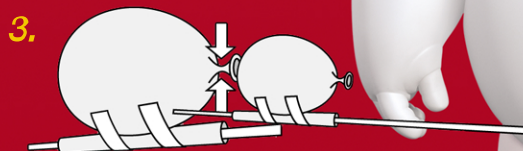
HELP HIRO MECH-OUT BAYMAX WITH THIS SUPER SCIENCE EXPERIMENT

## MATERIALS:

- Balloon
- Piece of string
- Plastic straw
- Sticky tape

## DIRECTIONS:

1. Tie the end of a piece of string to a chair, door knob or other solid object.
2. Thread the string through the plastic straw. Pull the string tight and tie the opposite end of the string to another solid object in the room.
3. Blow up a balloon and pinch the end (don't tie it). While holding the end, tape the balloon securely to the straw.
4. When you're ready to test your "rocket fist," let go of the end and watch the balloon go!



IN THEATRES NOVEMBER 7

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# BIG HERO 6



## HONEY LEMON'S CHEMISTRY CONCOCTION

Honey Lemon uses her knowledge of chemistry to battle the villain in "Big Hero 6." See what happens when you try out this simple chemistry experiment at home!

**SAFETY NOTE:** An adult should be present during this activity.



### MATERIALS

- Baking Soda
- Tissue
- Food Coloring (optional)
- Zipper Storage Bag
- Vinegar

### DIRECTIONS



1. Wrap a small amount of baking soda into a small tissue.
2. Pour a few tablespoons of vinegar into a zipper storage bag.
3. Have an adult help you place the wrapped baking soda carefully into the zipper storage bag holding it at the corner and making sure not to let it touch the vinegar yet.
4. Make sure the bag is securely sealed.
5. Let the baking soda drop into the vinegar and watch as your chemistry concoction bursts to life!

*\*OPTIONAL: Add different drops of food coloring into the vinegar for more fun concoctions!*



# BIG HERO 6



## GOGO TOMAGO'S FLYING LIGHT DISC

ACHIEVE THE PERFECT "LIGHT DISC" THROW WITH THIS FLYING DISC ACTIVITY!  
(YOU CAN USE ANY DISC-SHAPED GLIDING TOY OR SPORTING ITEM FOR THIS ACTIVITY)

### GOOD TO KNOW!

The two forces that act on a flying disc are **lift** and **drag**.

**Lift** is the force that keeps the disc in the air by using the disc's curved design to create low pressure above and high pressure below the disc as it cuts through the air. These opposing pressures thereby provide the lift. **Drag** is a resistant force that acts on the disc, perpendicular to the lift and acting against its movement through the air. The angle at which a disc is thrown will affect its lift and drag. Lastly, the spin on a flying disc will affect its flight – spin creates angular momentum to allow it to cut through the air. The faster the spin, the more stable its flight.

### TRY IT OUT!

- Lay out a long string in a straight line on the ground in front of you.
- Stand with your feet at a 90-degree angle from the end of the string with your throwing side closest to the string. Hold the disc with your arm across your body, and the disc near your non-throwing shoulder.  
**TIP:** To hold the disc, place your thumb above the disc, your index finger against the side, and your remaining fingers touching the underside of the disc.
- When you're ready to throw, straighten your arm quickly and flick your wrist, releasing the disc directly above the string. Point your index finger toward the opposite end of the string when you release, visualizing where you want the disc to end up.
- Keep practicing until you achieve your perfect "light disc" throw!  
**TIP:** Throw the disc flat horizontally OR tilt it at an angle upwards before you release. Observe how different angles affect each flight.





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# BIG HERO 6



## FRED'S SUPER-HERO INVISIBLE INK

USE SCIENCE TO SHARE SECRET MESSAGES WITH YOUR SUPER-HERO TEAM USING INVISIBLE INK!

### MATERIALS:

- Half a Lemon
- Bowl
- White paper
- Cotton Swab
- Lamp or Light Bulb

### DIRECTIONS:

- Squeeze 1/2 lemon juice into a bowl and mix in a few drops of water.
- Dip a cotton swab into the liquid mixture and, using the mixture as ink, write your super-hero secret message on the paper.
- Allow the lemon juice "ink" to dry so it becomes completely invisible.
- When you're ready to read your secret message, heat the paper by holding it close to a lamp or light bulb and watch the message appear!



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PG PARENTAL STRONG CAUTION  
ACTION AND PERIL,  
SOME RUDE HUMOR,  
AND THEMATIC  
ELEMENTS  
Some Material May Not Be Suitable for Children

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# WASABI'S LASER EXPERIMENTS

MASTER YOUR LASER KNOWLEDGE WITH THESE EXPERIMENTS USING A LASER POINTER & COMMON HOUSEHOLD OBJECTS!

## SAFETY TIPS!

- An adult should be present during this activity.
- Do not point the laser directly into anyone's eyes, including your own.
- Children should wear sunglasses or tinted goggles during this activity.
- Use a laser pointer with an output of less than 1mW. A keychain laser from a toy store works best!

## LIGHT BULB

In a darkened room, aim your laser pointer at a frosted incandescent light bulb. Observe the reflections both around and within the bulb!

## CD'S / DVD'S

Shine the laser beam over the underside of a CD or DVD. Experiment with different angles of the laser and observe how that changes the number and size of the resulting reflections.

## PLASTIC BOTTLE

Fill an empty bottle with water and a sprinkle of cornstarch. Dim the lights and aim the laser pointer through the bottle. Observe the resulting beams of light in and through the bottle!

## MIRRORS

Line up two small mirrors facing one another. Shine the laser beam between them and, adjusting the angle of the beam against the mirror surface, see what fun patterns you can create with the deflected light!