

# JR-ENGINEERS

# BALLOON ROCKET

Get kids thinking about how things go by setting up this super simple balloon rocket physics activity that is more like play!

## INSTRUCTIONS

**STEP 1:** Locate two anchor points across the room from each other like two chairs. Tie off one end of the string.

**STEP 2:** Thread the straw onto the other end of the string before tying off that end on the 2nd anchor point. Make sure the string is taught.

**STEP 3:** Cut out our rocket or draw your own. You could even use a sharpie to draw one on the side of the balloon.

**STEP 4:** Blow up the balloon and secure with a clothespin if desired or just hold it. Tape your paper rocket to the balloon.

**STEP 5:** Tape the balloon to the straw.

**STEP 6:** Release the balloon and watch your rocket take off!

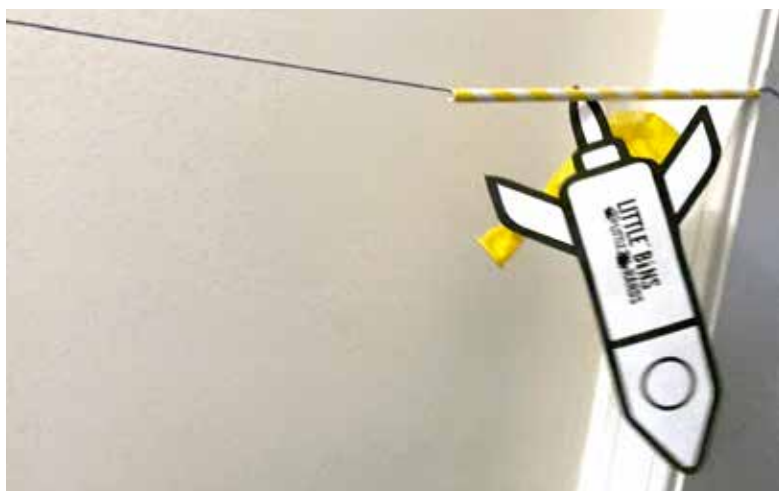
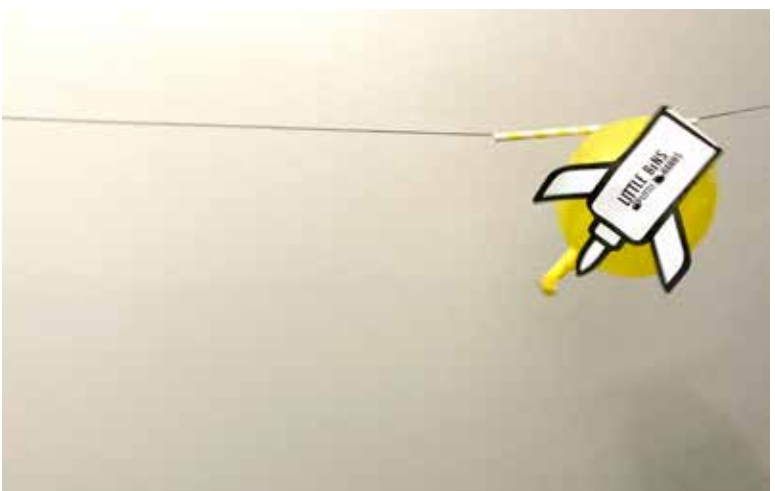
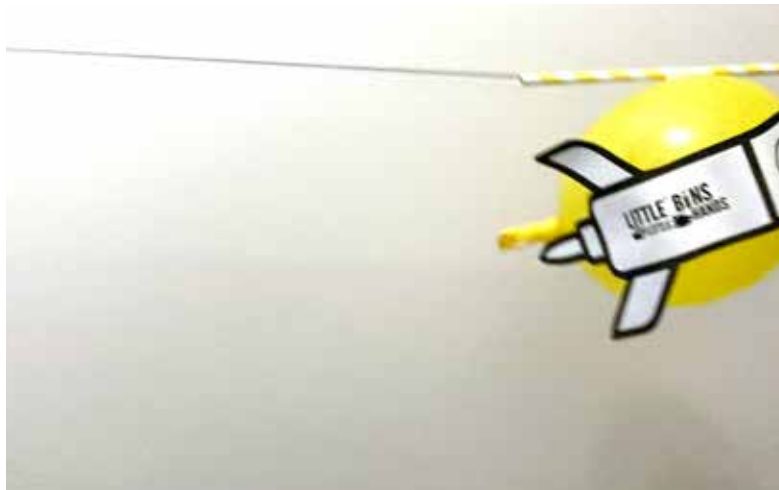
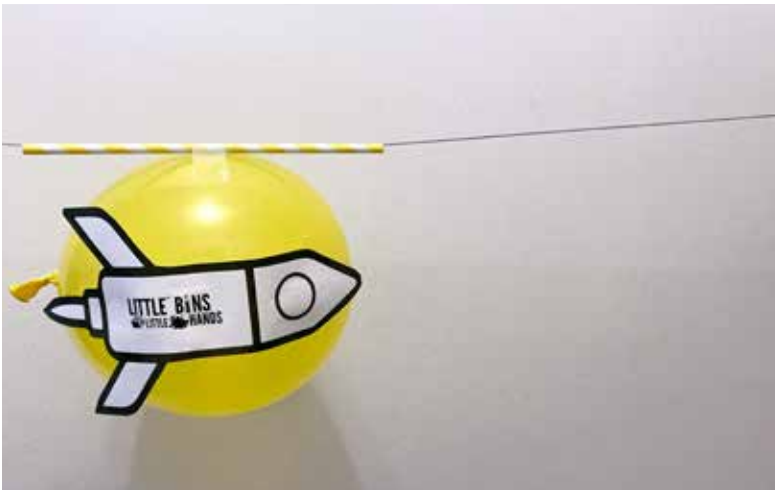
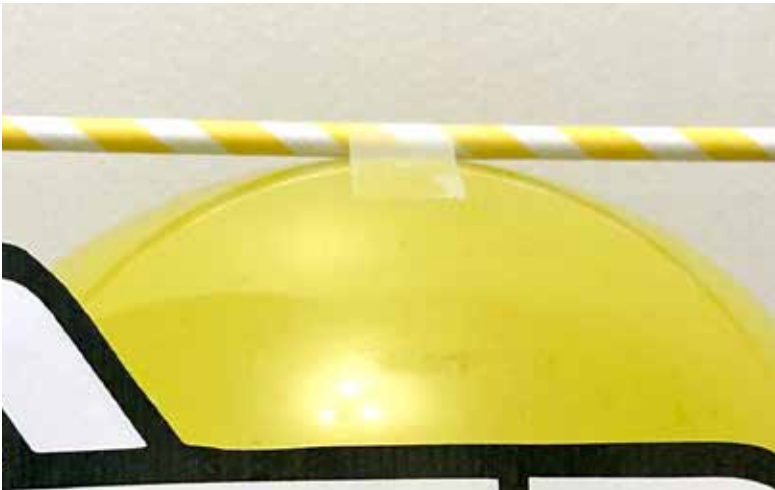
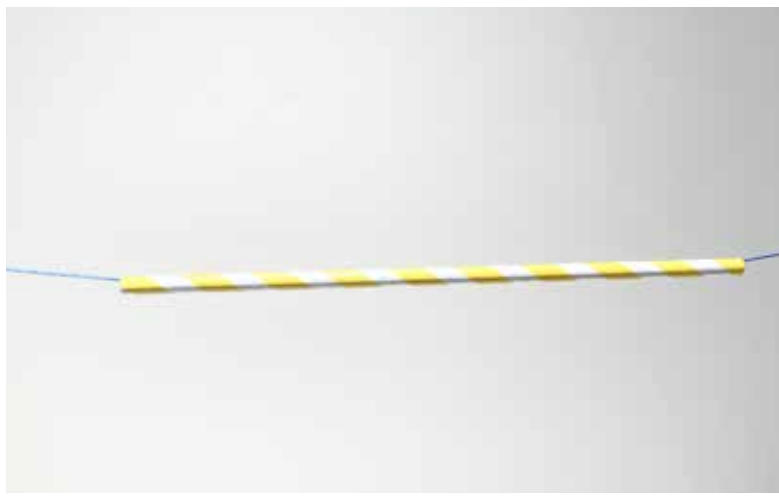
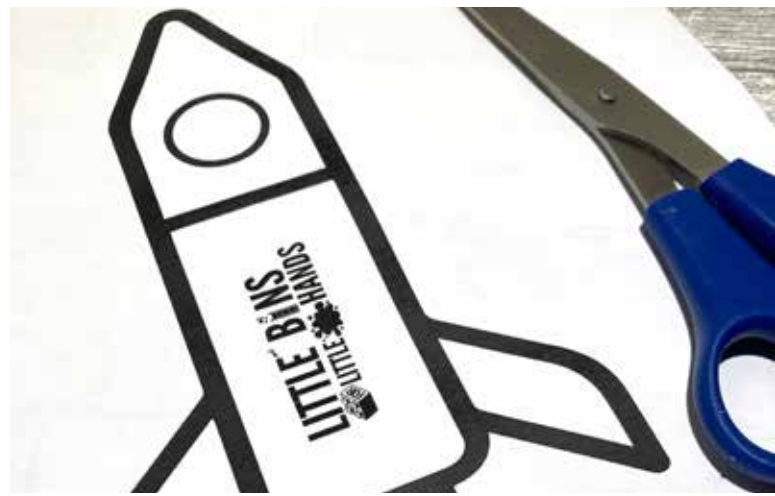
## THE SCIENCE

Let's start with thrust. You blow up the balloon, so now it's filled with gas. When you release the balloon the air/gas escapes creating a forward pushing motion called thrust! Thrust is created by the energy released from the balloon.

Then, you can bring in Sir Isaac Newton. For every action, there is an equal and opposite reaction. This is the third law of motion. When the gas is forced out of the balloon it pushed back against the air outside the balloon which then pushes the balloon forward!

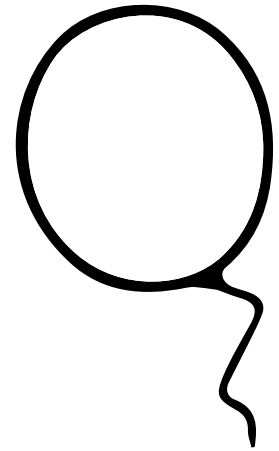
## SUPPLIES

Rocket Printout  
Balloon  
Tape  
Straws  
String  
A clothespin  
(optional)  
Scissors



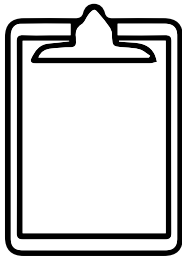
# Balloon Rocket Observations

Use this worksheet to process and evaluate your work.



Did your balloon rocket work? Did it need any adjustments?

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RECORD

Test and measure how far your rocket will fly!

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TRIAL 1

DISTANCE IN INCHES

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TRIAL 2

DISTANCE IN INCHES

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TRIAL 3

DISTANCE IN INCHES

If your rocket didn't work, what can you try next time?

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Test out different shaped balloons, change the angle of the string or the type of string, play around with the straw!