



Straw Rocket Challenge



Link to full directions from NASA: <https://www.jpl.nasa.gov/edu/learn/project/make-a-straw-rocket/>

1. Gather materials – paper, straw, tape, sharpened pencil, ruler, data sheet (printed or create your own). See photos of the materials and detailed directions needed in the link above.

Do

2. Design and make your straw rocket.
 - a. Cut out a paper rectangle for the rocket body. Decorate if wanted. Wrap the paper rectangle around the pencil lengthwise to make a tube and tape to secure.
 - b. Cut out fins (triangle shapes) for the rocket. Tape the fins onto the rocket body.
 - c. Twist the top of the rocket body tube around the sharpened end of a pencil carefully. This will help you make the nose cone of the paper rocket. Place a small piece of tape if needed on the nose cone to seal it up. *Why does the nose cone need to be sealed?*
3. Prepare to launch! Remove the pencil and place your rocket over the straw. Be sure your launch area is clear of people and hazards. Then, blow into the straw to launch your rocket.
4. Record the distance the rocket traveled on a data sheet.

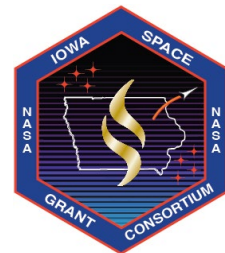
Reflect and Apply

5. Think about changes to make such as the length of the nose cone or different fin shapes and then launch again and again! Think about what worked well with your rocket and what you might want to change after each test.
6. Discuss or write about the following question: *How did your design impact your rocket launch?* Use your data table to help you answer this question.
7. Share your learning with others and a photo of your rocket on social media with an adult's permission. Hashtags: #4hAtHome or #IowaSpaceGrantConsortium

Follow-up NASA Videos:

<https://www.nasa.gov/artemis-1>

<https://www.nasa.gov/exploration/systems/sls/index.html>



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