



Challenger's Morning Science Segment:

August 17, 2015

Topic: Rocketry

Build: A straw rocket to launch

NASA soda-straw template [credit]:

<http://www.jpl.nasa.gov/edu/pdfs/sodastrawrocket.pdf>

Materials needed: soda-straw template / sharpened pencil / scissors / tape / straw

Building the rocket: Using the NASA soda-straw template (link above), cut out the rectangle. Wrap it around the pencil and tape to form the body of your rocket. Next cut out the two fins from the template. Align the fins opposite each other on the body of your rocket so that nothing sticks out past the body tube, and tape them. Then bend each fin 90 degrees so all 4 fins are perpendicular to the pencil. Finally, move the body of the rocket [opposite the fins] to the sharpened end of the pencil. Twist the body around the sharpened end of the pencil to form the nose cone and tape. To test your rocket, remove it from the pencil and place it on a straw. Blow on the opposite end of the straw and record how far it goes!

The science: [Credit NASA:

http://exploration.grc.nasa.gov/education/rocket/TRCRocket/paper_rocket.html]

“Paper rockets demonstrate how rockets fly through the atmosphere and the importance of having fins for control. For experimental purposes, try building a rocket with no fins and one with the fins in the front to see how they will fly. Practice flying the rockets on a ballistic trajectory towards a target. Also try making a rocket with wings so that it will glide.

This activity ties into the Challenger Learning Center of Maine: We have a rocket STEM program for Grades K-8. It allows young engineers to build a rocket using simple materials, and learn about the engineering design process, principles of flight and analyzing and communicating results. Check out www.astronaut.org to find details about bringing your school to the Challenger Learning Center!