



Challenger's Morning Science Segment:

December 12, 2016

Topic: Bernoulli's principle

Build: Air Cannon

Materials Needed:

Paper cut / pom pom (or cotton balls) / duct tape / plastic bag

Building an air cannon: First, with the scissors poke a hole centered on the bottom of the cup, slightly smaller than the size of the pom pom or cotton ball. Cover the mouth of the cup with the plastic bag and tape all around side of cup and the bag to make an air tight seal. Test the seal by blowing thru the small hole at the bottom of the cup to inflate the bag. When you push the air out of the bag, you should only feel air come thru the small hole at the bottom. You are ready to test with your pom pom. Inflate your bag once more, and push the pom pom so that it seals the small hole at bottom of the cup. Finally, push the air out of the bag and watch your pom pom FLY!

The science [credit: <http://pbskids.org/designsquad/build/air-cannon/>]

The Bernoulli principle with this build shows that air velocity increases as the pressure decreases. So the principle applies as the air travels thru the small hole unevenly, and it creates a vortex. The air moves faster in the center than the air at the edges. Thus observe the awesome power of the mighty air cannon.

This activity ties into the Challenger Learning Center of Maine, where students experience a newfound excitement for science, technology, engineering and math.

What's up next? Sign up for Challenger's December Vacation Camp, Dec 27-30. Each day is a different topic from Stories in the Sky to LEGOS! Sign up for one day or all days for Grades K-5. Don't miss out on this great week of STEM adventures. FMI- www.astronaut.org