



Challenger's Morning Science Segment:

September 4, 2017

Topic: Air pressure and Surface tension

Build: Water Glass Magic

Credit:

<http://www.physicscentral.com/experiment/physicsathome/magicwaterglass.cfm>

Materials Needed:

Glass / water / notecard / sink or bowl

Defying gravity with a glass of water: First fill a glass of water to the top of a glass. Next place a notecard over the top of the glass. While holding the notecard in place, quickly flip over the glass so the opening is pointed down. Then finally let go of the notecard. What happens?! Did you make a watery mess or is everything dry?!

The science:

[<http://www.physicscentral.com/experiment/physicsathome/magicwaterglass.cfm>]:

Atmospheric pressure is pushing up and holding the card in place. This is a high pressure zone. Now at the bottom of the glass [physically in the top position now] there is a small pocket of air. This is now an area of low pressure. This "low pressure zone in the glass prevents the water's weight from pushing the card down." Also at work, there is surface tension of the water with adhesion of the water molecules that are attracted to the paper. Overall, "the note card doesn't fall down because of the difference in pressure and it doesn't slide off because of surface tension and adhesion. "

Upcoming at the Challenger Learning Center of Maine: Challenger holds a bi-annual e-waste event for the public and businesses from any community. The event will be held at Challenger in Bangor on Saturday, Sep 16, 2017 from 9 AM – 1 PM. Help support this important fundraiser and take advantage of the opportunity to recycle your computers, TVs, monitors, keyboards and more. FMI-

www.astronaut.org