

## How Things Work

The Stars Challenge at Monmouth University 2009































The Stars Challenge Class How Things Work busy at work.



## How Things Work

Physics is phun! Physics is amazing! That was the consensus of the students taking the Star's Challenge course **How Things Work**.

Each week, the students investigated one or two physics principles by building a "toy" that demonstrated these principles.

Some of the "toys" built included a model of the swing ride at Great Adventure to demonstrate centripetal force, the singing cup to demonstrate sound, the magic electric pie plate to demonstrate static electricity, the balancing potato man to demonstrate center of gravity and a telescope to demonstrate the bending of light rays. These were just a few of the "toys" constructed by the students to take home and share with their family and friends.

I hope that the students shared with their family and friends that learning physics is not only phun but also a key to understanding how things work. Mr. Valente



Sara! Keep that tornado in the bottle.



Conner is amazed with the balancing potato man.



Lauren can't wait to amaze her friends with the balancing spoon and fork trick.



Muhammed helps Ryan "feel" rotational inertia. Andrew and Jack are fascinated with gyroscopes.



Patrick experiments with rotational inertia.



The class competes in the balancing soda bottle competition. The winner gets donuts! Yum.



Steve tries to master the torque tester.



The class tries to measure their horsepower.



Ryan and Ryan try to figure out which ball wins the race. Mr. Valente demonstrates the shooting ball trick.



Blake makes his kazoo.



The class watches as Mr. Valente demonstrates an antique record player and the singing rod.



Blake doesn't like the sound of the singing cup but Sara does.



Andrew is surprised at how the hanger rings in his ears. The class makes laser patterns on the ceiling with the laser sound can.



Lauren and Steve get a shock out of physics.



Ryan, Muhammed and Andrew try their hand at the floating static charger competition.















![](_page_18_Picture_7.jpeg)

![](_page_18_Picture_8.jpeg)

![](_page_18_Picture_9.jpeg)

![](_page_18_Picture_10.jpeg)

![](_page_18_Picture_11.jpeg)

![](_page_18_Picture_12.jpeg)

![](_page_18_Picture_13.jpeg)

![](_page_19_Picture_0.jpeg)

![](_page_19_Picture_1.jpeg)