

COOL STUFF EXHIBITION TOUR

Through richly-varied content and elegantly eccentric design, *Cool Stuff* embodies the mission of Discovery Place to ignite wonder by providing extraordinary learning experiences. By pushing the boundaries and exploring physics in interconnected ways, *Cool Stuff* generates those surprising “a-ha” moments where true discovery and learning take place.

Cool Stuff features three, main areas: **LIFT, LOOK/MOVE and PUSH.**

LIFT

“What goes up, must come down” is a fundamental but fun principle of physics. Exhibits in this area focus on the activity of lifting, making things go up or keeping objects airborne. Each exhibit uses a unique physics action to accomplish the “launch”, allowing visitors to compare and contrast different physical means of accomplishing a similar task and to build a more comprehensive view of the science behind the “launch” action.

- **Magnetic Ring Launcher**

Electrical energy, in the form of a magnetic field, is the power behind this exhibit. Visitors activate an electromagnetic field which sends a pulse to an aluminum ring, instantly blasting it high into the air and up a tall pole before falling back down.

- **Tennis Ball Launcher**

Using a rope, participants raise and drop a 16-pound bowling ball to compress air and propel a tennis ball into the air. Experimenting with the height of the bowling ball’s drop and seeing the corresponding rise of the tennis ball allows visitors to discover the connection between compression and propulsion.

- **Hydrogen Ping-Pong Launcher (*Opens early 2010*)**

Visitors trigger a contained chemical explosion of hydrogen that launches a ping-pong ball up a tall, clear tube with a surprising bang!

- **Astro Blaster**

Guests use momentum gained from gravitational acceleration to create an amazing transfer of energy from one ball to another.

- **Air Chair (*Opens early 2010*)**

A classic Electrolux vacuum becomes the tool to create a pressure differential great enough to lift a seated participant several feet in the air.

- **Bernoulli Blower**

Participants experiment with the lifting and levitating properties of air pressure by using directed streams of air to keep balls floating in mid-air.

- **Bed of Nails**
Guests are lifted up several inches above a bed of 5,000 nails.
- **Pulley Chair**
Guests test the effectiveness of different pulley configurations and try to determine which configuration requires the least amount of effort to lift themselves in the air.

LOOK/MOVE

Focusing on the strange and beautiful feats of physics that involve motion, light and heat, exhibits featured in this section illuminate bizarre aspects of the physical world. Guests can make visible the ordinarily invisible forces of physics through these experiences. The wave motion of energy, electromagnetic fields and gyroscopic forces serve as the medium for exhibits that cross the line between scientific experiment and artwork. Participants also can explore light and heat energy, their connections to our bodies and our ability to communicate in surprising new ways.

- **Lariat Chain**
Guests send pulses through a beaded chain to create one long wave that flows over the full length of the chain, creating mysteriously strange and beautiful motion.
- **Gyro Briefcase**
Visitors experience some truly strange motion as they experiment with inertia and momentum. A whirring gyroscope in the briefcase causes their chosen direction to not go quite as planned.
- **Dancing Trees**
Visitors will be captivated by a display of 64 magnetic “creatures” dancing to music. Visitors can pick a song and watch as the iron dust “creatures” rise, fall and ripple in amazingly beautiful patterns.
- **Laser Spy (*Opens early 2010*)**
Visitors take aim and discover how light can be translated into sound with this fun spying device.
- **Thermography**
Visitors are able to view themselves as radiating beings as they view the heat given off by their bodies in the form of light.
- **Fiber Optic Magnifying Lens**
Guests learn about the properties of light and how it can travel in a different direction as light bounces from surface to surface.

PUSH

How do forces make objects move? How can we use pushing and pulling to our advantage? Visitors can explore concepts of mechanical advantage, energy transfer and air pressure in these exhibits. Participants can explore how mechanical advantage can give enough force to succeed at feats that would normally be beyond one’s capabilities. These exhibits display the idea of “push” and the

related idea of “pull” in very different but equally dramatic ways. Visitors also can harness the power of air pressure and put “push” to work in a variety of ways to accomplish tasks.

- **Crush a Can**
This exhibit provides the mechanical advantage needed to turn a child’s energy into the force needed to flatten a 30-gallon metal trash can.
- **Giant Lever**
Kids can take on their parents and win a seemingly impossible tug of war match.
- **Hydraulic Arm Wrestling**
By experimenting with different pairs, shapes and surface areas of pistons, visitors can begin to gain an understanding of a different approach to the physics of pushing.
- **Vortex Cannon**
Using the large, 42”-diameter Vortex Cannon, guests can shoot a powerful, basketball-sized pocket of air that can be felt 30 feet away.
- **Capstan Fan Ball Fall**
Visitors turn their own pushing motion into wind power that, in turn, powers the mechanism of a ball fall display.
- **Sailboat Racers**
Visitors experiment with a real-world application of sail angles, wind and air pressure by sailing small ships.
- **Gizmotron**
Geared to explore the science behind simple machines in a hands-on way the Gizmotron offers a learning opportunity through collaborative play. Guests work as a team on this compound machine, moving plastic beads in a large cycle.

###

For more media information or visuals please contact:
Natividad Lewis, Marketing and Public Relations Manager
Tel: 704.348.1972 / E-mail: Natividadl@discoveryplace.org