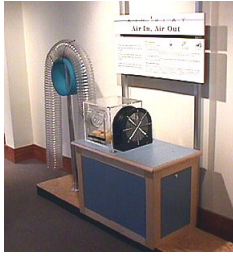


AirPlay Exhibit Descriptions



Air In, Air Out

A big fan moves air from left to right. As the fan moves the air out of the left-hand chamber, it creates an area of lower pressure. Air at the normal air pressure constantly rushes in through the hose to refill the box, working much like the vacuum cleaner you use on your carpet.



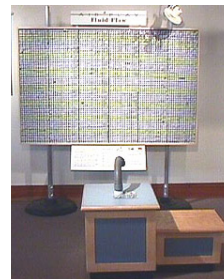
Ball Floaters

This is like juggling with air! See how many small foam balls you can balance from the airstreams coming out of several transparent tubes. Discover how to get the balls to drop down into one tube and pop out of another, to balance more than one on a stream of air, and to balance halfway up the tube.



Aeolian Landscape

Discover how moving air changes the shape of the landscape! Watch as the air blown by a fan moves and rearranges sand inside the chamber. Notice that the sand always creates patterns, not smooth surfaces.



Fluid Flow

We can't see air, but we can see its footprints—waving flags, ripples on a pond, or swaying fields of wheat all indicate that air is moving. Turn on the switch to this exhibit and direct the air hose at the wall of flutter disks. The disks move in a “watery” way because air flows a lot like water.



Air Cannon

No ammunition needed except a gentle slap on the rubber backing of the “cannon.” After you strike, watch the flutter disks on the wall—you can see the “shape” of the air puff striking the disks. A rubber mat with highlighted footprints encourages you to stand in the path of the air puff to see what it feels like to be hit with a cannonball made of air. Fire away!



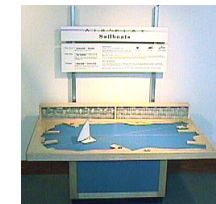
Fluttering Fabric

This is the entrance piece to the exhibition, and is a set of fabric panels which flutter and flap as air blows upwards from their base. A mesmerizing effect!



Air Maze

Engineers who design heating duct systems for houses have to figure out the number of turns and lengths of all the air passageways before they can decide on the size of ducts and fans. They know that before air can flow into a passageway, there must be an opening at the end of the passage. Blow a foam ball through the maze - see if you can change the direction of the ball by opening or closing the doors. It's air-mazing!



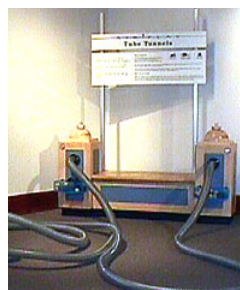
Sailboats

Until the curved sail was developed, mariners had to row, row, row their boats against the wind. When moving air pushes directly on the sail, it gives up some of its energy to the sail, and pushes the sailboat along in the same direction. Give it a try yourself by sailing model boats away from, across, and into the wind.



Air Race

Air flowing through a passage rubs along the inside of the tube and its flow becomes turbulent. The longer (or more “wiggly”) the passage, the more energy air will lose. In this exhibit, you and a friend can “race” two small balls by dropping them through a pair of blowholes at the same time. Their paths are exactly the same length: Which ball will arrive at the finish line first?



Tube Tunnels

Air flowing through a tube pushes the ball along with it. Put a short tube on one of the air “hydrants” and run a ball through it. Or, add sections of the tube to make the path longer. Does the ball behave differently? What happens if you cover the end of the pipe with your hand?