



Exhibits



1. Wooden Wave

Dimensions: 3 feet by 3 feet by 30 inches high

Description: This exhibit looks a bit like a wooden xylophone. It consists of a box with a top made of beautiful wooden slats. Visitors twist one, or both, handles on the front of the box to make the slats undulate in a variety of waves. Visitors can look through one of two plexi windows, or pull the slats up one by one to see the mechanism of off-center cogs on two shafts that make these solid wooden pieces appear fluid.

Concepts: Although none of these concepts are explicitly stated, the inspiration behind this exhibit was the nature of wave motion – that even though it may look as if a wave is moving across the box towards you, the actual wooden pieces are moving only up and down – not horizontally. Some visitors try to make the wave come straight towards them through careful manipulation of the two handles – it's a bit like an etch-a-sketch. Others place balls or other materials on the top and make up games with their own rules.



2. Rainbow Drums

Dimensions: 3 feet by 3 feet by 3 feet high (at highest point)

Description: This exhibit consists of nine clear acrylic tubes ranging in height from 12 inches to 36 inches. These tubes are arranged in a circle on a sturdy 3' by 3' by 12" platform. Each tube has a few inches of colored water in the bottom, and large, multicolored flip-flops scattered around the outside. Visitors smack the tubes over their tops with the rubbery flip-flops to create a pleasing sound. For those who look closely, the action also creates ripples in the water at the tubes' bottoms.

Concepts: The inspiration behind this exhibit was "Blue Man Group" (who hasn't wanted to hit those drums and make paint fly!) although we tried to make it a bit tidier for mass consumption. We like the idea of multiple people using this exhibit at the same time to create new songs. One could also, if one wished, get into the science of sound waves and notice how the amount of air space in each tube effects the note it produces.



3. Sand Table

Dimensions: 3 feet by 3 feet by 30 inches high

Description: This exhibit is incredibly simple, yet mesmerizing. It consists primarily of a board with holes drilled through it, and deeply colored sand to pour through it. The board fits into a slot in the sand table so that when sand is poured onto it, visitors can look through a window below to see the sand fall, and pull the board up to see the pattern the falling sand made below. The table has spaces for two boards, and an additional two boards with different patterns of holes and lines that can be switched out. Measuring cups and large paint brushes lie in the sand table for whatever use someone may have for it.

Concepts: The designers were inspired by sand going through a sieve. It is a really simple concept – yet our evaluations from FooFest and Waterfire indicate that the sand table is the crowd favorite!



4. Magnetic Poetry

Dimensions: two panels, each 18 inches by 18 inches by 78 inches high

Description: This exhibit consists of a brightly painted magnetic wall, and large pieces of magnetic poetry. The magnetic walls are very lightweight, and are also tall and thin, so they will need to be attached to the wall, or to a heavy bookcase. This exhibit has successfully been shown at the Exeter Public Library and other public venues. We bring screws and mounting thread and will fix the exhibit in place.

Concepts: The designers wanted a place for literacy and creative synthesis of the art/science concepts in our other exhibits. This was a place to emphasize the fact that both science and art require communication.



5. Light Pendulum

Dimensions: 3 feet by 3 feet by 40 inches high

Description: This exhibit consists of a low table, coated with photosensitive paint. Above the table, suspended by a copper frame, is a pendulum made from a flashlight with a uv bulb. As the pendulum is set in motion, it describes its path in glowing green light on the table. The older parts of the path slowly fade away as the pendulum moves on. A black cloth hood over the top part of the copper frame helps keep ambient light at bay, so the images made in light are clearer.

Concepts: The designers were inspired by the intricate patterns inscribed by pendulums in sand – but we wanted something less messy and with an easier re-set! The light adds a “wow” factor of coolness as well. We recommend that this exhibit is placed away from direct sunlight, and in as dim a place as possible.



6. Gear Table

Dimensions: 6 feet by 3 feet by 5 feet high

Description: This exhibit consists of a low table, coated with photosensitive paint. Above the table, suspended by a copper frame, is a pendulum made from a flashlight with a uv bulb. As the pendulum is set in motion, it describes its path in glowing green light on the table. The older parts of the path slowly fade away as the pendulum moves on. A black cloth hood over the top part of the copper frame helps keep ambient light at bay, so the images made in light are clearer.

Concepts: The designers were inspired by the intricate patterns inscribed by pendulums in sand – but we wanted something less messy and with an easier re-set! The light adds a “wow” factor of coolness as well. We recommend that this exhibit is placed away from direct sunlight, and in as dim a place as possible.



7. Spin Art

Dimensions: 10 inches diameter, 0.5 inches high

Description: This tabletop exhibit consists of a lazy susan and three squeeze bottles of paint. The paint is not only different colors, but each color is a different viscosity. Blue is the thickest, yellow is the thinnest and red is in between. Visitors place a 4" x 4" sheet of transparent plastic (like the kind that used to be used in overhead projectors) on the lazy susan, and squirt paint on it as they spin it.

Concept: This exhibit is a basic spin art, except for the fact that the different viscosities of paint move at different speeds when the lazy susan is spun. Although very simple in concept, when tested with local 7th and 8th graders, it was very popular. Each of the students reported that they were surprised by the motion of the paint (that it moved AT ALL). It became apparent that the toys and hands-on experiences with which many of us grew up are missing in today's youth.



8. Naked Piano (background)

Dimensions: 55-60 inches long, 20-25 inches deep, ~45 inches high

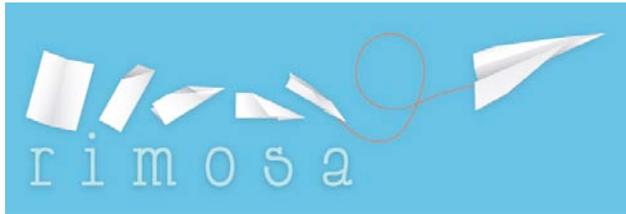
Description: This working, upright piano has had the covers removed so that visitors may see the intricate, mechanical inner workings as they press the keys, use the foot pedals or play a tune.

Concept: The combination of music with mechanics and demystification of a common instrument - including a "behind the scenes" feeling - is very compelling.

9. Cloth Wave (middle ground)

Dimensions: Center box - 3 feet by 3 feet by 30 inches high. Cloths - roughly 6 feet by 24 inches each. This may be displayed with all cloths attached, or any of the cloths may be removed to make a more streamlined exhibit.

Description: This exhibit is most effective and popular with large numbers of visitors present. Although there are no instructions (allowing for a number of games to be invented), visitors tend to place the three 5" diameter soft, cloth balls onto the cloths and, by lifting the end of the cloth rapidly up and down to make a wave, try to bump the ball into the center box. Some just see how high they can bounce the balls. Some simply like to look at the waves. In anticipation of visitors trying to sit on the cloth - each cloth is attached to the center box with Velcro. Too strong a pull on it will cause it to simply come off. Visitors then have the opportunity to do some quick problem solving and put it back together themselves!



Concept: This exhibit was part of the Transfer of Energy suite, an intended to show how energy can move from visitor, to cloth, to ball (and then originally the balls were supposed to hit chimes suspended from the ceiling to transfer the energy from motion to sound). We also see it as an exercise in creativity (what game can they invent with these balls and cloths) as well as gross muscle activity.

10. NOT Pictured: Bubble Wall

Dimensions: 5 feet by 30" feet by 6 feet high.

Description: Designed from plans purchased from the San Francisco Exploratorium, our bubble wall is an exact copy of theirs. Visitors hoist a roughly 60 inch pvc bar out of a trough of soap solution to create a large (5 feet square) wall of bubble film swirling with color, as bubbles do. Visitors can blow gently to distort the wall and have it snap back when they cease.

Concept: This exhibit can be used to discuss surface tension, optics, nanscale science (the swirling colors are due to interference of light waves reflected by the "front wall" and "back wall" of the thin film which makes up bubbles, nanometers thick.) But it's really just fun to play with.