MATHALIVE! PHOTO DESCRIPTIONS

[Photo credits: MathAlive!]

Boardercross … Snowboard Experience [Images 1, 2, 3]
Visitors challenge each other to a snowboard race. By twisting and torqueing their bodies, they can angle their boards and fly over obstacles, the results of their efforts displayed on an immersive screen. This interactive helps players understand the impact of changes to angle size.

Game Developer [Images 8, 9, 10]
Visitors race against a timer to design and program a game object at a touch-screen workstation. Rickshaws are designed and launched into the game to see how the properties assigned to each rickshaw's design effect its survival.

Get a Grip … Rock Climbing [Images 11, 12, 13]
Visitors test their mountaineering ability with a horizontal climb around a rock wall. By measuring height and arm span, then plotting the results of ratio of arm span to height on a scatter plot, they can determine how efficient they are as a rock climbers compared to others.

Ramp It Up … Build a Skateboard with POP [Images 14, 15, 16]
Visitors design a virtual skateboard that performs an *Ollie*, a popular trick. The interactive shows how manipulating variables in different dimensions - such as wheel size, wheel placement and board length - can optimize effect.

Curiosity Rover [Mars Rover, Images 17, 18]
Visitors control the movements of a virtual Curiosity rover on a flat tabletop touchscreen as it moves across a Mars landscape, by entering a series of commands to maneuver past obstacles. They are exploring programming and mathematical language.

Flicker Fusion … Make a Movie [Images 19, 20]
Visitors create a perfect animation by choosing the optimum frequency of rotation and optimum frequency of flashing light. The same principles and techniques are used in making modern animated films.

Mix It Up … Giant Musical Instrument [Images 21, 22, 23, 24]
Visitors adjust the controls on a mixing desk and add or subtract instruments on a giant super-instrument, to affect the composite sound on a continuously looping soundtrack; they are exploring the mathematical relationships involved in rhythm pitch and frequency in music.

On Target … NASA Robot [Space Walk, Images 25, 26, 27, 28]
Visitors operate a viewing camera on a robotic arm that extends from a 3-D version of the International Space Station. Here they are exploring the coordinate system as a way to locate objects in two-dimensional space.

Style Revolution … **360-degree Photo Shoot [Images 29, 30, 31]**
Visitors step onto a photo stage, pose and have their image captured in 360 degrees, using the same freeze-motion technique made famous in contemporary action movies. They are exploring the inverse relationship between the number and size of the cameras' angles.

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