[Photo credits: MathAlive!]

Boardercross … Snowboard Experience

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

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.

Ramp It Up … Build a Skateboard with POP

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

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.

Mix It Up … Giant Musical Instrument

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.

Style Revolution … 360-degree Photo Shoot

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.

Extreme Weather Alert

Visitors experience the work of meteorologists, preparing forecasts for extreme weather events. From a remote weather truck, they collect and interpret data in real-time and record their own video forecast weather alerts. They can then email the video broadcasts to themselves.

Cyber Security

Cyber Security lets visitors step inside an online computer game, where they are challenged to defend against invaders—like computer bugs and viruses—using security measures, simple code

sequences and computer passcodes. Fingerprint scans, card swipes and secret codes all help to create an exciting experience.

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