### **Understanding Physics through Collaborative Design and Play**

# MAGNETIC WALL INFORMATIONAL SHEET





### **DESCRIPTION:**

The Magnetic Wall, made by Kodo Kids, provides a unique environment for learners to investigate the effects of the force of gravity on the motion of balls rolling down a system of inclined planes (ramps) attached to a vertical wall. This system of ramp components is attached to the wall by magnets so the ramp components can be arranged, manipulated and adjusted in an infinite variety of configurations. This allows learners to have exciting opportunities to investigate their own ideas on how the variables of slope-angles and ramp length affect the motion of the balls.

Different size and weight balls further afford the opportunity to explore the concepts of mass and momentum on the motion of the balls moving through the ramp system. Learners are empowered to generate, investigate, test and evaluate ramp creations from their own imagination to experience fundamental concepts of force and motion while having fun with their friends and family.

Fully magnetic ramps allow for limitless manipulation of the ramps. Children can explore the result of different angles and momentum. Accessories such as rings and cups can be used in multiple ways encouraging kids to think outside the box. The Rubber Ramp can be attached to the wall to create roller coaster tracks and challenge child and parent alike. 2" and 1.75" wood balls aid in exploration of weight, mass and momentum.

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#### **Materials Include:**

- Five magnetic panels, each 34" wide by 44" tall
- 3 Indoor Ball-Catchers w/ trim
- 16 Magnetic Ramps
- 8 Non-magnetic ramps
- 110 Wood Balls (half 1.75" and half 2" so as to prevent choking hazards)
- 8 Extra Magnetic Walls
- 18 Magnetic Rings
- 16 Cups
- 2 Redirectors
- 2 Funnels w/ Rings
- 4 Tunnels
- 2 Elbows
- 46' Rubber Ramps
- 12 Rubber Ramp Peg Keys
- 2 4-Tube Ball Holder
- -3) tape measures

Rulers (vinyl) adhered to both the vertical and horizontal sides of the magnetic wall

Target age: 3+

**Required space:** Minimum of 13 linear feet **Source:** Kodo Kids http://kodokids.com/

Price: \$3274.44 plus S/H

Maintenance Notes Director of Operations: Exhibit is easily cleaned since it's primarily plastic. Wood used is a hard wood and naturally anti-bacterial. Anticipate that some of the materials will need to be replaced annually.