



# Marvels of Motion

*In this high energy event, children see Newton's three laws of motion in action. They try exciting experiments, compete in crazy competitions, and learn the physics behind some of their favorite sports.*

## **SUMMARY:**

This Mad Science Special Event program focuses specifically on Newton's Laws of Motion. Children are introduced to the ideas explained by Sir Isaac Newton centuries ago: that an object in motion will remain in motion, and that every action has an equal and opposite reaction. They also explore the rules that govern gravity. Perfect material for amazing science demonstrations. Learn the secrets of figure skating. Watch as volunteers go "monkey hunting" equipped with a blowgun with a laser sight. See the Mad Scientist move a thin, flimsy stick fast enough to punch through a piece of one-inch thick plywood. Volunteer to demonstrate the properties of a pendulum, and try not to move as a bowling ball comes rushing toward your head. Experiment with retro-rockets and watch someone shoot across the room on Newton's Rocket Car.

## **EDUCATIONAL VALUE:**

This program introduces children to Newton's three laws of motion. Students will learn all about why things move the way they do. This includes our legs and arms, our cats and dogs, and most everything you can think of. We call it the science of motion, and it is something that happens in the world everyday. Experiment with center of gravity, inertia, gravity and more.

## **TAKE-HOME MESSAGE:**

- 1 Things at rest prefer to stay at rest.
- 2 The heavier something is, the more inertia it has.
- 3 For every action there is an equal and opposite reaction.

## **NORTH CAROLINA ESSENTIAL STANDARDS:**

- K.P.1 Understand the positions and motions of objects and organisms observed in the environment.
- 1.P.1 Understand how forces (pushes or pulls) affect the motion of an object.
- 2.P.1 Understand the relationship between sound and vibrating objects.
- 3.P.1 Understand motion and factors that affect motion.
- 4.P.1 Explain how various forces affect the motion of an object.
- 5.P.1 Understand force, motion and the relationship between them.

