

# MAD MACHINES

*See how simple machines lighten your load! Launch with levers, secure with screws, and work with wedges. Use pulleys to move heavy objects with ease. Wind-up the Drag Racer for some zooming action.*

## **SUMMARY:**

Children discover how simple machines make our lives easier. They learn about the six different types of simple machines: the screw, lever, inclined plane, wedge, pulley, and wheel and axle. Children launch with levers, secure with screws, and work with wedges through hands-on activities! A large child-operated pulley system demonstrates how pulleys help us move heavy objects easily. Children apply their newfound mechanical knowledge by building their very own Drag Racer Take-Home!

## **EDUCATIONAL VALUE:**

Mad Machines introduces basic physical science. Children investigate mechanics and the role that they play in our everyday lives. Children learn about forces and work, and discover that simple machines make work easier by allowing us to push and pull less strenuously, but over a longer distance. They will extend this concept at home with the Drag Racer, a car model complete with wheels and axles.

## **TAKE-HOME MESSAGE:**

- 1 Simple machines make work easier.
- 2 The six simple machines are the screw, lever, inclined plane, wedge, pulley, and wheel and axle.
- 3 All complex machines have simple machines in them.

## **TAKE-HOME PRODUCT:**

Drag Racer

## **NORTH CAROLINA ESSENTIAL STANDARDS:**

- 1.P.1.1 Explain the importance of a push or pull to changing the motion of an object.
- 1.P.1.3 Predict the effect of a given force on the motion of an object, including balanced forces.
- 3.P.1 Understand motion and factors that affect motion.
- 5.P.1.1 Explain how factors such as gravity, friction, and change in mass affect the motion of objects.
- 5.P.1.2 Infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel.

