

OBSERVING FORCES OF MOTION

When something moves, a lot is going on that we don't see. But we can make deductions based on our observations of different movements! Try moving different objects on different surfaces and see what you learn.

➤ **Find a large, flat surface, such as a floor or tabletop.** Make sure the surface can't be damaged by water or by rolling or sliding objects! Try rolling your round object and watch its motion carefully. How far does it go? Does something stop it, or does it stop on its own?

➤ **Next, try sliding your book or other object.** How does its motion compare to a rolled object? Does something stop it, or does it seem to stop on its own?

➤ **Now, try sliding or rolling your container.** First, get it moving while it's empty. How does its motion compare to the first two objects? Now, put water into the container (be sure to put the cap on or seal it) and get it moving. How does the full container's motion compare to the empty container?

- * What stops the object's motion? Is it the same for each item?
- * Which object stops the quickest, and why?
- * Which object goes the farthest, and why?
- * Why do you think the motions of the objects are different?
- * Does the type of motion (rolling or sliding) make a difference?
- * Does the weight of an object affect its motion?
- * Which objects take the most force to move? Which take the least? Why?

Try This!

Try exploring the movements of other objects. What happens when you throw something like a ball? What gets it moving, and what stops it? Do bikes or skateboards roll forever?