

# Balls & Ramps

## How can so much fun get my child ready for school?

**Raceways is a study of balls in motion.** It is full of chutes, hoops and loops! Children learn about Newton's laws of motion as they send golf balls on various journeys. This exhibit will have your children giggling with anticipation as they watch their golf balls sail! It's loud, active, and often chaotic and very, very popular. Younger children enjoy watching the balls roll down the track over and over again, while older children may be found creating simple experiments.

### Try these at home!

- **Get Some Golf Balls.** Many golf courses are willing to make donations to your golf ball collection. Just inquire! Ask your friends who play golf if they will save their used balls for you.
- **Design a Track.** Make some simple drawings while you are standing around in Raceways. These are replicable at home. PVC pipe (available from your local hardware store) makes a great raceway.
- **Create Challenges.** Involve your child in creating the raceways, collecting the golf balls and then hosting a Raceways Challenge of your own!



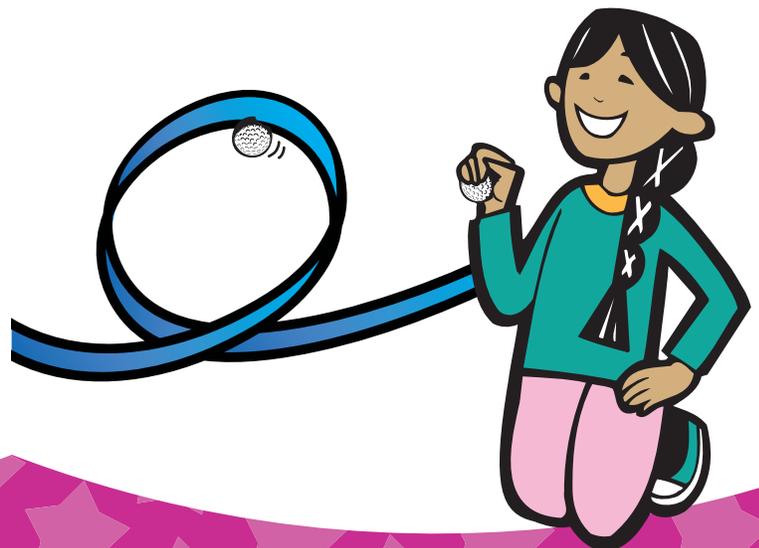
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## Things to say:

- “Which one do you think will land first?”  
Challenge kids to make estimates.
- “Which one do you think will go further?”  
There are lots of open-ended questions in Raceways.  
Think of one for your challenge.
- “Let’s design a track. What will work best?”  
Experiment with various tracks to see if you can make a jump or loop. How can you make the balls go faster or slower?

## Read All About It:

*The Happy Man and His Dump Truck*, by Golden Books and Tibor Gergely.

*Newton’s Laws of Motion* (School Mathematics (Paperback) by School Mathematics Project.

*Isaac Newton and the Laws of Motion* (Inventions and Discovery series) (Graphic Library: Inventions and Discovery) by Andrea Gianopoulos (Author), Phil Miller (Illustrator), Charles III Barnett (Illustrator).

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Illustrations by Corey Smigliani



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