

- Set up ramp on the edge of a table so when a ball is launched it lands on the ground.
- Measure the vertical distance from the floor to where the target ball will leave the ramp.
- Place a sphere at the top of the ramp and allow it to roll down and off the table without placing the target sphere.
- Lay down carbon paper in the general area of the ball's final position.
- Hang a string from the initial position of the sphere so you can find the zero position on the ground to measure from.
- Launch the sphere ten times and circle the center of the marks on the carbon paper.
- Measure the distance from the zero point to the center of the incident ball's marks. This line will serve as the x-axis for the rest of the lab.
- To make sure the straw that holds the target sphere is level, place the target sphere on the end of the track and hit it head on with the incident sphere. If the straw is level the incident sphere will hit near the incident sphere's previous marks.
- Keeping the straw level, adjust the location of the target sphere so there is a glancing collision.
- Collect data for the position of the target and incident spheres in a glancing collision. The masses should be the same. Run 10 collisions to find the center of the ball's landing points.
- Repeat data collection for a glancing collision between a metal incident sphere and a lighter target marble.