

# SHOOT AND CATCH DEMONSTRATION

## Purpose

This demonstration shows that when the ball is shot vertically upward from the cart while the cart is moving at any constant speed, the ball will land back in the cart.

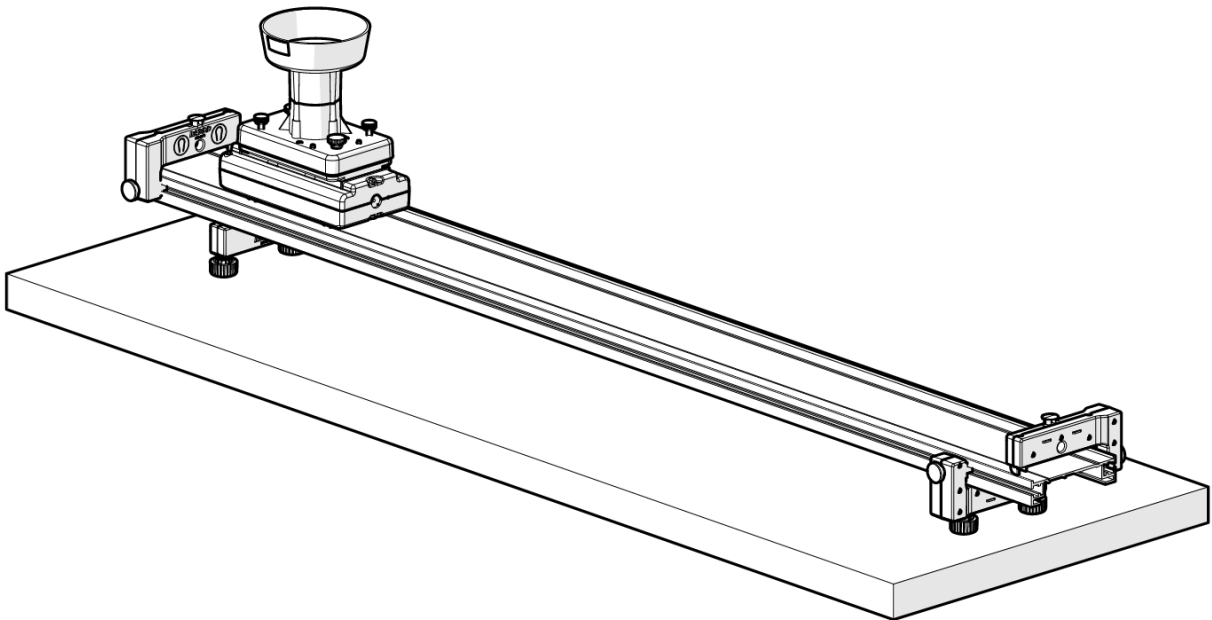
## Materials and Equipment

- Data collection system
- Smart Ballistic Cart Accessory
- Smart Cart
- Dynamics Track with Feet
- End Stops

## Safety

Follow these important safety precautions in addition to your regular classroom procedures:

- Wear safety goggles at all times.
- Do not look down the barrel of the Smart Ballistic Cart Accessory.



## Procedure

1. Attach the feet and end stops to the track. Level the track.
2. Attach the Smart Ballistic Cart Accessory to a Smart Cart. Connect the devices together using the Smart Cart accessory cable.
3. Connect the Smart Cart to software and open the Ballistic Cart tool.

4. Launch the ball for the scenarios listed below. To launch the ball, load the ball then click the Trigger Now button.
  - a. The cart at rest.
  - b. The cart moving at a slow speed.
  - c. The cart moving at a high speed.

*NOTE: Catch the cart with your hand before the cart reaches the end of the end stop to prevent the cart from derailing from the track.*