

CGPS: The Rollercoaster Launcher

Canada's Blunderland is always looking for new and exciting rides each year. Your engineering firm has come up with a clever idea for a new rollercoaster. You thought that the traditional lift to the top of the first big hill was too dull and boring. Instead, your new ride will use a falling mass to accelerate the cars up the incline so they reach the top of the hill moving quickly. The climb upwards is being modeled by your research department using the set-up at the front of the classroom. The cars will be released at the bottom of the track and your engineers have determined that an ideal speed at the top is 1.0 m/s. All that remains is to find a good mass to use when you make your test.

- Your car will have a unique mass as indicated here:
- You may make any appropriate measurements of the set-up.
- Your results will be tested using the motion detector.