How will you analyze your data

With doing the experiment multiple times over, the average velocity will be divided by the average time and the acceleration will be found from that. The data will be put in excel for a graph to be created then the standard deviation and standard error. We will find the average acceleration through the linear regression of the velocity vs time graph. After finding the average accelerations for the ball on the way up and way down, we will compare them.

How will you collect your data

To find the data we will use Tracker software for video analysis.

What data will be collected

We will collect the measurements of the platforms that the ball is rolling on including the incline length in meters. We will calculate the object’s position and time values multiple times. The tracker software will help find the velocity and time it takes for the can to roll from the top of the platform and to roll up to the top of the platform

The guiding question

Does a ball rolling on an incline have the same acceleration on the way up as it does on the way down?