2.2 - Kickball Challenge Directions

Materials:

Ball

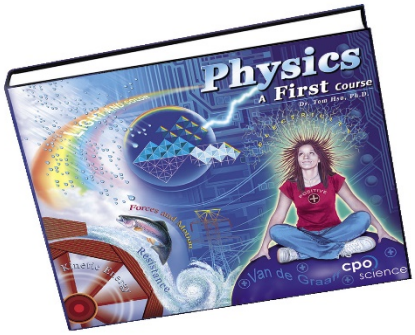
Ramp

Laptop

Motion Sensor with cables

Interface Box

Textbooks



- [ ] Step 1: Connect your sensor and interface to the laptop.
- [ ] Step 2: With your group, build a ramp using textbooks
- [ ] Step 3: Place your ball on the ramp
- [ ] Step 4: One group member will clear the sensor and hit start
- [ ] Step 5: Roll the ball down the ramp (Once you get a good run, go to the next step.)

☐ Step 6: Add a column to the left side of the table for you to enter the **Velocity** using slope from your **Position vs. Time** graph.

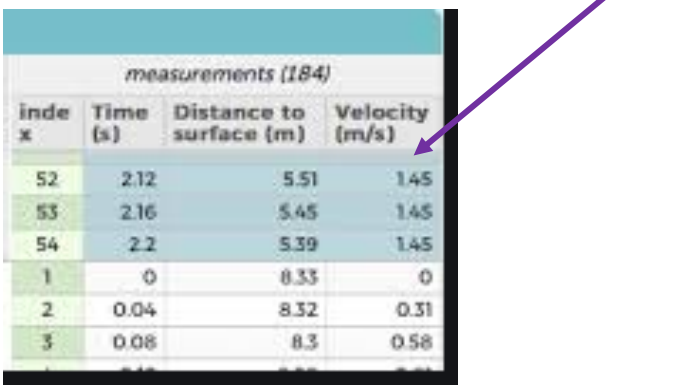
☐ Step 7: Make a **Position vs. Time** graph.

(HINT: If you need to make room to see your graph, click the (-) sign in the header bar of the Sensor Interactive.)

☐ Step 8: Choose the ruler option, click on moveable line.

Adjust your moveable line to find your slope in the yellow box.

☐ Step 9: In your table, type your slope into your velocity column.



measurements (184)

index	Time (s)	Distance to surface (m)	Velocity (m/s)
52	2.12	5.51	1.45
53	2.16	5.45	1.45
54	2.2	5.39	1.45
1	0	8.33	0
2	0.04	8.32	0.31
3	0.08	8.3	0.58

☐ Step 10: Write your group's **Velocity (slope)** value on the class white board.