

HOT WHEELS LAB # 2

THIS LAB YOU WILL TAKE 3 HOT WHEELS CARS OF YOUR CHOICE AND RUN THEM DOWN THE TRACK THAT HAS BEEN BUILT FOR YOU.

1. STUDENTS WILL PREDICT WHICH CARS COMPLETE THE COURSE THE FASTEST.
2. YOU WILL ALSO TIME YOUR CARS AS THEY COMPLETE THE COURSE AND AT 5 REFERENCE POINTS ALONG THE TRACK. AT EACH REFERENCE POINT YOU WILL NEED TO RECORD THE TIME IT TAKES FROM THE START LINE TO EACH OF YOUR 5 REFERENCE POINTS.
3. YOU WILL ALSO CALCULATE THE VELOCITY, ACCELERATION, KINETIC ENERGY AND DISTANCE AT EACH OF THE REFERENCE POINTS.
4. STUDENTS WILL CALCULATE THE POTENTIAL ENERGY OF EACH OF THEIR CARS WHILE AT THE START LINE.
5. STUDENTS WILL DRAW A MAP OF THEIR TRACK AND PLACE ALL CALCULATIONS ON THEIR MAP. PHOTOCOPIES OF YOUR ORIGINAL DRAWING WILL BE PROVIDED SO YOU CAN PLACE ALL YOUR RECORDED DATA ON THE DIAGRAMS. STUDENTS WILL HAVE ONE DIAGRAM FOR EACH OF THE 6 CALCULATION CATEGORIES.
6. ONCE ALL DATA HAS BEEN COLLECTED AND THE DIAGRAMS HAVE HAD THEIR CALCULATIONS PLACED ON THEM, GATHER TWO PIECE OF GRAPH PAPER AND GRAPH YOUR VELOCITY AND ACCELERATION. ENSURE THAT YOU REFER TO THE CLASS NOTES ON LABELING OF THE AXIS POINTS FOR GRAPHING.

TRIAL # 1 CAR DESCRIPTION _____

REFERENCE PT.	TIME <i>is</i> <i>seconds</i>	Distance <i>m.</i>	Velocity <i>M</i> <i>s</i>	KINETIC ENERGY	POTENTIAL ENERGY
1.					
2.					
3.					
4.					
5.					

TRIAL # 2 CAR DESCRPTION _____

REFERENCE PT.	TIME	VELOCITY	ACCELERATION	KINETIC ENERGY	POTENTIAL ENERGY
1.					
2.					
3.					
4.					
5.					

TRIAL # 3 CAR DESCRPTION _____

REFERENCE PT.	TIME	VELOCITY	ACCELERATION	KINETIC ENERGY	POTENTIAL ENERGY
1.					
2.					
3.					
4.					