

Balloon Racers



How can we make the balloon racer go farther and faster?

Before Beginning

LABEL YOUR RACER WITH YOUR NAME!!!

Step 1- Figure out how to work the Balloon Racer. Write down 5 or more questions and observations about your vehicle

Observations
1
2
3
4
5

Make a Prediction:

How far and fast do you think your racer will go in this first test?

i think the racer will travel _____ in _____ seconds.

Step 2- Without changing anything about the car, decide how far you will blow up the balloon. How will you make sure that this is a fair test (controls and variables)?

Then run the car three times down a straight path. Fill in the following data collection table.

<u>Trial</u>	<u>Distance in centimeters</u>	<u>Time in seconds</u>	<u>Speed</u>
1			
2			
3			
Average			

Step 3- Make ONE modification to your car to make it go straighter and faster. List it in the data table below.

<u>Modification</u>	<u>Why?</u>

<u>Trial</u>	<u>Distance in centimeters</u>	<u>Time in seconds</u>	<u>Speed</u>
1			
2			
3			
Average			

Step 4- Make another modification to your car to make it go straighter and faster. List it in the data table below.

<u>Modification</u>	<u>Why?</u>

<u>Trial</u>	<u>Distance in centimeters</u>	<u>Time in seconds</u>	<u>Speed</u>
1			
2			
3			

Average			
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Step 5- Make another modification to your car to make it go straighter and faster. List it in the data table below.

<u>Modification</u>	<u>Why?</u>

<u>Trial</u>	<u>Distance in centimeters</u>	<u>Time in seconds</u>	<u>Speed</u>
1			
2			
3			
Average			

Write-up of the Balloon Racer

- What question (s) were you trying to answer? (title)
- List your initial questions and observations.
- What was your prediction about speed and distance? Why did you think that?
- What change did you decide to make and why? Describe in detail at least one of your modifications and why you chose to make it. (hypothesis)
- Describe how you tested the car each time.
 - What was the one variable?
 - What were the controls?
- Graph your baseline data and all three modifications.
- Did all your modifications work? Why or why not?
- What made this activity difficult?
- What made this activity simple?