

Name: _____



**SCIENCE FUN
FOR EVERYONE!**

Newton's Lab

Directions: Use different amounts of breath blown into your balloon to graph the difference between the force coming out of the balloon to the distance it will travel.

Step 1: Use masking tape to mark a starting line for your car.

Step 2: Blow different amounts of air in your balloon and let it go at the starting line.

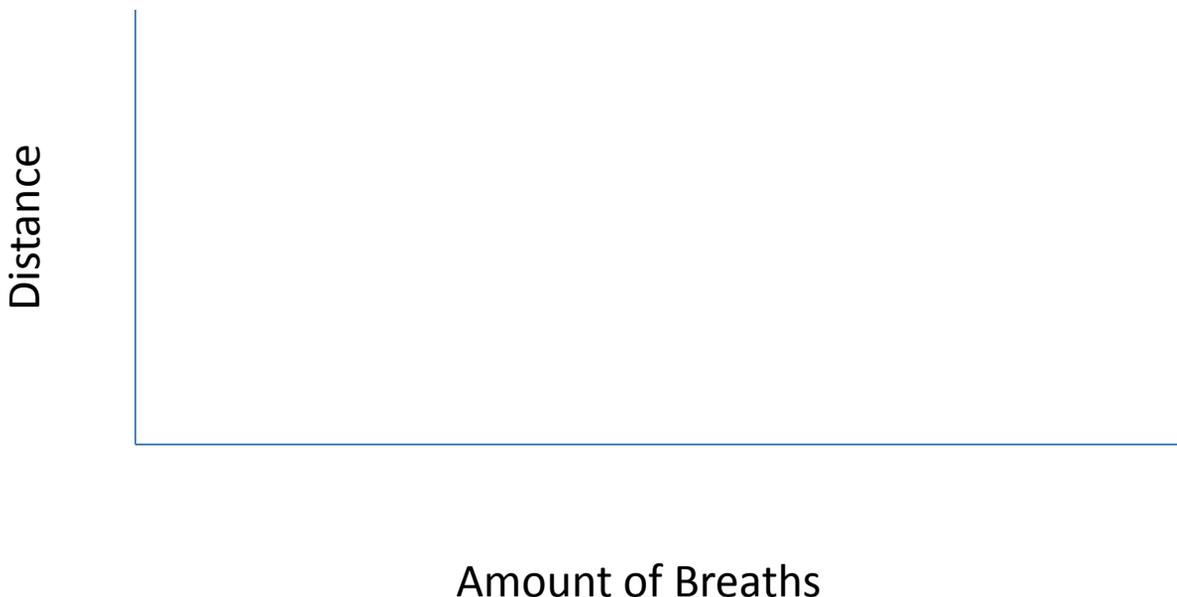
Step 3: Measure the distance your car traveled and record each amount on the chart.

Step 4: Repeat the amounts of air in your balloon to get the best accuracy.

Trial Distance

	1	2	3	Average
1				
2				
3				

Step 5: Use the graph below to graph your results. Be sure to label your graph.



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Word Search



D Z T S O M I C J N Z D I M V R Y M K B
Z Z K A C C E L E R A T I O N U B A L I
Q W F U T E W R H I D X C T B I G S G E
F I G R H V O C C V N G W N O F A S R M
I X U R I E L D S B D E B H N F K V A P
R L S G R L N A F I Q B R I O P O Y V U
S E J F D O X Z O U U U B T V M T I I P
T Q F Q L C H G J D F Z R R I S Z S T A
L S E B A I N W Y R C H W E X A R U Y M
A E P Y W T Q B I E F W E I G H T Z N S
W N Q G O Y A C N N O G H C Y Q H W J P
O D P U F L T Z J Y R A L O W U Q P A E
F T S Y M I M B A I C T K U M T D D A E
M I F A O I R J D O E I U C E O P X E D
O C M N T L G Y C M N C Y G R N T Z H J
T M I Y I S Q U F G H C L D E D S I M A
I S E C O N D L A W O F M O T I O N O I
O F Y V N N A S D X Z P P M W L S H Z N
N S E J T M V T S M O S R M Z E G C O R
M L V H U K D T I C J G G J C A L R U I

Find the following hidden words:

Inertia

Gravity

Weight

Mass

First Law of Motion

Motion

Velocity

Third Law of Motion

Speed

Second Law of Motion

Force

Friction

Acceleration

Bonus Question

1. While driving down the road, a firefly strikes the windshield of a bus and makes a splattered mess. This is a clear case of Newton's third law of motion. The firefly hits the bus and the bus hits the firefly. Which of the two forces is greater: **the force on the firefly or the force on the bus**?

Your Answer: _____



ANSWER:

Trick Question! Each force is the same size. For every action, there is an equal reaction... (equal!). The fact that the firefly splatters only means that with it's smaller mass, it is less able to withstand the smash. Besides, fireflies have guts and bug guts have a tendency to be *splatterable*. Windshields don't have guts. There you have it.