



## How Far Will It Go?

How far can you make a toy car go down a ramp?  
Well, it's time to find out!

On the next few slides you will be testing different ways that you can set up a ramp to change the distance a toy car can travel. The experiment is broken up into 3 parts. Follow the directions on each slide and record your findings as you go.

Be sure clear a large flat space where you can perform your experiment.

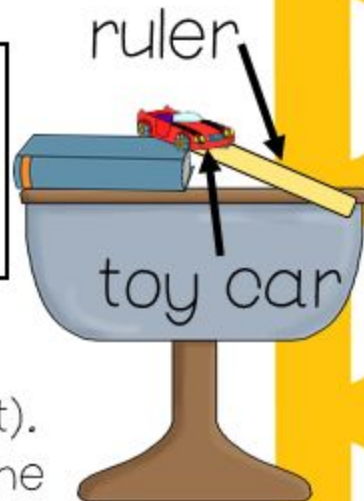


# How Far Will It Go?

(Part 1)

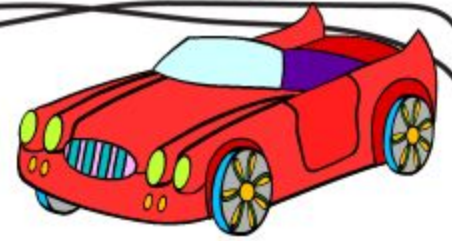
## Materials Needed:

ruler      3 books      measuring tape      toy car  
marking chips (such as pennies)



## Directions:

1. Set up one book and ruler as a ramp (as shown on the right).
2. Start the toy car at the top of the ruler and let it go down the ruler ramp. Place a marking chip where the car stopped. Measure the distance from the end of the ruler to the marking chip using the measuring tape. Record the distance on the next slide.
3. Add one book to the stack. Reset the ruler on the ramp and place the car at the top of the ramp and release. Place a second marking chip where the car stopped. Measure the distance and record it on the next slide.
4. Add a third book to the stack. Complete the test one more time. Place a final marking chip where the car stopped on the third test. Measure the distance and record.



As you complete each step as explained on the previous slide. Record your findings in the chart below.

After each trial, record the distance traveled by the toy car as you changed the height of the books.

Number of Books in the Stack	Distance Traveled (in inches)
1	Add Text
2	Add Text
3	Add Text

What do you notice about the distance the car traveled as you increased the height of the book stack?

Add Text



## How Far Will It Go?

(Part 2)

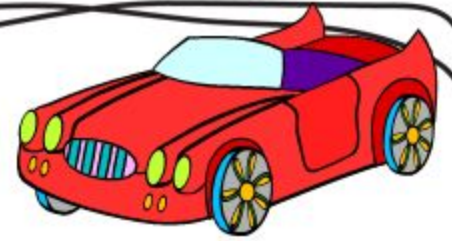
### Materials Needed:

ruler      book      measuring tape      toy car  
marking chips (such as pennies)



### Directions:

1. Set up the book and ruler as a ramp as shown to the right. Place the ruler against the book at the 12 inch line.
2. Place the toy car's back wheels at 4 inches on the ruler and let it go down the ruler ramp. Place a marking chip where the car stopped. Measure the distance from the end of the ruler to the marking chip using the measuring tape. Record the distance on the next slide.
3. Now, start the car at 6 inches and let it go down the ruler ramp. Place a marking chip where the car stopped. Measure and record the distance on the next slide.
4. Finally, place the car at 12 inches and let it go down the ruler ramp. Place a marking chip where the car stopped. Measure and record the distance on the next slide.



As you complete each step as explained on the previous slide. Record your findings in the chart below.

After each trial, record the distance traveled by the toy car as you changed the height of the toy car on the ruler.

Starting Height	Distance Traveled (in inches)
4 inches	Add Text
6 inches	Add Text
12 inches	Add Text

Did changing the starting height of the toy car on the ruler change the distance that the car traveled? If so, how?

Add Text



## How Far Will It Go?

(Part 3)

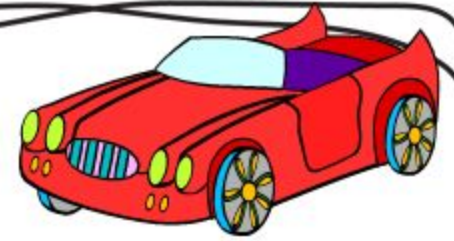
### Materials Needed:

ruler      2 books      measuring tape      toy car  
marking chips (such as pennies)



### Directions:

1. Set up one book and ruler as a ramp as shown to the right.
2. Place the ruler against the book at the 12 inch line.
3. Start the toy car at 4 inches and let it go down the ruler ramp.
4. Place a marking chip where the car stopped. Measure the distance with the measuring tape and record it on the next slide.
5. Repeat the same process at 6 inches.
6. Place a second book on top of the first and reset the ruler ramp. Start the car at 4 inches again and release the car. Place a marking chip where the car stopped. Measure the distance with the measuring tape and record it on the next slide.
7. Repeat the same process at 6 inches.



As you complete each step as explained on the previous slide. Record your findings in the chart below.

After each trial, record the distance traveled by the toy car as you changed the height of the books.

Number of Books in the Stack	Distance Traveled at 4 inches	Distance Traveled at 6 inches
1 Book	Add Text	Add Text
2 Books	Add Text	Add Text

Based on your findings from all three parts of this experiment, what are two things you can control to change the distance a toy car will travel down a ramp?

Add Text