

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Car Design Worksheet

## Problem

You need to design a car that will roll down a track at the fastest possible speed.

## Constraints

Your car must be designed to roll down a specified track (which limits the maximum size of your car). You only have **\$700** to purchase supplies to construct your car. You may only use the materials listed below, purchased for the cost shown.

## Material Costs

Item	Cost per Item
Lifesaver Mints	\$75 per mint
Straw	\$100 per straw
Popsicle Stick	\$50 per stick
Masking tape	\$50 per 12" section
Notebook Card	\$25 per card
Paper Clips	\$25 per clip

## Imagine

Brainstorm several ideas you have for building a really fast car. If needed, use a piece of scratch paper to draw pictures.


---

---

---

## Design

Draw out your car design and label each of the different materials used (mints, tape, straw, etc.).



Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Build**

List how much of each material you will need to build your car. Multiply the amount you need by the cost of the material and then add all of the amounts together. How much is the total cost of your car? Do you have enough money?

Item	Cost per Item	Number Purchased	Number x Cost	Total Cost of Purchase
Lifesaver Mints	\$75 per mint			
Straw	\$100 per straw			
Popsicle Stick	\$50 per stick			
Masking tape	\$50 per 12" section			
Notebook Card	\$25 per card			
Paper Clips	\$25 per clip			
<b>Total Spent</b>				
<b>EXAMPLE:</b>				
<i>Lifesaver Mints</i>	<i>\$75 per mint</i>	<i>4</i>	<i>4 x \$75</i>	<i>\$300</i>
<i>Paper Clips</i>	<i>\$25</i>	<i>2</i>	<i>2 x \$50</i>	<i>\$100</i>
<i>Total Spent</i>				<i>\$400</i>

**Test**

Group Name	Time (1) in seconds	Time (2) in seconds	Distance Jumped (1) in cm	Distance Jumped (2) in cm

Name: \_\_\_\_\_ Date: \_\_\_\_\_

How fast was your car compared to all of the other cars? \_\_\_\_\_

Did it jump farther than any of the other cars? \_\_\_\_\_

What are two things you would change about your car to make it work better? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Graphing

X - Variable (Angle in Degrees)	10	20	30	50	60
Y - Variable (Time in seconds)					

