

What is the purpose of this invention? (Explain in detail)

I want to design and build _____

The goal of this project is to _____

Research: Research your topic and find out as much information as you can.

You will need to find two (2) resources, summarize your findings, and create a **bibliography**. When using information provided by another person, you have to give them recognition; otherwise you're pretty much stealing their knowledge. Stealing is NOT COOL! Instead of stealing, give credit where credit is due.

Information from a credible web site, cite it like this:

Ex. With an author:

Last, First. (Year, Month Date Published). Article title.
Retrieved from URL

Simmons, B. (2015, January 9).

Article Title here. Retrieved from <http://website.com>

Ex. Without an author:

Article title. (Year, Month Date Published). Retrieved from URL

Maybe you'll find the facts you need from a book. If so, this should do the job:

Ex.

Last, First. (Year of Publication). *Title of work*. Publisher City, State: Publisher.

Finney, J. (1970). *Time and again*. New York, NY: Harper Collins.

Perhaps you'll interview a professional. If so, do this:

Ex.

Last, First. (Year, Month Date). Interview type.

Marino, B. (2014, October 18). Personal Interview.

Source #1: _____

Summary of what I learned: _____

Source #2: _____

Summary of what I learned: _____

Source #3: _____

Summary of what I learned: _____

People who would also be interested in my product are

Solutions to this problem that already exist include

I believe these solutions are inadequate because

Design Requirements:

My design must weigh _____

It must be small enough to _____

It must be no bigger than _____

To build a prototype, it will cost about _____

I plan to test my prototype by _____

My prototype must be able to _____

Brainstorm Solutions: For design #1, draw your original design for your prototype. For design #2, draw an improved design from your original. The purpose is to show progression and improvements being made. These drawings will eventually go on your science board. Remember to label all parts.

Design
#1

Design

#2

PROCEDURE: (Make sure to repeat this process 3 times)

These should help....

- To begin, __
- Next, __
- Then __
- Once __ was complete, I __
- __ minutes later, __
- Afterwards, __
- As soon as __
- During __, I __
- While __
- Lastly, __
- To conclude my experiment, __

There are other transitional words or phrases that are not listed. Use as many as necessary.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

(If you have additional steps, please use scratch paper)

Materials:

In order to build my prototype, I will need the following materials:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

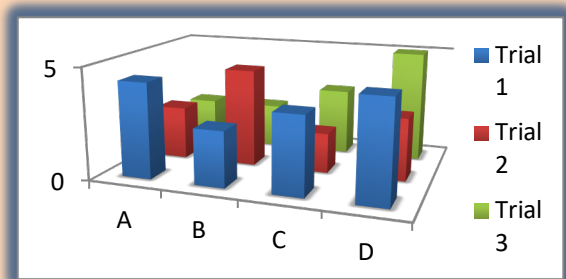
Data:

Now it's time to record all your information, observations, and measurements in a notebook or journal.

When you were testing your prototype, how did you determine it was working? Remember, your data is your evidence to show that your prototype works. Engineers need to provide evidence to show what they've created does indeed work. Each design is unique, so only you can decide how your data should be displayed.

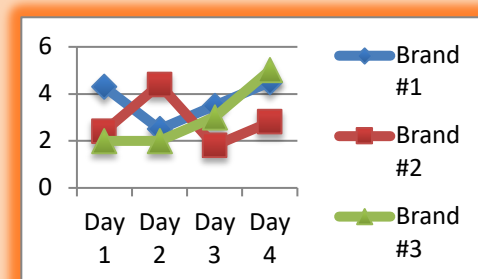
You MAY need to create one of these.

Bar graph



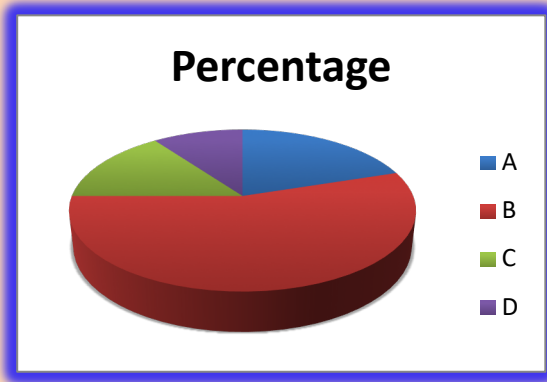
Bar graphs are excellent for comparing relationships between sets of data

Line Graph



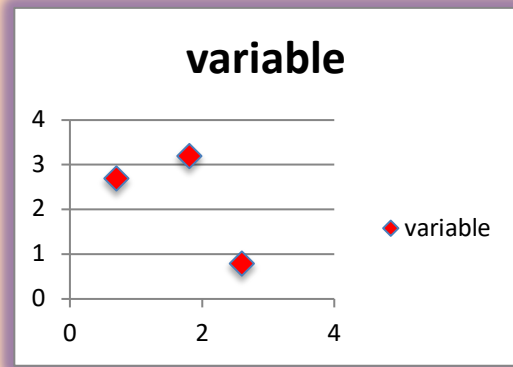
Line graphs are great for tracking changing data over a period of time

Pie graph



Pie graphs are used when comparing one piece of data with all data

Scatter Plot



Scatter plots identify relationships between 2 variables

Other ways to display your data include *Stem-and-Leaf Plots*, *Pictographs*, *Histograms*, *Line Plots*, and many more. Your teacher or your parents can help you with any of these. You must decide which one will be the most appropriate to display your data. Remember to make it colorful and easy for classmates and teachers to understand.

Which chart or graph will you use to represent your data? Why?

I've decided to create _____

because _____

_____.

