For this challenge, you will need at least 4 different bottles to test. They may be different brands, shapes, sizes, and colors. Describe each bottle. Be sure to indicate the unit you used to measure the height - you will need to use a ruler. Also list the units you will use to compare the volume. The volume is typically on the bottle's label. Use the same units for each bottle. Illustrate your bottles. Be sure to show any specific features like curves, dents, ridges, etc.

First practice tossing the bottles. Once you have developed a technique that you are comfortable with, fill out the checklist. You will need to use this same technique each time you toss for the challenge so write it all down.

## HAND USED <br> DLEFT HAND DRICHT HAND

## BODY POSITION

DSTANDING
OSITTING
DSQUATTING
OONKNEES
DOTHER: $\qquad$

## BOTTLE LOCATION <br> -TABLE TOP <br> DDESK <br> DFLOOR <br> -CARPET <br> DOTHER:

START POSTION
-BBTTOM SIDE DOWN
-BALANCING ONCAP
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Toss each bottle the same predetermined amount of times.. If you are working with a small group or partner, you may split the tosses - just be consistent and do the same for each bottle. Use tally marks to record if the toss was successful or not. A successful toss is one where the bottle lands the same way as it started. Be sure to use the same technique for each toss as marked on the techniques page.

## number of tosses for each bottle:

 Circle one or choose your own (realistic) number.Successful?
YES


THE FREQUENCY

| вотाE |  | \#xowicl |
| :---: | :---: | :---: |
| (A) | \|||| | 4 |
| B | \|||| W | 9 |
| ( | * | 5 |
| $\stackrel{10}{10} 9$ |  |  |



Use the data from the frequency chart to make a line plot, dot plot or graph. You will need to label the $Y$-axis, write in your total number of tosses and title your graph.
(Title)

# THE LACNDARES 

Look at your data to determine the following. Use the space to show your work.

## MEAN / AVERAGE NUMBER OF SUCCESSFUL TOSSES

Which bottles were less successful at landing than the average?

Which bottles were more successful at landing than the average?

What is something you did well in this part of the challenge?

What is something you had difficulty with in this part of the challenge?

