Part 2

THE BOTTLE

Use the bottle from Part I that had the highest success rate and fill out the information below. Be sure to indicate the unit you used to measure the height - you will need to use a ruler. Also list the unit for volume. The volume is typically on the bottle's label. Make a detailed illustration of your bottle. Be sure to show any specific features like curves, dents, ridges, etc.

BRAND

HEIGHT

VOLUME

SUCCESS RATE %

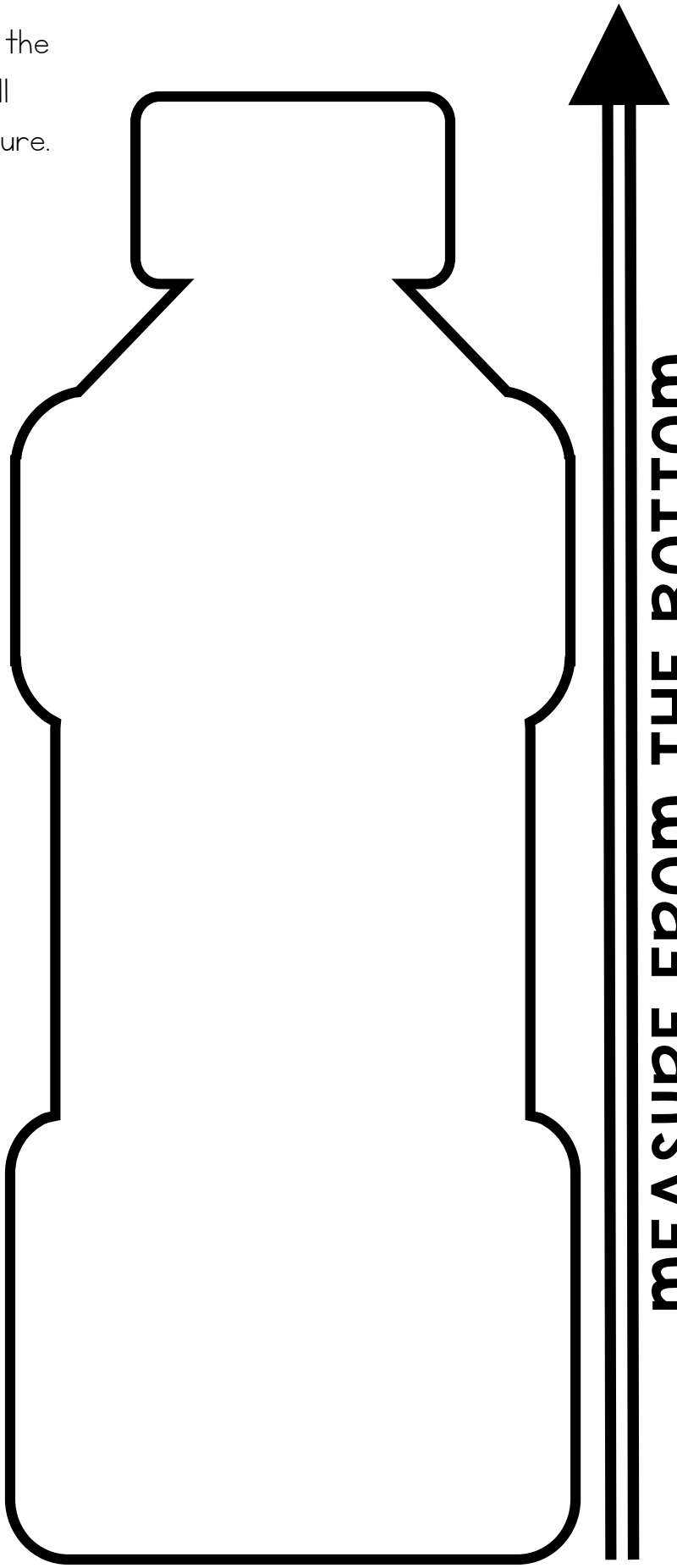
ADDITIONAL INFO

ILLUSTRATION

Part 2

THE WATER LEVEL

Measuring with a ruler from the bottom of the water bottle, choose 4 different levels to fill and toss. Use inches or centimeters to measure. If you cannot think of your own levels, try using 1 inch, 2 inches, 3 inches, and 4 inches from the bottom. Mark the levels you chose and label on the blank water bottle.



Part 2

THE TOSS

Fill the bottle one of the measurements you chose then toss it the same amount of times as you did in Part 1. If you are working with a small group or partner, you may split the tosses - just be consistent and do the same for each water level. Use tally marks to record if the toss was successful or not. Be sure to use the same technique for each toss as marked on the techniques page for Part 1

Number of tosses for each bottle:
Circle the same number you used in Part 1.

15 25 50 ◯

	Successful?	
WATER LEVEL from the bottom	**YES**	**NO**

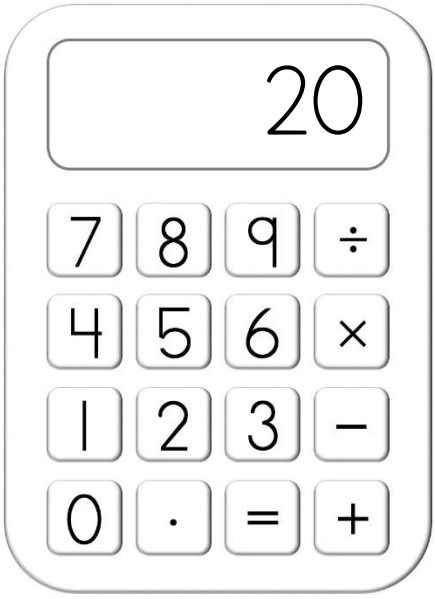
Part 1

THE DATA

Total up the number of successful tosses for each of your bottles. Write the total number. Next write the success rate as a fraction of total successful tosses over total tosses. For example, if you tossed each bottle 25 times and you successfully landed Bottle A 5 times, the success rate would be 5/25.

$$\frac{\text{TOTAL SUCCESSFUL TOSSES}}{\text{TOTAL NUMBER OF TIMES YOU TOSSED THE BOTTLE}}$$

Use your calculator to figure out the success percentage by dividing the top number by the bottom number then multiplying by 100. In the above example 5/25 would become 0.20 x 100 = 20. Write the percent symbol after the 20 on the table.



That means that in our example, Bottle A has a 20% chance of landing successfully if tossed by you with your technique.

BOTTLE	TOTAL SUCCESSFUL TOSSES	SUCCESS RATE (Fraction of success/total tosses)	SUCCESS PERCENTAGE
A	5	$\frac{5}{25}$	20%

Part 2

THE DATA

Crunch the numbers the SAME way you did for Part I.

WATER LEVEL from the bottom	TOTAL SUCCESSFUL TOSSES	SUCCESS RATE (Fraction of success/total tosses)	SUCCESS PERCENTAGE

THE RESULTS

Which water bottle water level had the best results? Why do you think that might be?