

# Bubble Gum Physics

Name \_\_\_\_\_

Obtain a piece of bubble gum from your teacher and start chewing to get ready for the experiments!

## Part A: Chomper Challenge

(1) For this experiment, you will conduct five trials to determine the number of chomps you can do in 30 seconds. A chomp is defined as a "big chew", or the kind that usually causes you to get caught with gum!

(2) Use a timer to determine the number of chomps you can do in 30 seconds. Record your data in the chart. Repeat the same process for the other trials.

Trial	Chomps	Time	Speed
1			
2			
3			
4			
5			

Speed = # of Chomps ÷ Time  
Round speeds to the nearest hundredth!

(3) What is your average speed? Round answers to the hundredth. \_\_\_\_\_ chomps/second

(4) Based on your average chomping speed, how many chomps could you do in five minutes, one hour, or one day? Show your work!

5 min = \_\_\_\_\_ chomps      1 hour = \_\_\_\_\_ chomps      1 day = \_\_\_\_\_ chomps

## Part B: Speedy Chompers

(1) Use a timer to determine the number of chomps you can do in 1 minute. As the time reaches each point, record the number of chomps you have completed. Do not stop the timer as you record your data. You may want to practice a few times before running an "official" trial.

Time	Chomps
20 sec	
40 sec	
60 sec	

(2) Calculate your chomping speed at each point (20 sec, 40 sec, and 60 sec) using the data from your experiment. Show your work! Round all answers to the nearest hundredth!

Speed at T = 20 sec = \_\_\_\_\_ chomps ÷ 20 sec = \_\_\_\_\_ chomps/sec

Speed at T = 40 sec = \_\_\_\_\_ chomps ÷ 40 sec = \_\_\_\_\_ chomps/sec

Speed at T = 60 sec = \_\_\_\_\_ chomps ÷ 60 sec = \_\_\_\_\_ chomps/sec

(3) Did you maintain a constant rate? Explain.

**Think About It!**

Write a paragraph to summarize the results of your experiments.

Are your results accurate and reliable? Why or why not?

What other experiments could you do with bubble gum?