

Bubblesum Blowout

Name _____

Experiment #1: Bubblegum Basics

What materials do we need to make bubblegum?

_____ base, corn _____, powdered _____, and bubblegum _____.

What are the steps involved in making gum? List them below.

How does our bubblegum compare to the regular brands of bubblegum?

Experiment #2: Sweet Bubbles

What will happen to the mass of your bubblegum as you chew it for 10 minutes? I predict that the mass will: A. increase. B. decrease. C. stay the same.

Directions:

1 – Make a foil “boat” to hold your gum.

2 - Find the mass of 1 piece of bubblegum using the triple-beam balance. Write the amount in the chart.

3 – Chew the gum for 5 minutes and then find the mass of the piece of bubblegum using the triple-beam balance. Write the amount in the chart.

4 – Chew the gum for another 5 minutes (10 minutes total) and then find the mass of the piece of bubblegum using the triple-beam balance. Write the amount in the chart.

Mass of Unchewed Gum	Mass after 5 minutes	Mass after 10 minutes

Think About It!

How did the bubblegum’s mass change? _____

What caused the change in mass? _____

How does your results compare to someone else with a different brand? _____

How would the mass change if you chewed the gum for another 30 minutes? _____

Experiment #3: Super Chompers

How fast can you chomp a piece of bubblegum? My prediction is _____ chomps per minute.

Directions:

- 1 – Use the piece of gum you chewed in experiment #1 since it already nicely chewed.
- 2 – Use a timer and count the number of chomps you can do in 60 seconds. For a "real" chomp, your jaws must open more than an inch. Record the amount in the chart below.
- 3 – Repeat step 2 two more times and record your results in the chart.

Trial 1	Trial 2	Trial 3
_____ chomps/1 min	_____ chomps/1 min	_____ chomps/1 min

Think About It!

Which was your fastest trial? _____ Slowest trial? _____

What caused the change in speed? _____

How would your speed change if you chomped for 60 seconds on each trial? _____

How close were you to your guess? _____

Experiment #4: Bubblegum Blowout

Which brand of bubblegum will make the best bubbles? My guess is _____.

Tips:

- ❖ **Stick to the smaller amounts of gum;** more gum doesn't mean more bubble. If you can blow your bubble and you still have gum in your mouth, you need more practice, not more gum. Remember, you are allowed only three pieces of gum when going for the world record.
- ❖ All gum contains sugar and artificial flavoring which is great for taste, but bad for bubbles. **Be sure to chew your gum long enough to work out all of the sugar and artificial flavoring,** this will help to strengthen your bubble. Find the right consistency to where you can push your tongue through the gum to make the pocket, but where you don't push all the way through and leave little gum to make a big bubble with.
- ❖ If you want to blow the biggest bubbles possible, **be careful and blow slowly.** Use slow even breaths, this gives your gum time to stretch and grow, but also keeps even pressure on the gum to keep it from sagging. **Don't tighten your lips around the bubble** like you just sucked on a lemon, this will force you to blow harder and pop your bubble. Instead keep your mouth open so you inflate the bubble through a larger hole.
- ❖ **Practice, practice, practice!** Blowing championship bubbles will require not only practice but a strong jaw, tongue, and diaphragm. Try different combinations of the tips above to find the perfect conditions for blowing the biggest bubbles possible.