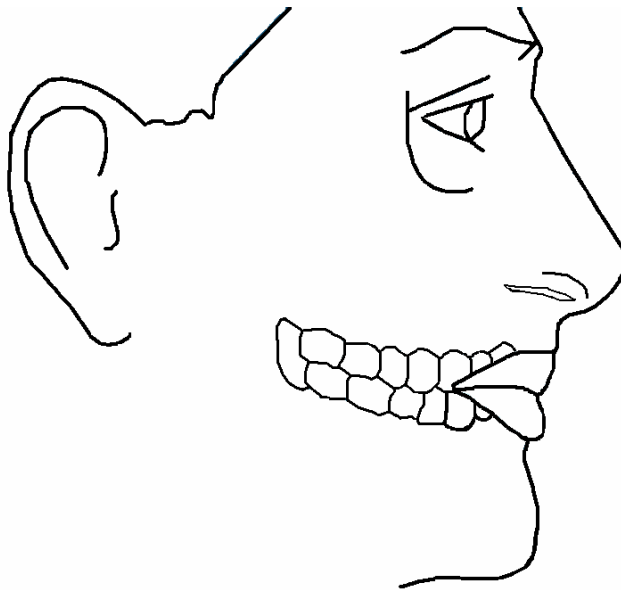


Saliva Search (High School Version)

Saliva: that tasteless liquid mixture produced by your salivary glands, sometimes known as spit, may be something you never thought much about except for dribbles and schoolyard giggles. However, saliva has been elevated to a new level gaining respect in the science and biotechnology world. As you visit each learning area, you will realize that this ho-hum fluid has gained widespread attention as an indicator of disease, a provider of oral health and a tool to unlock the mysteries of disasters and crime. Please complete the following activities as you walk through **Saliva: A Remarkable Fluid**.

I. SPIT HAPPENS

Draw and label the 3 major salivary glands that produce the majority of our saliva.



Salivary glands produce an amazing amount of liquid. In fact, our salivary glands produce _____ a day, every day.

What can you compare this amount of liquid to? _____
HINT: Check out the factoid wheel

II. SALIVA: A MOUTHWATERING RECIPE FOR HEALTH

Saliva is 99% _____. The remaining 1% is composed of:

_____	_____	_____
_____	_____	_____

Select one ingredient from that famous 1%. _____

What would happen if that ingredient were missing from your saliva?

Complete the Petri dish station.

III. ABOUT SPIT

Read the text panel on *About Spit*.

Saliva does more than keep your mouth wet. Name 3 ways that this *spittacular* fluid is working for you. Turn the pizza wheel to find out.

IV. REFLECTING ON SALIVA

Look in the mirror. Locate Wharton's Duct in your mouth. Did you know that this duct supplies 60% of your saliva?

Now try to roll your tongue. Can you roll your tongue ? YES NO

Tongue rolling is the ability to roll your tongue into a U shape. It is a dominant trait that you inherit from your parents.

Continue on reflecting.

What is your favorite food? _____

Can you smell and taste it just thinking about it? YES NO

Is your mouth watering in anticipation of that food? YES NO

That is because just the thought of something you like to eat can stimulate your salivary glands.

Now think about a situation that has recently upset you.

Is your breathing shallow? YES NO

Is your mouth becoming drier? YES NO

If it is, that is because just the feeling of sadness or fear or any intense negative feeling can cause your mouth to become dry.

V. SALIVA SOUND BITES

Walk around the sound bit cylinder. Which saliva factoid amazes you the most? Write it here.



VI. SALIVA A MIRROR TO YOUR HEALTH

Saliva reflects many conditions about disease, drugs, oral health, our environment, fertility, lead poisoning, and crime.

Experiment on the kiosk, *WHAT CAN SALIVA BE USE FOR?* Touch the question, “WHO COMMITTED THIS CRIME.”

Which suspect do you think is the chewing gum bandit? _____
Perform the test. Were you correct? If you have time, perform other experiments.

VII. A DROUGHT IN YOUR MOUTH

Read *How Dry is Dry*.

Everyone has a dry mouth once in a while – if they are nervous, upset, or under stress. But is you have a dry mouth all or most of the time, it can be uncomfortable and can lead to serious health problems.

What are the major causes of dry mouth? _____

What is Sjögren’s syndrome? _____

How is Sjögren’s syndrome different than the other causes of dry mouth? _____

VIII. OBSERVE THE VIDEO, DRY MOUTH – THE INSIDE STORY

Presented are two real-life cases of individuals suffering with dry mouth caused by Sjögren’s syndrome. What is your reaction to this video? _____

Identify at least 5 symptoms of Sjögren’s syndrome.

IX. GENE TRANSFER: RESTORING SALIVA, RESTORING HOPE

While there is no permanent cure for salivary gland depletion, science is looking toward gene therapy to repair salivary gland function in the very near future.

What protein is necessary to restore salivary function? _____

What does this protein do? _____

What vector will be used to transport this protein? _____

THANK YOU FOR VISITING SALIVA: A REMARKABLE FLUID

