

Bite Mark Analysis Lab

Purpose: The purpose of this lab is to identify and analyze the unique characteristics of individuals' bite impressions.

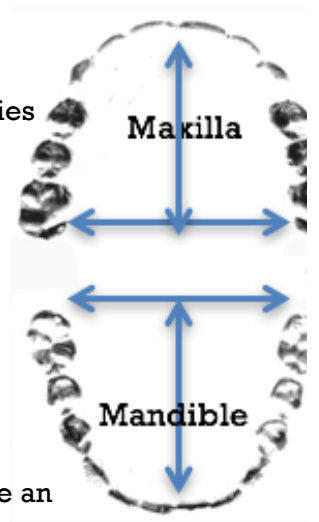
Pre-Lab Questions:

1. Why are teeth an important piece of evidence in a crime investigation?

2. Describe some basic and individual characteristics of teeth.

Materials:

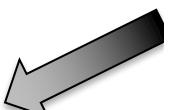
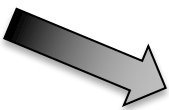
- Small Styrofoam plates (1 per student)
- Permanent Markers (1 per student)
- Rulers (1 per student)
- Overhead Transparencies
- Gloves
- Wipes



Procedure:

Part 1: Plate Bite Impression

1. Bend the Styrofoam plate in half (the top of the plate is on the inside)
2. Label one half "maxilla" and label the other half "mandible"
 - The **maxilla** is the top half, and the **mandible** is the bottom half
3. Insert the folded plate into mouth as far as possible and bite down to make an impression. *avoid biting through the plate
4. Use a wipe to clean the freshly bitten plate, throw away wipe when done
5. Place a sheet of the plastic film over the impression and use a permanent marker to recreate the pattern to match that of your bite mark
6. Use a ruler to make the measurements shown and record in the Table 1 along with any notes regarding unique characteristics you observe in the teeth



Check in with your teacher, submit your plate, and get a Bite Mark Analysis reading

Part 2: Plate Bite Impression Identification

1. Look through all the plates created in class today
2. Use your tracing of your print to try and find your plate
3. Check in with your teacher if you think you have the correct plate

Table 1: Plate Bite Impression

(Part 1, Step 6) Use a ruler to make the measurements needed to the nearest tenth of a centimeter and record your data in the table below along with any notes regarding unique characteristics you observe in the teeth.

Jaw	Width	Depth	Unique Characteristics
Maxilla			
Mandible			

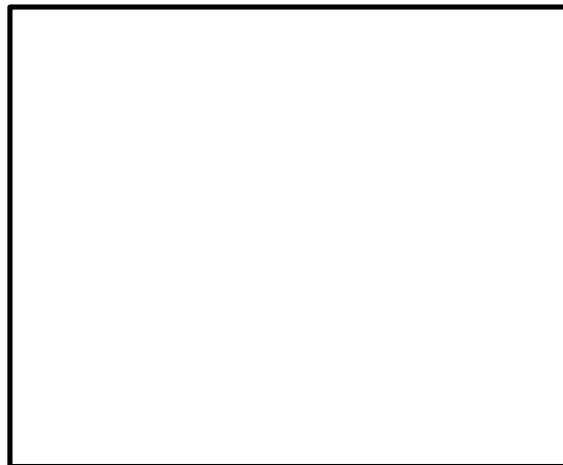
Post lab Questions: Answer the following in complete sentences.

1) Describe the patterns that ALL teeth have.

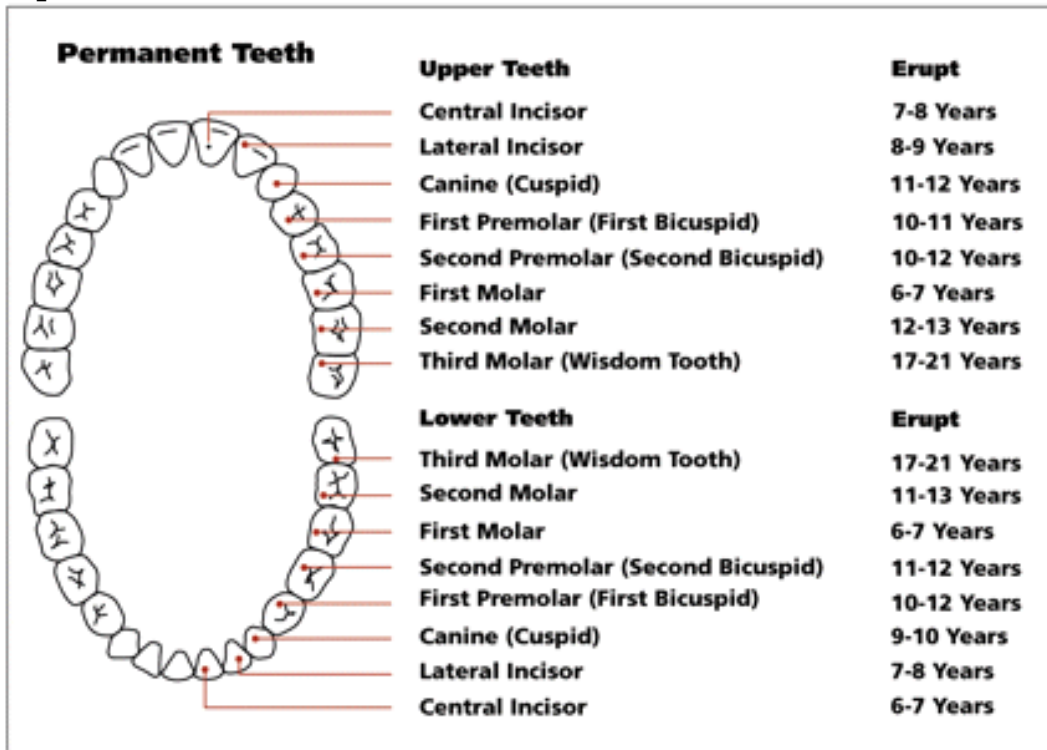
2) How would a rotated or missing tooth appear in a bite mark? How would a missing tooth appear in an impression?

3) What patterns did you look for when trying to match up your own bite impression?

4) Draw a model of a tooth, and label the crown, neck, root, dentin, enamel, and pulp.



5) **Optional:** Color code the incisors, canines, and molars with 3 different colors.



THE "BITE MARK ANALYSIS READING" MUST BE SUBMITTED WITH THE LAB (this paper) IN ORDER TO RECEIVE FULL CREDIT!