

Chapter 2

The Periodontal Probe

The Periodontal Probe is designed to measure anatomical structure(s) primarily within the oral cavity. This lesson of information is used to determine the health status of the periodontium. The probe is considered to be an Assessment Instrument.

Section Worksheets



Introduction

OBJECTIVES:

AT THE COMPLETION OF THIS SECTION, STUDENTS WILL:

1. State the function of the periodontal probe.
2. Identify the various parts of the probe.
3. State the armamentarium needed to successfully probe a given area.
4. Select the appropriate type of probe to use in a given area.



As we have learned, dental charting is the first step in gaining a 'picture' of the patient's mouth and its health status. Examination of the teeth gives us a hint to its ability to function as it should. But in order to determine the overall health status of the mouth, a full examination of the underlining structures and its ability to support the teeth is equally important. Examination of the periodontium is the next step in completing our 'picture' of the mouth.

The Periodontal Probe is an assessment tool used to measure anatomical structures in the mouth specifically:

1. Periodontal Sulcus.
2. Gingival Recession
3. Attached Gingiva
4. Furcation Involvement
5. Normal and/or abnormal findings

The measurements obtained are then used to make a diagnosis on the overall status of the health of the periodontium.

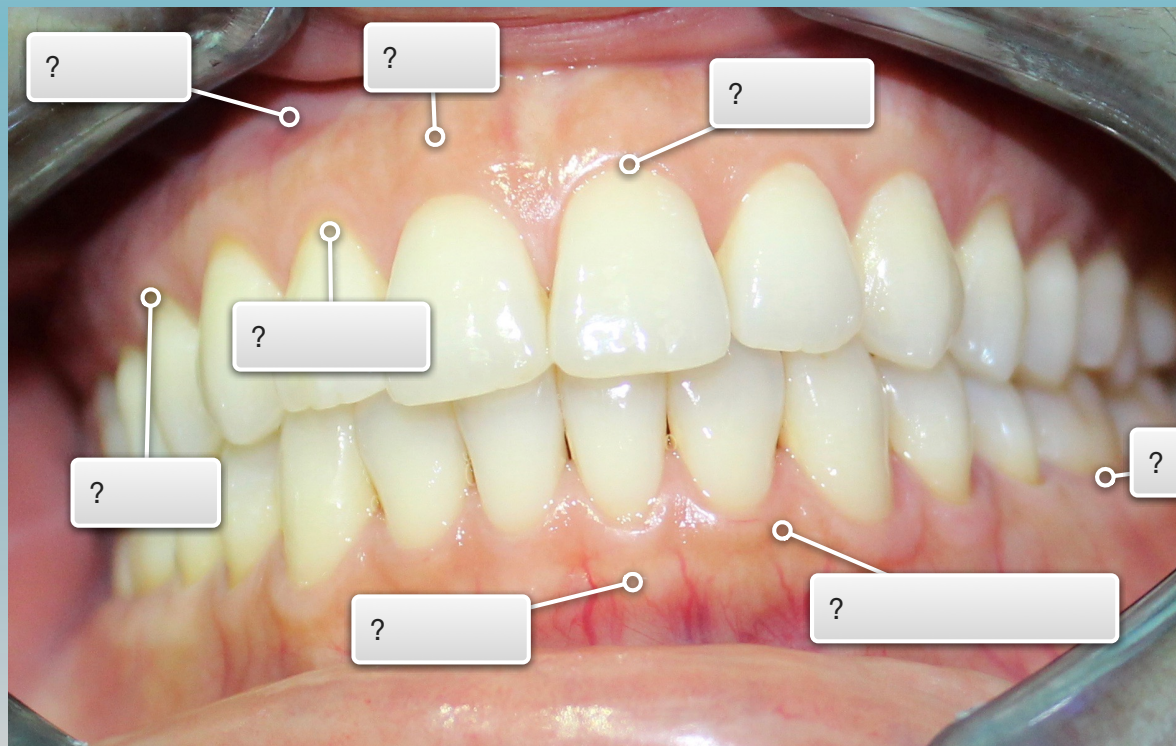
Discussions on how to use the Probe to take measurements of each anatomical structure will be discussed in the upcoming sections. For now, let's focus on the periodontal sulcus.

Before we begin, let's take a quick review of the of the periodontium

Interactive 2.1 Identify the anatomical structures that determine overall periodontal health. Then click on the box and see if you are right!

Choose from the following:

- Gingival Recession
- Mucogingival Junction
- Gingival Groove
- Sulcus
- Attached Gingiva
- Unattached Gingiva
- Furcation Involvement
- Cemental Enamel Junction



Beginning



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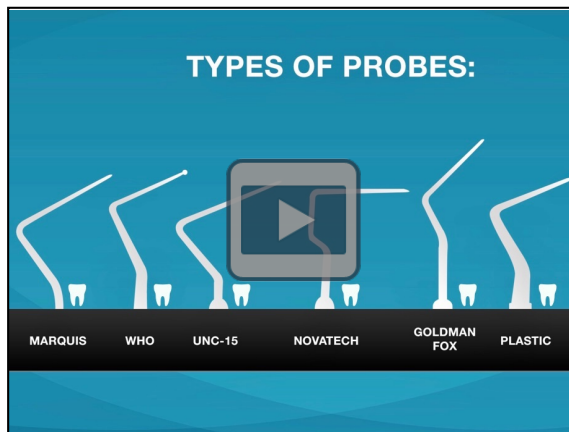


3 Basic Types of Periodontal Probes:

The Periodontal Probe-

Most frequently used of the three basic types of probes. It is used universally in the mouth. These probes can be used on any tooth or root surface. Basic probes, with their straight shanks, are the instrument of choice to measure soft and hard tissue.

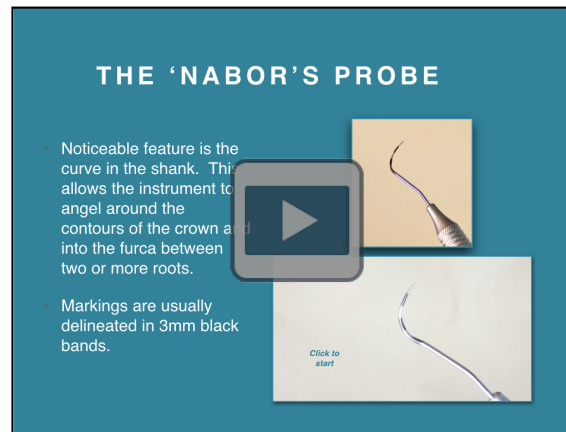
Slide Show 2.1 Expand by flaring out pinched fingers. Touch each tooth to learn more about that type of probe.



The Furcation Probe-

Used to take measurements in a furcation of two or more roots. The working shank of this instrument is curved as compared to the periodontal probe's straight working shank.

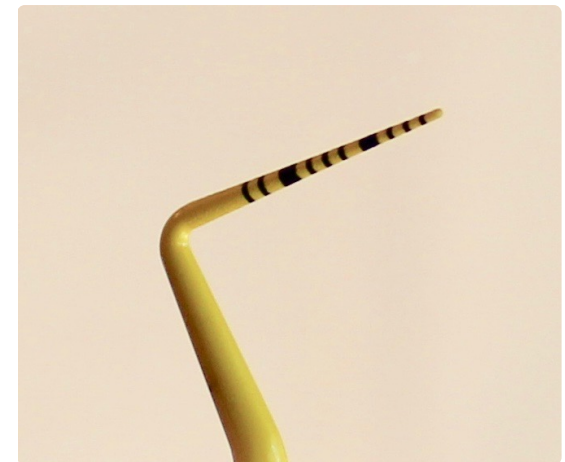
Interactive 2.2 Expand by flaring out pinched fingers



The Plastic Probe-

Looks and feels like the basic periodontal probe but made of plastic.. This instrument is used on implant teeth.

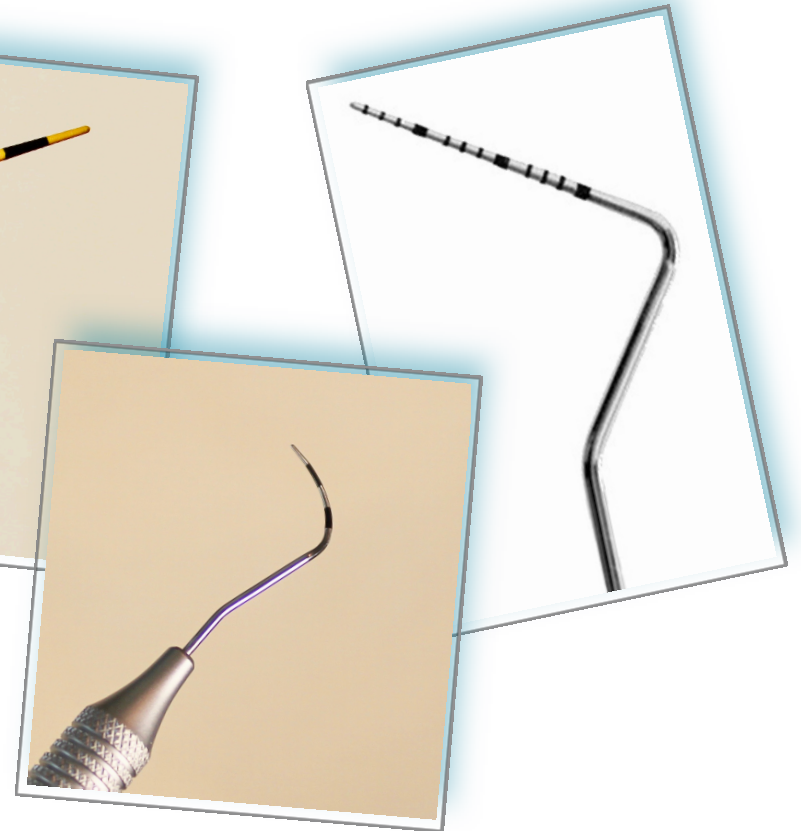
Gallery 2.1



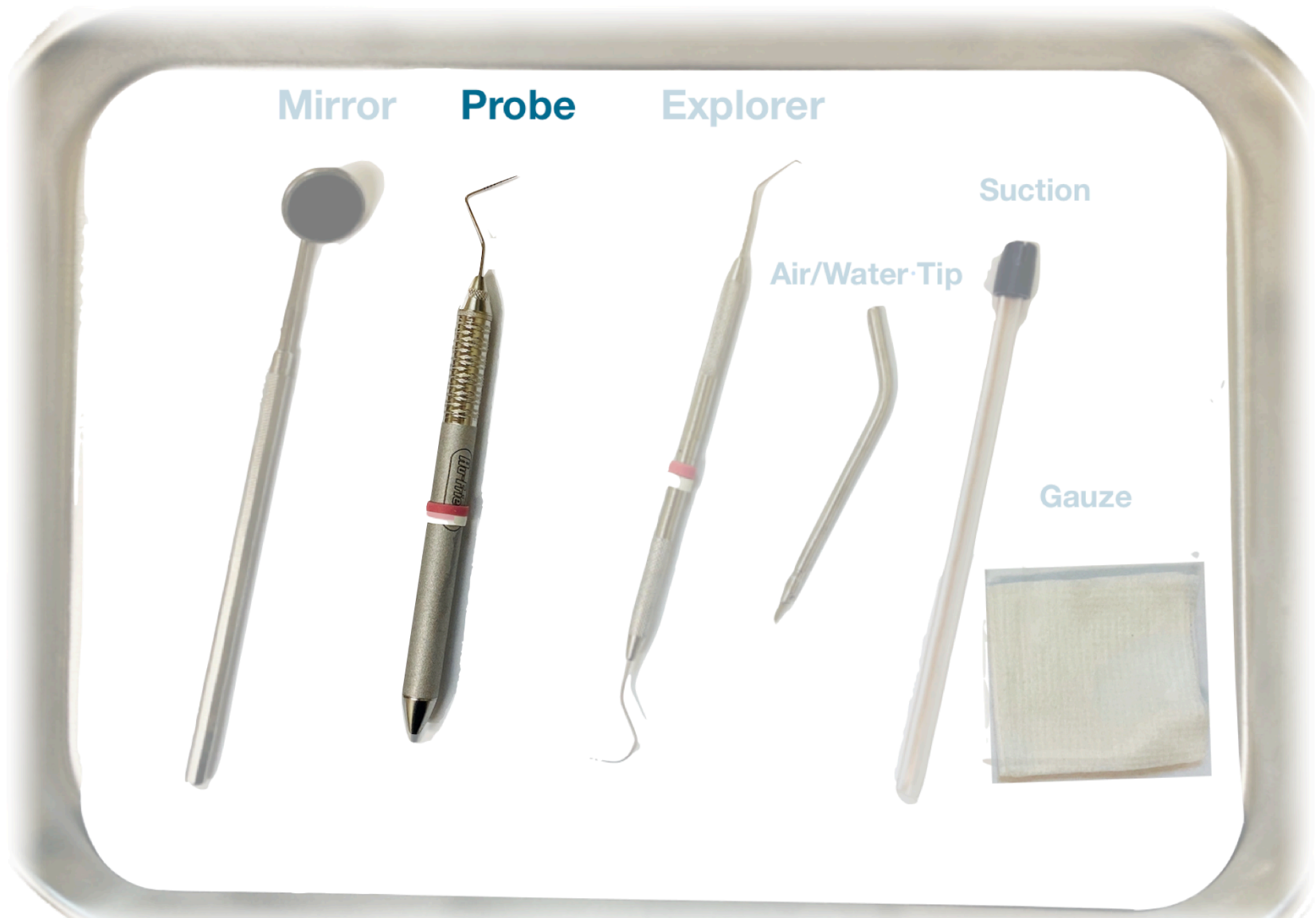
Design Characteristics:

Let's begin first with the design characteristics of the probe and what makes the probe so unique when compared to other instruments used in the mouth:

1. Distinct markings on the working end of the probe are noticeably apparent, making the probe unique from other dental instruments in both appearance and function. The markings on its working end delineate units of measurement in millimeters.
2. The tip of the probe is always rounded so that it does not puncture through the fragile epithelium.
3. Since the probe is used for assessment purposes, there are no cutting edges on its working end.
4. There is no foot on the probe only the working shank and its tip. *(Click on the images for additional information)*



Basic Armamentarium For Dental Screening:



Prior to Instrumentation:

Before probing can begin, the clinician needs to perform certain preliminary functions to ensure accurate data collection. This will ensure minimal or no fatigue to the clinician and optimal comfort for the patient. Always consider the following functions prior to instrumentation:

Patient positioning: *(Click here for a refresher) <--Doesn't work right now- Link will go to website that houses your school's philosophy)*

After placing patient in a supine position, adjust the height of the dental chair appropriately so that the patient's mouth is 16-18" away from the clinician's eyes.

Depending on the arch to be probed- is the patient's chin up (for maxillary) or down (for mandibular) for instrumentation? In another words, is the occlusal plane appropriate for the arch being probed?

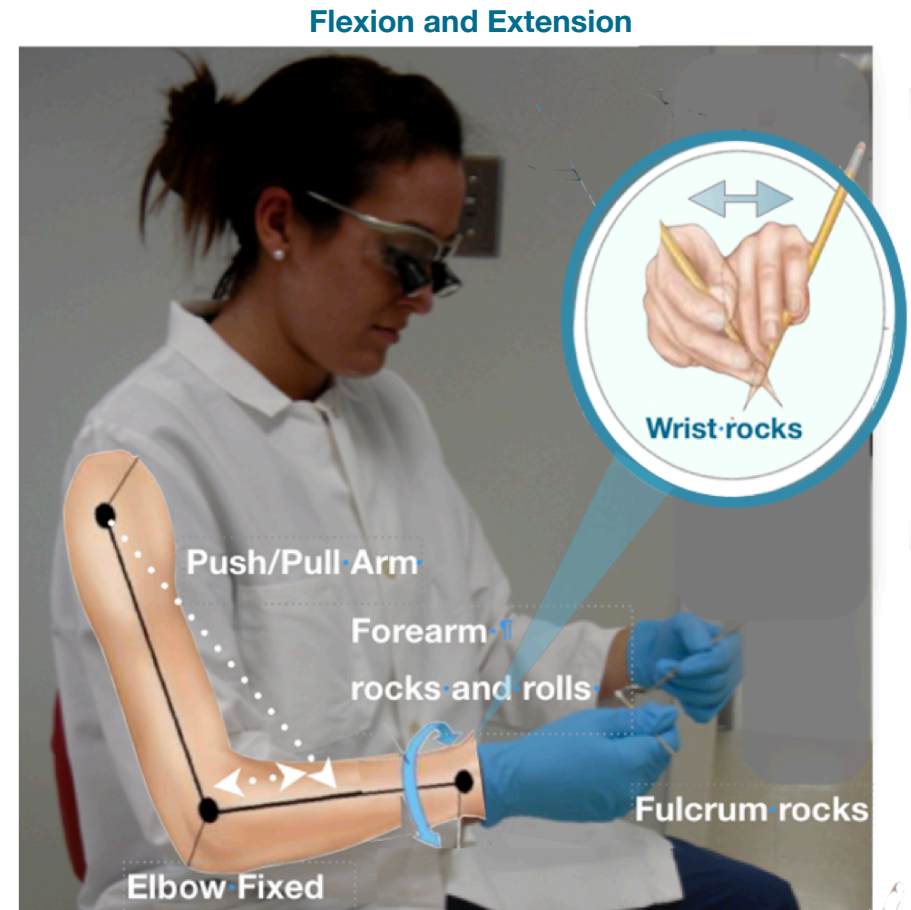
Is the patient's head turned for maximum viewing of the surface(s) to be probed using direct or indirect vision?

Operator positioning: *(Click here for a refresher) <--will go to website*

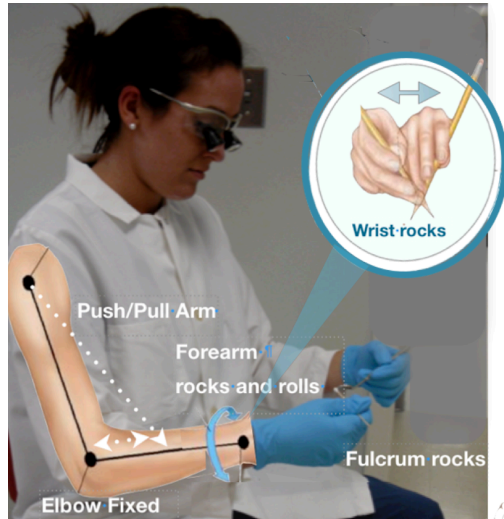
Is clinician at the appropriate clock position for the working area? Please note: positioning will change within the quadrant being probed as clinician moves from sextant to sextant.

Flexion and Extension:

Depending on the operator's positioning, the arm will extend for certain surfaces and flex for other surfaces, when it retracts. Since the fulcrum is anchored, the wrist will have to flex appropriately. This combined motion of secure fulcrum, extending/retracting arm and flexible wrist motion is what gives the clinician control when employing technique



Movie 2.1 Extension and Flexion Of The Arm And Wrist



Movie 2.2 Pivoting on the Fulcrum Finger And Finger Rolling The Instrument.

Pivoting:

Is the wrist relaxed and flexible?

Is the wrist able to rise and fall and roll while the fulcrum finger is anchored?

Finger Fulcrum:

Is the ring finger of the clinician's dominant hand straight and supporting its weight?

Is the finger fulcrum on the same arch, near the working site?

Is appropriate pivoting (flexion and extension) on the fulcrum site being employed?



Modified Pen Grasp:

Is the thumb and index finger pad positioned opposite one another on handle?

Fingers should not be touching or overlapped. Is the pad of the middle finger resting slightly on the instrument shank and is it touching the ring finger?

Does the instrument handle rests between the second knuckle of the index finger and the third knuckle of the thumb (the “V” of the clinician’s hand)?

Visibility: *(page 14)*

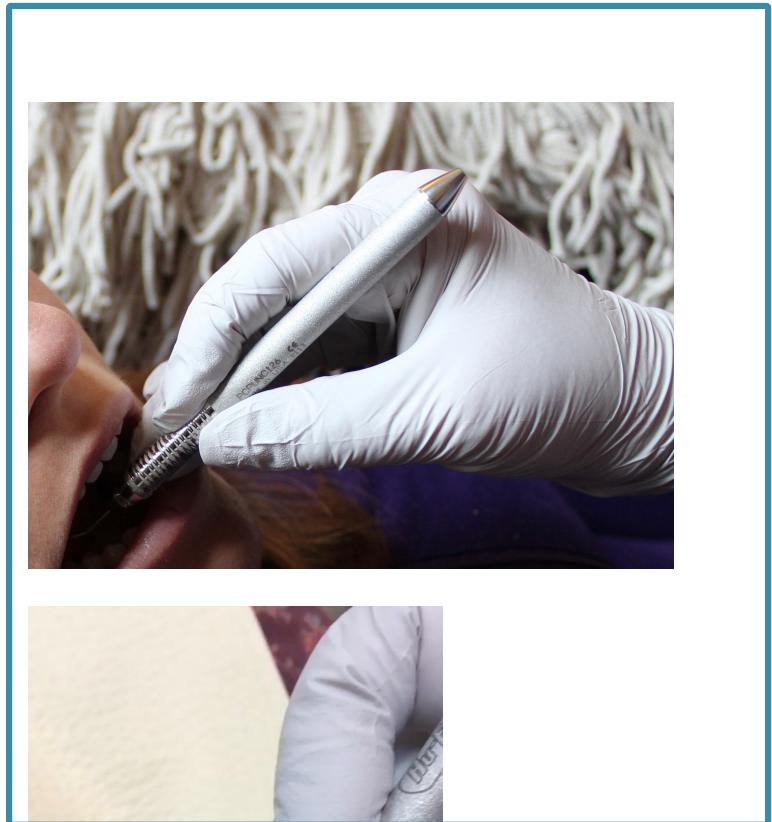
Is appropriate lighting established for working area? Is a mirror available for illumination and visibility of the area?

Is there appropriate placement of the saliva ejector or suction to maintain dry field and increase visibility?

Is water and/or air available for use to increase visibility?

******Please remember that gloves are worn when using ANY instrument in the mouth.***

Scrolling Bar 2.1.1 Modified Pen Grasp



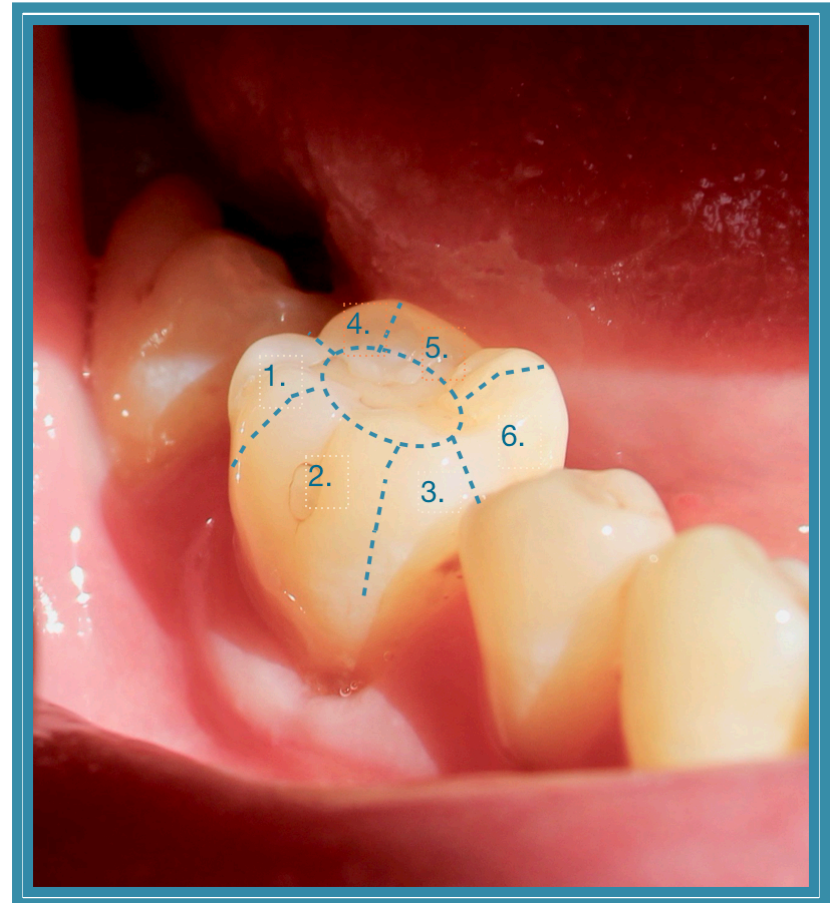
Identifying Tooth Surfaces:

In review, you know that every tooth is divided up into six sections, each section is called a 'surface'. Each surface is first defined directionally from contact point to contact point. If the surface is on the labial side (cheek) it is known as the Buccal Surface. The surface of the tooth on the tongue side is known as the Lingual Surface. Each of these two surfaces are then further divided by it's line angles.

Therefore, each tooth is divided into six sections and can be defined as follows:

1. The **Distal Buccal surface**- extends from the posterior line angle to the distal contact point on the buccal side of the tooth.
2. The direct **Buccal surface**- extends from line angle to line angle on the buccal side of the tooth.
3. The **Mesial Buccal surface**- extends from the anterior line angle to the mesial contact point on the buccal side of the tooth.
4. The **Distal Lingual surface**- extends from the posterior line angle to the contact point on the lingual side of the tooth.
5. The direct **Lingual surface**- extends from line angle to line angle on the lingual side of the tooth.
6. The **Mesial Lingual surface**- extends from the anterior line angle to the mesial contact point on the lingual side of the tooth.

Labeling each tooth surface enables the clinician to identify the specific tooth surface of interest and document findings. This will also ensure that future referral and re-evaluation of the noted area can be determined once again.



Interactive 2.3 **Test Your Knowledge!** (Touch screen to begin~)

