

Chapter 3

The Dental Explorer

The Dental Explorer is also considered to be an Assessment Instrument. It is designed to examine the anatomical surface(s) of the tooth by scratching the surface lightly to determine defects or anomalies in the tooth's surface.

Chapter Worksheets



Introduction

OBJECTIVES

AT THE COMPLETION OF THIS SECTION, STUDENTS WILL BE ABLE TO:

- 1. State the function of the dental explorer.**
- 2. Site and define the anatomical features that every explorer shares.**
- 3. Site the various types of dental explorers and describe the unique characteristics of each.**
- 4. Identify appropriate tooth surfaces to use each type of explorer.**

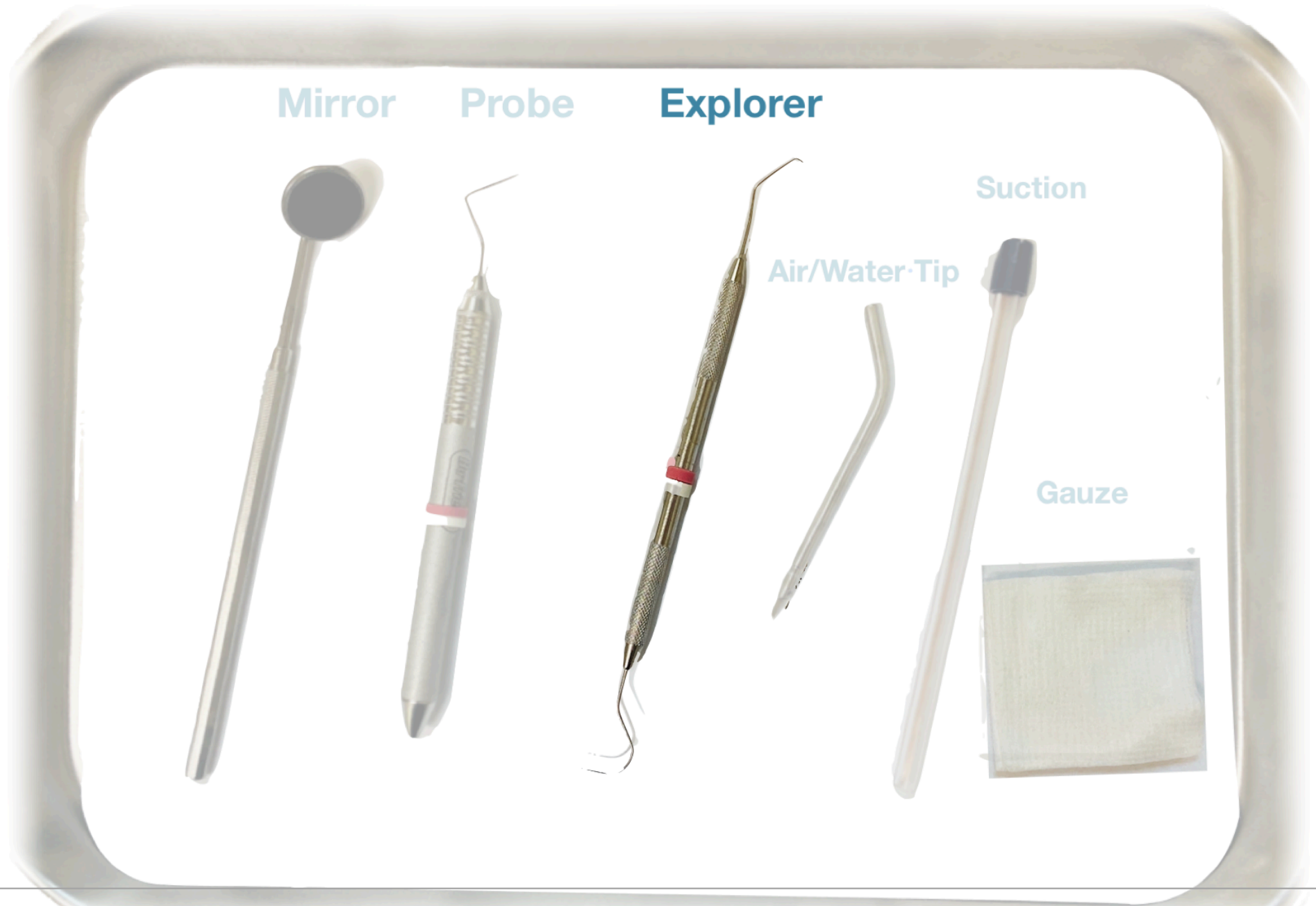


The dental explorer is used to examine the anatomical surface(s) of the tooth. This enables the clinician to determine if defects or anomalies are present. By lightly scratching the tooth's surface, tactile sensitivity is enhanced and anomalies are easily determined. The dental explorer is often used in conjunction with other tools such as radiographs to definitively determine if disease is present.

The explorer stands out from other instruments by its unique design characteristics. The explorer's very thin working end and its sharp, pointed tip enables this instrument to maintain constant contact as it maneuvers the tooth's surface. This allows the clinician to 'feel' for defects to help determine if disease (in the form of caries) is present or if there is an irregularity present such as a fracture, open restoration margin, calculus, etc.

There are various types of explorers used in dentistry today. Design characteristics determine when and where it can be used. Let's take a look at the dental explorer in more detail.

Basic Armamentarium for Dental Screening:



Anatomy of the Dental Explorer

There are many different types and variations of dental explorers. No matter what explorer you are using, **The main purpose of the explorer is to examine tooth structure for any anomalies, or irregularities, that exist on the tooth's surface.**

Some examples of anomalies that the explorer searches for are: fractures in the enamel, caries, defects in the margins of restorations and calculus.

Some examples of irregularities that can be found on the tooth surface are: pits and fissures, CEJ or lack of CEJ and concavities.

Let's now take a look at the explorer and discuss the features you'll see on every explorer.

Single Sided Explorers: Some explorers are used universally in the mouth using only one end of the instrument. Explorers that have only one working end are known as '*single sided*' explorers. Single sided explorers are often paired with another single sided instrument, however, they can stand alone. The picture to the right (image A) looks like an explorer with two working ends, however, each end is quite different from each other. This instrument is an example of a two single sided instruments paired together- the #17 explorer and the Shepherd's Hook. Each end can be used anywhere in the mouth, on any tooth surface, without flipping the instrument or moving the patient's head.



Double Sided Explorers: Explorers that look like they have the same working end on each end of the instrument handle but are, in fact, mirror images of each other, are referred to as a 'double sided' explorers (Image B). This means that one end of the instrument is used on all surfaces in the same plane in the mouth. The other end is use on all the surfaces of the opposite plane. Therefore, one end is used on all the buccal and lingual surfaces when the patient's head is turned to the right. (See image C). To access the remaining surface (opposite plane), the instrument is flipped and the patient's head is moved accordingly. (See image D)



Left upper and lower buccal
Right upper and lower lingual

Right upper and lower buccal
Left upper and lower lingual



Anatomical Features:

Tip: The point

Toe: Anterior 1/3 beginning at the tip

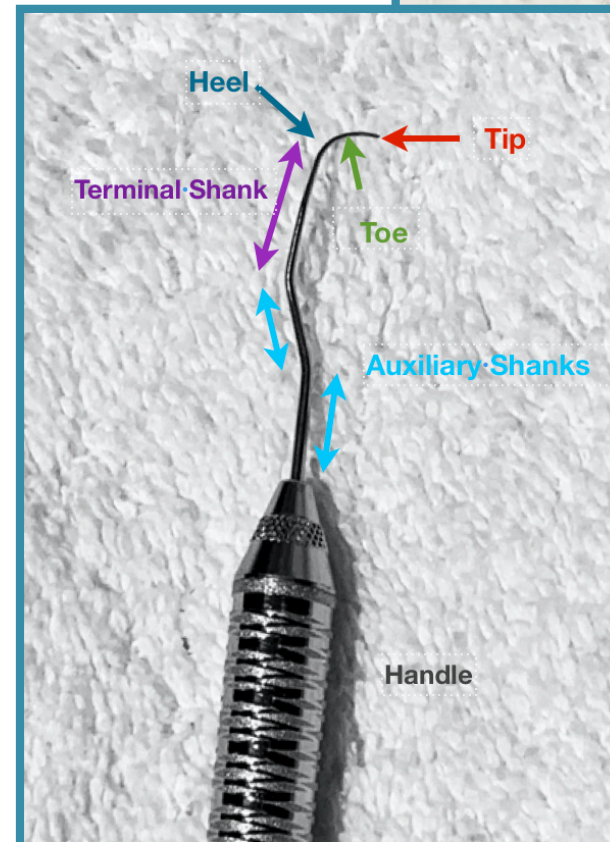
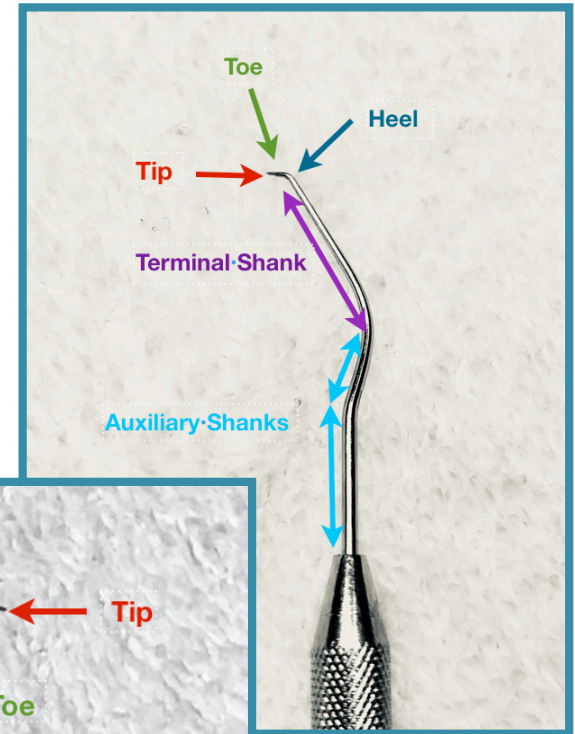
Heel: The first bend from the tip

Terminal Shank/ Working Shank: From the Heel to the next bend

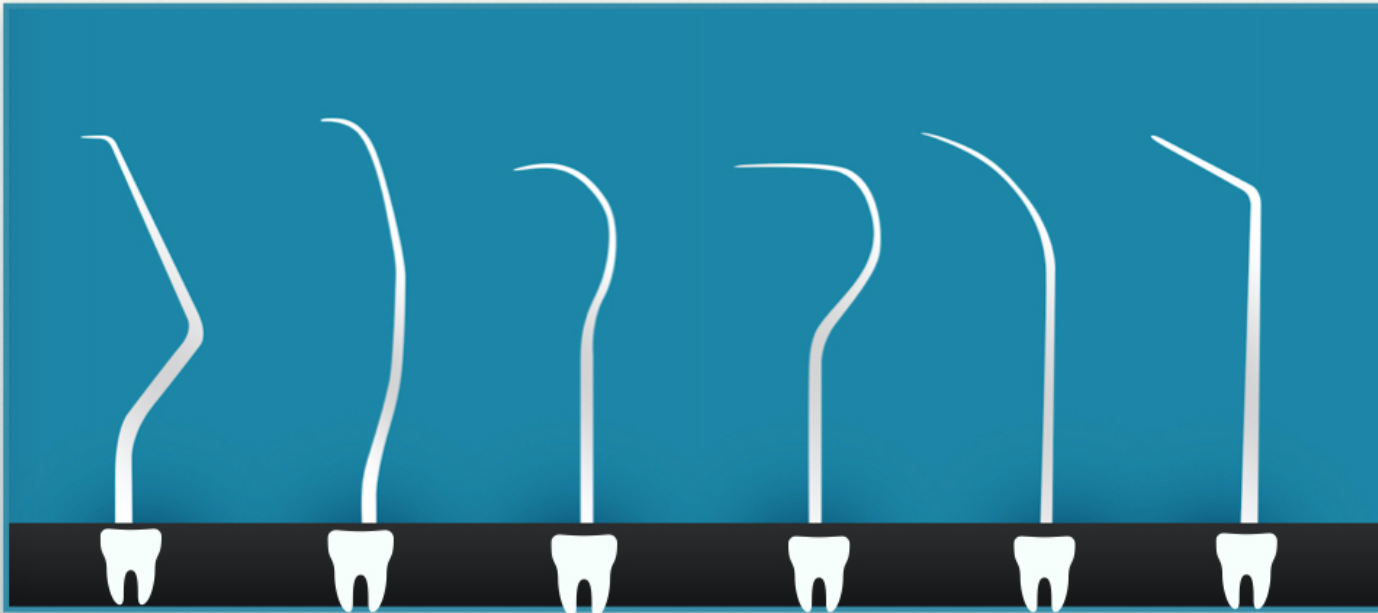
Auxiliary Shank From the Terminal Shank to the next bend. There may be several 'shanks'.

Handle: The part of the instrument that is grasped by the fingers.

***Notice on the Shepherd's Hook, the Toe, Heal, and Terminal Shank are all one. You will find this blending of features in other explorers as well.

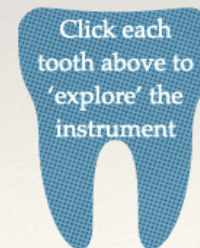


Slide Show 3.1 Click each tooth below to 'explore' the instrument.



Types of Dental Explorers: Function and Design Characteristics:

#17 Explorer
ODU 11/12
Pig Tail
Shepherd's Hook
#3 Explorer
Straight Explorer





Prior to Instrumentation:

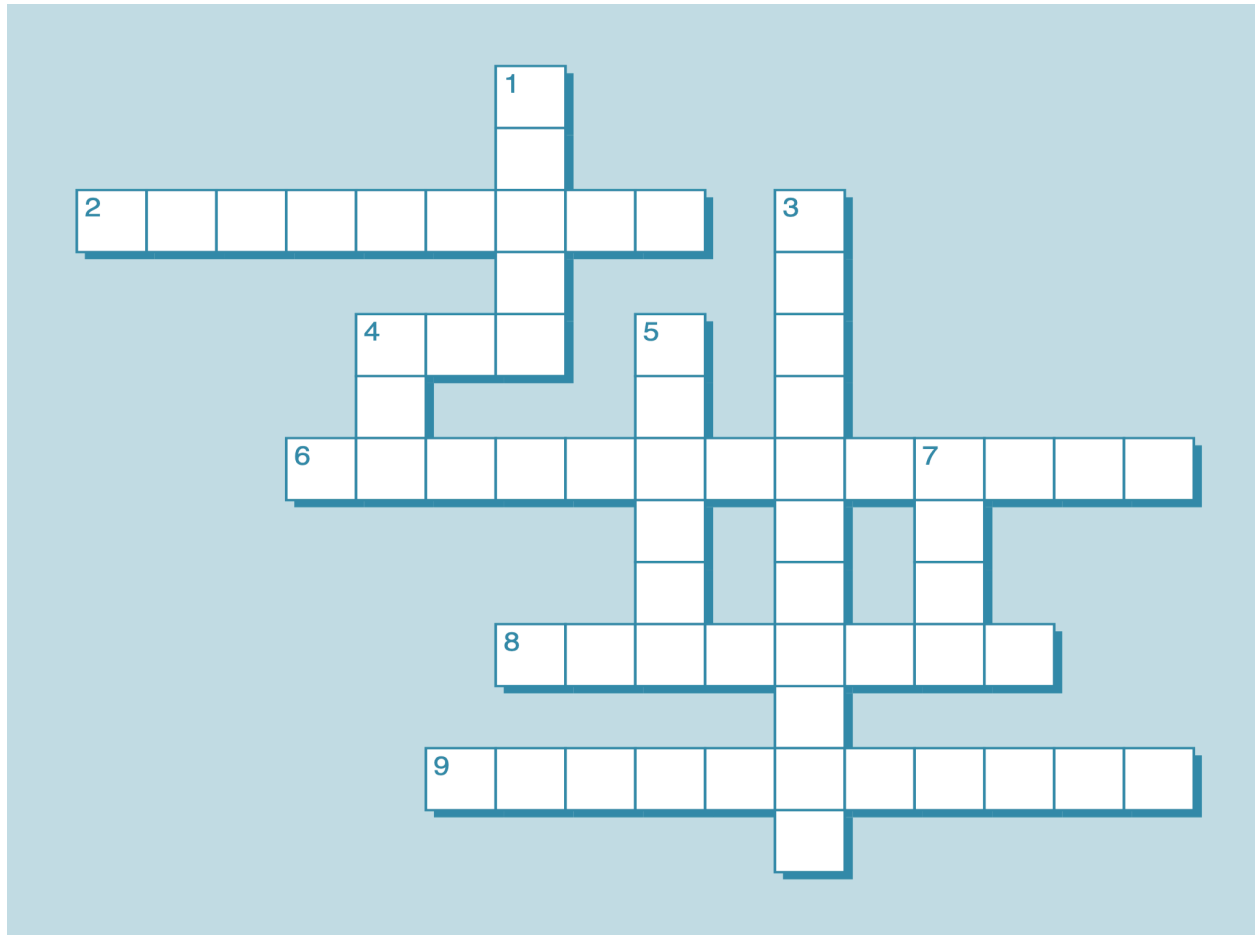
Operator/ Patient positioning is the same for the explorer as it is for the probe and all other instrumentation. It is important to be vigilant in this area for the general well being of the clinician and patient safety. Aches and pains, no matter how minor, over time, will contribute to ineffective technique, loss of patient comfort and eventually the loss of the ability to practice instrumentation. As a reminder, common ailments that develop over time through improper operator/patient positioning include but not limited to: chronic back issues and /or Carpal Tunnel Syndrome. [\(insert link to this_](#)

Please refer to p.30 and 31 to review operator/patient positioning, fulcrums, pivoting, flexion, extension and retraction and lighting.

For review of proper positioning , click here [\(links to web site that will house your school's materials\)](#)

Review Your Knowledge:

Interactive 3.1



Click screen to begin~