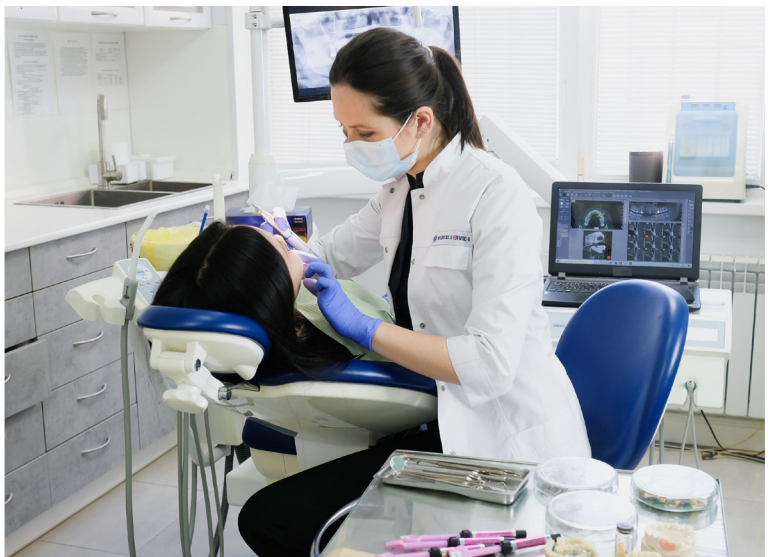




Dental Terminology Student Workbook

Student Workbook - Teacher Guide



Name:

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Lesson 1: Introduction to Dental Terminology

Popular Prefixes and Suffixes

Instructions: Part of working in a dental office is using the correct terminology. Before you can use these impressive-looking words, you must understand the word parts. A prefix is at the beginning of the root word, and a suffix is at the end, altering the word's meaning. A combining vowel is sometimes used to join word parts and simplify the pronunciation.

As your teacher leads the discussion, fill in the blanks to define what each word part means.

Prefix/Suffix	Definition	Example
-algia		
a-		
apic-		
-ectomy		
endo-		
endo-		
gingiv-		
-ia, -iasis		
-infra		
-inter		
-intra		
-itis		
lingu-		
muc-		
-osis		
odont-		
path-		
peri-		
perio-		
-plast, -plasty		
post-		
quad-		
-stomia		
super-		
supra-		
xero-		

Lesson 1: Introduction to Dental Terminology

Dissecting Dental Terminology

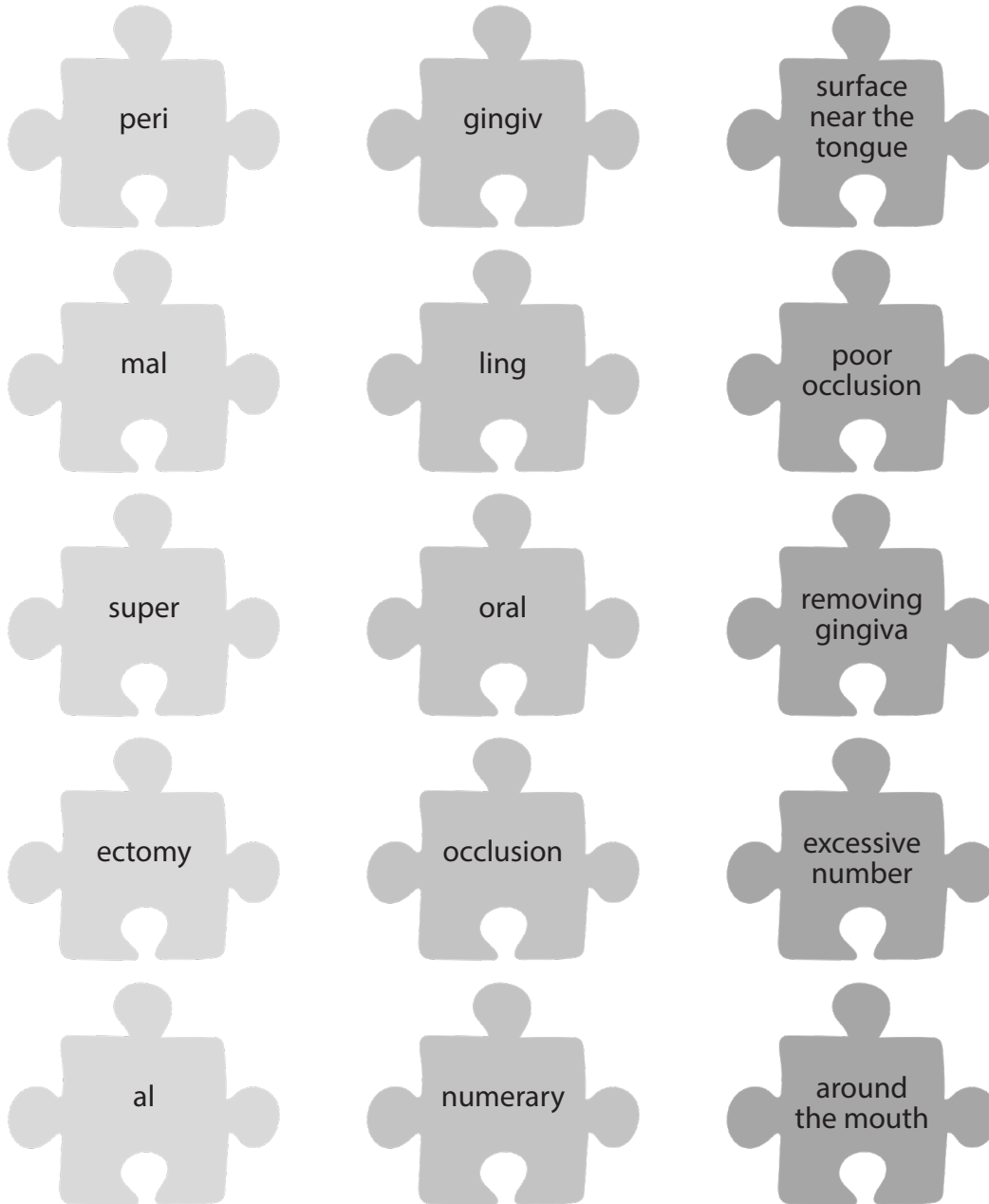
Instructions: Write each word's prefix, root word, and suffix in the correct box. Not every word may have all three parts.

Words	Prefix	Root Word	Suffix
Apicoectomy			
Alveoloplasty			
Bicuspid			
Bifurcation			
Calculus			
Dentin			
Gingivitis			
Intraoral			
Nonnarcotic			
Odontology			
Periodontitis			
Supragingival			
Xerostomia			
Vasoconstrictor			

Lesson 1: Introduction to Dental Terminology

Unscramble the Prefixes and Suffixes

Instructions: Unscramble the prefixes, root words, and suffixes to make a whole word. Each root word will have a prefix or suffix. Match it with the definition and write the word in the space provided below. Remember to use a vowel to create a combining form for root words.



1. _____
2. _____
3. _____
4. _____
5. _____

Lesson 1: Introduction to Dental Terminology

Scenario 1

You have completed taking x-rays on Ryan, a new patient, and the dentist, Dr. Voight, enters the operatory to review his findings. Dr. Voight tells Ryan that he has periodontitis. The initial treatment for this condition is scaling and root planing (SRP). It removes plaque and calculus from the root of the teeth. SRP can be done with instruments, a laser, or an ultrasonic device.

Dr. Voight advises Ryan that sometimes antibiotics are also needed. He may prescribe topical or oral antibiotics to help control bacterial infection. Ryan may need a prescription mouth rinse, or the hygienist can place an antibiotic gel into the gum pockets. If the antibiotics do not work, surgical treatment may be required. Procedures, like flap surgery, soft tissue grafts, and bone grafting, may be necessary to correct advanced conditions.

Terminology to consider:

- Diagnosed condition
- Treatment

Key questions:

- What condition is Ryan diagnosed with? What area of the mouth does it affect?
- What are the treatment options for Ryan?

Lesson 1: Introduction to Dental Terminology

Scenario 2

Mrs. Hoffer is with her 10-year-old daughter, Sara, at the office for her biannual dental checkup. Dr. Kennelly comes into the operatory to complete the exam. After reviewing her x-rays and inspecting the oral cavity, Dr. Kennelly recommends that Mrs. Hoffer take Sara to see an orthodontist to assess her malocclusion.

Because Sara sucked her thumb, she developed an open bite. If not corrected, Sara could have trouble speaking, chewing, and breathing throughout her life. Some treatment options the orthodontist may discuss include braces, headgear, and orthognathic surgery.

Terminology to consider:

- Diagnosed condition
- Treatment

Key questions:

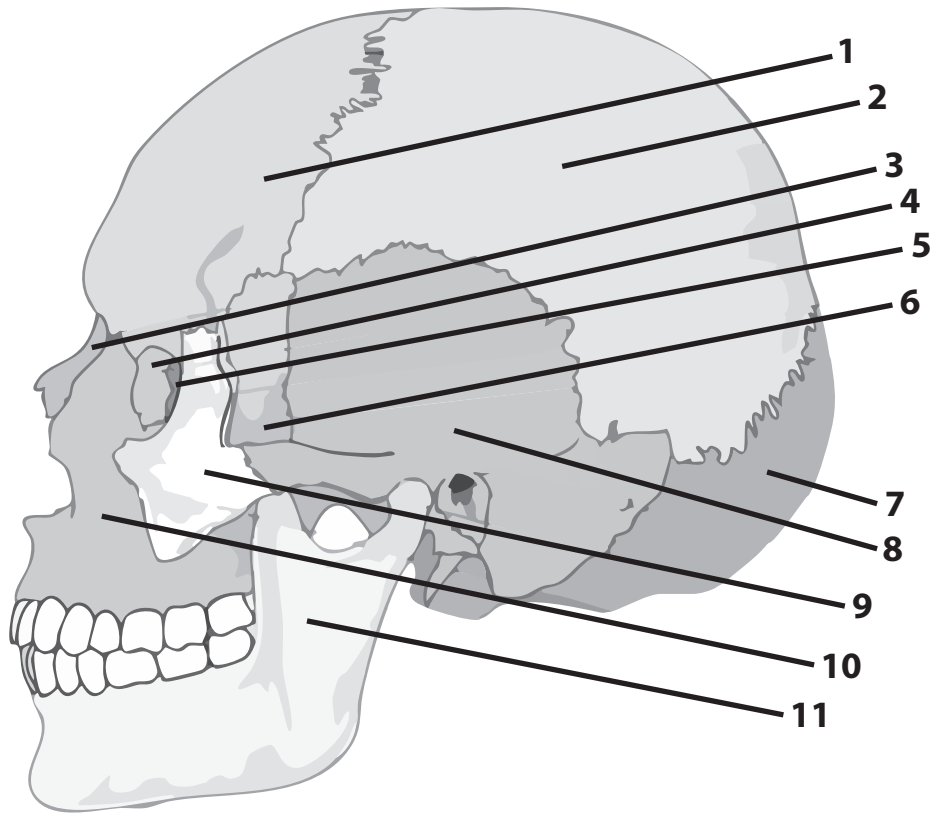
- What condition is Sara diagnosed with? What can happen if it is not treated?

- What are the potential treatment options for Sara?

Lesson 2: Anatomy of the Skull and Oral Cavity

Anatomy of the Skull

Instructions: Identify and label each area of the skull pointed out in the image below.



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Lesson 2: Anatomy of the Skull and Oral Cavity

Exploring the Skull and Oral Cavity

Instructions: Match the definition with the word it describes.

- | | | |
|-----------|---|---------------------------|
| 1. _____ | The portion of the skull that covers the brain | A. Muscles of mastication |
| 2. _____ | Hollow, air-filled cavities in the skull and facial bones | B. Teeth |
| 3. _____ | An immovable joint where two or more bones come together | C. Suture |
| 4. _____ | A projection of bone or tissue | D. Frenum |
| 5. _____ | An opening or hole in the bone through which nerves and vessels pass through | E. Cranium |
| 6. _____ | The only movable bone in the skull | F. Tongue |
| 7. _____ | Group of muscles that help with chewing | G. Palate |
| 8. _____ | Produce and supply saliva to the mouth to protect the lining, help moisten food, and help with speech | H. Labia |
| 9. _____ | Another word for lips | I. Process |
| 10. _____ | A narrow band of tissue that connects the tongue, lip, and cheek to the oral membrane | J. Mandible |
| 11. _____ | Contains papillae | K. Sinus |
| 12. _____ | Divided into a soft and hard part | L. Masseter |
| 13. _____ | Commonly known as the gums | M. Gingiva |
| 14. _____ | These sit in bony sockets called alveoli | N. Foramen |
| 15. _____ | Primary muscle for chewing | O. Salivary glands |

Lesson 2: Anatomy of the Skull and Oral Cavity

Landmark Makeup: Where Does It Go?

Although makeup has changed over the years, one thing remains the same: people use it to enhance their natural facial features. Look at various cosmetic advertisements in magazines or social media and identify the bones and facial features enhanced by applying products such as bronzer, blush, lipstick, and eyeshadow.

What natural landmark/feature is enhanced when using a lip liner?

Blush is applied over which facial bone?

Bronzer is applied over which facial bone(s)?

Lesson 2: Anatomy of the Skull and Oral Cavity

Scenario 3

Dr. Voight asks you to take an alginate impression of the maxillary and mandibular arches on Mr. Salazar. You capture the maxillary impression without any problem. However, when you try to take the mandibular impression, Mr. Salazar's tongue won't stay out of the way, so you can't seat the impression. You ask him to try lifting his tongue, but he says he is "tongue-tied."

Terminology to consider:

- Alginate Impression
- Tongue Tied

Key questions:

- What does it mean to be tongue-tied? Which anatomy is impacted by this condition?
- Why would it cause a problem when taking an alginate impression of the mandible?

Lesson 2: Anatomy of the Skull and Oral Cavity

Scenario 4

Sixteen-year-old Renée is in your office for her routine checkup. Unfortunately, she complains of a painful bump on her palate in the back of her upper front teeth. She says she was eating pizza at lunch and burned the roof of her mouth. Although this area will likely heal independently and leave no lasting damage, this information must be documented in her chart.

Terminology to consider:

- Diagnosed condition
- Treatment

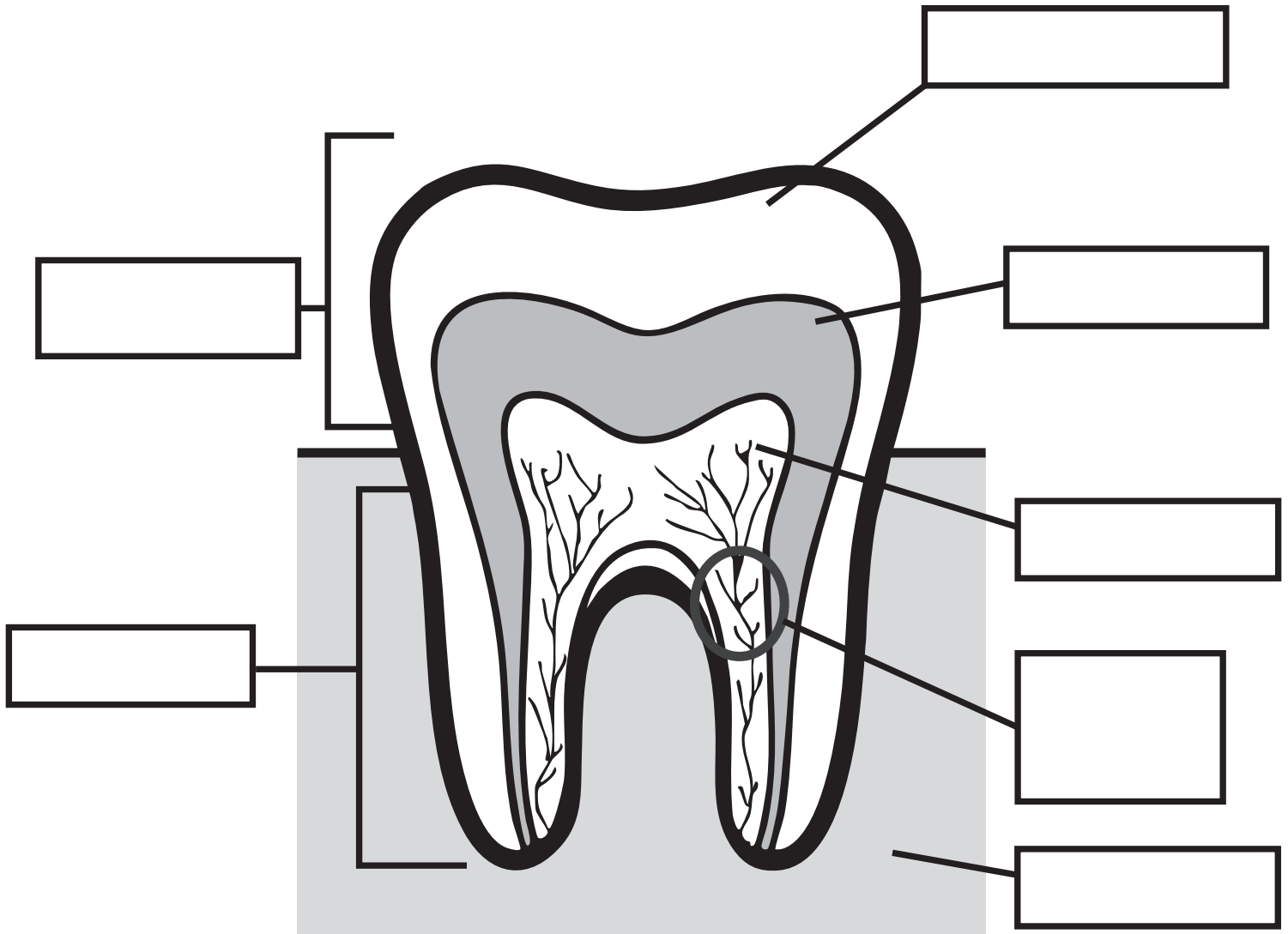
Key questions:

- What is the normal oral landmark that the pizza may have burned?
- Does Renée need additional treatment?

Lesson 3: Tooth Anatomy and Function

Parts of a Tooth

Instructions: Label the different parts of the tooth using the word bank.

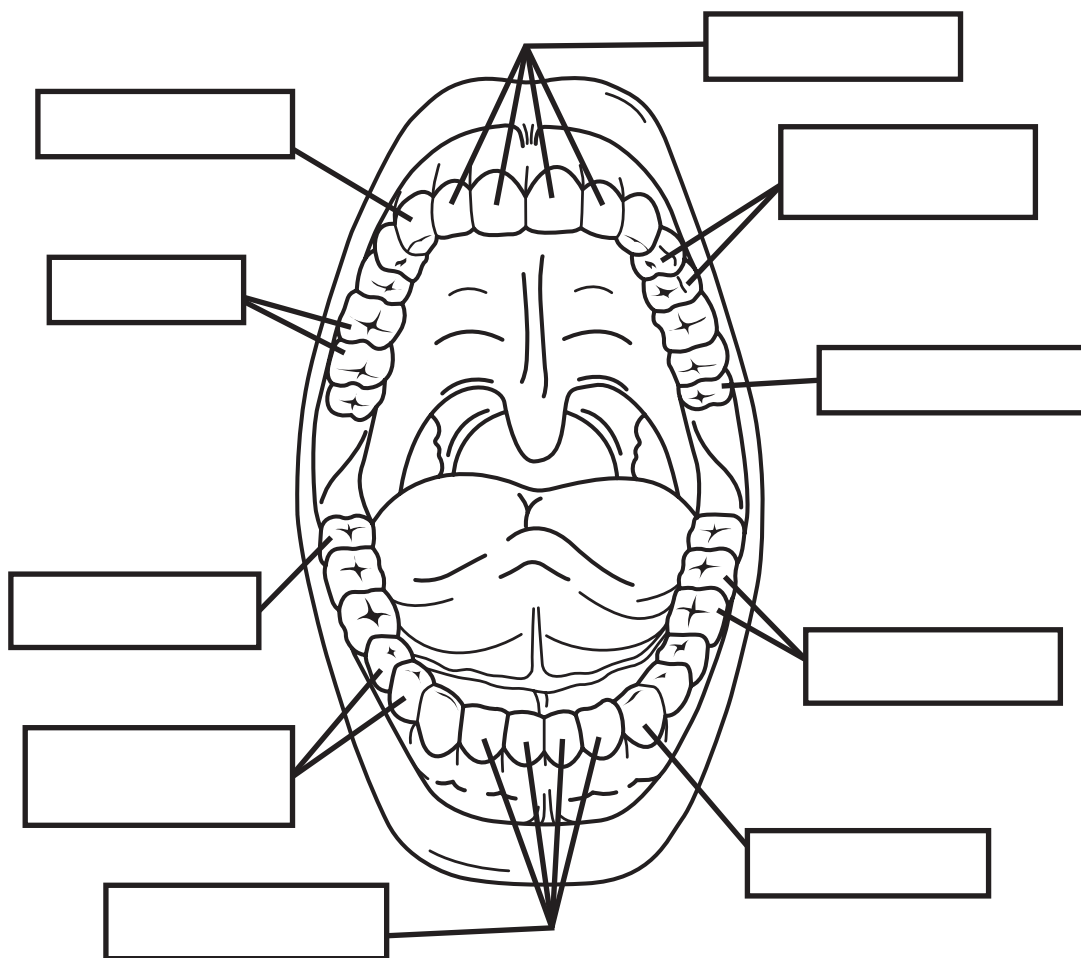


Word Bank

Crown	Roots	Enamel	Gum
Veins and nerves	Dentin	Pulp	

Lesson 3: Tooth Anatomy and Function

Label the Teeth and Tooth



Word Bank

(Words are used twice)

Premolars

Incisors

Molars

Canines

Wisdom

Word Bank

Dentin

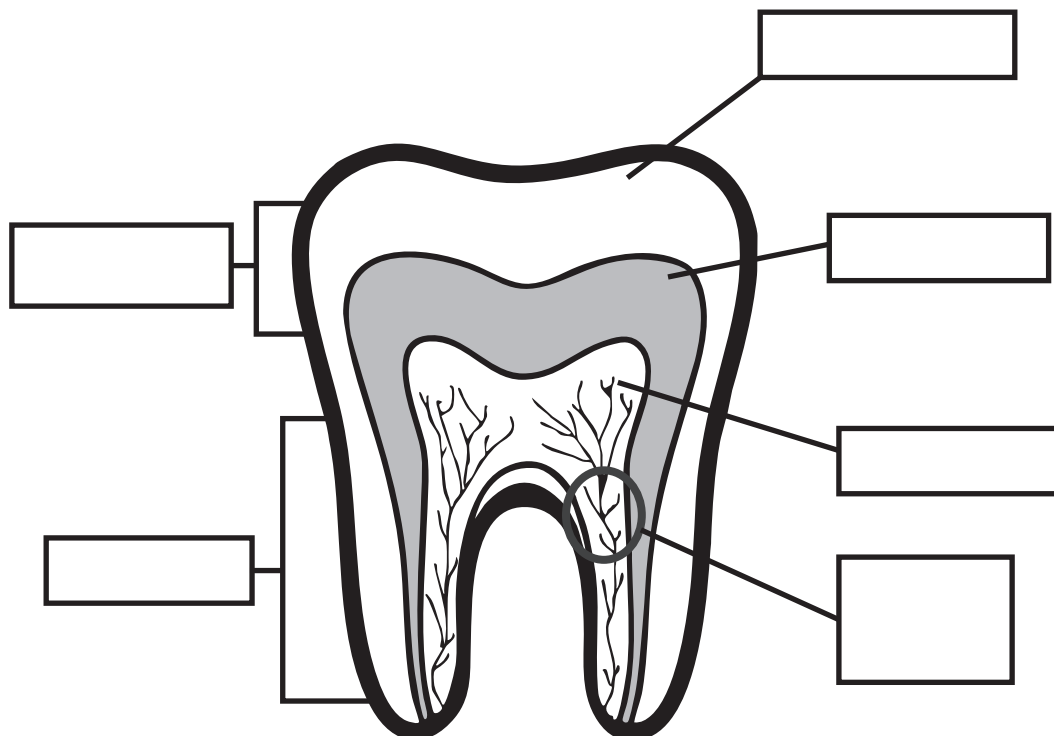
Enamel

Nerves
and Blood
Vessels

Crown

Pulp

Root



Lesson 3: Tooth Anatomy and Function

The Periodontium: The Oral Support System

Instructions: Read the following passage about periodontium. Then, answer the questions on below.

The periodontium is a complex system of tissues that surrounds and supports the teeth within the jawbones. It has four main components: the gingiva (gums), cementum, periodontal ligament, and alveolar bone. The gingiva is the visible, soft tissue that covers the jawbones and protects the underlying structures. The cementum is a thin, hard layer that covers the tooth's root, serving as an anchor for the periodontal ligament. The periodontal ligament comprises tiny fibers connecting the cementum to the alveolar bone, acting like shock absorbers for the teeth. Finally, the alveolar bone is the part of the jawbone that forms sockets to hold the teeth securely.

The health of the periodontium is crucial for maintaining healthy teeth. Periodontal disease, also known as gum disease, is a common infection that damages the supporting structures of the teeth. In its early stages, called gingivitis, symptoms include red, swollen, and bleeding gums. If left untreated, gingivitis can progress to periodontitis, characterized by the formation of pockets around the teeth, receding gums, and gradual bone loss. In severe cases, periodontitis can ultimately lead to tooth loss.

Questions:

- What is the periodontium?
- List the four primary components of the periodontium.
- What is the primary function of the periodontal ligament?
- Explain the difference between cementum and alveolar bone.

Lesson 3: Tooth Anatomy and Function

Scenario 5

Dai has been a patient in your office for years. He typically has positive checkups, but he received some bad news this time. After listening to Dai express that he has experienced sensitivity lately on his upper right side, Dr. Kennelly told him he has some gingival recession.

The root near Dai's maxillary right premolars is exposed, making the cementum visible and the tooth sensitive. Several things can cause this recession, including aggressive brushing, tobacco use, and bruxism. A dental crown may be able to cover the exposed area, or Dai can choose to have a gum graft to cover the area and reduce the sensitivity.

Terminology to consider:

- Diagnosed condition
- Treatment

Key questions:

- What condition is Dai diagnosed with? What area of the mouth does it affect?

- What are the treatment options for Dai?

Lesson 3: Tooth Anatomy and Function

Scenario 6

Vera brought her daughter, Polina, into the office because she was experiencing discomfort near the back of her mouth. Upon examination, Dr. Voight saw a clinical crown in the third molar area. He had you take a panoramic x-ray to gather more information.

After reviewing the x-ray, Dr. Voight said that Polina had four wisdom teeth present, and two of them were impacted. He recommended that Vera take her daughter to see an oral surgeon. The oral surgeon would likely suggest surgical removal of the impacted teeth to alleviate Polina's discomfort.

Terminology to consider:

- Diagnosed condition
- Treatment

Key questions:

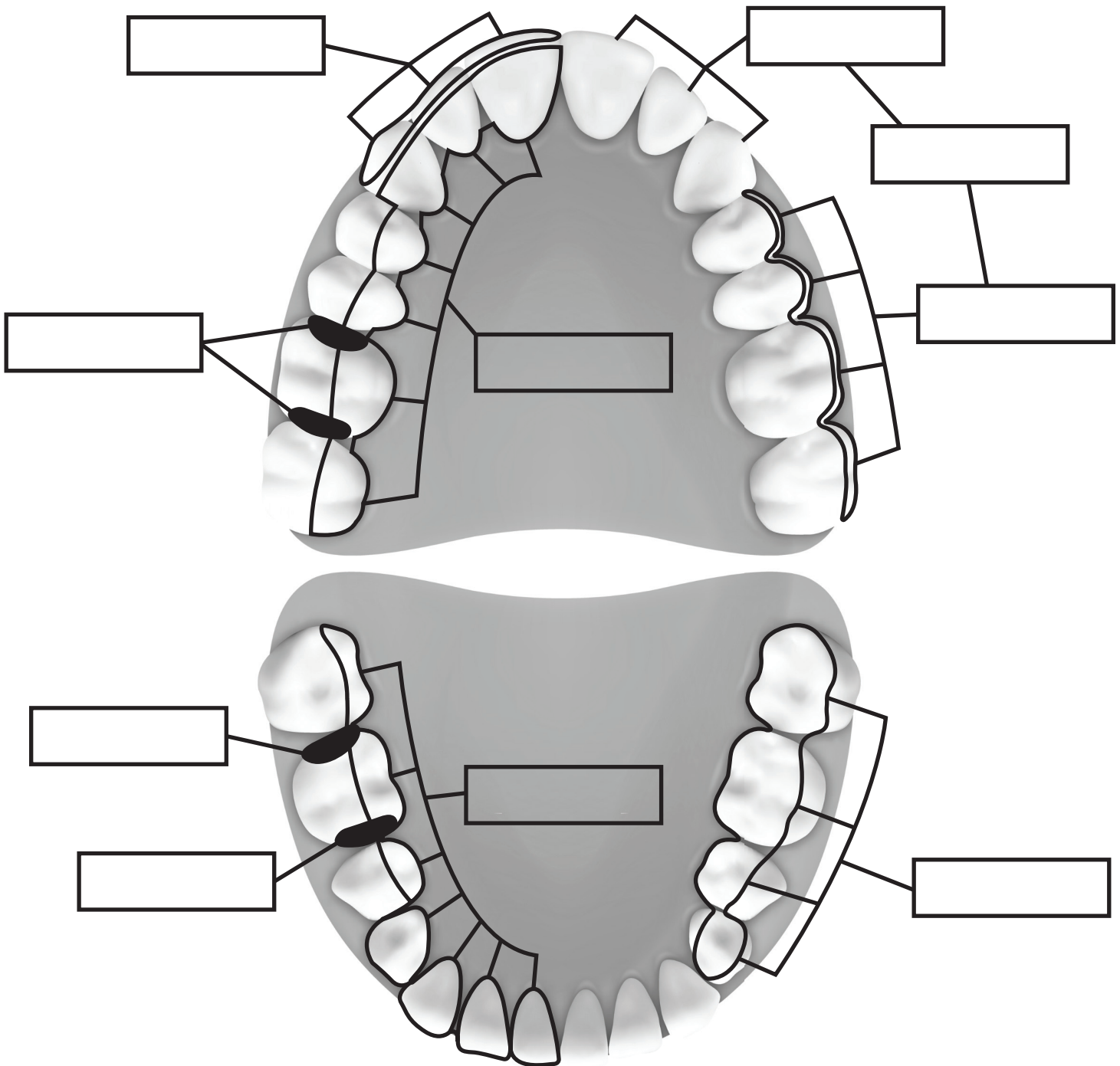
- What condition is Polina diagnosed with? What area of the mouth does it affect?

- What are the treatment options for Polina?

Lesson 4: Tooth Surfaces, Anatomic Features, and Directional Terminology

Surfaces of Teeth

Instructions: Use the word bank to label the surfaces of teeth.



Word Bank

Buccal

Distal

Facial

Incisal

Mesial

Labial

Lingual

Occlusal

Palatal

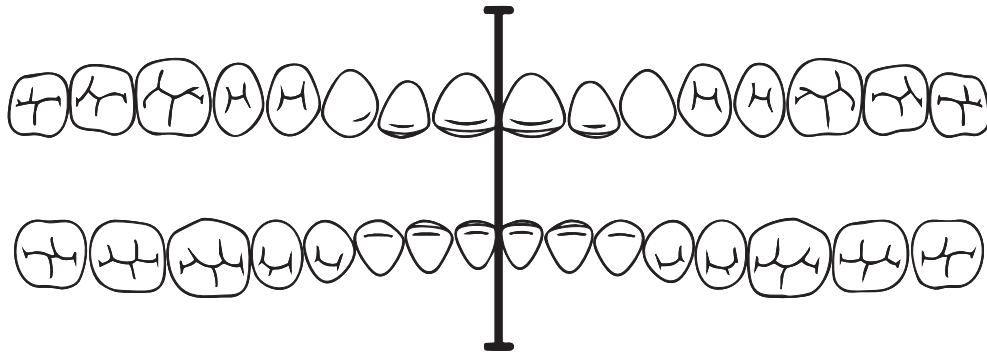
Proximal

Lesson 4: Tooth Surfaces, Anatomic Features, and Directional Terminology

Types of Teeth Labeling Exercise

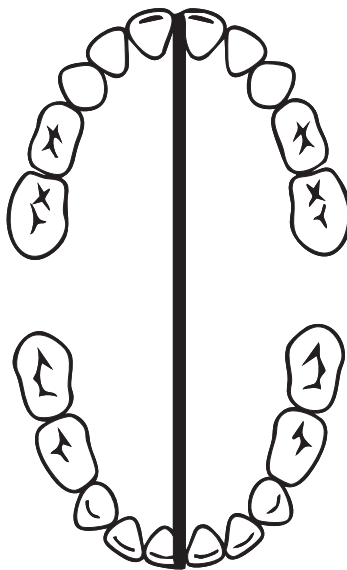
Instructions: Label the teeth in the permanent dentition. Use the words at the bottom of the page. Each word must be used multiple times.

Permanent Maxillary Teeth



Permanent Mandibular Teeth

Permanent Maxillary Teeth



Permanent Mandibular Teeth

Word Bank (Words are used twice)

Central Incisors

Canines

Molars

Lateral Incisors

Premolars

Lesson 4: Tooth Surfaces, Anatomic Features, and Directional Terminology

Compare and Contrast Dentitions

Instructions: Use this worksheet to compare and contrast primary (deciduous) and permanent dentition.

1. Total Number of Teeth

- Primary Dentition: _____
- Permanent Dentition: _____

2. Number of Each Type of Tooth

- Primary Dentition:
 - Incisors: _____
 - Canines: _____
 - Molars: _____
 - Premolars: _____
- Permanent Dentition:
 - Incisors: _____
 - Canines: _____
 - Premolars: _____
 - Molars: _____

Lesson 4: Tooth Surfaces, Anatomic Features, and Directional Terminology

Scenario 7

Makenzie is a 16-year-old interested in learning about teeth. He starts asking questions while you wait for the dentist to enter the treatment room. Makenzie says he is considering becoming a dentist and wants to learn as much as possible to help him decide. He wants to know how many teeth adults and kids have. Another question he asks is about the different types of teeth. What will you tell him?

Terminology to consider:

- Primary, mixed, and adult dentition
- Types of teeth

Key questions:

- How many teeth would you tell Makenzie are in the adult dentition, and how many are in the primary dentition?
- What would you tell Makenzie about the different types of teeth?

Lesson 4: Tooth Surfaces, Anatomic Features, and Directional Terminology

Scenario 8

Aleta Stevens brings her 10-year-old daughter, Tasia, into your office for an emergency visit. Mrs. Stevens is confident that one of Tasia's permanent molars "fell out." Tasia says that she is not in any pain, but she feels something in the area where she lost the tooth. When you take the tooth from Mrs. Stevens, you immediately recognize it as a primary molar that naturally fell out.

Terminology to consider:

- Permanent molar
- Primary molar

Key questions:

- How would you explain to her the differences between a primary molar and a permanent molar?
- What is Tasia feeling in the space where the tooth fell out?

Lesson 5: Tooth Numbering Systems

Tooth Names, Locations, and Numbers

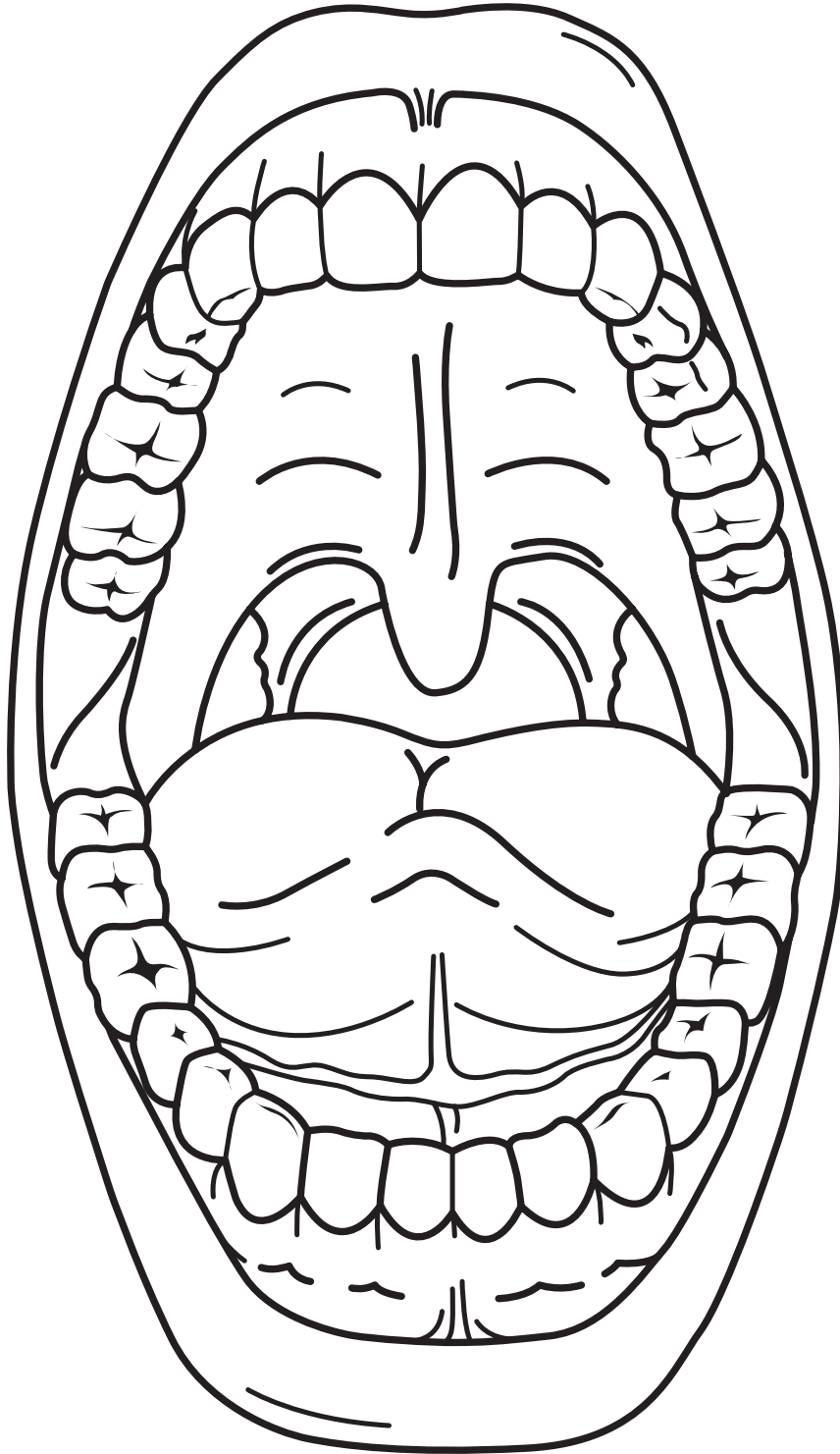
Instructions: Fill out the table below as your instructor explains the numbers and names of teeth.

Number	Name and Location of Tooth
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	

Lesson 5: Tooth Numbering Systems

Tooth Numbering Exercise

Instructions: Label each tooth in the permanent dentition using the Universal Numbering System, Palmer Notation Method, and the FDI World Dental Federation Notation System.



Lesson 5: Tooth Numbering Systems

Scenario 9

A 17-year-old boy, Mason, is in the office today complaining of discomfort near the back of his mouth. After you take a few x-rays, Dr. Kennelly reviews them to determine the problem. She tells Mason that his maxillary left third and mandibular left third molar are trying to erupt. However, they are slightly impacted, which is the cause of his discomfort. Dr. Kennelly recommends Mason consult with an oral surgeon to determine the best method for extracting these teeth.

Terminology to consider:

- Maxillary left third molar
- Mandibular left third molar

Key questions:

- What Universal Tooth Number would you use to document the required extraction in the chart?

- What is a common name for the third molars?

Lesson 5: Tooth Numbering Systems

Scenario 10

Gustavo is at the office for his six-month checkup, and you are helping with the exam. After Dr. Voight completes the exam, Gustavo asks what the numbers 3, 4, 29, and 30 mean. You tell him those numbers indicate which teeth have decay, and they are noted in the chart, so Dr. Voight knows which teeth need to be restored. Gustavo asks you to explain to him which teeth need work.

Terminology to consider:

- Proper names of each tooth

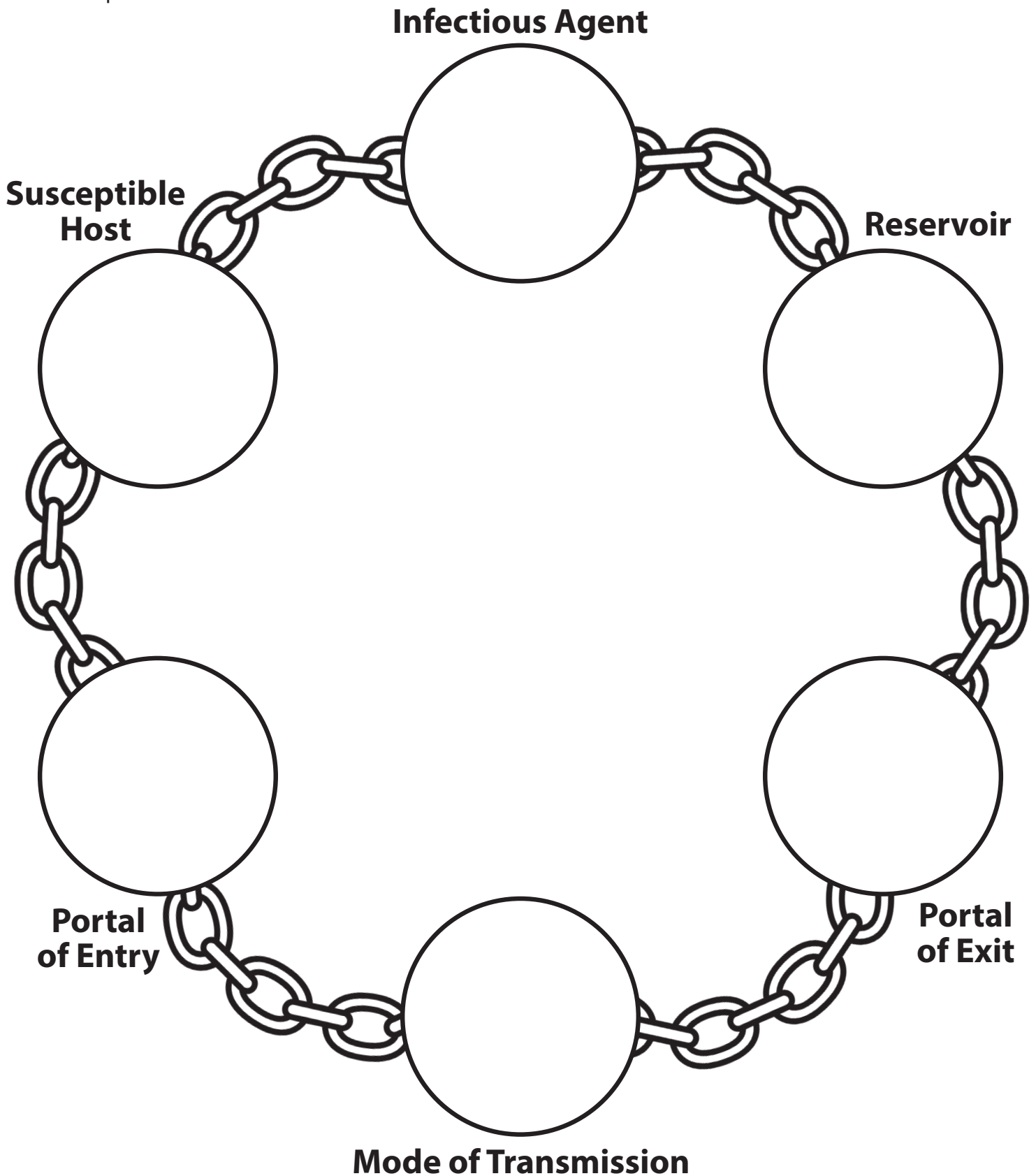
Key questions:

- Which teeth would you tell Gustavo will need fillings at the next appointment?

Lesson 6: Infection Control in Dentistry

Chain of Infection

Instructions: Follow along as your instructor discusses what each portion of the chain of infection means. List examples in the circles.



Lesson 6: Infection Control in Dentistry

Infection Control Research

Instructions: Choose one of the following infectious disease topics. Research the topic and provide the required information.

Topics:

- Hepatitis B
- Hepatitis C
- Covid-19
- Herpes Simplex Virus Type-1
- Human Papillomavirus Virus
- Mycobacterium tuberculosis
- Staphylococci (Staph infection)
- Cytomegalovirus

Research Criteria:

- Disease name
- Description of the disease
- How the diagnosis is made
- How the disease is transmitted
- Relative frequency of the disease
- Possible complications
- Treatment

Lesson 6: Infection Control in Dentistry

Infection Control Matching

Instructions: Match the following terms with the correct description.

- | | | |
|-----------|--|--|
| 1. _____ | Certain conditions must be met for a microbe or infectious disease to be spread from person to person | A. Indirect contact |
| 2. _____ | Hospital grade disinfectant with tuberculocidal action | B. Mode of transmission |
| 3. _____ | A route of transmission when an individual has this with a lesion or microorganism while performing intraoral dental procedures; touching or first-hand contact | C. Portal of exit |
| 4. _____ | The process by which bacteria or other microorganisms are unintentionally transferred from one substance or object to another, with harmful effect | D. Disinfection |
| 5. _____ | A route of transmission that involves contact with a microorganism through such means as contaminated instruments, supplies, and equipment | E. Parenteral |
| 6. _____ | Any reasonably anticipated exposure to secretions of the eye, mucosa, skin, parenteral, or any contact with blood or saliva that may be a result of employment tasks | F. Compromised host |
| 7. _____ | Microscopic communities that allow bacteria, fungi, and viruses to multiply | G. Hazardous waste |
| 8. _____ | Kills remaining pathogens after pre-cleaning | H. Standard precautions |
| 9. _____ | The action or state of making or being made impure by polluting or poisoning | I. Transfer surfaces |
| 10. _____ | Piercing of the mucous membranes of the skin through such events as needlesticks, cuts, and abrasions | J. Direct contact |
| 11. _____ | A bacterium, virus, or other microorganism that can cause disease | K. Personal protective equipment |
| 12. _____ | Methods to eliminate or reduce the transmission of infectious microorganisms | L. Occupational exposure |
| 13. _____ | Removing debris from the surface to prepare for disinfection | M. Chain of infection |
| 14. _____ | Guidelines established by the CDC to help protect health care workers and patients from the transmission of infectious diseases | N. Portal of entry |
| 15. _____ | The creation of an environment free of pathogens | O. Pathogen |
| 16. _____ | An individual whose normal defense mechanisms are impaired | P. Cross-contamination |
| 17. _____ | Areas that dental personnel do not actually contact, but still may be contaminated, such as counter tops or front of the dental light | Q. Splash, spatter, and droplet surfaces |
| 18. _____ | The route by which an infectious agent leaves the reservoir to be transferred to a susceptible host | R. Biofilms |
| 19. _____ | The route or method of transfer by which the infectious microorganism moves or is carried from one place to another to reach the new host | S. Contamination |
| 20. _____ | The route by which an infectious agent enters the host | T. Precleaning |
| 21. _____ | Items that should be worn to protect against contact with all body fluids | U. Intermediate-level disinfectant |
| 22. _____ | Surface is not directly touched, but are areas or items that are indirectly contaminated, such as air-water syringe holders, dental trays, and handpiece holders | V. Infection control |

Scenario 11

Mrs. Lee insists that she visits her family doctor regularly and that she does not have any diseases. Mrs. Lee also states that the assistant did not wear PPE to take x-rays at her previous dentist.

- Standard Precautions
- Bloodborne Pathogen Standard

- Should you suspect Mrs. Lee has a disease anyway?

- What would you explain to Mrs. Lee?

Lesson 6: Infection Control in Dentistry

Scenario 12

More than ever, people worry about the risk of catching a disease in the dental office. Since the 2020 Coronavirus pandemic, patients have become more aware of infection control, making it crucial for dental professionals to use proper infection control techniques. All dental team members must understand the importance of good precleaning and disinfection. Most importantly, they must follow all CDC and OSHA guidelines and regulations. The best method is to use a combination of barriers and disinfecting between patients to maintain the highest level of safety for both patients and the dental team.

As you seat Bindi for her appointment, she asks what methods you use to prevent the previous patient's germs from contaminating her during treatment.

Terminology to consider:

- Precleaning
- Disinfecting
- Surface barriers

Key questions:

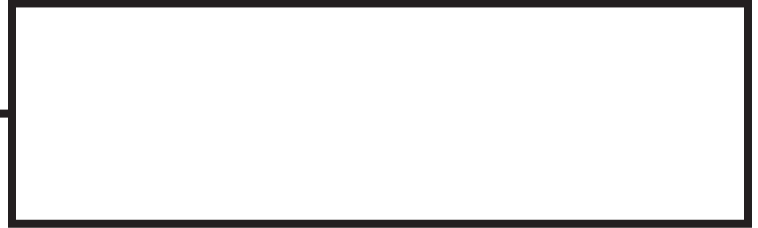
- How would you explain to Bindi the difference between precleaning and disinfecting?
- What can you show her to help put her mind at ease?

Lesson 7: Instrument Processing and Sterilization

7 Steps of Instrument Processing

Instructions: Write out and explanation for each step of instrument processing in its corresponding box.

Transport



Cleaning



Packaging



Sterilization



Storage



Delivery



Quality



Lesson 7: Instrument Processing and Sterilization

Instrument Processing and Sterilization Scramble

Instructions: Unscramble the letters to form a word related to instrument processing and sterilization in dentistry.

1. LROTIESZNTAI
2. EITRICMCILAS
3. ADHN BBURCNIGS
4. RKWFOLWO AERPNTT
5. BLICALIGOO STCIONDIAR
6. RMPATEEEETR
7. ATCBRAEI
8. NARILEGCEPN
9. CIAILTRC
10. ETAOAUCVL
11. NSCIUOTLA
12. ASTLTNIIEOIZR IGTMNRIION
13. CTOCNRLIANI
14. SPORE ETTGSIN
15. TIGRNEAOTR
16. CPALHYSI NMROINGTOI
17. DYR ATHE IITRLEASZONTI
18. EAUDNRTUSAT ECAICHML POARV
19. SHLAF TNRALEIISTOZI
20. DLOHNIG SONUOTIL

Lesson 7: Instrument Processing and Sterilization

Design Your Own Instrument Processing Area

Dr. Voight is building a new state-of-the-art dental office. He asks for your input on the physical layout and equipment you will use in the instrument processing area. What factors must you consider when designing this area? What equipment do you think he should order? Use the space available below to sketch your workflow pattern. Identify each section required to comply with necessary recommendations and regulations.

Lesson 7: Instrument Processing and Sterilization

Scenario 13

Denise, the front office assistant, asks you to step away from the treatment room and take a phone call from BacteriCheck, the sterilization monitoring company you use. The representative you work with tells you that the most recent spore test you sent them failed. This means the instruments may not be properly sterilized, making them unsafe. Additionally, you no longer comply with many standards and regulations set by the Centers for Disease Control and Prevention and Occupational Safety and Health Administration.

Terminology to consider:

- Spore Testing
- Occupational Safety and Health Administration

Key questions:

- What does it mean when you receive a failed spore test?
- What steps can you take to determine what caused the spore test to fail?

Lesson 7: Instrument Processing and Sterilization

Scenario 14

The CDC Guidelines for Infection Control in Dental Health-Care Settings—2003 were written to protect everyone in the dental office, including patients, from disease transmission. The OSHA Bloodborne Pathogens Standard requires the biologic monitoring of sterilizers and keeping the results. In addition, many states have adopted infection control regulations based on the CDC Guidelines for Infection Control.

As a dental assistant, you are legally and ethically responsible for following these guidelines and standards thoroughly and carefully. However, your friend, who is not a dental assistant, asks you why. If the CDC Guidelines for Infection Control in Dental Health-Care Settings—2003 are not laws, why must you follow them?

Terminology to consider:

- Centers for Disease Control and Prevention (CDC)
- CDC Guidelines for Infection Control in Dental Health-Care Settings—2003
- Disinfecting
- Surface barriers

Key questions:

- How would you explain to your friend why these regulations must be implemented in your dental office?
- What could happen if these guidelines were not followed?

Lesson 8: Common Dental Procedures

Dental Procedures

Instructions: List what you know about the common dental procedures listed below.



Fillings

A large rectangular box for writing notes about dental fillings.



Crowns

A large rectangular box for writing notes about dental crowns.



Root Canal Treatment

A large rectangular box for writing notes about root canal treatment.



Dental Implants

A large rectangular box for writing notes about dental implants.

Lesson 8: Common Dental Procedures

Newest Dental Materials Research Project

The materials used in dental procedures are constantly evolving. Dr. Kennelly wants to know the newest products she should consider investing in for her practice. She asks you to lead the research project and report your findings to her. Choose one of the dental procedures discussed and research the required materials. List existing, routinely used products and discuss upcoming products that Dr. Kennelly may be interested in using.

Lesson 8: Common Dental Procedures

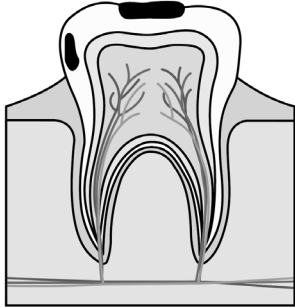
You Determine the Dental Procedure

Instructions: Review the following pictures of damaged teeth. Determine the best dental procedure to treat the condition and write it on the line to the right.

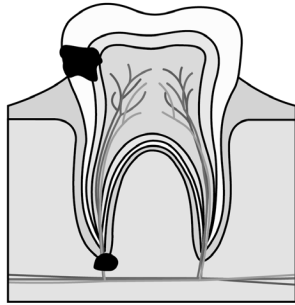
Damaged Tooth

Treatment

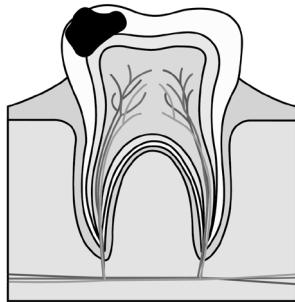
Mild to Moderate Decay



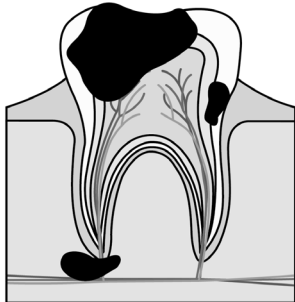
Moderate Decay and Abscess



Extensive Decay



Extensive Decay and Abscess



Missing Tooth



Lesson 8: Common Dental Procedures

Scenario 15

Liu arrived for her dental appointment. She is scheduled for a dental crown on tooth #12. You have the room prepared with instruments and materials you know Dr. Voight will need. However, when you seat Liu in the chair and review the procedure with her, she mentions the tooth feels extremely loose and painful.

Dr. Voight enters the operating room, and you explain the situation. He has you take an x-ray, and he examines the tooth. Unfortunately, the tooth has broken too far below the gum line to be restored with a crown. The only option is to extract it. Liu consents to the new treatment plan, and you have her sign the consent forms. As Dr. Voight administers the local anesthetic, you put away the dental crown instruments and prepare for the extraction.

Terminology to consider:

- Dental crown
- Consent forms
- Local anesthetic

Key questions:

- What instruments do you need to get out to prepare for the extraction?

- Which instrument do you think you will hand Dr. Voight first?

Lesson 8: Common Dental Procedures

Scenario 16

Remo is visiting your office today for a consultation for dental implants. Dr. Kennelly has reviewed his medical history and x-rays and prepared a treatment plan that includes an implant to replace teeth #18 and #19. Dental implants are a large investment of money and time for Remo, so Dr. Kennelly must present the complete plan for all stages of treatment.

Dr. Kennelly explains that the first phase involves surgically placing the titanium posts in each site. These posts osseointegrate with the surrounding bone to become part of the mandible. After a few months of healing, Remo must have a checkup to determine how the implants are healing. If everything looks good, he can schedule the second phase.

The second phase includes a small surgical procedure to uncover the implant and place a healing cap. Once the healing cap is in place, the site is ready to have the impressions for the artificial teeth. At a separate appointment, Dr. Kennelly will remove the healing caps, take an impression, and replace them. The impression and prescription are sent to the lab, where a lab technician makes the crowns. After they get shipped back to the office, Remo can have his final appointment to place the implant crowns permanently. The whole process takes between six months and a year.

Terminology to consider:

- Titanium
- Osseointegrate
- Healing cap
- Impression

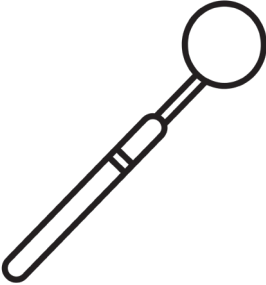
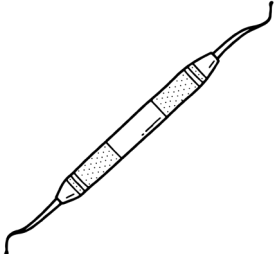
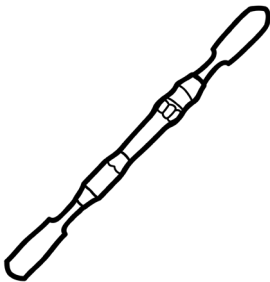
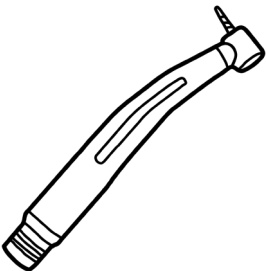
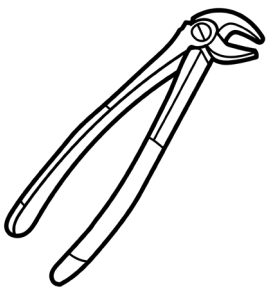
Key questions:

- Why would Remo need an appointment before the healing caps can be placed?
- What is the importance of the dental impression in this procedure?

Lesson 9: Dental Instruments

Dental Instruments Identification

Instructions: Identify the images of dental instruments and write their names next to their functions

Instrument	Instrument Name	Function
		Used to view teeth and tissues in the oral cavity
		Used to examine teeth and detect cavities or calculus
		Aids in mixing dental materials, such as a temporary cement
		Used to prepare teeth for restorative procedures
		Used to extract teeth

Lesson 9: Dental Instruments

Let's Talk Vocab

Instructions: Fill in the table with the instrument name that matches the description on the right.

Instrument	Description
	Part of a dental instrument that the dentist holds
	Instruments that remove decay, smooth and finish, or prepare tooth structure
	Reflects light, retracts the tongue and soft tissues
	Carries freshly mixed amalgam to the tooth
	Used for restorative procedures and spins at 450,000 rpms
	Used to measure the sulcus or pocket depth
	Working end shaped like a spoon
	Separates and retracts the periosteum from the bone surface
	Cuts enamel and smooths the walls and floors of tooth preparations
	Smooth working end instrument that smooths the surface of a restorative material
	Instruments that allow the dentist to thoroughly examine the health of the oral cavity
	Attaches the working end to the handle
	Helps the dentist grasp teeth
	Breaks down enamel and helps form sharp lines
	Wire working end with a sharp point that helps with tactile sensitivity
	Instruments that restore a tooth by placing, condensing, shaping, and carving dental anatomy
	Portion of the instrument with a specific function
	Locking or nonlocking instrument that carries small objects
	Also known as pluggers
	Versatile handpiece used for procedures outside of the mouth

Lesson 9: Dental Instruments

Preparing a Dental Tray

Instructions: Every dental procedure has a tray set up. Use the blank tray below to write in the names of the instruments you may need for a patient who has an appointment for filling on tooth #3.



Lesson 9: Dental Instruments

Scenario 17

You have just seated your next patient, Javier, for his appointment. He is at your office today because of discomfort on the maxillary right side. He points to the tooth he thinks it could be but notes that sometimes he cannot tell where the pain is coming from. You take an x-ray of the tooth he pointed to and set it up on the computer for Dr. Voight to review.

After reviewing the x-ray, Dr. Voight says it does not reveal anything, so he must take a closer look. He sits down and prepares to examine tooth #3, which Javier pointed to.

Terminology to consider:

- Maxillary Right Side
- Examine

Key questions:

- What instrument(s) must you have ready to transfer?

- Why would you choose these instruments for an examination of a tooth?

Lesson 9: Dental Instruments

Scenario 18

Proper cleaning, disinfection, and sterilization of dental handpieces are extremely important and are a duty of a dental assistant. Improper cleaning could result in transferring infectious microorganisms from one patient to another. If a patient becomes sick and can prove the bacteria came from a contaminated dental instrument, there could be a potential lawsuit against you and the dentist.

You must disinfect and sterilize instruments according to their classification and manufacturer instructions. When you started at Dr. Kennelly's office, Jasmine, a veteran assistant, told you that high-speed handpieces do not need to be sterilized. You can wipe them with a wet cloth and return them to the hose.

Terminology to consider:

- Disinfecting
- Sterilization
- Infectious Disease

Key questions:

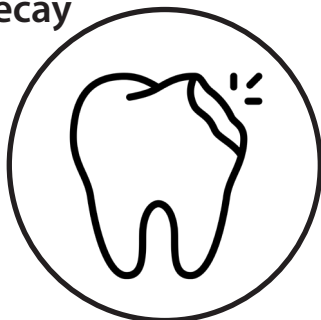
- Do you think it is safe to wipe high-speed handpieces with a wet cloth, or should they be cleaned more rigorously?
- How would you determine the appropriate cleaning technique for the high-speed handpieces in your dental office?

Lesson 10: Oral Health and Hygiene

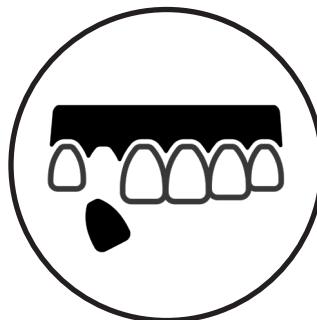
Oral Hygiene Can Cause

Instructions: Write information about how these common issues are linked to poor oral hygiene underneath each circle.

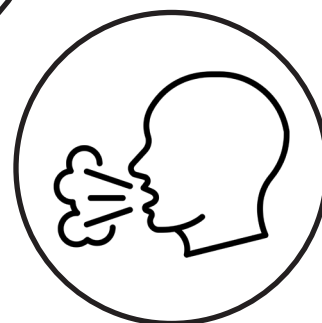
Tooth Decay



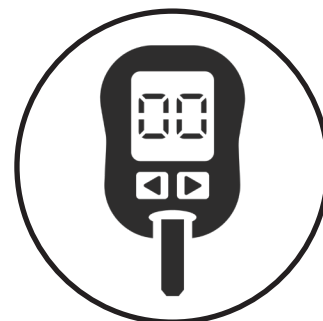
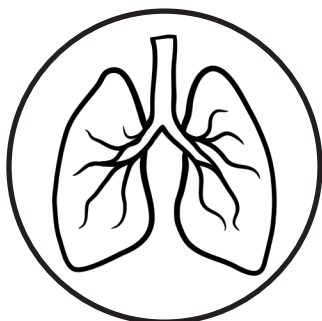
Tooth Loss



Bad Breath



Gum Disease



Lung Conditions

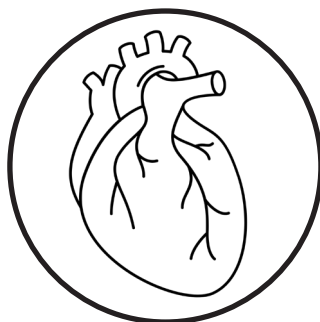
Diabetes



Oral Cancer



Stroke



Heart Disease

Periodontal Disease

Fluoride

Gingivitis

Plaque

Biofilm

Bass Method

Saliva

Sealants

Bleeding Gums

Preventive
Dental Care

Toothpaste

Mutans
Streptococci

Antibacterial
Rinses

Caries

Mouth Rinse

Periodontitis

Soft-Bristled
Brushes

Flossing

Patient
Education

Caries Process

Lactobacilli

Lesson 10: Oral Health and Hygiene

Oral Health Cloud Collage

Directions: Use the following table to match the definition with the correct word found in a cloud in the prior page.

Word From the Cloud	Definition
	Bacteria in the mouth that indicates high sugar intake
	Contains ingredients designed to remove food particles and stains
	Another name for plaque
	Requires three things to be present at the same time
	Providing information that motivates patients and helps them develop good oral hygiene
	Type of toothbrush dentists recommend
	Used after meals and snacks when toothbrushing is not possible
	Strengthens teeth
	Infectious disease involving inflammation of the periodontium
	A transmissible bacterial infection
	Inflammation of gingival tissue; easy to treat
	Physical, chemical, and antibacterial protection for teeth
	Inflammation of supporting structures that destroys connective tissue near the periodontal pocket
	A colorless, soft, sticky layer of microorganisms
	Reduces the number of cariogenic bacteria in the mouth
	Form of dentistry crucial for preventing caries and periodontal disease
	Applied to difficult-to-clean occlusal surfaces of the teeth
	A symptom of periodontal disease
	Major disease-producing bacteria
	Removes plaque and debris from between the teeth
	Recommended technique for toothbrushing

Lesson 10: Dental Instruments

Scenario 19

Edward is a 14-year-old boy who visited your office for a routine checkup. Dr. Voight found a considerable amount of plaque buildup along the gumline of his molars. Edward insists that he brushes his teeth daily but admits to not flossing. Dr. Voight has asked you to take Edward into an open operatory and review oral hygiene care with him. He specifically asks you to demonstrate using the Bass method on a mouth model and show Edward how to floss.

Terminology to consider:

- Plaque buildup
- Bass Method

Key questions:

- What might be causing the plaque to build up around Edward's molars?
- What information do you need to tell Edward about the Bass method?

Lesson 10: Dental Instruments

Scenario 20

Poppy is a 36-year-old patient in your dental office. During her routine exam, Dr. Kennelly noticed that Poppy had some slight bleeding around her molars and a slightly reddish tint on her gums. When Dr. Kennelly mentions the bleeding, Poppy says she has noticed blood in the sink after she spits out her toothpaste. She says that her home hygiene routine has not changed.

Dr. Kennelly tells her that she has gingivitis, which is an early stage of periodontal disease. She tells Poppy that it is treatable since she diagnosed it early and recommends non-surgical treatment.

Terminology to consider:

- Gingivitis
- Periodontal disease
- Non-surgical treatment

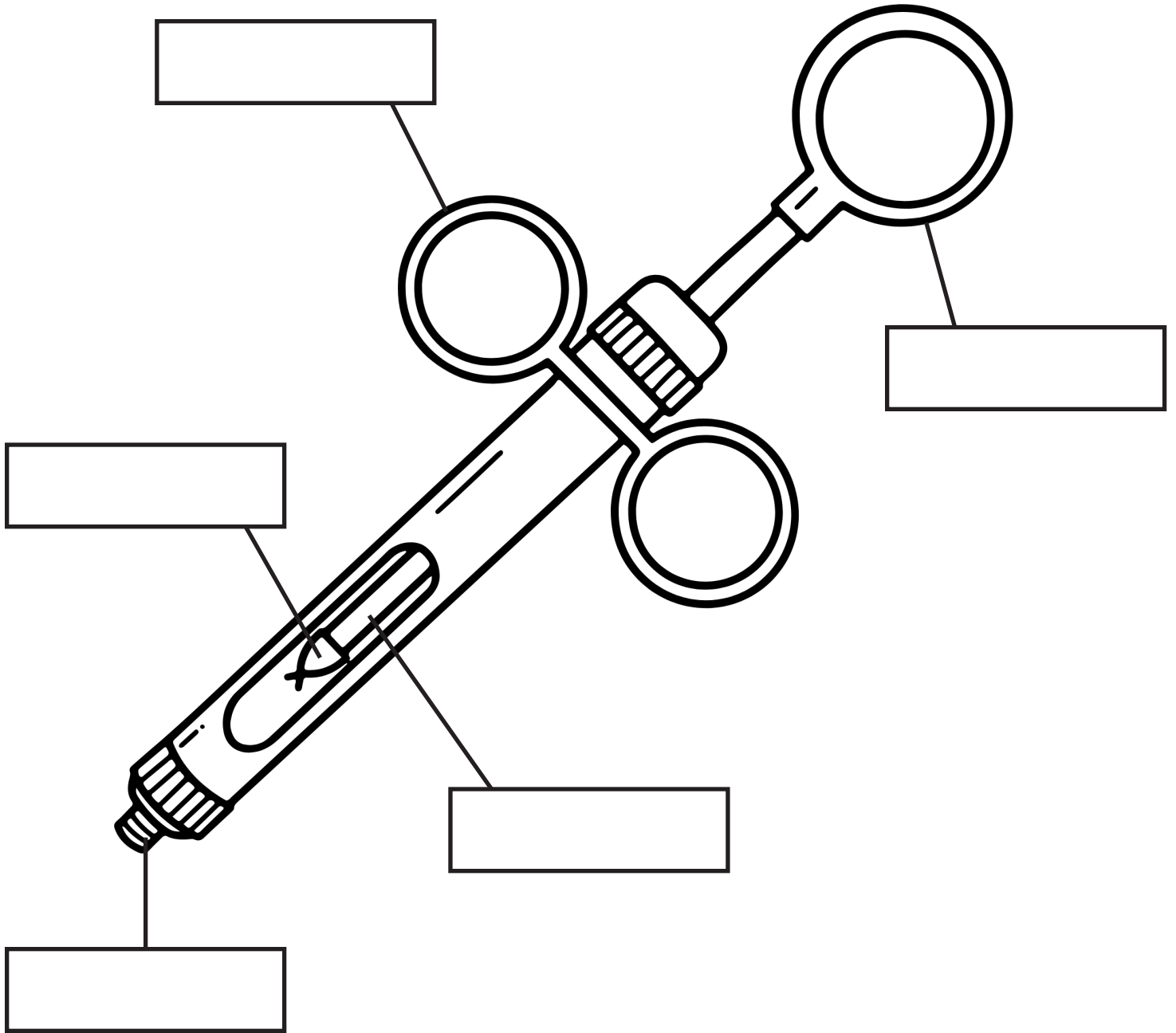
Key questions:

- What procedures do you think Dr. Kennelly recommended to Poppy?
- What factors could influence this change in Poppy's oral health if her home care habits have not changed?

Lesson 11: Pain Control in Dentistry

Labeling Parts of a Dental Syringe

Instructions: Label each part of the syringe below.



Lesson 11: Pain Control in Dentistry

Common Treatments Using Dental Anesthesia

Directions: Place a check mark in the column to match the anesthetic with the treatment.

Treatment	Local	IV Sedation	General Anesthesia
Dental Fillings	☐	☐	☐
Simple Extraction	☐	☐	☐
Surgical Extraction	☐	☐	☐
Root Canal	☐	☐	☐
Gum Surgery	☐	☐	☐
Crown Prep	☐	☐	☐
Crown Insert	☐	☐	☐
Bone Grafting	☐	☐	☐
Scaling and Root Planing	☐	☐	☐
Jaw Surgery	☐	☐	☐
Porcelain Veneers	☐	☐	☐
Prophylaxis	☐	☐	☐
Teeth Whitening	☐	☐	☐

Lesson 11: Pain Control in Dentistry

Scenario 21

Charity, a seven-year-old girl, is scheduled to have a baby tooth extracted because of the extensive decay. Her mother calls into the office and tells you Charity is exceptionally nervous about having Dr. Voight remove a tooth. Charity is concerned that it will hurt. You explain to Charity's mother that Dr. Voight does everything possible to make it a pain-free experience, including topical and local anesthetic and nitrous oxide.

Terminology to consider:

- Topical anesthetic
- Local anesthetic
- Nitrous oxide

Key questions:

- What would you tell Charity's mother about the process and reason for topical and local anesthetic?
- Why would you mention nitrous oxide to her?

Scenario 22

Terminology to consider:

- ### Key questions:

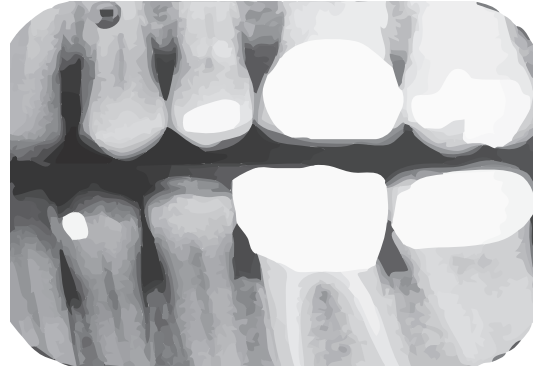
- Why must you ask about any changes to Diego's medical history before Dr. Kennelly administers the local anesthetic?

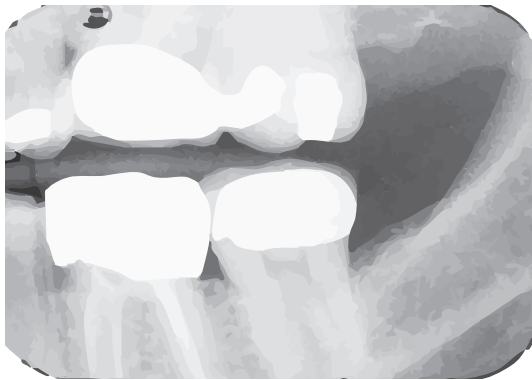
Lesson 12: Dental Radiology

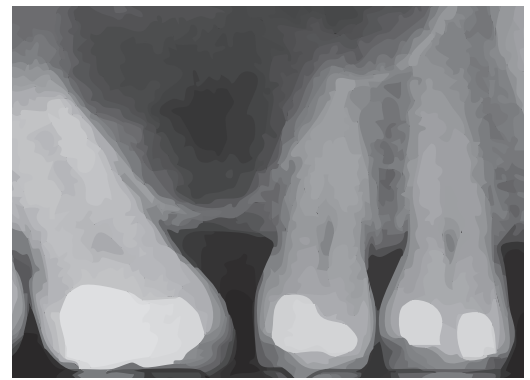
Types of Dental X-rays

Instructions: List the teeth that are in each type of dental x-ray. Identify what type of image it is.









Lesson 12: Pain Control in Dentistry

Dental Assisting National Board Assignment

Instructions: Visit the Dental Assisting National Board (DANB) website. Find the radiology requirements for your state and another state you are interested in learning more about. Write out the requirements, including any exams and the cost.

Lesson 12: Dental Radiology

This or That X-Ray

Your friend, Martina, wants two dental implants to replace teeth #29 and #30. Her dentist recommended she have a CBCT. Martina is worried because she has never heard of this procedure before. She asks your opinion on whether she should or should not agree and have the CBCT done.

Terminology to consider:

- Dental Implants
- CBCT

Key questions:

- Should Martina be concerned about having a CBCT taken?
- How would you explain the benefits of a CBCT to her?

Lesson 12: Dental Radiology

Scenario 23

Your friend, Martina, wants two dental implants to replace teeth #29 and #30. Her dentist recommended she have a CBCT. Martina is worried because she has never heard of this procedure before. She asks your opinion on whether she should or should not agree and have the CBCT done.

Terminology to consider:

- Dental Implants
- CBCT

Key questions:

- Should Martina be concerned about having a CBCT taken?
- How would you explain the benefits of a CBCT to her?

Lesson 12: Dental Radiology

Scenario 24

Felix is in the office today as a new patient. You are taking a full mouth series of x-rays so Dr. Voight can see the complete picture of Felix's oral health. However, after taking the right premolar bitewing, you notice an error. The premolars are overlapped, making this an undiagnostic image.

Terminology to consider:

- Full mouth series
- Bitewing
- Overlap

Key questions:

- Is it acceptable to retake the right premolar bitewing in this case?

- Why would you need to retake it?



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