**1 Introduction to Head and Neck Anatomy**

**CHAPTER LESSON PLAN& OBJECTIVES**

Lesson 1.1: Introduction to Head and Neck Anatomy

1. Define and pronounce the key terms and anatomic termsin this chapter.
2. Discuss the clinical applications of head and neck anatomy by dental professionals.
3. Discuss anatomic variation and how it applies to head and neck structures.
4. Correctly complete the review questions and activities for this chapter.
5. Apply the correct anatomic nomenclature during dental clinical procedures.

**CHAPTER TEACHING FOCUS**

The "Introduction to Head and Neck Anatomy"chapter begins with a discussion of the clinical applications of this topic to emphasize its importance for future clinical practice. The chapter then continues as an introductory unit for the entire textbook, reviewingthe anatomic nomenclature that was required in the prerequisite course work covering anatomy. Next, the chapter discusses normal anatomic variation and how this relates to patients. The chapter concludes with a discussion of how to approach the study of anatomy for the most effective outcomes.

By the time the students have completed this chapter, they will be fully prepared to study head and neck anatomy by considering the important topics of both anatomic nomenclature and study methods. In addition, they will now understand the importance of this study for future clinical dental practice. If any additional background is needed, the student should refer to a head and neck anatomy textbook as listed in Appendix A, such as *Gray's Anatomy, 41stEdition, The Anatomical Basis of Clinical Practice, Expert Consult—Online and Print* by Susan Standring, Elsevier, St. Louis, 2016.

**CHAPTER PRETEST**

Have the students answer these questions prior to covering this chapter to understand where they stand in relation to the content.

1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ used when discussing the body is based on the body being in anatomic position, which is a standard position of the body; when observing a body in the anatomic position, the left of the body is on the clinician’s right, and vice versa.
2. In \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the body is standing erect, with the arms at the sides and the palms and toes directed forward, as well as the eyes looking forward.
3. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or *midsagittal section* is a division through the median plane.
4. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or *frontal section* is a division through any frontal plane.
5. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or *transverse section* is a division through a horizontal plane.
6. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or *median plane* is created by an imaginary line dividing the body into equal right and left halves.
7. An imaginary line dividing the body into anterior and posterior parts at any level creates a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or *coronal plane*.
8. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is created by an imaginary line dividing the body at any level into either superior and inferior parts and is always perpendicular to the median plane.
9. A sagittal plane is any plane created by an imaginary plane parallel to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. When the body is lying face down in the anatomic position, this is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; when the body is lying face up, this is the supine position.

**Chapter Pretest Answers**

1. anatomic nomenclature

p. 2

1. anatomic position

p. 2

1. median section

p. 3

1. coronal section

p. 3

1. horizontal section

p. 3

1. midsagittal plane

p. 3

1. frontal plane

p. 3

1. horizontal plane

p. 3

1. median plane

p. 3

1. prone position

p. 2

**Classroom Preparation**

**Lesson 1.1: Introduction to Head and Neck Anatomy**

**INSTRUCTOR PREPARATION**

**Textbook Objectives Covered**

1. Define and pronounce the key terms and anatomic terms in this chapter.
2. Discuss the clinical applications of head and neck anatomy by dental professionals.
3. Discuss anatomic variation and how it applies to head and neck structures.
4. Correctly complete the review questions and activities for this chapter.
5. Apply the correct anatomic nomenclature during dental clinical procedures.

**National Standards Covered**

Competencies

ABHES DAI (Dental Assisting I – Basic)

* Section A: Curriculum, Competencies, Externship and/or Internal Clinical Experience: Dental Sciences: Anatomy and Physiology of the Oral Cavity. Proper practice of dental assisting requires in-depth knowledge of the anatomy and physiology of the oral cavity. In addition, an understanding of basic pathology requires knowledge of normal anatomy and physiology. (17.a)

ABHES DAII (Dental Assisting II – Advanced)

* Section A: Curriculum, Competencies, Externship and/or Internal Clinical Experience: Dental Sciences: Anatomy and Physiology of the Oral Cavity. Proper practice of dental assisting requires in-depth knowledge of the anatomy and physiology of the oral cavity. In addition, an understanding of basic pathology requires knowledge of normal anatomy and physiology. (19.c)

CODA Standards for Dental Assisting Programs

* Standard 2: Educational Program: Dental Sciences. Familiarity with general anatomy and physiology. (2-13.b)

CODA Standards for Dental Hygiene Programs

* Standard 2: Educational Program: Curriculum.Dental sciences content must include tooth morphology, head, neck and oral anatomy, oral embryology and histology, oral pathology, radiography, periodontology, pain management, and dental materials. (2-8.c)

**Lesson Preparation Checklist**

* Prepare lecture from TEACH lecture slides available on Evolve.
* Assemble materials and supplies needed for each lesson as indicated below.

**Materials and Supplies**

* computer
* projector

**Classroom Preparation**

**Lesson1.1: Introduction to Head and Neck Anatomy**

**STUDENT PREPARATION(3 hrs)**

|  |  |
| --- | --- |
| **1** | READ – Textbook (pp. 1-6)  **REVIEW – Evolve Student Resources**   * Practice Quiz, question 1 |
| **2** | READ – Textbook (pp. 1-3)  REVIEW – Evolve Student Resources   * Discussion Questions 1-24 * Practice Quiz, questions 2-9 |
| **3** | READ – Textbook (pp. 3-5)  ANSWER – Textbook   * Review Questions 1-20 (pp. 6-7) * Identification Exercises (pp. 8-10)   REVIEW – Evolve Student Resources   * Discussion Question 25 * Practice Quiz, question 10 |
| **4** | READ – Textbook (pp. 6-10) |
| **5** | READ – Textbook (pp. 1-2) |

**50-Minute Lesson Plan**

**Lesson 1.1: Introduction to Head and Neck Anatomy**

**LECTURE OUTLINE**

|  |  |
| --- | --- |
| **1** | **TERMS: SLIDES 3-35, 37-40(pp. 1-6)**   * Define and discuss the correct anatomic nomenclature for body sections and positions. |
| **2** | **CLINICAL APPLICATIONS: SLIDE 2 (pp. 1-3)**   * Discuss reasons why an understanding of basic head and neck anatomy is important for dental professionals. |
| **3** | **ANATOMIC VARIATIONS: SLIDE 36 (pp. 3-5)**   * Explain why anatomic variations can occur for head and neck structures. |

**Learning Activities**

|  |  |
| --- | --- |
| **1** | **REVIEW (15 min)**   * Call on a student and have the student define one of the key terms or anatomic terms. That student may then assign a term to another student, who gets to define that term. Continue until all key terms have been defined. * *Appropriate Settings:* Traditional classroom, flipped classroom |
| **2** | **ANALYZE (15min)**   * Denise just started dental school, and she doesn’t understand why she needs to know the anatomy of the head and neck when she’ll just be focusing on the oral cavity. Ask students why an understanding of head and neck anatomy is important for dental professionals. * *Appropriate Settings:* Traditional classroom, flipped classroom |
| **3** | **DISCUSS (10 min)**   * Discuss why there may be variations in anatomy from one patient to another. What does this mean for the dental professional? * *Appropriate Settings:* Traditional classroom, flipped classroom |
| **4** | **REVIEW (20 min)**   * Go over the correct answers to all the review questions at the end of this chapter. Address any student questions or concerns. * *Appropriate Settings:* Traditional classroom, flipped classroom |
| **5** | **ROLE PLAY (15 min)**   * Divide students into pairs. Have one student role play the patient who has come in for dental work. Have the other student explain each step of the procedure to the “patient” and be sure to use the correct anatomic terms. Students should then switch roles. * *Appropriate Settings:*Traditional classroom, flipped classroom |

**Critical Thinking QuestionS**

**Complete the following patient record notationsby filling in the blank with one word using the short definition in parentheses as well as the context.**

1. The \_\_\_\_\_ (front) part of the patient’s nose is showing solar damage at its bridge.*anterior*

The patient’s pharyngeal tissue that is \_\_\_\_\_ (farther away from median plane) to the right palatine tonsil needs to have a follow-up examination at next week’s appointment because of its moderate lymphadenopathy and redness.*lateral*

1. The patient has a hematoma on the \_\_\_\_\_ (area that faces away from head and toward feet) part of his chin in the mental region, probably caused by trauma from soccer.*inferior*
2. The biopsy of the lesion taken from the marginal gingiva of the permanent mandibular right central incisor shows hyperplasia in the \_\_\_\_\_ (through median plane) section of the epithelium of the gingival tissue.*midsagittal*
3. The patient’s permanent maxillary right canine is showing \_\_\_\_\_ (inner side of hollow structure) resorption as indicated by its pink coloration.*internal*
4. Because of crossover-innervation from the \_\_\_\_\_ (opposite) mandible, the patient needed a bilateral incisive block to achieve pain control before the procedure.*contralateral*
5. The \_\_\_\_\_ (farther away from median plane) surface of the patient’s primary mandibular right first molar has increased gingivitis because of her poor level of home care.*distal*
6. The \_\_\_\_\_ (structures located toward surface) part of the right labial commissure   
   of the patient's lips is showing signs of xerostomia.*superficial*
7. The \_\_\_\_\_(pointed end of conical structure) of the patient’s tongue was burned while eating 2 days ago, as reported by the patient.*apex*
8. The \_\_\_\_\_(structures on same side) submandibular lymph nodes that drain the patient’s permanent left mandibular third molar are tender when palpated. *ipsilateral*

**Assessments**

**Chapter 1: Introduction to Head and Neck Anatomy**

**ASSESSMENTS BY OBJECTIVE**

|  |  |
| --- | --- |
| **1** | Evolve Instructor Resources   * Test Bank:   + Multiple Choice, questions 2, 7, 11-14, 18, 20, 23   + Multiple Response, questions 1-5, 7   + Matching, questions 1-8 |
| **2** | Evolve Instructor Resources   * Test Bank:   + Multiple Choice, questions 1, 3-6, 8-10, 16-17, 21-22, 24-25   + Multiple Response, question 6   + Other, question 1 |
| **3** | Evolve Instructor Resources   * Test Bank: Multiple Choice, questions 15, 19 |