

Dental Anatomy & Physiology

At-A-Glance - Lamar CISD

Professional Standards/Employability Skills/Technical Skills			
Ongoing Skills Imbedded All Year	<p>DA&P 1(A) The student will demonstrate verbal and non-verbal communication in a clear, concise, and effective manner.</p> <p>DA&P 1(B) The student will exhibit the ability to cooperate, contribute, and collaborate as a member of a team.</p> <p>DA&P 1(C) The student will demonstrate professionalism, attention to detail, and problem-solving skills.</p> <p>DA&P 2(A) The student will identify anatomical structures of the head and neck, including the skull, sinuses, nasal cavity, intraoral and extraoral structures, throat, and ear using correct medical and dental terminology.</p> <p>DA&P 2(B) The student will describe the functions of the anatomical structures of the head and neck.</p> <p>DA&P 2(C) The student will explain the relationships of the anatomical structures of the head and neck to various corresponding body systems, including the nervous, circulatory, respiratory, muscular, skeletal, and digestive systems.</p> <p>DA&P 3(B) The student will identify the landmark structures of the oral cavity.</p> <p>DA&P 3(C) The student will describe the function of the oral cavity structures, including the tongue, teeth, mucosa, gingiva, and salivary glands using models.</p> <p>DA&P 4(A) The student will identify incisors, cuspids, premolars, and molars, including the crown, cemento-enamel junction (CEJ), root, line angles, point angles, facial height of contour, and root furcation (where applicable) using models.</p> <p>DA&P 4(B) The student will identify terms used to represent the locations and surfaces in the oral cavity, including buccal, labial, incisal, occlusal, mesial, distal, ventral, dorsal, and lateral.</p> <p>DA&P 5(A) The student will describe the embryological origins of the oral cavity, including the formation of the enamel, cementum, dentin, pulp, and periodontal fibers.</p> <p>DA&P 5(B) The student will describe the chronological timeline of the development of the primary and secondary dentitions.</p> <p>DA&P 6(A) The student will identify the locations, including origin and insertion points, of the muscles of face and oral cavity such as those responsible for facial expression and mastication.</p> <p>DA&P 8(C) The student will explain the use of radiation in the diagnosis of conditions of the head and neck.</p> <p>DA&P 9(A) The student will explain the importance of preventative oral health care.</p> <p>DA&P 10(C) The student will prepare a presentation of the effects of bacteria in the oral cavity and the importance of preventative oral care.</p> <p>DA&P 11(A) The student will investigate and present on education requirements and qualifications for different career pathways that require a knowledge of head and neck anatomy, including professions in dental and medical fields as well as speech pathology and audiology.</p>		
	<p>DA&P 1(B) The student will cooperate, contribute, and collaborate as a member of a team.</p> <p>DA&P 1(A) The student will demonstrate verbal and non-verbal communication in a clear, concise, and effective manner.</p> <p>DA&P 1(C) The student will demonstrate professionalism, attention to detail, and problem-solving skills.</p> <p>The student will use Interactive games – ex. Nearpod; Streaming videos; Warmups; Diagrams; Workbook; Projects; Quizlet/flash cards.</p>		
Ongoing Ways to Show			
Grading Period	Unit Name	Estimated Time Frame	TEKS
Grading Period 1 29 Days	Introduction to Dental Anatomy	3 Days	2A, 2B, 2C
	<p>DA&P 2(A) The student will identify anatomical structures of the head and neck, including the skull, sinuses, nasal cavity, intraoral and extraoral structures, throat, and ear using correct medical and dental terminology.</p> <p>DA&P 2(B) The student will describe the functions of the anatomical structures of the head and neck.</p> <p>DA&P 2(C) The student will explain the relationships of the anatomical structures of the head and neck to various corresponding body systems, including the nervous, circulatory, respiratory, muscular, skeletal, and digestive systems.</p>		
	Surface Anatomy	5 Days	2A, 2B, 2C, 3A, 3B
<p>DA&P 2(A) The student will identify anatomical structures of the head and neck, including the skull, sinuses, nasal cavity, intraoral and extraoral structures, throat, and ear using correct medical and dental terminology.</p> <p>DA&P 2(B) The student will describe the functions of the anatomical structures of the head and neck.</p> <p>DA&P 2(C) The student will explain the relationships of the anatomical structures of the head and neck to various corresponding body systems, including the nervous, circulatory, respiratory, muscular, skeletal, and digestive systems.</p>			

	DA&P 3(A) The student will describe the boundaries and sub-boundaries of the oral cavity using models. DA&P 3(B) The student will identify the landmark structures of the oral cavity.		
	Bones of the Head & Neck	13 Days	6D, 8C
	DA&P 6(D) The student will explain the movements of the Temporomandibular Joint (TMJ). DA&P 8(C) The student will identify anatomical landmarks commonly found on diagnostic images.		
	Muscular System of the Head & Neck	8 Days	3E, 3F
	DA&P 3(E) The student will diagram the location and describe the function of the various taste buds. DA&P 3(F) The student will describe the sequence of events that occurs when swallowing.		
Grading Period 2 26 Days	Muscular System of the Head & Neck	7 Days	3E, 3F
	DA&P 3(E) The student will diagram the location and describe the function of the various taste buds. DA&P 3(F) The student will describe the sequence of events that occurs when swallowing.		
	Vascular System of the Head & Neck	16 Days	2C, 6A, 6B, 6C, 6D
	DA&P 2(C) The student will explain the relationships of the anatomical structures of the head and neck to various corresponding body systems, including the nervous, circulatory, respiratory, muscular, skeletal, and digestive systems. DA&P 6(A) The student will identify the locations, including origin and insertion points, of the muscles of face and oral cavity such as those responsible for facial expression and mastication. DA&P 6(B) The student will identify the major branches of the facial nerves. DA&P 6(C) The student will create a model to identify the locations of the muscles, vessels, and major nerves of the head and neck. DA&P 6(D) The student will explain the movements of the Temporomandibular Joint (TMJ).		
	Nervous System of the Head & Neck	3 Days	6A, 6B, 6C
	DA&P 6(A) The student will identify the locations, including origin and insertion points, of the muscles of face and oral cavity such as those responsible for facial expression and mastication. DA&P 6(B) The student will identify the major branches of the facial nerves. DA&P 6(C) The student will create a model to identify the locations of the muscles, vessels, and major nerves of the head and neck.		
Grading Period 3 25 Days	Nervous System of the Head & Neck	11 Days	6A, 6B, 6C
	DA&P 6(A) The student will identify the locations, including origin and insertion points, of the muscles of face and oral cavity such as those responsible for facial expression and mastication. DA&P 6(B) The student will identify the major branches of the facial nerves. DA&P 6(C) The student will create a model to identify the locations of the muscles, vessels, and major nerves of the head and neck.		
	Glands of the Head & Neck	10 Days	3D
	DA&P 3(D) The student will explain the role saliva plays in the oral cavity.		
	Semester Exam	4 Days	
	Lymphatic System of the Head & Neck	11 Days	7D
	DA&P 7(D) The student will identify characteristics of oral pathologies such as lichen planus, candidiasis, herpes simplex virus, aphthous ulcer, black hairy tongue, geographic tongue, lesions, pemphigus vulgaris, nicotine stomatitis, hypocalcification, tetracycline staining, or hyperkeratosis.		

Grading Period 4 32 Days	Dental Anatomy	13 Days	4A, 4B, 4C, 4D, 4E
	<p>DA&P 4(A) The student will identify incisors, cuspids, premolars, and molars, including the crown, cemento-enamel junction (CEJ), root, line angles, point angles, facial height of contour, and root furcation (where applicable) using models.</p> <p>DA&P 4(B) The student will identify terms used to represent the locations and surfaces in the oral cavity, including buccal, labial, incisal, occlusal, mesial, distal, ventral, dorsal, and lateral.</p> <p>DA&P 4(C) The student will describe the function of each type of tooth.</p> <p>DA&P 4(D) The student will explain the relationship between the structure of each type of tooth and its function in mastication.</p> <p>DA&P 4(E) The student will model the distribution of forces throughout a tooth and its supporting structures during mastication.</p>		
Grading Period 5 32 Days	Development of Teeth	8 Days	2D, 2E, 5A, 5B, 5C, 5D, 7B, 7C, 7F, 7G, 7I
	<p>DA&P 2(D) The student will distinguish between the types of tissues that form the head and neck structures.</p> <p>DA&P 2(E) The student will identify and describe microscopic examples of various types of tissue found in the head and neck, including the tissues comprising the oral mucosa, submucosa, alveolar bone, and salivary gland ear using correct medical and dental terminology.</p> <p>DA&P 5(A) The student will describe the embryological origins of the oral cavity, including the formation of the enamel, cementum, dentin, pulp, and periodontal fibers.</p> <p>DA&P 5(B) The student will describe the chronological timeline of the development of the primary and secondary dentitions.</p> <p>DA&P 5(C) The student will contrast primary, secondary, and mixed dentitions.</p> <p>DA&P 5(D) The student will identify the conditions resulting from atypical morphology of the oral cavity structures, including genetic defects such as cleft lip or cleft palate.</p> <p>DA&P 7(B) The student will explain the role of bacteria in caries and periodontal disease.</p> <p>DA&P 7(C) The student will investigate and explain the impact of acids on tooth enamel.</p> <p>DA&P 7(F) The student will analyze data from fictional medical histories to predict the impacts on the functions of facial and/or oral structures.</p> <p>DA&P 7(G) The student will assess the impact of environmental factors on the structures of the oral cavity such as pacifiers, night-time bottle use, thumb-sucking, drug and alcohol use, or tobacco use.</p> <p>DA&P 7(I) The student will describe the roles, functions, and responsibilities of regulatory agencies, including Centers for Disease Control (CDC), Occupational Safety and Health Administration (OSHA), and the Texas State Board of Dental Examiners (TSBDE) in governing infection control in the dental setting.</p>		
Grading Period 5 32 Days	Supporting Structures of the Teeth	9 Days	7B, 7G
	<p>DA&P 7(B) The student will explain the role of bacteria in caries and periodontal disease.</p> <p>DA&P 7(G) The student will assess the impact of environmental factors on the structures of the oral cavity such as pacifiers, night-time bottle use, thumb-sucking, drug and alcohol use, or tobacco use.</p>		
	Articulation & Occlusion	13 Days	4E, 7G, 10A, 10B, 10C
	<p>DA&P 4(E) The student will model the distribution of forces throughout a tooth and its supporting structures during mastication.</p> <p>DA&P 7(G) The student will assess the impact of environmental factors on the structures of the oral cavity such as pacifiers, night-time bottle use, thumb-sucking, drug and alcohol use, or tobacco use.</p> <p>DA&P 10(A) The student will explain how a sleep-related breathing disorder such as sleep apnea can be detrimental to a patient's oral health.</p> <p>DA&P 10(B) The student will explain bruxism (need for nightguard), tooth replacement (for a congenitally missing or lost tooth), and orthodontics (for misaligned teeth or abnormal bite) using models.</p> <p>DA&P 10(C) The student will prepare a presentation of the effects of bacteria in the oral cavity and the importance of preventative oral care.</p>		
Grading Period 5 32 Days	The Edentulous Mouth	8 Days	2C, 3C, 3F, 7E, 7G, 7H
	<p>DA&P 2(C) The student will explain the relationships of the anatomical structures of the head and neck to various corresponding body systems, including the nervous, circulatory, respiratory, muscular, skeletal, and digestive systems.</p> <p>DA&P 3(C) The student will describe the function of the oral cavity structures, including the tongue, teeth, mucosa, gingiva, and salivary glands using models.</p>		

	<p>DA&P 3(F) The student will describe the sequence of events that occurs when swallowing.</p> <p>DA&P 7(E) The student will identify the lymph nodes involved in head and neck pathologies.</p> <p>DA&P 7(G) The student will assess the impact of environmental factors on the structures of the oral cavity such as pacifiers, night-time bottle use, thumb-sucking, drug and alcohol use, or tobacco use.</p> <p>DA&P 7(H) The student will identify and explain the oral side effects of medications such as those prescribed for high blood pressure, epilepsy, pain, allergy and cold, diabetes, heart disease, radiation therapy and chemotherapy.</p>		
	<p>Pathology/Viruses/Conditions</p>	<p>2 Days</p>	<p>7A, 7D, 7G, 7H</p>
	<p>DA&P 7(A) The student will differentiate between bacteria and viruses.</p> <p>DA&P 7(D) The student will identify characteristics of oral pathologies such as lichen planus, candidiasis, herpes simplex virus, aphthous ulcer, black hairy tongue, geographic tongue, lesions, pemphigus vulgaris, nicotine stomatitis, hypocalcification, tetracycline staining, or hyperkeratosis.</p> <p>DA&P 7(G) The student will assess the impact of environmental factors on the structures of the oral cavity such as pacifiers, night-time bottle use, thumb-sucking, drug and alcohol use, or tobacco use.</p> <p>DA&P 7(H) The student will identify and explain the oral side effects of medications such as those prescribed for high blood pressure, epilepsy, pain, allergy and cold, diabetes, heart disease, radiation therapy and chemotherapy.</p>		
<p>Grading Period 6 29 Days</p>	<p>Pathology/Viruses/Conditions</p>	<p>8 Days</p>	<p>7A, 7D, 7G, 7H</p>
	<p>DA&P 7(A) The student will differentiate between bacteria and viruses.</p> <p>DA&P 7(D) The student will identify characteristics of oral pathologies such as lichen planus, candidiasis, herpes simplex virus, aphthous ulcer, black hairy tongue, geographic tongue, lesions, pemphigus vulgaris, nicotine stomatitis, hypocalcification, tetracycline staining, or hyperkeratosis.</p> <p>DA&P 7(G) The student will assess the impact of environmental factors on the structures of the oral cavity such as pacifiers, night-time bottle use, thumb-sucking, drug and alcohol use, or tobacco use.</p> <p>DA&P 7(H) The student will identify and explain the oral side effects of medications such as those prescribed for high blood pressure, epilepsy, pain, allergy and cold, diabetes, heart disease, radiation therapy and chemotherapy.</p>		
	<p>Restorative/Preventative Dentistry</p>	<p>11 Days</p>	<p>1A, 1B, 1C, 1D, 7I, 8A, 9A, 9B, 9C, 9D, 9E, 11A, 11B, 11C</p>
	<p>DA&P 1(A) The student will demonstrate verbal and non-verbal communication in a clear, concise, and effective manner.</p> <p>DA&P 1(B) The student will cooperate, contribute, and collaborate as a member of a team.</p> <p>DA&P 1(C) The student will demonstrate professionalism, attention to detail, and problem-solving skills.</p> <p>DA&P 1(D) The student will explain the importance of the Health Insurance Portability and Accountability Act (HIPAA) and patient privacy and confidentiality.</p> <p>DA&P 7(I) The student will describe the roles, functions, and responsibilities of regulatory agencies, including Centers for Disease Control (CDC), Occupational Safety and Health Administration (OSHA), and the Texas State Board of Dental Examiners (TSBDE) in governing infection control in the dental setting.</p> <p>DA&P 8(A) The student will identify and explain the mechanisms of the diagnostic tools used in the head and neck region, including intraoral and extraoral radiographs, Cone Beam Computed Tomography (CBCT), Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and biopsies.</p> <p>DA&P 9(A) The student will explain the importance of preventative oral health care.</p> <p>DA&P 9(B) The student will demonstrate prevention methods for various dental conditions such as caries, halitosis, and periodontal disease.</p> <p>DA&P 9(C) The student will describe the types of dental restorations such as fillings, crowns, bridges, and implants.</p> <p>DA&P 9(D) The student will identify common restorations on radiographs.</p> <p>DA&P 9(E) The student will explain the most likely treatment for various conditions, including caries of the anterior and posterior teeth, bruxism, oral cancer, avulsed teeth, fractures, periodontal disease and TMJ issues.</p> <p>DA&P11(A) The student will investigate and present on education requirements and qualifications for different career pathways that require a knowledge of head and neck anatomy, including professions in dental and medical fields as well as speech pathology and audiology.</p> <p>DA&P 11(C) The student will define interprofessional collaboration and explain how a dental professional would interact with various careers.</p>		

	Radiographic Imaging	10 Days	7I, 8A, 8B, 8C, 8D, 9D
<p>DA&P 7(I) The student will describe the roles, functions, and responsibilities of regulatory agencies, including Centers for Disease Control (CDC), Occupational Safety and Health Administration (OSHA), and the Texas State Board of Dental Examiners (TSBDE) in governing infection control in the dental setting.</p> <p>DA&P 8(A) The student will identify and explain the mechanisms of the diagnostic tools used in the head and neck region, including intraoral and extraoral radiographs, Cone Beam Computed Tomography (CBCT), Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and biopsies.</p> <p>DA&P 8(B) The student will explain the use of radiation in the diagnosis of conditions of the head and neck.</p> <p>DA&P 8(C) The student will identify anatomical landmarks commonly found on diagnostic images.</p> <p>DA&P 8(D) The student will explain the Occupational Safety and Health Administration (OSHA) requirements for radiation safety in the workplace.</p> <p>DA&P 9(D) The student will identify common restorations on radiographs.</p>			