

# Dental Careers I

**8328 36 weeks / 280 hours**

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## Acknowledgments

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## Course Description

### **Suggested Grade Level: 11**

Students are introduced to the careers in dentistry, including dentist (general and specialists), hygienist, dental assistant, dental laboratory technician, and dental receptionist. Students practice and learn about many of the skills utilized in these professions while attaining all the skills necessary to become entry-level dental assistants. Study includes infection control and OSHA standards; anatomy and physiology; tooth morphology; oral histology; preventive dentistry; applied psychology; effective communication; office administration and management; use of dental software; operative dentistry techniques; and dental materials/laboratory skills.

Recommended prerequisite(s): Biology, Chemistry, Keyboarding 6150/6151, and Introduction to Health and Medical Sciences 8302

**NOTE:** *This course has specific state laws and regulations from a governing medical board or agency. Please contact the Virginia Department of Education, Office of Career and Technical Education Services prior to implementing this course. All inquiries may be sent to [cte@doe.virginia.gov](mailto:cte@doe.virginia.gov).*

As noted in [Superintendent's Memo #058-17 \(2-28-2017\)](#), this Career and Technical Education (CTE) course must maintain a maximum pupil-to-teacher ratio of 20 students to one teacher, due to safety regulations. The 2016-2018 biennial budget waiver of the teacher-to-pupil ratio staffing requirement does not apply.

## Task Essentials Table

- by plus icons (⊕) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (⊖) are omitted
- Tasks marked with an asterisk (\*) are sensitive.

8328 Tasks/Competencies	
Introducing Dentistry and the Dental Team	
○	Trace key developments of dentistry from early civilizations to the present, including educational and professional developments in America.
⊕	List the members of a dental team and the characteristics, educational requirements, and responsibilities of each member.
⊕	Describe the roles of professional dental organizations.
Investigating Dental Ethics and Law	
⊕	Examine ethical and legal issues related to the practice of dentistry.
⊕	Explain the American Dental Assistants Association (ADAA) Principles of Ethics and Code of Professional Conduct.
⊕	Describe the role of the Virginia Dental Practice Act as it relates to the practice of dentistry.
⊕	Explain confidentiality and its connection to the Health Insurance Portability and Accountability Act (HIPAA).
Examining Basic Dental-Related Anatomy and Physiology	
⊕	Identify anatomical reference systems.
⊕	Identify the bones and major anatomic landmarks of the skull.
⊕	Describe the bone structure of cartilage, compact bone, spongy bone, and periosteum.
⊕	Describe the gliding hinge action of the temporomandibular joint (TMJ).
⊕	Identify the major muscles of mastication and facial expressions, the extrinsic muscles of the tongue, and the major posterior muscles of the mouth, including the floor of the mouth.
⊕	Identify the major veins, arteries, and nerves of the face and mouth.
⊕	Identify the major anatomic landmarks of the oral cavity.

+	Identify the salivary glands and their ducts.
+	Explain the anatomy and physiology of body systems and their relationship to the face and neck.
<b>Describing Dental Anatomy</b>	
+	Explain oral embryology and the histology of dentition.
+	Explain developmental disturbances that may occur during tooth development.
+	Identify the eruption order for the primary and permanent dentition.
+	Explain the specialized functions and classifications of the four types of teeth.
+	Describe the anatomical features of teeth.
+	Identify tooth surfaces.
+	Identify teeth, using the Universal, Federation Dentaire Internationale (FDI), and Palmer Numbering Systems.
<b>Recording Patient Information and Assessment</b>	
+	Demonstrate compliance with the privacy policy of the Health Insurance Portability and Accountability Act (HIPAA) when recording patient information.
+	Manage personal information about a patient.
+	Update medical and dental history.
+	Explain the meaning and importance of informed consent.
+	Identify the standards and criteria for patient-record entries.
+	Obtain and record vital signs and observations.
+	Document initial findings, including recommended treatment.
+	Record treatment rendered.
+	Obtain intraoral and extraoral images.
<b>Examining Preventive Dentistry and Nutrition</b>	
+	Describe how dental decay occurs.
+	Identify the methods of detecting decay.
+	Describe systemic conditions associated with periodontal disease.
+	Identify risk factors for periodontal disease.
+	Demonstrate the components of preventive dentistry.
+	Describe the roles of systemic and topical fluorides.
+	Identify key nutrients.
+	Establish a diet for dental health maintenance.
<b>Performing Administrative Functions</b>	
+	Greet patients.
+	Manage records.
<b>Performing Infection-Control Techniques</b>	
+	Describe the major groups of microorganisms that cause disease.
+	Describe the types of diseases caused by microorganisms.
+	Describe ways diseases are transmitted in the dental treatment environment.
+	Explain maintenance of aseptic chain in the dental treatment environment.
+	Demonstrate compliance with governmental regulations and guidelines, including those of the Occupational Health and Safety Administration (OSHA), Environmental Protection Agency (EPA), and Centers for Disease Control (CDC), regarding infection control and disease prevention.
+	Disinfect and/or sterilize dental instruments.

+	Demonstrate maintenance and sterilization of dental handpieces.
+	Demonstrate maintenance of the evacuation system.
+	Demonstrate maintenance of dental disinfecting/sterilizing equipment, including the renewal of solutions.
+	Explain maintenance of the dental unit waterline (DUWL).
<b>Managing Hazardous Chemicals and Waste</b>	
+	Identify methods of protection against exposure to hazardous chemicals.
+	Comply with the OSHA Hazard Communications Standard.
+	Describe the classification of waste.
+	Demonstrate compliance with governmental regulations regarding the management of hazardous chemicals and waste.
<b>Assisting with Basic Pharmacology and Pain Control</b>	
+	Explain pharmacology terms.
+	Explain the types of anesthesia used in dentistry.
+	Demonstrate assisting in the administration of local anesthesia.
+	Document the administration of anesthesia and pain control.
<b>Serving Patients with Special Needs</b>	
+	Describe the management of special-needs patients during dental procedures.
+	Determine fearful patients' physical and emotional needs in order to alleviate anxiety.
+	Describe considerations connected with treating various special-needs patients.
<b>Demonstrating Chairside Procedures</b>	
+	Seat and position patients.
+	Dismiss patients.
+	Demonstrate ergonomics in the dental setting.
+	Pass and retrieve instruments at chairside.
+	Demonstrate maintenance of a clear field.
+	Perform oral evacuation.
+	Prepare basic operatory setup.
+	Prepare dental dam equipment and materials for use.
+	Perform a preventive dentistry treatment.

Legend: + Essential ○ Non-essential - Omitted

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## Curriculum Framework

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### Introducing Dentistry and the Dental Team

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#### Task Number 39

# **Trace key developments of dentistry from early civilizations to the present, including educational and professional developments in America.**

## **Definition**

Tracing of key developments should include the contributions of

- Hippocrates
- G. V. Black
- Juliet Southard
- Edmund Kells
- Pierre Fauchard
- Josiah Flagg
- Lucy Hobbs
- Robert Tanner Freeman

and the significance of the

- "amalgam wars"
- beginning of formal dental education
- invention of the first dental chair
- first female graduate of dentistry
- first African American graduate of dentistry
- use of nitrous oxide in dentistry
- use of x-radiation in dentistry.

Note: This task is optional, but it should be taught if students are taking the Dental Assisting National Board Inc. (DANB) Radiation Health and Safety (RHS) exam.

## **Process/Skill Questions**

- What contributions of Hippocrates are still applied in medicine today?
- Who is known as the "grand old man of dentistry"? Why?
- Who were two female American pioneers in dentistry, and what were their contributions?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

## Category II - Health Professions Events

- Dental Science (Category II)
- 

### Task Number 40

**List the members of a dental team and the characteristics, educational requirements, and responsibilities of each member.**

#### Definition

List should include the characteristics, educational requirements, and responsibilities of the following members of a dental team:

- General dentist
- Dental specialist
- Registered dental hygienist
- Certified dental assistant
- Certified laboratory technician
- Anesthesia provider

#### Process/Skill Questions

- How is the concept of a *team* applied in dentistry?
- How does the display of professional characteristics influence patient-staff relationships?
- Why is a dental team a good example of a career ladder?

### HOSA Competitive Events (High School)

#### Category I - Health Science Events

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### Category II - Health Professions Events

- Dental Science (Category II)

#### Category III - Leadership Events

- Medical Photography (Category III)

### **Category IV - Teamwork Events**

- Career Health Display (Category IV)
- 

## **Task Number 41**

### **Describe the roles of professional dental organizations.**

#### **Definition**

Description should include the functions of the American Dental Association (ADA), American Dental Assistants Association (ADAA), Dental Assisting National Board, Inc. (DANB), and American Dental Hygienist Association (ADHA) in the areas of continuing education and professional development.

#### **Process/Skill Questions**

- Why is it important for each member of a dental team to belong to his or her specific professional dental organization?
- Where can you find information pertaining to a specific professional dental organization?
- What are some benefits of being a member of a professional dental organization?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category III - Leadership Events**

- Medical Photography (Category III)

#### **Category IV - Teamwork Events**

- Career Health Display (Category IV)
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# Investigating Dental Ethics and Law

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## Task Number 42

### Examine ethical and legal issues related to the practice of dentistry.

#### Definition

Examination should include

- Dental Assisting National Board Inc. (DANB) Virginia State Requirements
- definitions of *ethics* and *code of ethics*
- a comparison of ethics and law
- an explanation of how a code of ethics should influence the work of a practicing dental professional
- the "standard of care," including
  - malpractice
  - torts
  - assault and battery
  - defamation of character
  - invasion of privacy
  - fraud
  - Good Samaritan laws
  - Americans with Disabilities Act (ADA)
- the types of law, including contract and tort, related to the practice of dentistry
- the legal responsibilities of a practicing dental professional.

#### Process/Skill Questions

- What are the differences and similarities between ethics and law?
- How does ethics relate to the practice of dentistry?
- How should a dental assistant handle workplace situations involving ethical questions?
- How might a dental assistant's professional ethics affect a patient? In a situation involving ethical questions, to whom is a dental assistant primarily responsible—the dentist or the patient?
- What are examples of types of laws related to the practice of dentistry?
- What type of law is most often applied in dentistry? What are the requirements for contract law to apply? How does contract law apply to the dentist-patient relationship?

- What is breach of contract?
- What type of consent is required from a patient before performance of a routine dental procedure?
- What is the "standard of care"? What are the categories that comprise the "standard of care"?
- What are Good Samaritan laws?
- How do the two types of defamation of character differ?
- How are *fraud* and *tort* defined in relation to the practice of dentistry?
- What are the areas covered by the Americans with Disabilities Act (ADA), and what is the ADA's mandate?
- What are the four elements of negligence (malpractice)?
- What are the consequences of being found guilty of malpractice?
- What is the difference between assault and battery?
- How can a dental practice be guilty of invasion of privacy?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- Biomedical Debate (Category IV)

## **Task Number 43**

### **Explain the American Dental Assistants Association (ADAA) Principles of Ethics and Code of Professional Conduct.**

#### **Definition**

Explanation should include the reasons for the existence of the ADAA Principles of Ethics and Code of Professional Conduct, as well as a discussion of the obligations outlined by the ADAA in order to enrich the profession.

#### **Process/Skill Questions**

- Why is it important for professional organizations to have a code of conduct?
- What general items are commonly found in the codes of conduct of professional organizations?
- Is a code of conduct also a law? Why, or why not?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- Biomedical Debate (Category IV)

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## **Task Number 44**

### **Describe the role of the Virginia Dental Practice Act as it relates to the practice of dentistry.**

#### **Definition**

Description should include the provisions of the Virginia Dental Practice Act and §54.1-2700 of the Code of Virginia and the roles of the following legal aspects of the practice of dentistry:

- Virginia Board of Dentistry guidance document 60-7 on Delegation to Dental Assistants
- Commonwealth of Virginia Regulations Governing the Practice of Dental Assistants §18VAC60-30-10 effective December 2, 2015
- Licensure/certification
- Level of supervision
- American Heart Association CPR certification

#### **Process/Skill Questions**

- What is the state Dental Practice Act?
- Whose duties are stated in the state Dental Practice Act?
- How would you explain the role of the Virginia Board of Dentistry?

- What is the makeup of the membership of the Virginia Board of Dentistry?
- What type of credentialing is required for a dental assistant? For a dentist? For a dental hygienist?
- Who is authorized to provide credentialing for dental assistants?
- What are the levels of auxiliary supervision?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- Biomedical Debate (Category IV)

## **Task Number 45**

### **Explain confidentiality and its connection to the Health Insurance Portability and Accountability Act (HIPAA).**

#### **Definition**

Explanation should include

- a definition of *confidentiality*
- the reasons that patient confidentiality is important in the practice of dentistry
- the possible consequences of not maintaining patient confidentiality
- a summary of the provisions found in HIPAA (e.g., privacy standard, patient rights, administrative requirements)
- the privacy standards mandated by the Department of Health and Human Services to protect the privacy of patients
- Virginia Code §32.1-127.1:03.

#### **Process/Skill Questions**

- Why is confidentiality important in patient relationships?

- What could be the consequences of not maintaining patient confidentiality?
- When does patient confidentiality move from an ethical issue to a legal issue?
- When was HIPAA enacted? Why was it enacted?
- What types of health information are protected under HIPAA?
- Who is responsible for the enforcement of HIPAA?
- What are the consequences of violating HIPAA?
- What are the privacy standards mandated by the Department of Health and Human Services to protect the privacy of patients?

## **HOSA Competitive Events (High School)**

### **Category V - Recognition**

- Health Care Issues Exam (Category V)
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# **Examining Basic Dental-Related Anatomy and Physiology**

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## **Task Number 46**

### **Identify anatomical reference systems.**

#### **Definition**

Identification should include

- sagittal plane
- frontal plane
- horizontal plane
- transverse plane
- mid-sagittal plane.

#### **Process/Skill Questions**

- What are the three primary body planes?
- What are the two body cavities created by the body planes?
- What are the two parts of the dorsal cavity?

- What are the three parts of the ventral cavity?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 47**

### **Identify the bones and major anatomic landmarks of the skull.**

#### **Definition**

Identification should include the name and location of the eight bones of the cranium and the 14 bones of the face that constitute the major anatomic landmarks of the skull.

#### **Process/Skill Questions**

- What are the prominences of the dental arches?
- What is the function of the cranium?
- What is a foramen?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 48**

**Describe the bone structure of cartilage, compact bone, spongy bone, and periosteum.**

### **Definition**

Description should include the definition, location, and function of each bone structure.

### **Process/Skill Questions**

- What are the two types of bone-forming cells?
- What is the makeup and function of cartilage?
- What are the two components found inside cancellous bone?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 49**

# **Describe the gliding hinge action of the temporomandibular joint (TMJ).**

## **Definition**

Description should include

- a definition of *occlusion*
- an explanation of all TMJ parts and functions.

## **Process/Skill Questions**

- What is the derivation of the term *temporomandibular*?
- What are the three stages of TMJ movement?
- What is the function of synovial fluid?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

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## **Task Number 50**

**Identify the major muscles of mastication and facial expressions, the extrinsic muscles of the tongue, and the major posterior muscles of the mouth, including the floor of the mouth.**

## **Definition**



Identification of the major muscles should include the name, location, and function of each major muscle.

### **Process/Skill Questions**

- Where is the hyoid bone located, and what is its shape?
- What are the two muscles of the soft palate?
- How are the muscles of the floor of the mouth innervated differently from other muscles of the mouth?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

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## **Task Number 51**

### **Identify the major veins, arteries, and nerves of the face and mouth.**

#### **Definition**

Identification should include explaining the functions of the three major blood vessels and diagramming the veins, arteries, and nerves of the face and mouth.

#### **Process/Skill Questions**

- What four cranial nerves innervate the face and oral cavity?
- What are the three branches of the trigeminal nerve?
- Which division of the common carotid artery supplies blood to the face and oral cavity?

### **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 52**

### **Identify the major anatomic landmarks of the oral cavity.**

#### **Definition**

Identification should include the name, location, and function of the

- lips
- soft palate
- cheeks
- pillars of fauces
- frenum
- oral mucosa
- tongue
- hard palate

as well as common abnormalities of the oral cavity.

#### **Process/Skill Questions**

- What are the four types of papillae found on the dorsal surface of the tongue?
- What are tori?
- Where is the incisive papilla found?
- What are the three components of the floor of the mouth?
- What are the signs and symptoms of common abnormalities?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 53**

### **Identify the salivary glands and their ducts.**

#### **Definition**

Identification should include naming and locating the

- parotid glands and Stensen's duct
- submandibular gland and Wharton's duct
- sublingual gland and Wharton's duct/ducts of Rivinus.

#### **Process/Skill Questions**

- What is the makeup of saliva?
- What is the approximate amount of saliva produced daily by a normal individual?
- What are the consequences of a saliva deficiency?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

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## **Task Number 54**

### **Explain the anatomy and physiology of body systems and their relationship to the face and neck.**

#### **Definition**

Explanation should include the components and functions of the circulatory, digestive, respiratory, and lymphatic systems and the ways in which the systems relate to the face and neck.

#### **Process/Skill Questions**

- What respiratory system disease is considered a health hazard to a dental health team? Why?
- What digestive system condition results in the dissolving of tooth structure?
- What types of patients are considered to be at high risk for bacterial endocarditis? Why?

#### **HOSA Competitive Events (High School)**

##### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

##### **Category II - Health Professions Events**

- Dental Science (Category II)

##### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Describing Dental Anatomy**

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## **Task Number 55**

# **Explain oral embryology and the histology of dentition.**

## **Definition**

Explanation should include the names and functions of parts and tissues of the teeth and surrounding structures.

## **Process/Skill Questions**

- What are the three stages of differentiation?
- What are the two types of cleft lips?
- What is the result of fusion failure of the palatal shelves?
- What are the four stages of the life cycle of the tooth?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 56**

# **Explain developmental disturbances that may occur during tooth development.**

## **Definition**

Explanation should include listing the major disturbances and explaining their causes.

## **Process/Skill Questions**

- What do the prefixes *micro* and *macro* mean?
- What does the suffix *genesis* mean?

- What are supernumerary teeth?
- Which teeth are most likely to appear as supernumerary teeth? Why?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 57**

### **Identify the eruption order for the primary and permanent dentition.**

#### **Definition**

Identification should include listing all primary and secondary teeth in the correct eruption sequence.

#### **Process/Skill Questions**

- How many teeth are succedaneous?
- What permanent teeth are not succedaneous?
- What is a mixed dentition?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
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## **Task Number 58**

### **Explain the specialized functions and classifications of the four types of teeth.**

#### **Definition**

Explanation should include identification and number of the four types of teeth (incisors, cuspids [canines], bicuspid [premolars], molars), as well as

- description of their functions
- classification as primary or permanent and as anterior or posterior
- number of each found in primary and permanent dentition
- identification of surfaces of anterior and posterior teeth in all dentition.

#### **Process/Skill Questions**

- Which type of tooth is *not* found in a primary dentition?
- Which type of tooth is commonly called a "wisdom tooth"?
- What teeth are in the anterior region?
- What teeth are in the posterior region?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

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## **Task Number 59**

### **Describe the anatomical features of teeth.**

#### **Definition**

Description should include all anatomical landmarks, structures, and common abnormalities of hard tissue.

#### **Process/Skill Questions**

- Which types of teeth have a convex surface?
- Which types of teeth have a concave surface?
- What type of cusp is found only on maxillary first permanent molars?
- Which teeth are bifurcated?
- Which teeth are trifurcated?
- Why are cuspids (canines) commonly known as "eye teeth"?
- What are signs and symptoms of abnormalities of hard tissue?

#### **HOSA Competitive Events (High School)**

##### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

##### **Category II - Health Professions Events**

- Dental Science (Category II)

##### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

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## **Task Number 60**

### **Identify tooth surfaces.**

#### **Definition**



Identification should include all surfaces of anterior and posterior teeth.

### **Process/Skill Questions**

- How many surfaces does each tooth have?
- What surface term can replace both *labial* and *buccal*?
- What are proximal surfaces?
- Where can two mesial surfaces be proximal?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)
- 

## **Task Number 61**

### **Identify teeth, using the Universal, Federation Dentaire Internationale (FDI), and Palmer Numbering Systems.**

#### **Definition**

Identification should include labeling all primary and permanent teeth on dentition charts, using each system.

#### **Process/Skill Questions**

- How would you identify a permanent tooth, using the Universal Numbering System?
- How would you identify a primary tooth, using the Universal Numbering System?
- Which numbering system numbers quadrants and teeth?
- Which numbering system uses symbols to denote quadrants?

### **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

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# **Recording Patient Information and Assessment**

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## **Task Number 62**

### **Demonstrate compliance with the privacy policy of the Health Insurance Portability and Accountability Act (HIPAA) when recording patient information.**

#### **Definition**

Demonstration should include

- recording and handling confidential patient information
- explaining procedures meant to preserve patient privacy
- adhering to Virginia Code §32.1-127.1:03 and Commonwealth of Virginia Regulations Governing the Practice of Dental Assistants 18VAC60-30-10 effective December 2, 2015.

#### **Process/Skill Questions**

- In what situations would you *not* record a patient's personal information?

- What information can you give another medical office about your patient? What information should you not share?
- How would you discuss treatment with a patient who needs an interpreter?
- How would you discuss treatment with a hard-of-hearing patient in an office that has been designed with an open-bay concept?

## **HOSA Competitive Events (High School)**

### **Category IV - Teamwork Events**

- Biomedical Debate (Category IV)

### **Category V - Recognition**

- Health Care Issues Exam (Category V)

## **Task Number 63**

### **Manage personal information about a patient.**

#### **Definition**

Management should include gathering and recording personal information such as the following:

- Name
- Address
- Phone number
- Date of birth
- Insurance provider information
- Employment
- Party responsible for payment

#### **Process/Skill Questions**

- How can you differentiate between two patients with the same name?
- What kind of information is recorded on the front of the chart?
- What kind of questions would you ask the provider of a new insurance-coverage policy?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)

- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
- 

## **Task Number 64**

### **Update medical and dental history.**

#### **Definition**

Update should include a list of

- allergies
- medications
- medical conditions
- hospitalizations
- specific dental symptoms.

#### **Process/Skill Questions**

- What medical information is recorded on the front of the chart?
- What information can you give another medical office about your patient? What information can you *not* share?
- How would you handle a phone conversation with another medical office when receiving information about a patient's medications and health status?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 65**

# **Explain the meaning and importance of informed consent.**

## **Definition**

Explanation should include communicating to the patient the importance of the procedure to be performed, the risks involved, the expected outcome, other treatment options, and the risks of no treatment. Explanation must also include that informed consent must be obtained by the dentist at all times.

## **Process/Skill Questions**

- Why is it necessary to give patients copies of consent forms?
- Why is informed consent not required for a routine procedure?
- How could a dentist obtain informed consent from a patient who is not fluent in English?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

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## **Task Number 66**

# **Identify the standards and criteria for patient-record entries.**

## **Definition**

Identification should include legal issues, patient responses, storage, and record transfer.

## **Process/Skill Questions**

- To whom do a patient's records belong?
- How would you respond to a patient who does not understand the purpose of an appointment?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 67**

### **Obtain and record vital signs and observations.**

#### **Definition**

Obtaining and recording should include the following:

- Vital signs (e.g., temperature, pulse, respiration, blood pressure)
- Observations (e.g., appearance, gait, speech, breath odors)

#### **Process/Skill Questions**

- Why would you take a radial pulse instead of a carotid artery pulse?
- What would you do if a patient presenting for treatment were showing vital signs that are above normal?
- What would you do if a patient were to claim that there is an inaccuracy in his or her recorded vital signs?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 68**

### **Document initial findings, including recommended treatment.**

#### **Definition**

Documentation should include the following:

- Charting findings (in all current formats)—areas of inflammation; types of oral lesions and conditions; developmental defects; diseases of the teeth; and pulp, periodontal, and temporomandibular joint (TMJ) disorders
- Listing treatment—treatment(s) as determined by a doctor of dental surgery (DDS)

#### **Process/Skill Questions**

- How do you respond to a patient who asks you to clarify the dentist's instructions?
- How do you respond to a patient who asks for your advice on treatment options?
- Should you interrupt an examination to clarify for a patient information presented by a dentist in an unclear way? If so, how would you do this?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
- 

## **Task Number 69**

### **Record treatment rendered.**

#### **Definition**

Recording should include

- tooth number

- dental restoration
- oral surgery
- medications or prescriptions
- anesthetic
- post-operative instructions (reviewed and understood by the patient)
- dental procedures (impressions, fluoride, vital signs)
- date
- operator
- assistant.

### **Process/Skill Questions**

- How often should a patient's health history be updated?
- Why should chart entries be written in ink? How should changes to entries be made?
- Do all recorded procedures require a tooth number? Why, or why not?
- How should a multiple-tooth-restoration appointment be recorded?
- Why is it necessary to record all materials used in a procedure?
- In what ways could waiting to record information be problematic?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

## **Task Number 70**

### **Obtain intraoral and extraoral images.**

#### **Definition**

Obtaining images should include explanations of how to use a digital intraoral camera for recording oral and facial images on a patient chart.

#### **Process/Skill Questions**

- How would you take intraoral images on a patient with limited opening?
- What records need to be presented during a treatment consultation?



- How may intraoral imaging become vital legally to the dentist in years to come?
- How can intraoral imaging be used as an educational tool for a dental practice?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)
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# **Examining Preventive Dentistry and Nutrition**

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## **Task Number 71**

### **Describe how dental decay occurs.**

#### **Definition**

Description should include

- baby bottle caries
- effects of acid on the teeth
- demineralization and remineralization
- healthful and unhealthful snacks
- dry mouth
- drug use.

#### **Process/Skill Questions**

- At recall appointments, what questions would you ask a patient who has recurring caries?
- What information regarding dental caries can you offer to a newly expectant mother?
- How does the demineralization and remineralization process work on a daily basis?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- Community Awareness (Category IV)
  - Health Education (Category IV)
  - HOSA Bowl (Category IV)
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## **Task Number 72**

### **Identify the methods of detecting decay.**

#### **Definition**

Identification should include the use of explorer, radiographs, appearance, and caries indicators.

#### **Process/Skill Questions**

- How would you respond to a patient who asks, "What do you see on my X-ray?"
- How would you compare visual findings to the radiograph findings?
- Who is responsible for diagnosis when indicator dyes are used?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- Community Awareness (Category IV)
  - Health Education (Category IV)
  - HOSA Bowl (Category IV)
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## **Task Number 73**

### **Describe systemic conditions associated with periodontal disease.**

#### **Definition**

Description should include the effects of chronic diseases (e.g., cardiovascular disease, respiratory disease).

#### **Process/Skill Questions**

- How would you advise a patient who presents with a history of periodontal disease as well as a heart condition?
- What would you tell a pregnant patient who calls to cancel her periodontal recall appointment?
- What information would you give a patient with chronic respiratory illness?

#### **HOSA Competitive Events (High School)**

##### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

##### **Category II - Health Professions Events**

- Dental Science (Category II)

##### **Category IV - Teamwork Events**

- Community Awareness (Category IV)
  - Health Education (Category IV)
  - HOSA Bowl (Category IV)
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## **Task Number 74**

## **Identify risk factors for periodontal disease.**

### **Definition**

Identification should include risk factors such as smoking, diabetes, poor oral hygiene, HIV/AIDS, malocclusion, stress, and medications.

### **Process/Skill Questions**

- How does the use of various tobacco products affect periodontal health?
- What are the health benefits of using a mouth guard?
- What questions could you ask a patient in order to identify the cause of local periodontal disease?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- Community Awareness (Category IV)
- Health Education (Category IV)
- HOSA Bowl (Category IV)

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## **Task Number 75**

### **Demonstrate the components of preventive dentistry.**

#### **Definition**

Demonstration should include

- oral hygiene instruction (OHI) in brushing and flossing
- use of oral hygiene aids
- use of disclosing agents

- use of motivation techniques
- use of educational tools.

### **Process/Skill Questions**

- How would you teach proper brushing and flossing techniques to someone whose manual dexterity is challenged?
- How would you instruct someone with various dental appliances to adapt his or her brushing technique?
- How should you respond to a patient who asks you to recommend a toothpaste?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

#### **Category IV - Teamwork Events**

- Community Awareness (Category IV)
- Health Education (Category IV)
- HOSA Bowl (Category IV)

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## **Task Number 76**

### **Describe the roles of systemic and topical fluorides.**

#### **Definition**

Description should include

- benefits
- risks
- safety precautions
- sources
- administration of fluorides.

#### **Process/Skill Questions**

- What are the similarities and differences between systemic and topical fluorides?
- What precautions should be taken to prevent fluoride ingestion?
- What procedures would be necessary if a child were to ingest fluoride?
- If a patient drinks only water without fluoride, what would you tell him/her about fluoride?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

### **Category IV - Teamwork Events**

- Community Awareness (Category IV)
- Health Education (Category IV)
- HOSA Bowl (Category IV)

## **Task Number 77**

### **Identify key nutrients.**

#### **Definition**

Identification should include

- nutrient sources
- nutrient functions
- indications of nutrient deficiencies.

#### **Process/Skill Questions**

- What effect does malnutrition have on developing teeth?
- When is a dietary analysis needed?
- Why is a working knowledge of nutrition needed by a dental assistant?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Knowledge Test: Nutrition (Category I)
- 

## **Task Number 78**

### **Establish a diet for dental health maintenance.**

#### **Definition**

Establishment of a diet plan should include

- diet for routine dental health maintenance
- specific diets for special-needs patients.

#### **Process/Skill Questions**

- How would you counsel a lactose-intolerant patient?
- What foods should be suggested for snacking, and why?
- What foods would you suggest to the oral surgery patient who has limited opening or jaw strength?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Knowledge Test: Nutrition (Category I)

#### **Category IV - Teamwork Events**

- Health Education (Category IV)
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## **Performing Administrative Functions**

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### **Task Number 79**

# Greet patients.

## Definition

Greeting patients should include in-person, telephone, and written interactions.

## Process/Skill Questions

- What are some hallmarks of courteous behavior?
- How can you tell whether a patient is anxious about treatment?
- What information should be in a letter of introduction to a dental office?
- On which ring should you answer the phone? Why?

## HOSA Competitive Events (High School)

### Category I - Health Science Events

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### Category II - Health Professions Events

- Dental Science (Category II)

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# Task Number 80

# Manage records.

## Definition

[Management of records](#) should include the development of files and filing systems and the protection and transfer of files.

## Process/Skill Questions

- If a patient has not been seen within the last five years, would that patient be considered active or inactive?
- What are the basic filing procedures?
- What are the regulations for record transfer?
- How are records protected?

## HOSA Competitive Events (High School)



### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

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# **Performing Infection-Control Techniques**

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## **Task Number 81**

**Describe the major groups of microorganisms that cause disease.**

### **Definition**

Description should include

- a list with descriptions of the major groups of pathogenic microorganisms
- the ways bacteria are classified
- a description of a protozoa
- the ways oxygen contributes to the growth/destruction of bacteria
- the ways rickettsiae are passed to humans.

### **Process/Skill Questions**

- How are bacteria classified?
- How does oxygen contribute to the growth and/or destruction of bacteria?
- What is a protozoa?
- How are rickettsiae passed to humans?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Medical Spelling (Category I)
- Medical Terminology (Category I)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

#### **Category V - Recognition**

- Health Care Issues Exam (Category V)
- 

## **Task Number 82**

### **Describe the types of diseases caused by microorganisms.**

#### **Definition**

Description should include examples of diseases caused by

- bacteria
- protozoa
- rickettsiae
- fungus/yeast/mold
- viruses.

#### **Process/Skill Questions**

- What dental disease is directly related to protozoa?
- What fungal infection is commonly found on the oral mucosa?
- What types of pathogenic microorganism diseases are commonly prevented by vaccination?
- What viral disease is of major concern to dental healthcare workers?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Medical Spelling (Category I)
- Medical Terminology (Category I)

#### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

## Category V - Recognition

- Health Care Issues Exam (Category V)
- 

### Task Number 83

#### **Describe ways diseases are transmitted in the dental treatment environment.**

##### **Definition**

Description should include

- causes of disease and the body's defenses
- chain of infection
- definitions and examples of modes of disease transmission
- major diseases of concern to dental healthcare workers.

##### **Process/Skill Questions**

- Why is it important to break the chain of infection in the dental setting?
- What protocol helps prevent disease transmission from patient to dental team?
- What protocol helps prevent disease transmission from dental team to patient?
- What protocol helps prevent disease transmission from patient to patient?

#### **HOSA Competitive Events (High School)**

##### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

##### **Category II - Health Professions Events**

- Dental Science (Category II)
- 

### Task Number 84

# **Explain maintenance of aseptic chain in the dental treatment environment.**

## **Definition**

Explanation should include

- sterilizing instruments and materials
- operating sterilized equipment, using autoclave and other acceptable methods such as dry heat and chemical-vapor sterilization
- conducting biological monitoring of sterilization equipment
- listing criteria for sterilization center
- washing hands
- disinfecting treatment areas
- maintaining OSHA housekeeping requirements
- using protective barriers and disposable items
- disposing of medical waste
- attending to special considerations, including patient charts, radiographs, medical lab specimens, and disinfection of impressions, laboratory cases, and lab areas.

## **Process/Skill Questions**

- How could the chain of asepsis be broken?
- How do you know your sterilization equipment is operating properly?
- How could the clinical staff endanger the front office staff?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

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## **Task Number 85**

**Demonstrate compliance with governmental regulations and guidelines, including those of the Occupational Health and**

# **Safety Administration (OSHA), Environmental Protection Agency (EPA), and Centers for Disease Control (CDC), regarding infection control and disease prevention.**

## **Definition**

Demonstration should include

- use of universal precautions
- use of personal protective equipment (PPE)
- explanation of the roles of state and federal agencies, including OSHA, EPA, and CDC.

## **Process/Skill Questions**

- What are PPE items? What are their protective values?
- What are some factors that could harm you even when you are using PPE?
- What is the difference between a recommendation and a regulation?
- What are the roles of OSHA, CDC, and EPA as they relate to dentistry?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)

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## **Task Number 86**

### **Disinfect and/or sterilize dental instruments.**

#### **Definition**

Disinfection should include the selection and use of chemicals that destroy or deactivate most species of pathogenic microorganisms.

Sterilization should include the destruction of all microorganisms through the use of heat.

## Process/Skill Questions

- What three chemical disinfectants are most commonly used in dental offices? Why?
- What is the minimum contact time for a surface disinfectant?
- What agency regulates disinfectants?
- What three methods of sterilizing are most commonly used in dental offices? Why?

## HOSA Competitive Events (High School)

### Category I - Health Science Events

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### Category II - Health Professions Events

- Dental Science (Category II)
- 

## Task Number 87

### Demonstrate maintenance and sterilization of dental handpieces.

#### Definition

Demonstration should include

- gathering manufacturers' maintenance instructions for specific handpieces
- identifying all applicable lubricants, disinfecting solutions, and wrenches
- disassembling and cleaning handpieces according to manufacturers' specifications
- sterilizing handpieces according to manufacturers' specifications.

## Process/Skill Questions

- What should be done to a handpiece before it is autoclaved?
- What types of heat sterilization are appropriate for a high-speed handpiece?
- Why is it important to consult the manufacturer's instructions for maintenance of a handpiece?

## HOSA Competitive Events (High School)

### Category I - Health Science Events

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 88**

### **Demonstrate maintenance of the evacuation system.**

#### **Definition**

Demonstration should include caring for traps and the central vacuum compressor and flushing evacuation hoses.

#### **Process/Skill Questions**

- Why is it important to clean the traps?
- How often should the hoses be cleaned and flushed?
- What needs to be done to maintain the central vacuum compressor?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 89**

### **Demonstrate maintenance of dental disinfecting/sterilizing equipment, including the renewal of solutions.**

#### **Definition**

Demonstration should include maintenance for

- central air compressor
- plaster trap
- model trimmer
- other equipment as specified.

Disinfection/sterilization procedure should include cleaning the

- cold sterile container
- ultrasonic cleaner
- tray container
- autoclave
- chemiclave
- dry-heat sterilizer
- other disinfecting containers.

All solutions must be discarded and replaced according to specified guidelines, and the autoclave indicator dials or LCD readout must be monitored throughout the procedure.

### **Process/Skill Questions**

- How do you determine the correct cleaning procedure for an autoclave?
- Should personal protective equipment (PPE) be worn when using chemicals to maintain the equipment? Why, or why not?
- How often should the solution in an ultrasonic cleaner be changed?
- How often should the plaster trap be checked?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

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## **Task Number 90**

**Explain maintenance of the dental unit waterline (DUWL).**



## Definition

Explanation should include

- identifying the two primary sources of microorganisms in dental unit water as the public water supply and saliva that may be retracted into the waterline through a process called backflow
- identifying risks due to bacterial contamination of the DUWL
- describing methods for reducing bacterial contamination of the DUWL
- listing the Centers for Disease Control (CDC) recommendations for the DUWL, biofilm, and water quality.

## Process/Skill Questions

- What are the two primary sources of microorganisms in a DUWL?
- Where is biofilm found?
- Is it possible to eliminate biofilm completely? Why, or why not?
- What precautions should you take when selecting a chemical for the dental unit?

## HOSA Competitive Events (High School)

### Category I - Health Science Events

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### Category II - Health Professions Events

- Dental Science (Category II)

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# Managing Hazardous Chemicals and Waste

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## Task Number 91

**Identify methods of protection against exposure to hazardous chemicals.**

## **Definition**

Identification should include various methods of protection against chemical exposure such as using masks, gloves, glasses, and lab coats.

## **Process/Skill Questions**

- Why are protective devices needed in a dental office and lab?
- What would you do if you found a break in your glove?
- To what chemicals could you be exposed in a dental office?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Medical Spelling (Category I)
- Medical Terminology (Category I)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

### **Category V - Recognition**

- Health Care Issues Exam (Category V)
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## **Task Number 92**

### **Comply with the OSHA Hazard Communications Standard.**

#### **Definition**

Compliance should include

- labeling potentially hazardous products
- maintaining safety data sheets (SDS)
- handling hazardous chemicals and other materials
- handling engineering controls, laundry, and relevant housekeeping matters
- maintaining a written hazard communication program.

#### **Process/Skill Questions**

- What repercussions could the dentist expect if an employee is harmed by an undocumented chemical?
- What process needs to be executed for a new chemical product to meet OSHA standards?
- What information is needed about a product before transferring it into a new container?
- What type of training regarding compliance is required of all employees?
- Why must all materials containing hazardous chemicals be labeled with the National Fire Protection Association color and number methods?
- What color always denotes that an item is a biohazard risk?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Medical Spelling (Category I)
- Medical Terminology (Category I)

### **Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

### **Category V - Recognition**

- Health Care Issues Exam (Category V)

## **Task Number 93**

### **Describe the classification of waste.**

#### **Definition**

Description should include general, chemical, and medical waste.

#### **Process/Skill Questions**

- What are the dangers of not following local guidelines for the proper disposal of waste?
- How could improper disposal of radiographic solutions affect the community?
- How could improper disposal of sharps affect the community?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Medical Spelling (Category I)

- Medical Terminology (Category I)

**Category IV - Teamwork Events**

- HOSA Bowl (Category IV)

**Category V - Recognition**

- Health Care Issues Exam (Category V)
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## **Task Number 94**

### **Demonstrate compliance with governmental regulations regarding the management of hazardous chemicals and waste.**

#### **Definition**

Demonstration should include a list of regulations regarding chemicals and waste and a summary of the nine sections of the SDS forms.

#### **Process/Skill Questions**

- Why do government regulations regarding the management of hazardous chemicals exist?
- Why were agencies such as the EPA established?
- What factors make some chemicals toxic and others nontoxic?
- What would you say to a coworker who places food in the sterilization room?
- How should you dispose of a tooth containing an amalgam filling?

#### **HOSA Competitive Events (High School)**

**Category IV - Teamwork Events**

- Biomedical Debate (Category IV)

**Category V - Recognition**

- Health Care Issues Exam (Category V)
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# Assisting with Basic Pharmacology and Pain Control

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## Task Number 95

### Explain pharmacology terms.

#### Definition

Explanation of pharmacological terms should include their definitions and relationships to the dentistry field.

#### Process/Skill Questions

- What would you say to a patient who wants to know the difference between a generic drug and a name-brand drug?
- What drugs might be recommended for a nervous patient? Why?
- Why is it important to check a patient's medical history?

### HOSA Competitive Events (High School)

#### Category I - Health Science Events

- Dental Spelling (Category I)
  - Dental Terminology (Category I)
  - Medical Terminology (Category I)
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## Task Number 96

### Explain the types of anesthesia used in dentistry.

#### Definition

Explanation should include [topical, local, and general anesthesia and minimal, moderate, and deep sedation](#).

#### Process/Skill Questions

- What procedures could you employ to prevent needle-stick exposure?
- What are some uses for topicals other than restorations?
- What procedures require general anesthesia?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 97**

### **Demonstrate assisting in the administration of local anesthesia.**

#### **Definition**

Demonstration should include

- preparing the anesthetic setup
- applying the topical
- assembling the syringe
- passing the needle to the doctor behind or beside
- rinsing and suctioning after the application or injection.

#### **Process/Skill Questions**

- What are some ways a dental assistant can help lower the anxiety level of a patient?
- Why would you leave the topical in place until just before injection?
- Why is it important to use an aspirating syringe?
- Why is it important to monitor your patient after anesthesia has been administered?
- What is the difference between block and infiltration anesthesia?
- What is a contraindication for the use of epinephrine?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
- 

## **Task Number 98**

### **Document the administration of anesthesia and pain control.**

#### **Definition**

Documentation should include

- charting the type and volume of anesthetic used
- charting complaints about or side effects of anesthesia.

#### **Process/Skill Questions**

- What steps should be taken if a patient has a reaction to a specific anesthetic?
- What would be the cause of a patient still being numb 24 hours after a routine filling?
- What steps should be taken to prevent a patient from having a reoccurrence of adverse reactions on the next visit?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Serving Patients with Special Needs**

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## **Task Number 99**

### **Describe the management of special-needs patients during dental procedures.**

#### **Definition**

Description should include

- the use of stabilizing devices, sedatives, and restraining devices
- the need for a positive atmosphere of caring and concern
- the importance of obtaining informed consent for the management of a special-needs patient during dental procedures.

#### **Process/Skill Questions**

- How would you describe a special-needs patient?
- What factors determine the use of physical restraints?
- What can you do to calm a special-needs patient?
- How can you discourage a parent from entering a treatment area inappropriately?

#### **HOSA Competitive Events (High School)**

##### **Category II - Health Professions Event**

- Dental Science (Category II)

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## **Task Number 100**

### **Determine fearful patients' physical and emotional needs in order to alleviate anxiety.**

#### **Definition**

Determination should include notation of physical behaviors, vital signs, phobias, and treatments for such phobias.

#### **Process/Skill Questions**



- What phobias can manifest in the dental setting?
- How might a phobia change a patient's perspective?
- What steps could be taken to calm a patient and alleviate his or her anxiety?

## **HOSA Competitive Events (High School)**

### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 101**

### **Describe considerations connected with treating various special-needs patients.**

#### **Definition**

Description should include medical, physical, and emotional considerations.

#### **Process/Skill Questions**

- What type of anesthetic is required for patients with cardiovascular disorders?
- What behavior problems could be expected from children of different age groups late in the day?
- What time of day is best for scheduling very young children for dental treatment?
- Why are nursing mothers considered to be a category of special-needs patients?
- How could a hearing-impaired individual be made to understand the purpose and need for specific treatment?
- What emotional obstacles might a patient with a cleft palate present?

## **HOSA Competitive Events (High School)**

### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Demonstrating Chairside Procedures**

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## **Task Number 102**

### **Seat and position patients.**

#### **Definition**

Seating and positioning of patients should include

- procedure for seating
- placement of patient napkin
- positioning for procedure.

#### **Process/Skill Questions**

- What should be moved out of the way in order to seat a patient safely?
- What is the proper position in which to place a patient for an operative procedure?
- What is the correct distance from the dental light to the oral cavity during treatment?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 103**

### **Dismiss patients.**

#### **Definition**

Dismissal of patients should include

- repositioning the chair and preparing patients for dismissal
- reviewing postoperative instructions with patients

- escorting patients from operatory
- [adhering to the Commonwealth of Virginia Board of Dentistry Regulations Governing the Practice of Dentistry 18VAC60-21-10 effective December 2, 2015.](#)

### **Process/Skill Questions**

- What equipment needs to be moved out of the way before dismissing a patient?
- What are some examples of post-operative instructions that may need to be shared with a patient?
- What personal items may need to be returned to a patient?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)

## **Task Number 104**

### **Demonstrate ergonomics in the dental setting.**

#### **Definition**

Demonstration should include

- identifying risk factors that can contribute to injury
- assuming the neutral position
- performing exercises that reduce strain.
- considering the four zones of activity (i.e., static, operator, aux, transfer).

#### **Process/Skill Questions**

- What is meant by the term *ergonomics*?
- What is the goal of ergonomics?
- What types of disorders are considered to be MSDs?
- What are the four zones of activity?

### **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)
- 

## **Task Number 105**

### **Pass and retrieve instruments at chairside.**

#### **Definition**

Passing and retrieving should include

- pen-grasp transfer
- palm-grasp transfer
- palm-thumb grasp transfer
- alternating transfers
- provider hand-off signal.

#### **Process/Skill Questions**

- Where is the transfer zone?
- What is an example of a dental instrument for which the palm-thumb grasp should be used?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
-

## **Task Number 106**

### **Demonstrate maintenance of a clear field.**

#### **Definition**

Demonstration should include

- using various items for retraction
- using a three-way syringe
- positioning a dental light.

#### **Process/Skill Questions**

- What are three uses for the mouth mirror?
- How can you prevent the mouth mirror from fogging?
- What precautions should be taken when retracting the tissue?

### **HOSA Competitive Events (High School)**

#### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

#### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 107**

### **Perform oral evacuation.**

#### **Definition**

Performance should include use of the saliva ejector and high-volume evacuator (HVE).

#### **Process/Skill Questions**

- What can be done if the HVE gets caught up with the cheek tissue?
- When a right-handed operator is preparing the maxillary left second molar for an occlusal amalgam, where should the HVE tip be placed?

- When a right-handed operator is preparing the mandibular right central incisor for a class V composite, where should the HVE tip be placed?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 108**

### **Prepare basic operatory setup.**

#### **Definition**

Preparation should include instrumentation and arrangement of disposable armamentarium.

#### **Process/Skill Questions**

- What instruments are included in the basic setup?
- What is the order of use for the basic setup?
- What are at least three disposable items included in the basic setup?

## **HOSA Competitive Events (High School)**

### **Category I - Health Science Events**

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### **Category II - Health Professions Events**

- Dental Science (Category II)
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## **Task Number 109**

# Prepare dental dam equipment and materials for use.

## Definition

Preparation should include instrumentation and selection of equipment, materials, and disposables.

## Process/Skill Questions

- What is the purpose of the inversion of a dental dam?
- What are at least four pieces of equipment needed to place or remove a dental dam?
- In what direction is the dam pulled from the teeth upon removal?

## HOSA Competitive Events (High School)

### Category I - Health Science Events

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### Category II - Health Professions Events

- Dental Science (Category II)

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## Task Number 110

# Perform a preventive dentistry treatment.

## Definition

Performance should include

- tray instrumentation
- selection of materials and disposables
- manipulation of materials
- performance of prophylaxis and fluoride treatment.

## Process/Skill Questions

- What is the name of the dental condition that results from too much fluoride?
- What instructions should be given to a patient when performing an office fluoride treatment?

- What are the criteria for choosing the grit of prophylaxis paste?

## HOSA Competitive Events (High School)

### Category I - Health Science Events

- Dental Spelling (Category I)
- Dental Terminology (Category I)

### Category II - Health Professions Events

- Dental Science (Category II)

## SOL Correlation by Task

39	Trace key developments of dentistry from early civilizations to the present, including educational and professional developments in America.	English: 11.8 History and Social Science: VUS.15
40	List the members of a dental team and the characteristics, educational requirements, and responsibilities of each member.	English: 11.6, 11.7
41	Describe the roles of professional dental organizations.	English: 11.5 History and Social Science: GOVT.9
42	Examine ethical and legal issues related to the practice of dentistry.	English: 11.5, 11.8 History and Social Science: GOVT.11, GOVT.17
43	Explain the American Dental Assistants Association (ADAA) Principles of Ethics and Code of Professional Conduct.	English: 11.5 History and Social Science: GOVT.17
44	Describe the role of the Virginia Dental Practice Act as it relates to the practice of dentistry.	English: 11.5, 11.8 History and Social Science: GOVT.8, GOVT.9, GOVT.17, GOVT.18
45	Explain confidentiality and its connection to the Health Insurance Portability and Accountability Act (HIPAA).	English: 11.5, 11.8



		History and Social Science: GOVT.9, GOVT.10, GOVT.11, GOVT.17, GOVT.18
46	Identify anatomical reference systems.	English: 11.5
47	Identify the bones and major anatomic landmarks of the skull.	
48	Describe the bone structure of cartilage, compact bone, spongy bone, and periosteum.	English: 11.3, 11.5
49	Describe the gliding hinge action of the temporomandibular joint (TMJ).	English: 11.3, 11.5
50	Identify the major muscles of mastication and facial expressions, the extrinsic muscles of the tongue, and the major posterior muscles of the mouth, including the floor of the mouth.	
51	Identify the major veins, arteries, and nerves of the face and mouth.	
52	Identify the major anatomic landmarks of the oral cavity.	
53	Identify the salivary glands and their ducts.	
54	Explain the anatomy and physiology of body systems and their relationship to the face and neck.	English: 11.5 Science: BIO.4
55	Explain oral embryology and the histology of dentition.	English: 11.5
56	Explain developmental disturbances that may occur during tooth development.	English: 11.5
57	Identify the eruption order for the primary and permanent dentition.	English: 11.6, 11.7
58	Explain the specialized functions and classifications of the four types of teeth.	English: 11.5
59	Describe the anatomical features of teeth.	English: 11.5
60	Identify tooth surfaces.	
61	Identify teeth, using the Universal, Federation Dentaire Internationale (FDI), and Palmer Numbering Systems.	
62	Demonstrate compliance with the privacy policy of the Health Insurance Portability and Accountability Act (HIPAA) when recording patient information.	English: 11.5, 11.8 History and Social Science: GOVT.1, GOVT.9, GOVT.17
63	Manage personal information about a patient.	
64	Update medical and dental history.	
65	Explain the meaning and importance of informed consent.	English: 11.1, 11.5
66	Identify the standards and criteria for patient-record entries.	English: 11.8 History and Social Science: GOVT.17
67	Obtain and record vital signs and observations.	
68	Document initial findings, including recommended treatment.	

69	Record treatment rendered.	
70	Obtain intraoral and extraoral images.	
71	Describe how dental decay occurs.	English: 11.5
72	Identify the methods of detecting decay.	
73	Describe systemic conditions associated with periodontal disease.	English: 11.5
74	Identify risk factors for periodontal disease.	
75	Demonstrate the components of preventive dentistry.	
76	Describe the roles of systemic and topical fluorides.	
77	Identify key nutrients.	
78	Establish a diet for dental health maintenance.	
79	Greet patients.	
80	Manage records.	English: 11.6, 11.7, 11.8
81	Describe the major groups of microorganisms that cause disease.	English: 11.5, 11.6, 11.7 Science: BIO.4
82	Describe the types of diseases caused by microorganisms.	English: 11.5 Science: BIO.4
83	Describe ways diseases are transmitted in the dental treatment environment.	English: 11.5
84	Explain maintenance of aseptic chain in the dental treatment environment.	English: 11.5
85	Demonstrate compliance with governmental regulations and guidelines, including those of the Occupational Health and Safety Administration (OSHA), Environmental Protection Agency (EPA), and Centers for Disease Control (CDC), regarding infection control and disease prevention.	History and Social Science: GOVT.9
86	Disinfect and/or sterilize dental instruments.	
87	Demonstrate maintenance and sterilization of dental handpieces.	
88	Demonstrate maintenance of the evacuation system.	
89	Demonstrate maintenance of dental disinfecting/sterilizing equipment, including the renewal of solutions.	
90	Explain maintenance of the dental unit waterline (DUWL).	English: 11.5, 11.6, 11.7
91	Identify methods of protection against exposure to hazardous chemicals.	Science: CH.4
92	Comply with the OSHA Hazard Communications Standard.	
93	Describe the classification of waste.	English: 11.5 History and Social Science: GOVT.18

94	Demonstrate compliance with governmental regulations regarding the management of hazardous chemicals and waste.	
95	Explain pharmacology terms.	English: 11.5
96	Explain the types of anesthesia used in dentistry.	English: 11.5, 11.8
97	Demonstrate assisting in the administration of local anesthesia.	
98	Document the administration of anesthesia and pain control.	
99	Describe the management of special-needs patients during dental procedures.	English: 11.5
100	Determine fearful patients' physical and emotional needs in order to alleviate anxiety.	
101	Describe considerations connected with treating various special-needs patients.	English: 11.5
102	Seat and position patients.	
103	Dismiss patients.	English: 11.5, 11.8
104	Demonstrate ergonomics in the dental setting.	
105	Pass and retrieve instruments at chairside.	
106	Demonstrate maintenance of a clear field.	
107	Perform oral evacuation.	
108	Prepare basic operatory setup.	
109	Prepare dental dam equipment and materials for use.	
110	Perform a preventive dentistry treatment.	

## Teacher Resources

The following resources may be helpful to teachers and/or students.

### Print Resources

- Asperheim, Mary Kaye. *Pharmacology: An Introductory Text*. 9th ed. Philadelphia: W. B. Saunders Company, 2002.
- Bailey, Larry J. *Working: Skills for a New Age*. Delmar, 1990.
- Bath-Balogh, Mary, and Margaret J. Fehrenbach. *Illustrated Dental Embryology, Histology, and Anatomy*, 2nd Pkg. ed. Philadelphia: W. B. Saunders Company, 2005.
- Bird, Doni L., and Debbie S. Robinson. *Torres and Ehrlich Modern Dental Assisting*. 8th ed. Philadelphia: Elsevier Saunders Co., 2005.
- Dofka, Charline M. *Competency Skills for the Dental Assistant*. Albany: Delmar Publishers, 1996.
- Ehrlich, Ann. *Business Administration for the Dental Assistant*. 4th ed. Champaign, IL: Colwell Systems, 1991.
- Farr, J. Michael, Richard Gaither, and R. Michael Pickrell. *The Work Book: Getting the Job You Want*. 5th ed. Glencoe/McGraw-Hill, 1995.
- Faux, Marian. *The Complete Résumé Guide*. 5th ed. Arco Publishing, 1995.
- Finkbeiner, Betty Ladley, and Claudia Sullens Johnson. *Mosby's Comprehensive Review of Dental Assisting*. St. Louis: Mosby, 1997.

- Gage, Tommy W. and Frieda Atherton Pickett. *Mosby's Dental Drug Reference*. 7th ed. St. Louis: Elsevier Mosby, 2004.
- Govoni, Mary. *Introduction to Basic Concepts in Dental Radiography*. American Dental Assistants Association, 1999.
- Haring, Joen Iannucci, and Laura Jansen Lind. *Dental Radiography: Principles and Techniques*. 2nd ed. W. B. Saunders Co., 1996.
- Hirsch, Arlene S. *Interviewing: Effective Techniques to Help You Answer Tough Questions and Make a Great Impression*. 3rd ed. John Wiley & Sons, 1999.
- *HOSA: Learn, Grow, Become*, 2nd ed. HOSA, 1995. (Available from National HOSA and from CIMC, Oklahoma Department of Vocational and Technical Education.)
- Kelly-Plate, Joan M., and Ruth Volz-Patton. *Career Skills*. 2nd ed. Glencoe/McGraw-Hill, 2004.
- Kimbrell, Grady and Ben S. Vineyard. *Succeeding in the World of Work*. 8th ed. Glencoe/McGraw-Hill, 2004.
- Kushner, John A. *How to Find and Apply for a Job*. South-Western, 2000.
- Miles, Dale A., Margot L. Van Dis, Catherine W. Jensen, and Ann Bruno Ferretti. *Radiographic Imaging for Dental Auxiliaries*. 3rd ed. Philadelphia: W. B. Saunders Company, 1999.
- Phinney, Donna J., and Judy H. Halstead. *Delmar's Dental Assisting: A Comprehensive Approach*. 2nd ed. Delmar, 2004.
- Robinson, Debbie S., and Doni L. Bird. *Torres and Ehrlich Essentials of Dental Assisting*. 3rd ed. Philadelphia: W. B. Saunders Co., 2000.
- Tiersten, Sylvia, and Pam Dixon. *Be Your Own Headhunter Online: Get the Job You Want Using the Information Superhighway*. Random House, 1995.
- Wynett, Stanley. *Cover Letters That Will Get You the Job You Want*. Betterway Books, 1993.

## Software

Many dental-related software packages are available from a variety of suppliers. Examples:

- *Dentech*. Health-Tech Systems, Inc. 1-800-288-7691.
- *Easy Dental*. Henry Schein, Inc., 5 Harbor Park Drive, Port Washington, NY 11050. 1-800-443-2756.
- *Right Resume Writer III*. The School Company, Division of Career Development Software, Inc. P. O. Box 5379, Vancouver, WA 98668. 1-206-696-3529.
- *SOFTDENT Dental Office Management Software*. Info Soft, Inc., 7939 Honeygo Boulevard, Suite 212, Baltimore, MD 21236. 1-800-433-2409.

## Videos

**Order from the American Dental Association, 211 East Chicago Avenue, Chicago, IL 60611-2673; Phone 312-440-2500; Fax 312-440-7494:**

- *Careers in Dental Assisting, Dental Laboratory Technology, and Dental Hygiene*.
- *Dental Assisting: A Career for You*.

- *Dental Assisting: A Contemporary Career* (nontraditional students).

**Order from NIMCO, P.O. Box 9, 102 Hwy 81N, Calhoun, KY 42327-0009; Phone 800-962-6662:**

- *Basic Oral Anatomy for the Dental Health Team*, 1992 (MED-DA310R-V25: 12-minute live video, \$100.00. MED-DA310W-B25: Workbook, \$5.99).
- *Radiographic Techniques and Safety: Introduction to X-Ray and Safety Precautions*, 1992 (MED-DR102-V25: 17-minute live video, \$100.00. MED-DR102W-B25: Workbook, \$5.99).
- *Radiographic Techniques and Safety: Taking Radiographs*, 1992 (MED-DR103-V25: 24-minute live video, \$100.00. MED-DR103W-B25: Workbook, \$5.99).
- *Radiographic Techniques and Safety: X-Ray Film Processing*, 1992 (MED-DR104-V25: 23-minute live video, \$100.00. MED-DR104W-B25: Workbook, \$5.99).
- To obtain the series of four videos and workbooks: order MED-DR-V25, \$300.00

**Order from the Academy of General Dentistry: 211 East Chicago Ave., Ste 900, Chicago, IL 60611-1999, Phone 888-AGD-DENT (888-243-3368); Fax 312-440-0559:**

- *Medical Emergencies in the Dental Office*.

## Entrepreneurship Infusion Units

Entrepreneurship Infusion Units may be used to help students achieve additional, focused competencies and enhance the validated tasks/competencies related to identifying and starting a new business venture. Because the unit is a complement to certain designated courses and is not mandatory, all tasks/competencies are marked “optional.”

# Appendix: Credentials, Course Sequences, and Career Cluster Information

## Industry Credentials: Only apply to 36-week courses

- College and Work Readiness Assessment (CWRA+)
- Dental Support Technician Certification (DSTC) Examination
- National Career Readiness Certificate Assessment
- Workplace Readiness Skills for the Commonwealth Examination

**Concentration sequences:** *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Dental Careers II (8329/36 weeks, 280 hours)
- Health Assisting Careers (8331/36 weeks)
- Introduction to Health and Medical Sciences (8302/36 weeks)
- Introduction to Health and Medical Sciences (8301/18 weeks)

<b>Career Cluster Name: Health Science</b>	
<b>Pathway Title</b>	<b>Occupation Title(s): Bolded occupations are currently associated.</b>
<b>Diagnostics Services</b>	<b>Radiologic Technologist, Radiographer</b>
<b>Support Services</b>	<b>Records Processing Assistant</b>
<b>Therapeutic Services</b>	<b>Dental Assistant Dentist Medical Assistant Surgical Technologist Veterinary Assistant</b>