## Dental Science Supplemental Program Resources



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## **Supplemental Program Resources**

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#### Introduction

This document provides supplemental information for the Dental Science program of study. It may be updated or revised as the base program of study, or complementary programs, are updated, added, or removed. Please contact the appropriate Education Programs Professional with any questions.

The Program of Study includes the approved courses, complementary courses, alignment(s) to industry, postsecondary options, and additional information.

The Equipment List for the Dental Science program of study is included and, if applicable, additional items used only in the complementary course(s) are noted.

The Crosswalks and Alignments connect and support the Dental Science standards for the Health Science program of study. Complementary course standards are not listed in the crosswalks and alignments.

## **Program of Study Information**

The following program of study information sheet as well as the program structure tables for the courses are provided to be able to print separately for handouts. The information provided is based on the best available information at the time of this document and will be updated as appropriate.

#### **Dental Science**



The Dental Science program is designed for the students interested in a career in the dental field. Is covers all procedures utilized in the dental office during the practice of dentistry. It gives students a vast knowledge base of dental anatomy, dental disease processes, and treatment. It develops the dexterity, knowledge, and communication skills needed to work as a dental assistant.

#### **Dental Science Career Cluster**

This career cluster is focused on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

#### **Postsecondary Options**

#### Secondary

Certificate of Skills Attainment CPR/First Aid

#### Certificate/License

 Dental Assisting (TMCC, Carrington, Milan, NV Career College, PIMA)

#### **Associates Degree**

- Dental Assisting (TMCC, CSN, Carrington)
- Dental Hygiene (CSN)

#### Bachelor's Degree

• Dental Hygiene (TMCC, CSN)

#### Master's/Doctoral Degree

- Dental Medicine (UNLV, Roseman)
- Oral Biology (UNLV)





For additional information on this cluster, please contact: Jennifer Fisk at <a href="mailto:jennifer.fisk@doe.nv.gov">jennifer.fisk@doe.nv.gov</a>

#### **Approved Courses**

Dental Science I
Dental Science II

#### **Complementary Courses**

Dental Science Advanced Studies

CTE Work Experience – Health Science

Industry Recognized Credential – Dental Assisting

#### **Work-Based Learning Opportunities**

Job Shadowing / Internship / Work Experience / Career Days / Career Fairs / Field Trips / Guest Speakers

#### **Career and Technical Student Organization**

**HOSA: Future Health Professionals** 



### **State Recognized Industry Certifications**

Refer to the Governor's Office of Workforce Innovation's Nevada Industry Recognized Credential List

	Aligned to Industry					
Occupation	Median	Annual	%			
	Wage	Openings	Growth			
	Per year					
Dentist	\$163,220	5,100	6.0%			
Orthodontist	\$267,280	5,140	11.4%			
Dental Hygienist	\$77,810	16,300	9.0%			
Dental Assistant	\$38,660	56,400	8.0%			
Dental	\$39,090	9,900	2.0%			
Laboratory						
Technician						

Source U.S. Bureau of Labor Statistics 2022

Website: https://doe.nv.gov/cte/

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## **Program Structure for Dental Science**

The core course sequencing is provided in the following table. Complementary Courses are available and provided later in this document. The following courses provide a completed program of study.

### Core Course Sequence (R) with Lab Course(s) (C)

Required/ Complementary	Course Title	Abbreviated Name	CIP Code	SCED Subject Area	SCED Course Identifier	SCED Course Level	SCED Unit Credit	SCED Course Sequence	SCED Course Number
R	Dental Science I	DENTAL SCI I	51.0601	14	054	G	1.00	12	14054G1.0012
R	Dental Science II	DENTAL SCI II	51.0601	14	054	G	1.00	22	14054G1.0022

The complementary courses are provided in the following table. The qualifying program of study must be completed prior to enrolling in the complementary course(s). A program does not have to utilize the complementary courses for students to complete their program of study.

Required/ Complementary	Course Title	Abbreviated Name	CIP Code	SCED Subject Area	SCED Course Identifier	SCED Course Level	SCED Unit Credit	SCED Course Sequence	SCED Course Number
С	Dental Science Advanced Studies	DENTAL SCI AS	51.0601	14	054	E	1.00	11	14054E1.0011
С	CTE Work Experience- Health Science	WORK EXPER HEALTH	99.0008	14	298	G	1.00	11	14298G1.0011
С	Industry-Recognized Credential – Dental Assisting	IRC DENTAL SCI	51.0601	14	999	Е	1.00	11	14999E1.0011

CIP Code – Classification of Instructional Programs (CIP) Codes

SCED – School Courses for the Exchange of Data that populates the State Infinite Campus System and the System for Accountability Information in Nevada (SAIN)

## **Course Descriptions**

#### **Dental Science I**

Prerequisite: None

This introductory course is designed for the student interested in a career in the dental field. It covers all procedures utilized in the dental office during the practice of dentistry. It gives students a vast knowledge base of dental anatomy, dental disease processes and treatment. It develops the dexterity, knowledge, and communication skills needed to work as a dental assistant. Emphasis is placed on developing critical-thinking skills, research skills, and necessary techniques. The appropriate use of technology and industry-standard equipment is an integral part of this course.

#### **Dental Science II**

Prerequisite: Dental Science I

This course is a continuation of Dental Science I. This course allows intermediate dental science students to develop their knowledge and skills learned in Dental Science I. Areas of study will include oral pathology, dental medications, legal and ethical issues, and research skills. The appropriate use of technology and industry-standard equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary education.

#### **Dental Science Advanced Studies**

Prerequisite: Completion of Dental Science Program of Study

This course is offered to students who have completed all content standards in a program and desire to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

#### CTE Work Experience – Health Science

Prerequisite: Completion of Level 2 course in the qualifying program of study

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

#### Industry-Recognized Credential – Dental Science

Prerequisite: Completion of Dental Science Program of Study

This course is offered to students who have completed all content standards in a program of study and desire to pursue an Industry-Recognized Credential that aligns with the standards and skills associated with the Dental Science Program of Study. This course is designed to expand the students' opportunities to pursue certification aligned with employment standards in the industry aligned with this program of study. The supervising teacher will provide instruction aligned with the certification requirements, monitor progress toward certification, and provide the students with appropriate testing or certification opportunities associated with the intended Industry-Recognized Credential that is the subject of the course. This course may be repeated for additional instruction and credit.

\$1,360

Total:

## **Equipment List**

This recommended list is based upon a classroom size of 25 students. All costs are estimated and may be adjusted once verified and justified by districts with current quotes. No specific equipment vendor or brand names are endorsed due to various possibilities, but school districts should consult with stakeholders to ensure industry-recognized equipment and software are purchased. The intent of this list is to provide school districts with guidance on the equipment needed to implement the state standards for a Dental Science program.

#### **CTE Classroom Equipment**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
2	Storage Cabinets (36" x 12" x 72") (lockable)	\$300	\$600
1	Eyewash Station	\$300	\$300
2	Fire Extinguisher	\$130	\$260
1	Sink with Soap Dispenser	\$100	\$100
1	First Aid Kit	\$100	\$100

## Program Equipment Total: \$99,500

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Computers	\$1,000	\$25,000
1	Technology Storage/Charging System	\$2,000	\$2,000
1	Air Compressor/Vacuum	\$3,000	\$3,000
1	Medical Autoclave	\$3,000	\$3,000
5	Patient Dental Chairs and Water Lines	\$3,000	\$15,000
3	3-Demensional (3D) Dental Printers	\$500	\$1,500
1	Anatomy Table (optional)	\$50,000	\$50,000

#### Instructional Materials Total: \$8,485

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Textbooks (Approved by NDE) CTE Instructional Materials list can be found here.	\$100	\$2,500
1	Teacher Textbook Edition and Resources	\$500	\$500
1	Electronic Dental Records Program and License	\$3,000	\$3,000
1	Anatomy Software Program and License	\$2,000	\$2,000
1	Basic Life Support Cardiopulmonary Resuscitation (CPR) Instructor Kit	\$110	\$110
25	Basic Life Support Student Manuals	\$15	\$15

Instructional Supplies Total: \$17,160

1         Amalgam Meter         \$300         \$300           5         Automated External Defibrillator (AED) Trainers         \$300         \$300           1         X-ray Complete Positioning System (XCP) Kit         \$200         \$200           25         Teeth Models (typodonts)         \$150         \$150           5         Adult CPR Manikins         \$100         \$500           5         Child CPR Manikins         \$100         \$100           5         Infant CPR Manikins         \$90         \$450           1         Saliva Ejector         \$75         \$75           1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         \$25         \$62	QTY	ITEM DESCRIPTION	UNIT	TOTAL
1         X-ray Complete Positioning System (XCP) Kit         \$200         \$200           25         Teeth Models (typodonts)         \$150         \$150           5         Adult CPR Manikins         \$100         \$500           5         Child CPR Manikins         \$100         \$100           5         Infant CPR Manikins         \$90         \$450           1         Saliva Ejector         \$75         \$75           1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         Aray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         \$25         \$625           25         Infant BVMs         \$22         \$20           Varie	1	Amalgam Meter	\$300	\$300
25         Teeth Models (typodonts)         \$150         \$150           5         Adult CPR Manikins         \$100         \$500           5         Child CPR Manikins         \$100         \$100           5         Infant CPR Manikins         \$90         \$450           1         Saliva Ejector         \$75         \$75           1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         \$25         \$625           25         Infant BVMs         \$25         \$625           25         Infant BVMs         \$25         \$625           26         Pertacting Cord         \$20         \$2,000           Varies         De	5	Automated External Defibrillator (AED) Trainers	\$300	\$300
5         Adult CPR Manikins         \$100         \$500           5         Child CPR Manikins         \$100         \$100           5         Infant CPR Manikins         \$90         \$450           1         Saliva Ejector         \$75         \$75           1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         <	1	X-ray Complete Positioning System (XCP) Kit	\$200	\$200
5         Child CPR Manikins         \$100         \$100           5         Infant CPR Manikins         \$90         \$450           1         Saliva Ejector         \$75         \$75           1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         \$20         \$20           24         Pertacting Cord         \$20         \$20           25         Pertacting Cord <t< td=""><td>25</td><td>Teeth Models (typodonts)</td><td>\$150</td><td>\$150</td></t<>	25	Teeth Models (typodonts)	\$150	\$150
5         Infant CPR Manikins         \$90         \$450           1         Saliva Ejector         \$75         \$75           1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         \$25         \$625           1         Retracting Cord         \$20         \$20           Varies         Dental Instruments         \$2,000         \$2,000           Varies         Dental Materials (coping material, provisional material, stone, amalgam, composite resin, alginate, distilled water)         \$2,000         \$2,000           Varies         Preventive Dentistry Supplies         \$1,000         \$1,000           Varies         Personal Protective Equipment (PPE) (gowns, gloves, booties, surgical caps, face shields)	5	Adult CPR Manikins	\$100	\$500
1         Saliva Ejector         \$75         \$75           1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         \$25         \$625           1         Retracting Cord         \$20         \$20           Varies         Dental Instruments         \$2,000         \$2,000           Varies         Dental Materials (coping material, provisional material, stone, amalgam, composite resin, alginate, distilled water)         \$2,000         \$2,000           Varies         Preventive Dentistry Supplies         \$1,000         \$1,000           Varies         Personal Protective Equipment (PPE) (gowns, gloves, booties, surgical caps, face shields)         \$1,000         \$1,000           Varies         Sanitary Supplies (	5	Child CPR Manikins	\$100	\$100
1         Water Line Cleanse Tablets         \$60         \$60           1         X-Ray Film         \$60         \$60           1         High Volume Evacuator (HVE) Tips         \$60         \$60           1         Autoclave Bags         \$60         \$60           5         Vital Sign Kits         \$50         \$50           1         Biohazard Waste Can         \$50         \$50           1         Biohazard Sharps Container         \$25         \$25           25         Adule Bag valve Masks (BVMs)         \$25         \$625           25         Infant BVMs         \$25         \$625           1         Retracting Cord         \$20         \$20           Varies         Dental Instruments         \$2,000         \$2,000           Varies         Dental Materials (coping material, provisional material, stone, amalgam, composite resin, alginate, distilled water)         \$2,000         \$2,000           Varies         Preventive Preventive Dentistry Supplies         \$1,000         \$1,000           Varies         Personal Protective Equipment (PPE) (gowns, gloves, booties, surgical caps, face shields)         \$1,000         \$1,000           Varies         Sanitary Supplies (hand sanitizer, disinfectant soap, paper towels)         \$500         \$500	5	Infant CPR Manikins	\$90	\$450
1       X-Ray Film       \$60       \$60         1       High Volume Evacuator (HVE) Tips       \$60       \$60         1       Autoclave Bags       \$60       \$60         5       Vital Sign Kits       \$50       \$50         1       Biohazard Waste Can       \$50       \$50         1       Biohazard Sharps Container       \$25       \$25         25       Adule Bag valve Masks (BVMs)       \$25       \$625         25       Infant BVMs       \$25       \$625         1       Retracting Cord       \$20       \$20         Varies       Dental Instruments       \$2,000       \$2,000         Varies       Dental Materials (coping material, provisional material, stone, amalgam, composite resin, alginate, distilled water)       \$2,000       \$2,000         Varies       Preventive Dentistry Supplies       \$1,000       \$1,000         Varies       Personal Protective Equipment (PPE) (gowns, gloves, booties, surgical caps, face shields)       \$1,000       \$1,000         Varies       Souls and Spatulas       \$500       \$500         Varies       Sanitary Supplies (hand sanitizer, disinfectant soap, paper towels)       \$500       \$500         Varies       Suture Supplies       \$150       \$150	1	Saliva Ejector	\$75	\$75
1High Volume Evacuator (HVE) Tips\$60\$601Autoclave Bags\$60\$605Vital Sign Kits\$50\$501Biohazard Waste Can\$50\$501Biohazard Sharps Container\$25\$2525Adule Bag valve Masks (BVMs)\$25\$62525Infant BVMs\$25\$6251Retracting Cord\$20\$20VariesDental Instruments\$2,000\$2,000VariesDental Materials (coping material, provisional material, stone, amalgam, composite resin, alginate, distilled water)\$2,000\$2,000VariesPreventive Dentistry Supplies\$1,000\$1,000VariesPersonal Protective Equipment (PPE) (gowns, gloves, booties, surgical caps, face shields)\$1,000\$1,000VariesBowls and Spatulas\$500\$500VariesSanitary Supplies (hand sanitizer, disinfectant soap, paper towels)\$500\$500VariesSuture Supplies\$200\$200VariesUltrasonic Cleaners and Fluids\$150\$150VariesNeedles and Syringes\$100\$100	1	Water Line Cleanse Tablets	\$60	\$60
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VariesDental Instruments\$2,000\$2,000VariesDental Materials (coping material, provisional material, stone, amalgam, composite resin, alginate, distilled water)\$2,000\$2,000VariesPreventive Dentistry Supplies\$1,000\$1,000VariesPersonal Protective Equipment (PPE) (gowns, gloves, booties, surgical caps, face shields)\$1,000\$1,000VariesBowls and Spatulas\$500\$500VariesSanitary Supplies (hand sanitizer, disinfectant soap, paper towels)\$500\$500VariesSuture Supplies\$200\$200VariesUltrasonic Cleaners and Fluids\$150\$150VariesNeedles and Syringes\$100\$100	25	Infant BVMs	\$25	\$625
VariesDental Materials (coping material, provisional material, stone, amalgam, composite resin, alginate, distilled water)\$2,000\$2,000VariesPreventive Dentistry Supplies\$1,000\$1,000VariesPersonal Protective Equipment (PPE) (gowns, gloves, booties, surgical caps, face shields)\$1,000\$1,000VariesBowls and Spatulas\$500\$500VariesSanitary Supplies (hand sanitizer, disinfectant soap, paper towels)\$500\$500VariesSuture Supplies\$200\$200VariesUltrasonic Cleaners and Fluids\$150\$150VariesNeedles and Syringes\$100\$100	1	Retracting Cord	\$20	\$20
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VariesSanitary Supplies (hand sanitizer, disinfectant soap, paper towels)\$500\$500VariesSuture Supplies\$200\$200VariesUltrasonic Cleaners and Fluids\$150\$150VariesNeedles and Syringes\$100\$100	Varies		\$1,000	\$1,000
VariesSuture Supplies\$200\$200VariesUltrasonic Cleaners and Fluids\$150\$150VariesNeedles and Syringes\$100\$100	Varies	Bowls and Spatulas	\$500	\$500
VariesUltrasonic Cleaners and Fluids\$150\$150VariesNeedles and Syringes\$100\$100	Varies	Sanitary Supplies (hand sanitizer, disinfectant soap, paper towels)	\$500	\$500
Varies Needles and Syringes \$100 \$100	Varies	Suture Supplies	\$200	\$200
	Varies	Ultrasonic Cleaners and Fluids	\$150	\$150
Varies Impression Trays \$100 \$100	Varies	Needles and Syringes	\$100	\$100
	Varies	Impression Trays	\$100	\$100

Other Total: \$300

QTY	ITEM DESCRIPTION	UNIT	TOTAL
1	Basic Life Support CPR Instructor Training	\$200	\$200

## **Category Totals:**

Estimated Program Total	\$126,805
Other	\$300
Instructional Supplies	\$17,160
Instructional Materials	\$8,485
Program Equipment	\$99,500
Classroom Equipment	\$1,360

#### **Crosswalks and Alignments for Program of Study Standards**

Crosswalks and alignments are intended to assist the teacher make connections for students between the technical skills within the program and academic standards. The crosswalks and alignments are not intended to teach the academic standards but to assist students in making meaningful connections between their CTE program of study and academic courses. The crosswalks are for the required program of study courses, not the complementary courses.

#### **Crosswalks (Academic Standards)**

The crosswalks of the Dental Science Standards show connections with the Nevada Academic Content Standards. The crosswalk identifies the performance indicators in which the learning objectives in the Dental Science program connect with and support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the Nevada Academic Content Standards in English Language Arts, Mathematics, and Science.

#### **Alignments (Mathematical Practices)**

In addition to connections with the Nevada Academic Content Standards for Mathematics, many performance indicators support the Mathematical Practices. The following table illustrates the alignment of the Dental Science Standards Performance Indicators and the Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Dental Science program connect with and support academic learning.

#### **Alignments (Science and Engineering Practices)**

In addition to connections with the Nevada Academic Content Standards for Science, many performance indicators support the Science and Engineering Practices. The following table illustrates the alignment of the Dental Science Standards Performance Indicators and the Science and Engineering Practices. This alignment identifies the performance indicators in which the learning objectives in the Dental Science program connect with and support academic learning.

#### **Crosswalks (Common Career Technical Core)**

The crosswalks of the Dental Science Standards show connections with the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Dental Science program connect with and support the Common Career Technical Core. The Common Career Technical Core defines what students should know and be able to do after completing instruction in a program of study. The Dental Science Standards are crosswalked to the Health Science Career Cluster™ and the Therapeutic Services Career Pathway.

## Crosswalk of Dental Science Program of Study Standards and the Nevada Academic Content Standards

## **English Language Arts: Language Standards**

	Nevada Academic Content Standards	Performance Indicators
L.11-12.6	Acquire and use accurately general academic and domain- specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.	1.5.2; 2.1.1; 3.3.4

### **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects**

	Nevada Academic Content Standards	Performance Indicators
RST.11-12.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.	8.2.5
RST.11-12.5	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.	11.2.3
RI.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.	3.1.3; 4.3.1; 5.1.3; 9.5.3
RI.11-12.8	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.	5.1.1; 8.1.2
RST.11-12.9	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.	10.1.1

## **English Language Arts: Speaking and Listening Standards**

	Nevada Academic Content Standards	Performance Indicators
SL.11-12.1a	Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.	1.1.1, 1.1.2, 1.2.1, 1.2.4, 1.4.2; 3.2.1

	Nevada Academic Content Standards	Performance Indicators
SL.11-12.1c	Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.	3.3.1
SL.11-12.1d	Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.	10.2.2
SL.11-12.2	Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.	1.1.1, 1.1.2, 1.2.1, 1.2.4, 1.4.2, 1.5.2; 2.1.1; 5.1.2
SL.11-12.4	Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.	1.1.1, 1.1.2, 1.2.1, 1.2.4, 1.4.2, 1.5.2; 2.1.2; 4.3.1; 8.2.1; 9.4.2; 12.2.3
SL.11-12.6	Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3 on page 54 for specific expectations.)	9.2.6

## **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects**

	Nevada Academic Content Standards	Performance Indicators
WHST.11-12.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	1.2.5, 1.4.1; 6.3.2; 12.3.1
WHST.11-12.5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	1.4.4
WHST.11-12.6	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	1.4.5

	Nevada Academic Content Standards	Performance Indicators
WHST.11-12.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	8.1.3; 12.1.1
WHST.11-12.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	1.1.2, 1.1.3, 1.4.2, 1.4.3, 1.5.2; 2.2.2; 3.1.2; 4.3.2; 5.2.1; 8.3.3; 9.1.3

## Math: Algebra – Creating Equations

	Nevada Academic Content Standards	Performance Indicators
ACED.A.1	Create equations and inequalities in one variable and use them to solve problems.	6.3.4; 7.1.3, 7.2.2

## Math: Number & Quantity- Quantities

	Nevada Academic Content Standards	Performance Indicators
NQ.A.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	6.3.1
NQ.A.2	Define appropriate quantities for the purpose of descriptive modeling.	6.3.3
NQ.A.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	6.3.2

### Science: Earth and Space Sciences- HS. Human Sustainability

	Nevada Academic Content Standards	Performance Indicators
HS-LS1-1	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	2.1.7, 2.1.8; 4.2.1; 5.3.2; 6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.1.5; 8.3.1, 8.3.2, 8.3.3; 11.4.1, 14.2.1; 15.1.1, 5.2.1, 15.2.3; 16.1.4; 17.1.3, 17.1.4, 17.1.5, 17.1.6

	Nevada Academic Content Standards	Performance Indicators
HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.	5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.3.1, 5.3.3; 8.1.1, 8.1.2, 8.1.3, 8.2.1, 8.2.2; 9.1.1, 9.1.2, 9.1.3, 9.2.1, 9.2.2, 9.2.3, 9.2.4, 9.2.5, 9.2.6, 9.3.1; 10.1.1, 10.1.2, 10.2.1, 10.3.1, 10.4.1, 10.4.2, 10.4.3; 11.1.1, 11.1.2, 11.1.3, 11.1.4, 11.1.5, 11.1.6, 11.1.7, 11.2.1, 11.2.2, 11.3.1, 11.3.2, 11.3.3; 12.1.1, 12.1.2, 12.2.2, 12.2.3; 13.1.1, 13.1.2; 14.2.3, 14.2.4, 14.2.6; 15.2.2; 16.1.2; 17.1.1, 17.1.2
HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	3.1.3; 5.3.4, 5.3.5, 5.3.6; 9.3.2, 9.3.3; 10.3.3, 10.4.4; 11.3.4; 12.1.3; 13.1.3, 13.1.4; 14.1.2, 14.1.3, 14.1.5; 15.2.5; 17.2.2
HS-LS1-6	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	3.2.1, 3.2.2, 3.2.3; 4.2.2; 10.2.2; 11.4.2; 16.2.2

## Science: Structure and Function (LS1)

	Nevada Academic Content Standards	Performance Indicators
HS-LS1-7	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.	10.2.4, 10.2.5, 10.2.6; 11.4.3
HS-LS2-3	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.	10.3.2; 11.2.3

## Science: Inheritance and Variation of Traits (LS1 and LS3)

	Nevada Academic Content Standards	Performance Indicators
HS-LS1-4	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	17.2.2
HS-LS3-1	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	3.1.1; 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.2.3, 4.2.4, 4.2.6, 4.2.8; 10.2.3; 14.1.1; 15.1.2, 15.1.33, 15.1.5; 16.1.1
HS-LS3-1	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	4.2.7; 14.1.7; 17.2.3

## Science: Natural Selection and Evolution (LS4)

	Nevada Academic Content Standards	Performance Indicators
HS-LS4-4	Construct an explanation based on evidence for how natural selection leads to adaptation of populations	3.1.5
HS-LS4-5	Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	3.2.4

## Science: Waves and Electromagnetic Radiation (PS4)

	Nevada Academic Content Standards	Performance Indicators
HS-PS4-5	Communicate technical information about how some	16.1.3
	technological devices use the principles of wave	
	behavior and wave interactions with matter to transmit	
	and capture information and energy.	

# Alignment of Dental Science Standards and the Mathematical Practices

Mathematical Practices	Dental Science Performance Indicators
Make sense of problems and persevere in solving them.	2.1.3 4.3.3
2. Reason abstractly and quantitatively.	5.1.3, 5.1.4 6.1.3, 6.2.1
3. Construct viable arguments and critique the reasoning of others.	6.4.1 8.2.5 13.1.6
4. Model with mathematics.	5.1.4 9.1.3, 9.1.7 10.1.3 11.1.1
5. Use appropriate tools strategically.	7.2.3, 7.2.4; 7.3.2 10.2.2, 10.2.4 11.1.4 12.2.2
6. Attend to precision.	4.1.9 9.2.1 10.3.4 11.1.2
7. Look for and make use of structure.	6.4.3 11.1.8
8. Look for and express regularity in repeated reasoning.	6.4.2 8.2.2

# Alignment of Dental Science Standards and the Science and Engineering Practices

Science and Engineering Practices	Dental Science Performance Indicators
Asking questions (for science) and defining problems (for engineering).	7.3.1; 7.4.2
Developing and using models.	6.2.1; 6.3.1, 6.3.2; 6.4.2 8.2.3
3. Planning and carrying out investigations.	7.1.1; 7.2.4; 7.4.2 12.2.3
4. Analyzing and interpreting data.	4.1.6 9.1.7
5. Using mathematics and computational thinking.	5.1.3, 5.1.4
Constructing explanations (for science) and designing solutions (for engineering).	7.2.5
7. Engaging in argument from evidence.	4.2.1 10.3.3
8. Obtaining, evaluating, and communicating information.	4.3.3 8.2.5 10.3.4

# **Crosswalks of Dental Science Standards and the Common Career Technical Core**

	Health Science Career Cluster	Performance Indicators
1.	Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career.	2.1.3; 2.2.1-2.2.3 2.4.1-2.4.2
2.	Explain the healthcare worker's role within their department, their organization, and the overall healthcare system	2.3.1; 3.1.1-3.1.8 11.2.3
3.	Identify existing and potential hazards to clients, coworkers, visitors, and self in the healthcare workplace	5.1.4; 7.1.1-7.1.2 7.2.1-7.2.5; 7.4.1-7.4.3
4.	Evaluate the roles and responsibilities of individual members as part of the healthcare team and explain their role in promoting the delivery of quality health care	3.1.1-3.1.8; 4.1.2
5.	Analyze the legal and ethical responsibilities, limitations, and implications of actions within the healthcare workplace.	4.1.3-4.1.9; 4.2.1-4.2.3 4.3.1-4.3.5
6.	Evaluate accepted ethical practices with respect to cultural, social, and ethnic difference within the healthcare workplace.	4.1.3-4.1.9; 4.2.1-4.2.3 4.3.1-4.3.5

	Therapeutic Services Career Pathway	Performance Indicators
1.	Utilize communication strategies to answer patient/client questions and concerns on planned procedures and goals.	4.2.1-4.2.3; 4.3.1-4.3.5 5.1.5, 5.2.3; 9.1.7
2.	Communicate patient/client information among healthcare team members to facilitate a team approach to patient care.	4.3.5; 5.1.5, 5.2.3 9.1.2; 11.1.2
3.	Utilize processes for assessing, monitoring, and reporting patient's/client's health status to the treatment team within protocol and scope of practice.	8.1.2, 8.3.3; 9.1.7 10.1.1-10.1.6; 11.2.1 13.2.4-13.2.6
4.	Evaluate patient/client needs, strengths, and problems in order to determine if treatment goals are being met.	8.1.3; 10.2.2-10.2.4; 10.3.4