



UNIT	TITLE	GRADE	OBJECTIVES	Nebraska Science Standards	Nebraska Health Science Standards	Nebraska Career Readiness Standards	Nebraska Family and Consumer Education Standards	Next Generation Science Standard (NGSS) Core Idea	National Health Science Standards (NCHSE)
Genetics	Introduction to Cells and Nucleus	6-10	<ol style="list-style-type: none"> 1. Identify the differences between unicellular and multicellular organisms 2. Distinguish between different specialized cell structures and their corresponding functions 3. Rank the levels of cellular organization of multicellular organisms 	SC.6.6.2	HS.HS.8.1.a, HS.HS.11.4.a			LS1.A	1.1.1.a
Genetics	Specialized Cells: Receptors and Responses	6-10	<ol style="list-style-type: none"> 1. Compare the inputs (electromagnetic, mechanical, chemical) that each type of special receptor responds to 2. Categorize the specialized cell with the sense it provides for us 3. Predict the response an organism would display to a certain perception 	SC.6.6.2	HS.HS.8.1.a, HS.HS.11.4.a, HS.HS.11.4.c			LS1.D	1.1.1.a, 1.1.2.c, 1.2.1
Genetics	Plant Genetics	6-10	<ol style="list-style-type: none"> 1. Identify specialized features and animal behaviors that increase the odds of reproduction 2. Differentiate between sexual and asexual methods of reproduction in plants and how genetic material is transferred during reproduction 3. Compare environmental factors and genetic factors that influence the growth of adult plants 4. Interpret how artificial selection influences the types of foods we eat 	SC.6.6.2				LS1.A	
Genetics	Heredity	6-10	<ol style="list-style-type: none"> 1. Determine the structures in the cell that affect inherited traits 2. Demonstrate an understanding of the mechanics that create variety among organisms 3. Compare the relationships between mutations, genes, and traits 4. Analyze the acquisition of genes and inheritance of genetic information 	SC.6.9.3	HS.HS.8.1.a		HSE.MS.6.19, HSE.HS.33.3	LS3.A	1.1.1.a
Genetics	Mendelian Genetics Introduction	6-10	<ol style="list-style-type: none"> 1. Analyze the approaches to science that made Gregor Mendel's genetic experiments successful 2. Construct Punnett Squares to predict and evaluate the results of a genetic cross 	SC.6.9.3				LS3.B	
Genetics	Human Genetics Introduction	6-10	<ol style="list-style-type: none"> 1. Examine the relationship between genes, chromosomes, and variations of distinct traits in humans 2. Explain the role mutations in genes have on proteins and the structure and function of different human traits 3. Use a model to describe variations of human inherited traits (caused by inherited chromosomes & genes) between parent and offspring 	SC.6.9.3	HS.HS.8.1.a, HS.HS.11.4.a, HS.HS.11.4.c			LS3.A, LS3.B	1.2.1
Genetics	Human Genetics	8-10	<ol style="list-style-type: none"> 1. Identify three sources of genetic variation: new combinations, through meiosis, viable errors occurring during replication, and mutations caused by environmental factors 2. Give examples of how diversity of traits affects survival, reproduction and population dynamics 3. Differentiate between individual acclimation and population (species) adaptation 	SC.HS.10				LS4.B, LS4.C	
Genetics	DNA and Proteins	8-10	<ol style="list-style-type: none"> 1. Organize the steps showing the relationship between DNA and Protein 2. Contrast protein and DNA molecules in relation to the genetic code 3. Explain that proteins are responsible for the changes of molecules in our bodies and the development of specialized cells 	SC.HS.10	HS.HS.8.1.a, HS.HS.11.4.a			LS1.A	1.2.1
Genetics	Cell Division: Mitosis & Meiosis	8-10	<ol style="list-style-type: none"> 1. Understand the process of mitosis as a part of cell division 2. Understand meiosis and its importance in helping to increase species diversity (including recombination and random assortment of chromosomes) 3. Compare and contrast mitosis vs. meiosis 	SC.HS.10				LS1.B	
Genetics	Gene Expression	8-10	<ol style="list-style-type: none"> 1. Describe why sexually-reproduced offspring cannot have the exact same genes as either one of the parents. 2. Identify reasons why some genes get expressed in the phenotype while other genes do not 3. Give examples of how environmental factors can influence the expression of genes 	SC.HS.10				LS3.A, LS3.B	
Genetics	Evolution of Traits	8-10	<ol style="list-style-type: none"> 1. Identify the basics of phylogenetic tree interpretation and how they contribute to relatedness 2. Understand how amino acid sequences and genotypes lead to changes in phenotypic traits 3. Explain how genotypic evidence contributes to understanding common ancestry and biological evolution 	SC.HS.10.5				LS4.A	
Genetics	Types of Genetic Mutations	8-10	<ol style="list-style-type: none"> 1. Identify the role of base-pair sequences in the process of protein synthesis 2. Describe the mechanism and impact of the following DNA errors: substitution, insertion, deletion, duplication, frameshift mutation 3. Analyze and discuss the inheritance of a mutation caused by an environmental factor 	SC.HS.9.4	HS.HS.8.1.b, HS.HS.11.4.c			LS3.B	1.2.1

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Genetics	Bioethics	11-12	1. Define bioethics 2. Consider ethical dilemmas in bioethics 3. Develop a personal view of bioethics and a strategy for dealing with ethical situations		HS.HS. 6.2.a, HS.HS.7.5			LS4.D	3.1.1.c, 3.1.2, 3.1.3, 5.2.1, 6.1.1, 6.1.2
Genetics	Genetically Modified Organisms (GMOs) in Food	11-12	1. Describe the benefits of genetically modified (GM) food crops 2. Explain the risks involved with genetically modified (GM) food crops 3. Discuss the impact of genetically modified food organisms on Earth's biodiversity	SC.HSP.9.4, 10.5			HSE.MS.6.13,HSE.HS.18.6,HSE.HS.21.2	ETS2.B	1.2.2, 6.1.2
Genetics	Cloning	11-12	1. Define the meaning of artificial human cloning 2. Distinguish between therapeutic cloning and reproductive cloning 3. Contrast two cloning methods: somatic-cell nuclear transfer and pluripotent stem cell induction	SC.HSP.17	HS.HS.7.5.b			ETS2.B	1.2.2, 6.1.1, 6.1.2
Genetics	Biotechnology	11-12	1. Summarize how a gene constructs a protein using RNA as an intermediary 2. Explain how polymerase chain reaction (PCR) is used in DNA research 3. List products that come from recombinant DNA	SC.HSP.9.4				ETS2.B	
Genetics	RNA	11-12	1. Identify the role of nucleotide base-pair sequences in the process of protein synthesis 2. Explain the process in which DNA is transcribed into mRNA 3. Discuss the role of snRNA 4. Describe the functions of tRNA and rRNA in the process of translation	SC.HSP.9.4				LS3.A	
Pharmacology	Structure and Properties of Matter	6-8	1. Distinguish between physical and chemical properties of pure substances 2. Describe the relative positions of particles within solids, liquids, and gases 3. Explain how variations in temperature or pressure can cause states of matter to change	SC.6.4.1				PS1.A	1.1.1.a
Pharmacology	Chemical Reactions	6-8	1. Recognize that the new substances produced by a chemical reaction have different properties than the substances that reacted 2. Compare the mass of the reactants to the mass of the products in a chemical reaction 3. Discuss differences in energy flow during different kinds of reactions	SC.7.5.2				PS1.B	1.1.1.a
Pharmacology	Structure and Properties of the Periodic Table	9-10	1. Describe the role of electrical charges among protons, neutrons, and electrons 2. Discuss the patterns that organize the elements into the periodic table 3. Recognize the importance of chemistry in fields of medicine	SC.HS.3				PS1.A	1.1.1.a
Pharmacology	Chemical Processes	9-10	1. Describe how the rearrangement of atoms during a chemical reaction involves changes in energy 2. Give an example of conservation of atoms during a chemical reaction 3. Discuss how the understanding of chemical processes influences the practice of pharmacy and medicine	SC.HS.5				PS1.B	1.1.1.a
Pharmacology	Pharmacognosy-Medicines from plants and other natural resources	11-12	1. Recognize that pharmacologic and toxicologic chemicals can be found in nature. 2. Discuss sources of crude drugs used in ancient cultures and some related products used today 3. Explain that herbals can interact in the body the same way as compounds developed by chemists	SC.HSP.3, HSP.6				PS1.B	
Pharmacology	Drug Discovery	11-12	1. Describe how compounds found in nature are used as a basis for drug development 2. Identify multiple steps of the drug discovery process: Target Validation, Preclinical testing, Investigational New Drug application, Phases 1-4 of Clinical Studies, and New Drug approval 3. Explain the financial costs associated with the drug discovery process	SC.HSP.3, HSP.6				PS1.B	
Pharmacology	FDA Approval Introduction	11-12	1. Describe the role of the FDA in the drug approval process 2. Compare how various types of drugs are regulated: over the counter (OTC), prescription, investigational, herbals, supplements 3. Distinguish between generic and brand-name drugs	SC.HSP.3	HS.HS. 6.2.a, HS.HS.7.5c			PS1.B	3.1.1.c, 4.3.2
Pharmacology	FDA Approval Process	11-12	1. Describe the mandatory preclinical process that is conducted prior to the FDA approval process. 2. Explain the importance and purpose of each clinical trial phase 3. Describe the types of facts that must be established prior to official FDA approval for each drug	SC.HSP.3	HS.HS. 6.2.a, HS.HS.7.5c			PS1.B	3.1.1.c, 4.3.2
Pharmacology	Pharmaceutical Compounding	11-12	1. Explain the differences between compounding and mass production of medication 2. List various dosing forms of medications: oral, intranasal, ophthalmic, otic, topical, injection, suppository 3. Identify factors that influence the administration of the different dosing forms: age, weight, condition of patients, ease of administration, capsule size, etc.	SC.HSP.3, HSP.6				PS1.B	4.3.2

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Pharmacology	Routes of Administration	11-12	1. Describe the administration of drugs by way of the nose, eyes, and ears 2. Identify examples of topical administration: cream, ointment, patch 3. Differentiate among methods of drug injection: subcutaneous, intramuscular, intravenous, intrasosseous 4. Discuss suppository medications	SC.HSP.3, HSP.6	HS.HS.12.1			ETS1.B	1.1.2.c
Pharmacology	Introduction to Pharmacology-Drug composition, properties, and functions	11-12	1. Distinguish between pharmacodynamics and pharmacokinetics 2. Explain the four main processes involved with drug interactions within the body: absorption, distribution, metabolism, excretion 3. Compare and contrast the different forms of drug administration	SC.HSP.3, HSP.6	HS.HS.12.1			PS1.B	1.1.2.i
Pharmacology	Individualizing Drug Therapy	11-12	1. Determine the factors that influence drug concentrations (factors like age, weight, gender, body compositions, etc) 2. List different types of drug interactions and incompatibilities (drug-drug, drug-food, drug-herbal) 3. Describe different applications of pharmacogenomics 4. Explain the basis of therapeutic drug monitoring	SC.HSP.3, HSP.6				PS1.B	
Pharmacology	Adverse Drug Effects	11-12	1. Differentiate between an adverse drug event and a medication error 2. Identify different adverse drug reactions 3. List possible outcomes to various adverse drug reactions	SC.HSP.3, HSP.6	HS.HS.12.1.c			PS1.B	3.1.1.c, 3.1.2, 5.2.6
Pharmacology	Pharmacy Ethics	11-12	1. Determine the difference between laws, practices, and ethics. 2. Identify the main principles of Pharmacy Ethics	SC.HSP.3, HSP.6	HS.HS.6.2, HS.HS. 7.5			PS1.B	3.1.1.c, 3.1.2, 3.1.3, 6.1.2
Pharmacology	Introduction to Nanotechnology	6-12	1. Become familiar with the basic Nanotechnology terminology 2. Be able to identify properties of Nanomaterials 3. Know the various applications of Nanotechnology and Nanoscience	SC.HS.4.4	HS.HS. 7.3.d			ETS2.B	1.3.1.a
Pathology/Microbiology	Cell Structure and Function: Unicellular and Multicellular	6-8	1. Identify the differences between unicellular and multicellular organisms 2. Distinguish between different specialized cell structures and their corresponding function 3. Give examples of human illnesses that are related to cell structure and function	SC.6.6.2	HS.HS.8.1.a, HS.HS.8.1.b			LS1.A	1.1.1.a
Pathology/Microbiology	Growth and Development: Reproduction and Fertilization	6-8	1. Explain the differences between sexual and asexual reproduction 2. Distinguish between internal and external fertilization 3. Describe why an organism does not continue to grow throughout its life	SC.6.6.2	HS.HS.8.1.a, HS.HS. 11.4.a			LS1.B	1.1.1.a, 1.1.2.k
Pathology/Microbiology	Organization for Matter and Energy Flow in Organisms	6-8	1. Describe the molecular structure of glucose 2. Compare and contrast the processes of cellular respiration and photosynthesis 3. Examine the role of glucose molecules in maintaining human health	SC.6.6.2				LS1.C	
Pathology/Microbiology	Specialized Cells - Senses: Sensory Pathways	6-8	1. Describe the sensory pathway including stimulus, receptor cell, nerve transmission, and brain processing 2. Recognize that a problem anywhere along the pathway could cause loss of a particular sense. 3. Discuss treatment options for various types of disorders related to your senses	SC.6.6.2	HS.HS.8.1.a, HS.HS.8.1.b			LS1.D	1.1.2.g, 1.2.1, 2.1.2.a
Pathology/Microbiology	Cell Structure and Function: Molecules of Life	9-10	1. Arrange by size the structural components of an organism down to the atomic level 2. Recognize that proteins, carbohydrates, lipids, and nucleic acids are the molecules of life 3. Describe the role of homeostasis within an organism	SC.6.6.2	HS.HS.8.1.a			LS1.A	1.1.1.a
Pathology/Microbiology	Growth and Development: Cell Division and Differentiation	9-10	1. Distinguish between mitosis and meiosis 2. Explain the progression from fertilization to differentiation 3. Describe how cell autonomy and anaplasia cause cancerous growth	SC.6.6.2	HS.HS.8.1.a, HS.HS.8.1.b			LS1.B	1.1.1a, 1.2.1
Pathology/Microbiology	Human Immune System	9-10	1. Explain the role of physical defenses (such as skin and mucous membranes) in fighting infections 2. List internal processes and cells that protect the body from invaders 3. Describe how the lymphatic system is involved in the defense of the body	SC.6.6.2	HS.HS.8.1.a, HS.HS. 8.1.b			LS1.A	1.1.2.c, 1.1.2.e
Pathology/Microbiology	Viruses: Are they Living?	9-10	1. Describe the structure of a virus 2. Identify reasons that viruses are not considered to be living organisms 3. Explain why viruses can be described as living	SC.6.6.2			HSE.HS.19.5	LS1.A	7.1.1.a
Pathology/Microbiology	History of Medicine and Pathology	11-12	1. Define the field of pathology 2. Discuss the role of Ancient Egyptian medicine in the documentation of diseases 3. Identify specific tools that have contributed to advancements in medical practice through the centuries	SC.HSP.17	HS.HS.6.1.a			ETS2.B	4.3.1, 4.3.2
Pathology/Microbiology	Histology of Epithelial and Connective Tissues	11-12	1. Identify the four basic tissues in the body 2. Compare the characteristics and functions of epithelial tissue 3. Identify epithelial and connective tissues via microscope	SC.HSP.6	HS.HS.8.1.a, HS.HS.11.4.a			LS1.A	1.1.2.a

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Pathology/Microbiology	Blood Components and Cells	11-12	1. Identify the four main components of blood 2. Compare the functions of each of those blood components 3. Discuss medical conditions involving abnormalities with blood components	SC.HSP.6	HS.HS.11.4.a, HS.HS.11.4.c			LS1.A	1.1.2.d, 1.2.1
Pathology/Microbiology	Cell Adaptation and Death	11-12	1. Define each type of cellular adaptation: atrophy, hypertrophy, dysplasia, hyperplasia, and metaplasia 2. Distinguish between necrosis and apoptosis 3. Discuss causes of necrosis and apoptosis	SC.HSP.6				LS1.A	
Pathology/Microbiology	Immunology Overview	11-12	1. Differentiate between innate and adaptive responses of the immune system 2. Explain how the body distinguishes between its own cells and infectious disease agents 3. Understand autoimmune diseases	SC.HSP.6	HS.HS.8.1.a, HS.HS.8.1.b, HS.HS.11.4.a,b,c			LS1.A	1.1.2.e, 1.2.1, 7.1.2.e
Pathology/Microbiology	Acute Inflammation, Chronic Inflammation and Tissue Repair	11-12	1. Explain the difference between acute and chronic inflammation 2. Differentiate between regeneration and repair 3. Discuss factors that can affect wound healing	SC.HSP.6	HS.HS.8.1.b, HS.HS.11.4.c			LS1.A	
Pathology/Microbiology	Hemostasis	11-12	1. List the three major steps of hemostasis 2. Explain the roles of platelets and fibrin mesh in the process of hemostasis 3. Discuss the function and importance of clotting factors	SC.HSP.6				LS1.A	1.1.2.d
Pathology/Microbiology	Genetic Disorders	11-12	1. Gather, analyze, and communicate evidence of the inheritance and variation of traits. 2. Distinguish among single-gene disorders, chromosomal disorders, and complex disorders 3. Identify tests that can detect genetic disorders 4. Discuss options for treating genetic disorders	SC.HSP.9.4	HS.HS.8.1.b, HS.HS.11.4.c			LS3.B	1.2.1, 1.2.2
Pathology/Microbiology	Neoplasia	11-12	1. Distinguish between benign and malignant growths 2. List possible causes of neoplasia 3. Discuss treatment options for neoplasia	SC.HSP.17.1	HS.HS.8.1.b, HS.HS.11.4.c			LS1.A	1.2.1
Pathology/Microbiology	U.S. Morbidity and Mortality Overview	11-12	1. Explain the relationship between morbidity and mortality 2. Describe the role of epidemiologists in investigating morbidity and mortality 3. List five diseases with the highest mortality rates in the United States	SC.HSP.6	HS.HS.8.1.b, HS.HS.11.4.c			LS1.A	1.2.1
Pathology/Microbiology	Microbiology Introduction	11-12	1. Discuss the history of microbiology 2. Discuss the observation of microorganisms using microscopes 3. List different classifications of microorganisms	SC.HSP.17				ETS2.B	1.2.2, 7.1.1.a
Pathology/Microbiology	Bacteria	11-12	1. Distinguish between prokaryotes and eukaryotes 2. List a variety of bacteria shapes 3. Explain how bacteria reproduce 4. Discuss diseases caused by bacteria	SC.HSP.17			HSE.HS.19.5	ETS2.B	7.1.1.a
Pathology/Microbiology	Bacterial Culture	11-12	1. Compare methods of cultivating bacteria in a laboratory 2. Identify techniques for maintaining a pure culture 3. Give examples of safety concerns regarding the culturing of bacteria	SC.HSP.17				ETS2.B	7.1.1.a
Pathology/Microbiology	Bacteria in the Human Body	11-12	1. Identify beneficial functions of bacteria in the human body 2. Discuss methods of transmission of human diseases caused by bacteria 3. Compare treatment options for bacterial infections	SC.HSP.17	HS.HS.8.1.b			LS2	7.1.1.a
Pathology/Microbiology	Anti-Bacteria	11-12	1. Discuss the ways of controlling bacterial growth, both in the body and the environment 2. Describe the history of modern antibiotics 3. Identify concerns about the overuse of antibiotics	SC.HSP.17	HS.HS.6.4.c, HS.HS.7.4.d			LS2	7.1.1.a, 7.1.2.a
Pathology/Microbiology	Parasitology	11-12	1. Describe the relationship between parasites and their hosts 2. Compare parasitic protozoa, parasitic worms, and parasitic arthropods 3. Identify diseases related to parasites	SC.HSP.17	HS.HS.8.1.b, HS.HS.6.4.c, HS.HS.11.4.c		HSE.HS.21.5	LS2	7.1.1.a
Pathology/Microbiology	Mycology	11-12	1. Define mycology 2. Describe the role of fungi in the process of decomposition 3. List human diseases caused by fungi	SC.HSP.17	HS.HS.8.1.b, HS.HS.11.4.c			LS1	7.1.1.a
Pathology/Microbiology	Virology	11-12	1. Classify viruses based upon their Baltimore classification and structure 2. Discuss how viruses cause disease in humans 3. Know how you are able to prevent this from happening	SC.HSP.17	HS.HS.8.1.b, HS.HS.6.4.c			LS1	1.2.1, 7.1.1.a, 7.1.2.a, 7.1.2.e
Pathology/Microbiology	Aseptic Technique	6-12	1. Identify key elements of aseptic technique 2. Examine common causes of contamination	SC.HS.5.5.E	HS.HS.6.4.a, HS.HS.6.4.c			LS1.A	7.1.2.a, 7.1.2.b
Pathology/Microbiology	Measuring and Transferring Liquids		1. Describe the process of transferring solutions with a serological pipet 2. Describe the process of transferring solutions with a micropipet 3. Apply solution transfer through serial dilution		HS.HS.4.3.c				1.3.1, 7.3.1

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Cancer	Hallmarks of Cancer	6-12	1. Recognize the six hallmarks of cancer 2. Describe the emerging hallmarks and be able to explain the enabling characteristics of cancer 3. Create and correlate hallmark analogies to deepen your understanding of the content	SC.HSP.17	HS.HS.8.1.b			LS1.A	1.2.1
Cancer	Stages of Cancer	6-12	1. List the stages of cancer 2. Name common cancers among men and women in the U.S. 3. Describe the risk factors, symptoms, and protective factors of the major types of cancer	SC.HSP.17	HS.HS.8.1.b			LS1.A	1.1.1.a, 1.2.1
Cancer	Radon & Cancer	6-12	1. What radon is and where it comes from 2. How radon can enter your home and affect your health 3. How to detect radon levels and reduce radon levels in your home	SC.HS.3.3, SC.HS.5.5, SC.HS.9.4	HS.HS.8.1.b			PS1.C, LS3.A, ESS3.B	
Cancer	Pediatric Cancer	6-12	1. Summarize the most prevalent pediatric cancer types, symptoms, and causes 2. Describe the treatments and survival rates of these childhood cancers 3. Explain how pediatric cancer can interfere with the ability of children to function on a day-to-day basis	SC.HS.6.1, SC.HSP.6.6	HS.HS.8.1.b			LS1.B	1.2.1
Cancer	Nitrates and Cancer	6-12	1. Understand what nitrates are and where they come from 2. Understand how nitrates can enter our water systems and affect our health 3. How to sample for nitrates and reduce nitrate levels in our surface waters		HS.HS.7.2.a, HS.HS.8.1.b				1.2.1
Public Health	Vaping Prevention- Lesson 1	6-12	1. Provide basic information about e-cigarettes 2. Distinguish facts from myths 3. Understand that the e-cigarette aerosol is not just harmless water vapor	SC.HSP.3.3, SC.HSP.6.6			HSE.MS.7.5	ETS2.B	9.1.2
Public Health	Vaping Prevention- Lesson 2	6-12	1. Learn about nicotine and nicotine addiction 2. Understand why using e-cigarettes (vaping) is risky 3. Identify various health effects associated with vaping	SC.HSP.3.3, SC.HSP.6.5	HS.HS.7.2.a, HS.HS.7.2.b		HSE.MS.7.5	ETS2.B	9.1.2, 9.1.3, 9.2.1
Public Health	Vaping Prevention- Lesson 3	6-12	1. Discuss the vaping epidemic among youth 2. Understand the role of marketing and advertising strategies in increasing e-cigarette use among youth 3. Think critically about marketing and advertising strategies used to appeal to young people	SC.HSP.3.3, SC.HSP.6.5	HS.HS.7.2.a, HS.HS.7.2.b		HSE.MS.7.5	ETS2.B	3.1.3, 9.1.2, 9.2.1
Public Health	Introduction to Climate Change	6-12	1. Define climate drivers (both natural and human-caused), weather, climate change, and climate variability 2. Describe and quantify the role of greenhouse gases in Earth's climate system 3. Explain some major impacts of projected climate change and their corresponding uncertainty	SC.HS.12				ESS2.D	3.1.3, 9.2.1
Public Health	Climate and Health	6-12	1. Broadly understand the concept of Public Health, its distinguishing characteristics relative to the societal and environmental determinants of health. 2. Identify the health impacts of climate change and effective responses on the part of specific health services in Nebraska. 3. Explain the importance of working collaboratively and across disciplines on climate and health issues.	SC.HS.12	HS.HS.7.2.a, HS.HS.7.2.b			LS4.D	3.1.3, 9.1.3, 9.2.1, 9.2.2
Public Health	Water and Health	6-12	1. Describe the water cycle 2. Understand the importance of water to life 3. Recognize relationships between human activities, water scarcity, water quality degradation, and ecological and health consequences 4. Understand how water can become contaminated 5. Understand what individuals, governments, and communities can do to help protect water	SC.HS.12	HS.HS.7.2.a		HSE.HS.1.8.6, HSE.HS.21.2	LS4.D	
Public Health	Sexual Reproductive Health	6-12	1. Identify family and community resources available to adolescents for the development and protection of their sexual and reproductive well-being (physical, mental, emotional, social). 2. Describe major issues facing girls and women in terms of reproductive choice 3. Explain causes and treatments for various sexual diseases	SC.HSP.6.9	HS.HS.7.2.a, HS.HS.7.2.b		HSE.MS.7.3	LS1.A, LS1.B	1.2.1, 9.2, 9.1.3
Public Health	Introduction to Public Health	6-12	1. Describe the foundational characteristics of public health 2. Summarize the three levels of prevention: primary prevention, secondary prevention, and tertiary prevention.	SC.HS.15.5	HS.HS.7.2.a, HS.HS.7.2.b			ETS2	9.1.2, 9.1.3, 9.2.2
Public Health	Obesity	6-12	1. Define adult and childhood obesity 2. Examine the causes of obesity 3. Identify the potential health consequences of obesity		HS.HS.11.4.c		HSE.HS.18.5.c, HSE.HS.27.6.e, HSE.HS.311.3.f, HSE.HS.33.6	LS1.A	1.2.1

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Public Health	Epidemiology	6-12	1. Identify key (scientific) principles of epidemiology. 2. Explain the terms "distribution" and "determinants" to understand health events/problems in a population. 3. Give examples of ways epidemiology can improve public health.	SC.HSP.17.1.C	HS.HS.11.4.c			ETS2	1.2.1, 3.1.1
Careers	Careers in Genetics	6-12	1. Health science careers that involve the use of genetics 2. Courses that can prepare a person for a career in health sciences 3. How genetics are involved in solving real world problems	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Careers in Pathology & Microbiology	6-12	1. Health science careers that involve the use of pathology & microbiology 2. High school science, engineering, and math courses that can prepare for a career in health sciences 3. How pathologists and microbiologists are involved in solving real-world health problems	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Careers in Pharmacy	6-12	1. Health science careers that involve the use of pharmacology 2. High school courses that can prepare a person for a career in health sciences 3. How pharmacy professionals are involved in solving real-world health problems	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Careers in Medical Imaging	6-12	1. Careers in medical imaging and therapeutic science 2. High school courses that can prepare for a career in health sciences 3. How medical imaging is involved in solving real-world health problems	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Careers in Dentistry	6-12	1. Health science careers in dentistry 2. Courses that can prepare a person for a career in dentistry 3. How dentistry professionals are involved in solving real world problems	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Careers in Public Health	6-12	1. Identify Health science careers in public health 2. Explore different High school courses that can prepare for a career in health sciences 3. Assess how public health experts are involved in solving real-world problems	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Careers in Nursing	6-12	1. Identify several careers in Nursing 2. Explore pathways to different certifications and credentials within Nursing 3. Assess the salary range, duties, educational level, and completion time for certain programs in the Nursing field	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Careers in Rehabilitation Sciences	6-12	1. Identify the different careers in rehabilitation therapy 2. Explore pathways to different jobs and degrees in rehabilitation therapy 3. Assess the salary range, duties, educational level, and completion time for certain OT, PT, and SLP careers	SC.HSP.17.1	HS.HS.6.1.c, HS.HS.7.1.a, HS.HS.7.1.b, HS.HS.8.4.b		HSE.MS.8.3, HSE.MS.8.12, HSE.HS.27.1, HSE.HS.29.2		4.3.1, 4.3.2
Careers	Dentistry: Oral Health Literacy	11-12	1. Define health literacy 2. Understand the scope of implications of limited health literacy 3. Recognize behaviors that may indicate limited health literacy 4. Implement strategies for effective patient communication and understand					ETS2	3.1.2, 6.2.2
Careers	Dentistry: Tooth Identification	11-12	1. Correctly identify teeth using the Universal Numbering System 2. Correctly classify a tooth by type, dental arch, quadrant, and number					LS1.A	1.1.1.d

UNIT	TITLE	GRADE	OBJECTIVES	Nebraska Science Standards	Nebraska Health Science Standards	Nebraska Career Readiness Standards	Nebraska Family and Consumer Education Standards	Next Generation Science Standard (NGSS) Core Idea	National Health Science Standards (NCHSE)
Careers	Bone Growth and Clinical Application to Dentistry	11-12	1. Describe and differentiate bone cell types and their functions 2. Describe types of bones and identify the locations of each in the human body 3. Describe the function of collagen and how collagen associates with bone and cartilage 4. Compare and contrast endochondral and intramembranous ossification and provide examples of each 5. Identify histological zones at growth plates of long bones	SC.HSP.6.3	HS.HS.11.4.a, HS.HS.8.1.a			LS1.A	1.1.2.a
Behavioral Health	Resiliency Training (Part 1)	6-12	1. Differentiate between the various forms of stress 2. Summarize the impact of stress on the human body 3. Explain the role of emotions in human physiology.				HSE.HS.13.3, HSE.HS.14.6		9.1.1.,9.1.2, 9.1.3
Behavioral Health	Resiliency Training (Part 2)	6-12	1. Define the role of IgA in physiology and how its function is impacted by stress. 2. Explain the role of Heart Rate Variability in the adaptability of body and mind. 3. Differentiate between incoherence and coherence and learn a strategy to achieve coherence.				HSE.HS.13.3, HSE.HS.14.6		1.2.1, 9.1.1, 9.1.2,9.1.3
Behavioral Health	Resiliency Training (Part 3)	6-12	1. Differentiate between coping and relaxation skills 2. Describe the impact of these skills on building resilience in the body. 3. Identify four skills from coping/relaxation techniques that you could utilize in your life.				HSE.HS.13.3, HSE.HS.14.6, HS.HS.2.1		9.1.1.,9.1.2, 9.1.3
Behavioral Health	A Middle Schooler's Guide to Choices: Alcohol and Drug Prevention Skills	6-8	1. Identify healthy self-esteem 2. Compare healthy and unhealthy relationships 3. Identify and role-play skills to refuse the use of alcohol and other drugs				HSE.MS.7.5		9.1.1.,9.1.2, 9.1.3
Behavioral Health	A High Schooler's Guide to Choices: Alcohol and Drug Prevention Skills	9-12	1. Recognize the negative effects of alcohol and other drug use. 2. Determine strategies for making safe choices surrounding the use of alcohol and other drugs. 3. Utilize communication skills to build healthy relationships.	SC.HSP.6.5	HS.09.01.01, HS.09.01.02 HS.02.01.01, HS.01.01.02 HS.07.01.01,	CR.02 CR.04, CR.05	HSE.HS.1.1, HSE.HS.1.3, HSE.HS.4.1, HSE.HS.4.2, HSE.HS.7.1		
Medical Terminology	Module 1: Basic Word Structure	6-12	1. Distinguish among word components: root, prefix, suffix, combining vowel, and combining form 2. Pronounce and define parts of medical words: combining forms, suffixes, and prefixes 3. Convert medical terms from singular to plural forms		HS.HS.11.1.a		HS.HS.1.2, HSE.HS.8.6		2.2.1, 2.2.2
Medical Terminology	Module 2: Complex Medical Terms	6-12	1. Analyze complex medical terms using common prefixes, combining forms, and suffixes 2. Pronounce the presented medical terms 3. Define the presented medical terms		HS.HS.11.1.a		HS.HS.1.2, HSE.HS.8.6		2.2.1, 2.2.2
Academic Success	Efficient Strategies for Learning	9-12	1. Define cognitive flexibility, active recall, and active learning, and understand why each is important to effective learning 2. Define the testing effect and how it can be used to benefit the learner 3. Understand how mindfulness and meditation influence components of learning including cognitive flexibility, attentional performance, and auditory attention			1.A.1, 1.A.2, 1.A.3, 1. A.4			
Academic Success	Growth Mindset 1	9-12	1. "What is Imposter Syndrome?" 2. "What is Growth Mindset?" 3. "Why is Growth Mindset important?" 4. "Do you currently have a Growth Mindset?"			5.C.1, 5.C.2, 5.C.3, 5.C.4	HSE.MS.8.14, HSE.HS.13.7		
Academic Success	Growth Mindset 2	9-12	1. What to expect with growth mindset 2. How to develop growth mindset			1.C.1, 1.C.2,1.C.3,1.C.4	HSE.MS.8.14, HSE.HS.13.7		
Academic Success	Optimize Your Learning Experience	9-12	1. What does "optimize your learning experience" mean? 2. Why is optimizing your learning experience important? 3. How to optimize you learning			1.A.1, 1.A.2, 1.A.3, 1. A.4			
Academic Success	Preparing for Class	9-12	1. Utilize the Course Syllabus 2. Be prepared to discuss class topics 3. Develop a "Ready to Learn" mindset and environment			1.B.1, 1.B.2, 1.B.3			
Academic Success	Spaced Practice	9-12	1. Concept and methods of spaced practice and retrieval practice 2. Benefits of applying spaced practice			5.C.1, 5.C.2, 5.C.3, 5.C.4			
Academic Success	How to Master Exams	9-12	1. Successfully approach an exam question 2. Understand the depth of the question			1.C.1, 1.C.2,1.C.3,1.C.4			