



SOUTH CAROLINA – HEALTH SCIENCE MIDDLE SCHOOL COURSE #2

Fundamentals of Healthcare

Course Description: This course provides students with a foundation of healthcare applications used in a variety of healthcare careers. While further exploring the five career pathways developed by NCHSE (the National Consortium on Health Science Education), students will be exposed to basic healthcare industry practices.

Course Objectives: Upon completion of this course students will have a good understanding of what it takes to be a healthcare professional. This course will assist students in making informed decisions regarding academic and occupational goals.

Grades: Recommended for grade 8

This course is recommended for: Students with a desire learn more about Healthcare.

Pre-requisites: Introduction to Healthcare Professions

Stackable Credentials: NFHS Learn (concussion, heat related illness), First Aid, Heartsaver CPR/AED, Stop the Bleed

COURSE STANDARDS

MS Standard 1: SAFETY PRACTICES AND INFECTION CONTROL: (National Foundation Standard 7: Safety Practices)

Students will demonstrate the proper implementation of safe work practices to prevent injury or illness.

- Review the procedures and demonstrate the proper method for hand washing.
 - Demonstrate proper body mechanics
 - Compare and contrast the differences in a virus and bacteria
- [When and How to Wash Your Hands | Handwashing | CDC](#)
[Proper Body Mechanics - What You Need to Know \(drugs.com\)](#)
[Infection: Bacterial or viral? - Mayo Clinic](#)

MS Standard 2: HEALTHCARE COMMUNICATIONS: (National Foundation Standard 2: Communications)

Students will effectively communicate orally and in writing, applying knowledge of healthcare communications.

- Introduction to basic medical terminology – word parts (included below)
- Demonstrate basic telephone skills
- Demonstrate active speaking and listening skills
- Use proper elements of written and electronic communication

[MA-1-27-1_0.pdf \(hosa.org\)](#)

[Lesson Plan: Punctuation in Health Care | TX CTE Resource Center](#)

**Activity on following directions

**Activity on listening

**MS Standard 3: PERSONAL TRAITS OF A HEALTHCARE PROFESSIONAL
(National Foundation Standard 4: Employability Skills)**

Identify some of the personal traits and attitudes desirable in a member of the career ready healthcare team.

- Goal setting
- Problem solving
- Constructive criticism (giving and taking)
- Conflict resolution

[Goal and Planner Activity \(Kidshealth.org\)](#)

**MS Standard 4: HEALTHY BEHAVIORS :
(National Foundation Standard 9: Health Maintenance Practices)**

Differentiate between wellness and disease. Promote disease prevention and model healthy behaviors.

- Promote behaviors of health and wellness (including nutrition and weight control)
- Strategies for prevention of disease.
 - Mental health screenings
 - Stress management
 - Coping mechanisms
 - Immunizations

[BAM! Body and Mind \(cdc.gov\)](#)

[Hazing Prevention for Students Course \(nfhslearn.com\)](#)

[Social Media for Students Course \(nfhslearn.com\)](#)

[Student Mental Health and Suicide Prevention Course \(nfhslearn.com\)](#)

[Stress Lesson Plan and Activities \(kidshealth.org\)](#)

**MS Standard 5: HEALTHCARE TEAMS AND LEADERSHIP:
(National Foundation Standard 8: Teamwork)**

Identify roles and responsibilities of individual members and leaders as part of the healthcare team.

- Demonstrate teambuilding applications and team organization
- Discuss the benefits of participating as a team member
- Leadership expansion - HOSA- Future Health Professionals

[HOSA Middle School Handbook/ Scavenger Hunt \(hosa.org\)](#)

**MS Standard 6: HEALTH CAREER PATHWAYS:
(National Foundation Standard 4.3 Career Decision Making)**

Distinguish differences among careers between health science pathways (diagnostic services, therapeutic services, health informatics, support services, or biotechnology research and development).

- Compare and contrast the health science pathways
- Demonstrate understanding of pathways through project-based activity (individual or team activity)
 - Health science pathway

- Career focus
 - Skills and/or courses needed to be successful
 - Education level needed
- [Microsoft Word - Health Science Career Specialties 8-2018.doc \(healthscienceconsortium.org\)](#)
[Be Something Amazing Front Page | Be Something Amazing](#)

MS Standard 7: HEALTH CAREER TECHNICAL APPLICATIONS
(National Foundation Standard 10 Technical Skills)

- Exploration of First Aid and CPR/AED
 - Choking
 - Bleeding
 - Emergency response system (911)
- Equipment use and safety
 - Wheelchair safety
 - Gait belts
- Introduction to medical math
 - Simple conversions
 - Understanding, milliliters, milligrams and dosage (Tylenol, Motrin, etc.)

[Heat Illness Prevention Course \(nfhslearn.com\)](#)
[Concussion for Students Course \(nfhslearn.com\)](#)
[Sudden Cardiac Arrest Course \(nfhslearn.com\)](#)
[Unit 4 folder First Aid/ CPR - Google Drive](#)
[Get Trained | Stop The Bleed](#)

CLASSROOM RESOURCES AND TABLES

Therapeutic Services

Individuals pursuing a career in the Therapeutic Services Pathway are focused primarily on changing the health status of the patient over time. Health professionals in this pathway work directly with patients; they may provide care, treatment, counseling and health education information.

Diagnostic Services

Individuals pursuing a career in the Diagnostic Services Pathway use tests and evaluations that aid in the detection, diagnosis and treatment of diseases, injuries or other physical conditions

Health Informatics

Individuals pursuing a career in the Health Informatics Pathway can expect to be involved in many different levels of health care related employment. This pathway includes health care administrators who manage health care agencies as well as those individuals who are responsible for managing all of the patient data and information, financial information, and computer applications related to health care processes and procedures.

Support Services

Individuals pursuing a career in the Support Services Pathway provide a therapeutic environment for the delivery of health care. Support Services offers a full range of career opportunities from entry level to management, including technical and professional careers.

Biotechnology Research and Development

Individuals pursuing a career in the Biotechnology Research and Development pathway involve bioscience research and development as it applies to human health. These scientists may study diseases to discover new treatments or invent medical devices used to directly assist patients or to improve the accuracy of diagnostic tests.

STUDENT PATHWAY PROJECT

Have students prepare an oral, written, or hands-on project based on the Health Science Pathways. The project may include, but is not limited to, why they chose this pathway and career focus, examples and experiences that illustrate the pathway/career focus, and what forms of research they used to complete the project.

Poster Presentation Rubric:

A. Health Science pathway and career focus information presented in a clear and concise manner. **50 points**

B. Oral, written, or project presentation demonstrates insight and a deep understanding of the pathway and career focus. **25 points**

C. Project was able to show examples, and experiences that illustrate the Health Science pathway or career focus, and how the pathway/career fits into the healthcare system. **25 points**

CLASSROOM RESOURCES

Medical Terminology

Word Part Samples

PREFIX- A syllable or a word placed at the beginning of a word.

a-without

cyt- cell

ab- away from

dys- difficult, painful

ad- toward

endo - within

anti – against

ec-ecti-ecto-ex-outside

aur- ear

fore- in front of

auto- self

hist- tissue

a/pnea- without or lack of breathing

ante- before

cardi –heart

cryo-cold

hyper-above

hypo- below

epi- around, upon, over, upper

multi- many, much, large amount

neo- new

non- no

ost/e- bone

narc-sleep

pyr-heat, fever

tachy- fast

trans- across

hemi- half

infra-beneath

inter- between

intra- within

macro- large

micro-small

mono- one, single

noct- night

pre- before

post- after

necr- death

path- disease

salping – tube

brady- slow

scler- hardening

SUFFIX – Syllable or word placed at the end of a word.

Inflammation-itis

Emesis- vomit

Esis-condition of

Cide- causing death

Genesis- production, development, creation

Ism- condition, theory, state of being

Ology or logy- study of

ectomy- surgical removal of

emia- blood condition

cise-cut

blast/embryonic cell

genous- type, kind

kinetic – motion

lys- destruction of

Megaly – large

oma- tumor or swelling

Orrhea- flow or discharge

osis – process, condition, state

Otomy- cutting into

paresis- paralysis

Penia- lack of, deficiency

phagia- swallow

Ptosis- drooping down, sagging

trophy-nutrition, growth, development

Sclerosis- hardening

scopy- observation

Use the above abbreviations and word parts to help you understand medical language, such as, but not limited to the words below. Other resources would be helpful, as not all definitions are in this packet.

Autophobia

cardiomegaly

dyskinetic

hematology

Cryotherapy

hemiplegia

fibrogenesis

rhinorrhea

Germicide

multiracial

atrophy

necrosis

Bradycardia

cystoscopy

epicarditis

narcolepsy

Tachycardia

diarrhea

pyrexia

meningitis

Endotracheal

septicemia

sublingual

hypotension

Excise

post- operative

hemiparesis

exogenous

ADDITIONAL RESOURCES CONTINUED NEXT PAGE

Career Pathways

Health Science Pathways and Sample Career Specialties

Updated August 2018



Sample Career Specialties	Acupuncturist Anesthesiologist Assistant Art/Music/Dance Therapist(s) Athletic Trainer Audiologist Certified Nursing Assistant Certified Registered Nurse Anesthetist (CRNA) Chiropractor Dental Assistant Dental Hygienist Dental Lab Technician Dentist Dialysis Technician Dietitian/Nutritionist Dietetic Technician Dosemetrist Emergency/Medical Technician Home Health Aide Kinesiotherapist Licensed Practical Nurse Massage Therapist Medical Assistant Mortician Nurse Practitioner Occupational Therapist Occupational Therapy Assistant Ophthalmic Technician Ophthalmic Technician Orientation & Mobility Specialist Orthotist/Prosthetist Paramedic Podiatrist Personal care aide Pharmacist Pharmacy Technician Physical Therapist Physical Therapy Assistant Physician (MD/DO) Physician Assistant Podiatrist Psychologist Psychiatrist Radiation Therapist Recreational Therapist Registered Nurse Rehabilitation Counselor Respiratory Therapist Social Worker Speech Language Pathologist Surgeon Surgical Technologist Veterinarian Veterinary Technician Wellness Coach	Audiologist Blood Bank Technician Cardiovascular Technologist Clinical Laboratory Technician Computer Tomography (CT) Technologist Cytogenetic Technologist Cytotechnologists Diagnostic Medical Sonographers Electrocardiographic (ECG) Technician Neurodiagnostic Technologist Exercise Physiologist Genetic Counselor Histotechnician Histotechnologist Magnetic Resonance (MR) Technologist Mammographer Medical Technologist/ Clinical Laboratory Scientist Nuclear Medicine Technologist Nurse Practitioner Nutritionist/Dietitian Occupational Therapist Ophthalmic Technician/Technologist Ophthalmic Dispensing Optician Optometrist Phlebotomist Physical Therapist Polysomnographic Technologist Positron Emission Tomography (PET) Technologist Radiologic Technologist Respiratory Therapist	Admitting Clerk Applied Researcher Cancer Registrar Certified Compliance Technician Clinical Account Manager Clinical Account Technician Clinical Coder Clinical Data Miner Clinical Data Management Specialist Clinical Data Specialist Community Services Specialists Data Quality Manager Decision Support Analyst Epidemiologist Ethicist Health Educator Health Information Administrator Health Information Technician Health Information Services Healthcare Administrator Healthcare Finance Professional Information Privacy Officer Information Security Officer Managed Care Contract Analyst Medical Assistant Medical Illustrator Medical Information Technologist Medical Librarian Medical Records Technician Patient Account Manager Patient Account Technician Patient Advocates Patient Information Coordinator Project Manager Quality Management Specialist Quality Data Analyst Reimbursement Specialist Risk Manager Transcriptionist Unit Coordinator Utilization Manager Utilization Review Manager	Behavioral Disorder Counselors Biomedical/Clinical Engineer Biomedical/Clinical Technician Clinical Simulator Technician Central Service Manager Central Service Technician Community Health Worker Dietary Manager Dietary Aide Environmental Services Facilities Manager Healthcare Administrator Healthcare Economist Maintenance Engineer Industrial Hygienist Interpreter Materials Manager Patient Navigator Transport Technician Substance Abuse Counselors	Biochemist Bioinformatics Associate Bioinformatics Scientist Bioinformatics Specialist Biomedical Chemist Biomedical/Clinical Engineer Biomedical/Clinical Technician Biostatistician Cell Biologist Clinical Data Management Associate/Consultant Clinical Pharmacologist Clinical Trials Monitor Clinical Trials Research Associate Clinical Trials Research Coordinator Geneticist Laboratory Assistant-Genetics Laboratory Technician Medical Editor/Writer Microbiologist Molecular Biologist Pharmaceutical/Clinical Project Mgt. Pharmaceutical Sales Representative Pharmaceutical Scientist Pharmacologist Product Safety Associate/Scientist Process Development Associate/Scientist Processing Technician Quality Assurance Technician Quality Control Technician Regulatory Affairs Specialist Research Assistant Research Scientist Toxicologist
	Therapeutic Services	Diagnostic Services	Health Informatics	Support Services	Biotechnology Research and Development

Textbook and online RESOURCES

Winger, Blahnik; Goodheart-Willcox; 2016 [Introduction to Health Science: Pathways to Your Future.](#)

Simmers-Nartker, Simmers-Kobelak; 2014 [Simmers DHO Health Science- 8th edition](#)

National Consortium for Health Science Education – NCHSE; National Healthcare Foundation Standards – [Standards | National Consortium for Health Science Education \(healthscienceconsortium.org\)](#)

Kids Health in the Classroom - [- KidsHealth in the Classroom](#)

South Carolina Health Science – Secondary Standards – for reference
[Health Science Education - South Carolina Department of Education - 7/14/21 9:06 AM](#)

www.besomethingamazing.com – Career website created by South Carolina Hospital Association

www.schosa.org – SC HOSA Future Health Professionals

www.hosa.org – National HOSA Future Health Professionals

Health Science Teacher Resources: [Resources-for-HS-Teachers-2020.pdf \(schosa.org\)](#)

HOSA on – demand – learning (Career Exploration, History, Infection Control, Communication Skills, Leadership Skills, etc.) [On-Demand Learning Opportunities – HOSA](#)

Georgia Health Science – Middle School Standards -<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/Healthcare-Science-.aspx>

Florida Health Science – Middle School Standards – for reference
www.fl DOE.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/2021-22-frameworks/health-science.stml

Tennessee: Middle School Health Science-
https://www.tn.gov/content/dam/tn/education/ccte/hlth/cte_std_intro_health_science.pdf
