

Unit 1: Introduction to Medical Terminology and Body Organization

Content Area: **Science**
Course(s):
Time Period: **Marking Period 1**
Length: **3 Weeks**
Status: **Not Published**

Brief Summary of Unit

This unit introduces the key words that are the building blocks of all medical terms and provides an overview of basic terms in use throughout the healthcare field. This unit also serves as an overview of the structure of the human body. Anatomy and physiology are defined along with specific studies like cytology and histology. Major anatomical consideration is given to body planes, directions and cavities and major medical specialties are described.

Standards

LA.RST.11-12.1	Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.
LA.WHST.11-12.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
LA.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.
LA.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.
LA.WHST.11-12.9	Draw evidence from informational texts to support analysis, reflection, and research.
LA.SL.11-12.5	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP3	Attend to personal health and financial well-being.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
SCI.9-12.HS.SF	Structure and Function
SCI.9-12.HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.

Transfer

- Understand medical terms when dealing with health related issues of their own, or friend or family member
- Understand structures and functions of body systems as they relate to everyday life.

Essential Questions

- How are cells organized to form systems?
- How are locations of body parts and directions on the body verbally described?
- How are medical terms constructed?
- How does cell function affect whole body systems?
- What descriptive terms are used in anatomical studies?
- Why must medical terminology be so precise?

Science and Engineering Practices

- Developing and Using Models Develop and use a model based on evidence to illustrate the relationships between systems or between components of a system. (HS-LS1-1)

DCI

- HS-LS1: From Molecules to Organisms: Structures and Processes HS-LS1.A: Structure and Function Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level.

Crosscutting Concepts

- Systems and System Models Models (e.g., physical, mathematical, computer models) can be used to simulate systems and interactions (including energy, matter, and information flows) within and between systems at different scales. (HS-LS1-1)

Evidence/Performance Tasks

- Clarify confusing terms that look or sound alike.
- Compare and contrast the four major tissue types using their essential features.
- Describe the human anatomy using directional terms, body planes, body regions, and body cavities.
- Describe the particular medical specialty to study and treat each major body system.
- Identify the key terms listed at the end of this unit.
- Organize the body into cells, tissues, organs, and systems which all work together to perform specific functions.
- Recognize that each body system has a specific set of terminology to describe the major components.

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- Recognize that the medical record of a patient documents the details of that patient's hospital stay, and contains reports from any professional who has had contact with the patient.
- Recognize the different healthcare settings.
- Recognize the documents found in a medical record.
- Recognize the importance of always spelling medical terms correctly.
- Recognize, define, spell and pronounce the medical terms in this unit.
- Relate the body's component parts into fully functioning tissues, organs, systems, and the body as a whole.
- Students will develop and utilize models to identify and describe: the body planes, directions, cavities, and regions; directional terms; the nine anatomical and four clinical divisions of the abdomen; and the major body systems.
- Students will identify the most common prefixes and suffixes.
- Students will illustrate how the interactions between systems provide different functions.
- Students will practice changing terms from singular to plural, and vice versa.
- Students will recognize, define, spell and pronounce the medical terms in this unit, and interpret abbreviations associated with body organization.
- Students will state why caution is important when using abbreviations.
- Students will use knowledge of word parts to decipher medical terms.
- Students will use their models to describe the anatomical position, and relate to actual human form.
- Students will use their models to relate component parts of systems, how they affect each other, and how they interact to contribute to a fully functioning person.
- Understand that a word root is the foundation of a medical term, and can indicate the body part or system, or it may be an action.
- Understand that anatomy and physiology are the structures and functions of the body.
- Understand that cells are the basic structural units of the body.
- Understand that combining forms usually indicate the part of the body that is involved.
- Understand that confidentiality is crucial in the medical profession. Medical professionals have a moral and legal responsibility to keep patient medical information private.
- Understand that descriptive terms make it easier to describe the location of body parts.
- Understand that prefixes are word parts that usually indicate location, number, or status.
- Understand that suffixes are word parts that usually indicate the procedure, condition, disorder or disease.

Learning Plan

- Allow students to create flashcards and/or quizlet or other online flashcards or study aids.
- Analyze scenarios regarding patient information to determine the levels of confidentiality necessary.
- Combining Forms aden/o carcin/o cardi/o chem/o cis/o dermat/o enter/o gastr/o gynec/o hemat/o hydr/o immune/o laryng/o morph/o nephro/o neur/o ophthalm/o ot/o path/o pulmon/o rhin/o ur/o
- Common Prefixes a- an- ante- anti- auto- brady- dys- endo- epi- eu- hetero- homo- hyper- hypo- infra- inter- intra- macro- micro- neo- pan- para- per- peri- post- pre- pseudo- retro- sub- super- supra- tachy-

trans- ultra-

- Common Suffixes -algia -cele -cise -cyte -dynia -ecstasis -gen -genesis -genic -ia -iasis -ism -it is -logist -logy -lysis -malacia -megaly -oma -osis -pathy -plasia -plasm -ptosis -rrhage -rrhea -rrhexis -sclerosis -stenosis -therapy -trophy Adjective Suffixes -ac -al -an -ar -ary -eal -iac -ic -ical -ile -ior -ory -ose -ous -tic Surgical Suffixes -centesis -ectomy -ostomy -otomy -pexy -plasty -rrhaphy Procedural Suffixes -gram -graph -graphy -meter -metry -scope -scopy
- Create a Bingo or Jeopardy style game to review all vocabulary associated with the unit.
- Define prefix, combining form, word root, and suffix and give examples of each.
- Define terms related to body position.
- Define the terms, prefixes, suffixes, and combining forms in this unit.
- Describe the levels of body organization, illustrating common features of all cells.
- Differentiate between anatomy and physiology.
- Differentiate between the four tissue types, providing examples of each.
- Distinguish between different aspects of a medical record.
- Distinguish between types of healthcare settings by determining the facility that would be appropriate in different situations.
- Explain when the combining vowel is or is not used.
- Give examples of contrasting and confusing terms.
- Identify the body systems including the major functions, components, combining forms, and medical specialties of each.
- Key Terms: acute care hospitals ambulatory care centers ancillary reports anesthesiologist's report combining form combining vowel consultation report diagnostic reports discharge summary general hospitals health maintenance organization (HMO) history and physical home health care hospices informed consent long-term care facilities medical record nurse's notes nursing homes operative report outpatient clinics pathologist's report physician's offices physician's orders physician's progress notes prefix rehabilitation centers specialty care hospitals suffix surgical centers word root
- Number Prefixes bi- hemi- mono- multi- nulli- poly- quad- semi- tri- uni-
- Preview the essential questions and connect to learning throughout the unit.
- Review the rules for singular and plural endings.
- Review the use of caution when working with abbreviations, referencing examples from Appendix I in the course textbook.
- Students can "prep a patient" for surgery, using a potato or cucumber as the patient, and following directions related to anatomical terms.
- Use word parts to interpret medical terms, stressing the importance of spelling and pronunciation.
- Using models and self, identify the anatomical position, body planes, body regions, body cavities, directional and positional terms.

Materials

- Index cards
- Models and diagrams of the anatomical position, body planes, body cavities, and body regions
- Potato or cucumber "patient"
- Textbook: Medical Terminology: A Living Language by Bonnie F. Fremgen and Suzanne S. Frucht

Suggestions for Modifications

FOR SPECIAL EDUCATION STUDENTS , ELL, AT RISK AND STUDENTS GIFTED STUDENTS

- *The suggested timeline is subject to change as teachers and program supervisors find necessary.
- Activities can be adjusted for time or repeated to enhance the idea of scientific understanding.
- Adjust assessments and class work accordingly with your student's IEP/504/or other education plans.
- Alternative assessments can be provided in place of a traditional assessment (quiz or test).
- Have instructor's notes available for students as needed.