Intro to Healthcare Science
UNIT 1: Evolution of Modern Medicine

ESSENTIAL QUESTION	BIG IDEAS
What is the most effective way to deliver healthcare?	Students understand the timeline of healthcare leaders and the evolution of modern healthcare delivery systems. Students describe multiple career pathways in healthcare.

GUIDING QUESTIONS

Content:
- What are career pathways in health care?
- What are the local and global healthcare delivery systems?
- Who are the major contributors to the current healthcare system?

Process:
- How are healthcare careers categorized?
- How is healthcare delivered locally and globally?
- Who are the most influential leaders in healthcare - past to present?
- How has our current healthcare system evolved from past to present?

Reflective:
- What are the healthcare careers of the future?
- How effective is our current healthcare model?
- What will our healthcare model look like in the future?

FOCUS STANDARDS

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- **Benchmark 1: Compare and contrast the history of medicine with current trends**
  - Create a historical timeline to include: Egyptians, Hippocrates, Clara Barton, Elizabeth Blackwell, Florence Nightingale, William Harvey, Joseph Liter, Ignaz Semmelweis, Jonas Salk and Albert Sabin, Louis Pasteur.
  - Identify current trends in healthcare.
- **Benchmark 3: Demonstrate knowledge of written and verbal communication skills in healthcare settings**
  - Recognize, organize, write and compile technical information and summaries using common medical terminology (abbreviations, roots, prefixes, suffixes).

- **Benchmark 4: Demonstrate knowledge of healthcare delivery system**
  - Understand the healthcare delivery system (public, private, government and non-profit).
  - Describe the responsibilities of consumers within the healthcare delivery system.
  - Assess the impact of emerging issues on healthcare delivery systems.
  - Understand the history and role of health insurance and employer / employee benefits.
- **Benchmark 6: Career Exploration in health science.**
  - Identify a variety of careers in health science: Diagnostic Services, Therapeutic Services, Health Informatics, Support Services, Biotechnology Research & Development.

UNIT 2: Body Systems and Medical Terminology

ESSENTIAL QUESTION	BIG IDEAS
How does language help describe the interconnectedness of body systems?	Students communicate with basic medical terminology used in a health care setting. Students identify general functions and major structures of the human body systems. Students identify and interpret data from a wellness exam.

GUIDING QUESTIONS

Content - what
- What are the main components of medical terms? (word roots, prefixes, suffixes, abbreviations)
- What are the main human body systems - structures and functions?
- What tests and evaluations are performed in a wellness exam?

Process - how
- How is medical terminology used in different healthcare settings?
- How are the human body systems interconnected?
- How is data from a wellness exam used?

Reflective - why
- Why is medical language important in healthcare communication?
- Why is care of the whole patient (all body systems) important?
- Why do test results matter in patient care?

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- **Benchmark 2: Demonstrate knowledge of medical mathematics**
    - o Apply mathematical computations related to healthcare procedures.
    - o Apply mathematical principles to conversion equations used in the healthcare delivery system.
    - o Apply mathematical principles involving temperature, weights, and measures used in the healthcare delivery system.
    - o Analyze diagrams, charts, graphs and tables to interpret healthcare results.
    - o Demonstrate use of the 24-hour clock / military time.
- **Benchmark 3: Demonstrate knowledge of written and verbal communication skills in healthcare settings**.
    - o Recognize, organize, write and compile technical information and summaries using common medical terminology (abbreviations, roots, prefixes, suffixes).
    - o Use medical terminology to communicate information, data and observations.
    - o Use medical terminology within a scope of practice in order to interpret, transcribe and communicate information, data and observations.

UNIT 3: Professional Qualities of a Healthcare Worker

ESSENTIAL QUESTION	BIG IDEAS
What makes a great healthcare worker?	Students describe the importance of professionalism in the healthcare setting. Students practice communication and collaboration skills that are necessary for the delivery of healthcare. Students demonstrate behaviors that contribute to a successful healthcare team.

GUIDING QUESTIONS

Content - What
- What are the professional traits and attitudes of a healthcare worker?
- What skills are necessary for safe and effective work in a healthcare setting?
- What behaviors are necessary for safe and effective work in a healthcare setting?

Process - How
- How does an individual contribute to the work of a successful healthcare team?

- How does communication impact the delivery of healthcare?
- How does collaboration impact the delivery of healthcare?

Reflective - Why
- Why is communication essential to the work of the healthcare team?
- Why is it important to build professional behaviors in healthcare?
- Why is it important to reflect on individual and team performance in healthcare?

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- **Benchmark 3: Demonstrate knowledge of written and verbal communication skills in healthcare settings**
  - 3.3 Use medical terminology within a scope of practice in order to interpret, transcribe and communicate information, data and observations.
  - 3.4 Identify common barriers to communication.
  - 3.5 Practice communication needs of the patient / client including active listening.
  - 3.6 Modify communication to meet the needs of the patient / client and be appropriate to the situation.
- **Benchmark 5: Summarize personal traits of the healthcare professional**
  - 5.1 Classify the personal traits and attitudes desirable in a member of the healthcare team.
  - 5.2 Summarize professional standards as they apply to language, confidentiality, and behavior.
  - 5.3 Demonstrate proper hygiene of a healthcare worker.
  - 5.4 Describe proper dress of a healthcare worker.
  - 5.5 Discuss proper behavior in a healthcare setting (honesty, empathy, dependability, lifelong learner and teamwork).

UNIT 4: Responsibilities of a Healthcare Worker

ESSENTIAL QUESTION	BIG IDEAS
How does a healthcare worker make the right decision?	Students understand basic legal obligations of healthcare workers. Students identify the legal and ethical pathways of decision-making in healthcare. Students demonstrate an understanding of cultural competence and diversity.

GUIDING QUESTIONS

Content - What
- What are the laws that guide and regulate healthcare?
- What is the difference between morals and ethics?
- What is the difference between cultural competency and diversity?

Process - How
- How do healthcare laws and policies impact patient care?
- How does a healthcare worker's personal beliefs impact decision-making?
- How does a healthcare worker respect an individual's diverse background?

Reflective - Why
- Why are the laws that guide and regulate healthcare necessary?
- Why is it important to separate personal beliefs from professional practice?
- Why is connecting with a patient's culture vital to their overall health and well-being?

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- **Benchmark 3: Demonstrate knowledge of written and verbal communication skills in healthcare settings**
  - 3.4 Identify common barriers to communication.
  - 3.5 Practice communication needs of the patient / client including active listening.
  - 3.6 Modify communication to meet the needs of the patient / client and be appropriate to the situation.
- **Benchmark 7: Demonstrate knowledge of medical law and medical ethics**
  - 7.1 Analyze legal responsibilities, limitations and implications of actions.
  - 7.2 Apply procedures for accurate documentation and use of electronic and print health care records.
  - 7.3 Differentiate between medical law and medical ethics including: Hippocratic oath, Patient Bill of Rights, patient care partnership, ethics committees.
  - 7.4 Describe scope of practice for healthcare workers.
  - 7.5 Explain the importance of expressed consent, implied consent and informed consent.
  - 7.6 Define legal implications and how they relate to healthcare including: battery, invasion of privacy, malpractice, negligence, slander, libel, assault, abuse.
  - 7.7 Describe HIPAA.

- o 7.10 Utilize procedures for reporting activities and behaviors of patients / clients that affect the health, safety and welfare of others.
- **Benchmark 8: Cultural, social and ethnic diversity**
  - o 8.1 Identify and demonstrate respectful and empathetic treatment of ALL patients / clients.
  - o 8.2 Discuss religious and cultural values as they impact healthcare: ethnicity, gender, race, religion.

Based on ISTE Standards for Students:

3b Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

3d Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

4d Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

5c Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

6d Students publish or present content that customizes the message and medium for their intended audiences.

7b Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.

7d Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.

UNIT 5: Infection Prevention and Control

ESSENTIAL QUESTION	BIG IDEAS
How do we prevent and eliminate disease?	Students identify the roles of microorganisms in human health. Students identify modes of disease transmission within a population or community. Students explain preventative practices utilized to protect the individual, the healthcare worker, and the population.

GUIDING QUESTIONS

Content - What
- What is the difference between pathogenic and non-pathogenic microorganisms?
- How are diseases transmitted?
- What are preventative practices used in the healthcare setting?

Process - How
- How do microorganisms keep us well?
- How does understanding disease transmission help us prevent the spread of disease?
- How are preventative practices regulated in the healthcare setting?

Reflective - Why
- Why is it important to complete treatment plans as prescribed by the healthcare provider?
- Why is the control of disease important?
- Why is the health of the community dependent on the health of the individual?

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- **Benchmark 2: Demonstrate knowledge of medical mathematics**
  - 2.4 Analyze diagrams, charts, graphs and tables to interpret healthcare results
- **Benchmark 4: Demonstrate knowledge of Health Care Delivery System**
  - 4.1 Understand the healthcare delivery system (public, private, government, and non-profit).
  - 4.2 Describe the responsibilities of consumers within the healthcare system.
  - 4.3 Assess the impact of emerging issues on healthcare delivery systems.
- **Benchmark 5: Summarize Personal Traits of the Healthcare Professional**
  - 5.3 Demonstrate proper hyenine of health care worker.
  - 5.4 Describe proper dress of a health care worker.
  - 5.5 Discuss proper behavior in a healthcare setting (honesty empathy, dependability, lifelong learner, and teamwork.