

## Scope & Sequence Strand: Functions and Interrelationships of Systems

### Content Standard 1: Structure and Functions of the Body

#### A. Integumentary System (Skin)

1. Students will describe the functions and structures of the skin.
  - a. Sample Teaching Strategy
    1. Show students a cross-section of the skin, identifying major structures (e.g., sweat gland, pore, hair follicle, oil gland, dermis, epidermis, fat)
    2. Invite students to brainstorm the functions of the skin (e.g., protect body, remove waste, gather information, produce Vitamin D, maintain temperature).
    3. Encourage students to observe the skin of people, animals, and vegetables. Write a paragraph or create a chart to compare and contrast their findings.

#### B. Nervous System

1. Students will summarize the functions of the nervous system. Include: sending and receiving messages, regulating body functions (homeostasis).
  - a. Sample Teaching Strategy
    1. Set up a clear shield (glass/Plexiglas), place a student behind it and toss various non-harmful objects (e.g., beach ball, bean bag, wad of paper), and have the class observe the reactions of student behind shield.
    2. Discuss the reactions with the class and categorize them according to function.
    3. Have students use athletics to illustrate the functions of the nervous system (e.g., Batter hitting a ball – sees ball coming toward him (receiving), responds by swinging (sending), and lungs expand, heart rate increases, etc. (homeostasis).
2. Students will distinguish between the CNS (Central Nervous System) and PNS (Peripheral Nervous System).
  - a. Sample Teaching Strategy
    1. Discuss the various parts of the nervous system (e.g., brain, spinal cord, nerves, cerebrum, cerebellum, sense organs)
    2. Differentiate between what the CNS does (control center) and what the PNS does (connects body to CNS and controls actions).
    3. Have students create a concept map showing the division of structures (between CNS and PNS) of the nervous system.

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C. Urinary/Excretory System

1. Students will label the major components of the urinary system (e.g., kidneys, ureters, urinary bladder, urethra) and state how the kidneys filter wastes from the blood.
  - a. Sample Teaching Strategy
    1. Diagram the path that urine takes beginning with formation in the kidneys and concluding with exit from the urethra.
    2. Describe how the kidneys filter the blood and remove substances.
2. Students will be able to explain how excretion contributes to homeostasis.
  - a. Sample Teaching Strategy
    1. Explain how skin, lungs, and kidneys remove particular wastes from the body creating internal harmony.

D. Endocrine System

1. Students will identify and describe the basic functions of the endocrine system including growth (pituitary), reproduction (ovaries, testes), fight or flight responses (adrenal) and energy and metabolism (thyroid).
  - a. Sample Teaching Strategy
    1. Create a chart which organizes the glands and their functions.

E. Reproductive System

1. Students will define sexual reproduction.
  - a. Sample Teaching Strategy
    1. Describe how fertilization occurs with egg and sperm cells.
2. Students will describe the structures and functions of the male and female reproductive systems.
  - a. Sample Teaching Strategy
    1. Create a chart which organizes the male and female reproductive organs and their functions.

F. Lymphatic-Immune System

1. Students will explain the body's lines of defense, and how they protect us from disease and infection.
  - a. Sample Teaching Strategy
    1. Describe the three lines of defense – barriers, inflammatory response and immune response.
    2. Create a concept map to show how the immune system works.

G. System Interactions and Interrelationships

1. Students will show how body systems work together to maintain good health and homeostasis.
  - a. Sample Teaching Strategy
    1. Give an example of how two body systems work together and depend upon each other (example: circulatory & respiratory).

2. Brainstorm other systems that work together as well and why this is important to our health.

## Scope & Sequence Strand: Health Maintenance and Enhancement

<b>Content Standard 1: Personal and Family Health</b>
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### A. Personal Health & Hygiene

1. Students will critique personal behaviors and their cause and effect that relate to the following choices:
  - Eating breakfast every day
  - Refraining from the use of tobacco and alcohol
  - Sleeping six to eight hours a night
  - Maintaining a healthy weight
  - Participating in daily moderate to vigorous physical activities
  - Making healthy food choices
  - Coping with stress
    - a. Sample Teaching Strategy
      1. Divide class into groups and assign students to determine pros and cons of each bulleted item.
      2. Encourage students to record a schedule of their typical day to determine if they are achieving these behaviors.
2. Students will understand the procedures necessary for good personal hygiene.
  - a. Sample Teaching Strategy
    1. Describe the relationship between hygiene and some body systems (endocrine, integumentary).
    2. Create a hygiene plan (deodorant, bathing, hair care, etc.) for a younger grade (maybe fifth grade) as a way of reminding students of their own hygiene.

### B. Preventive Care

1. Students will identify and assess personal health needs during adolescence and apply strategies to address those needs or problems.
  - a. Sample Teaching Strategy
    1. Encourage students to regularly visit all doctors (optometrist, dentist, physician).
    2. Create a chart of television shows, movies, and video games watched by the class, show the focus of each, and discuss the effects they have on the students (tendencies toward violence, anger, kindness, caring, etc.).

C. Growth and Development

1. Students will sequence the process and events of the human life cycle (fertilization, fetal development, birth, infancy, childhood, adolescence, and adulthood).
  - a. Sample Teaching Strategy
    1. Relate human life cycle to that of a chicken.
    2. Discuss the time involved with each portion of the life cycle (some occur in a short time, others take years).

## **Scope & Sequence Strand: Social Responsibilities**

<b>Content Standard 1: Life Management Skills</b>
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A. Peer Pressure

1. Students will differentiate between negative peer pressure and positive peer support.
  - a. Sample Teaching Strategy
    1. Brainstorm what friends have convinced students to do, that normally they would not do (shoplifting, disrespect, help someone less fortunate, go to Sunday School).

B. Character Education

1. Students will understand and exhibit traits which show positive character.
  - a. Sample Teaching Strategy
    1. Create a chart comparing/contrasting positive character in the eyes of society, the media and the Bible.

C. Coping Skills

1. Students will analyze various techniques to enhance coping abilities (e.g., stay healthy, relax, positive outlook, physically active, talk it out).
  - a. Sample Teaching Strategy
    1. Role-play with students a variety of situations that require coping skills.
    2. Help students to determine what the appropriate skill is based on the type of situation.

D. Stress Management

1. Students will identify stressful situations.
  - a. Sample Teaching Strategy
    1. Brainstorm situations or circumstances that cause stress.
2. Students will describe skills or techniques to reduce stress-related problems.
  - a. Sample Teaching Strategy
    1. Role-play with students a variety of stress-filled situations that require a skill or technique to alleviate the stress.

## Scope & Sequence Strand: Risk Assessment and Reduction

### Content Standard 1: Disease Prevention and Control

- A. Communicable vs. Non-Communicable Diseases
  - 1. Students will identify diseases as communicable (e.g., flu, HIV, hepatitis, rare diseases) or non-communicable (e.g., cancer, allergies, diabetes, cardiovascular disease, hypertension, arthritis).
    - a. Sample Teaching Strategy
      - 1. Create a concept map of diseases (communicable and non-communicable).
  - 2. Students will identify the causes (e.g., heredity, lifestyle, environment, unknown reasons) of non-communicable diseases.
    - a. Sample Teaching Strategy
      - 1. Discuss how one or more of these reasons can result in a disease.
      - 2. Brainstorm ways that students can avoid these diseases.
  - 3. Students will identify the causes (e.g., infected people, infected animals, contaminated objects, food and water) of communicable diseases.
    - a. Sample Teaching Strategy
      - 1. Discuss how one or more of these reasons can result in a disease.
      - 2. Brainstorm ways that students can avoid these diseases.
- B. Body Defenses and Recovery
  - 1. Students will describe the body's line of defense and the stages of disease progression.
    - a. Sample Teaching Strategy
      - 1. Review the immune system and three lines of defense that our bodies employ.
      - 2. Explain how the period of incubation varies with disease.
- C. Types of Pathogens and Transmission
  - 1. Students will identify the four types of pathogens (bacteria, virus, protist and fungi).
    - a. Sample Teaching Strategy
      - 1. Create a matching activity with communicable diseases and pathogens that cause them.
  - 2. Students will describe the chain of infection involved in the transmission of pathogens.
    - a. Sample Teaching Strategy
      - 1. Discuss the optimal conditions for the growth of pathogens (warm, moist locations).
    - b. Resources
      - 1. "Finding Patient Zero" Activity  
<http://www.pbs.org/wgbh/aso/resources/guide/medact4index.html>

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D. Adolescent Health Issues

1. Students will recognize adolescent health issues (e.g., joint problems, asthma, acne, eating disorders).
  - a. Sample Teaching Strategy
    1. Brainstorm common problems that teens or preteens face.
2. Students will select appropriate strategies to solve or prevent these problems.
  - a. Sample Teaching Strategy
    1. Brainstorm possible causes of each problem.
    2. Once true cause is identified, review solutions or prevention of individual problems.

E. Sexually Transmitted Infections

1. Students will name and discuss common STIs (sexually transmitted infections).
  - a. Sample Teaching Strategy
    1. Give students a list of common STIs and their slang name.
    2. Discuss what they are.
2. Students will describe the patterns of transmissions, treatments and the prevention of STIs.
  - a. Sample Teaching Strategy
    1. Discuss how they are transmitted, treated and avoided.
    2. Discuss the results if left untreated.

F. HIV/AIDS Prevention Education

1. Students will explain the relationship between HIV and AIDS.
  - a. Sample Teaching Strategy
    1. Describe how HIV leads to AIDS which opens the door to many other fatal diseases and problems.
2. Students will explain the patterns of transmission, treatment and prevention of HIV/AIDS.
  - a. Sample Teaching Strategy
    1. Discuss the most common types of transmission (blood and body fluids).
    2. Discuss treatment versus cures – there is no cure!
    3. Describe methods of prevention – wear gloves around blood and keep it away from any part of body that could allow it entry.

G. Abstinence

1. Students will explain the role of abstinence in preventing STIs and teen pregnancy.
  - a. Sample Teaching Strategy
    1. Reinforce that STIs are transmitted sexually. Avoiding sexual activity eliminates the possibility of acquiring STIs or getting pregnant.

H. Management and Prevention of Disease(s)

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1. Students will recognize the need to follow instructions regarding maintenance of a disease or illness.
    - a. Sample Teaching Strategy
      1. Emphasize the importance of following a doctor's instructions and dosage instructions.
      2. Discuss the impact a disease can have if left untreated.
  2. Students will recognize the importance of behaviors that can prevent the spread of disease.
    - a. Sample Teaching Strategy
      1. Brainstorm ways students can avoid spreading disease (e.g., wash hands, use tissues, hand sanitizer, cover mouth when coughing, avoid people if you are contagious).
- I. Historical Perspective
1. Students will understand the change in health threats over time.
    - a. Sample Teaching Strategy
      1. Create a chart relating the most common causes of death now to the most common causes of death 50 years ago and 100 years ago.
      2. Discuss vaccinations and the role they have played in the decrease in deaths, especially of children.