Missouri Health

Grades 9, 10, 11, 12

Adopted 2007

Functions and Interrelationships of Systems

1. **Structure and Functions of the Body**
   - A. Sensory System
     - a. Investigate disorders, their treatments, and prevention techniques to maintain a healthy sensory system (e.g., hearing loss, glaucoma, near and far-sightedness, halitosis, numbness, tingling).
   - B. Muscular System
     - a. Investigate disorders, their treatment, and prevention techniques to maintain a healthy muscular system (e.g., muscular dystrophy, muscle cramps, tendonitis, muscle strains).
   - C. Skeletal System
     - a. Investigate disorders, their treatment, and prevention techniques to maintain a healthy skeletal system (e.g., osteoporosis, arthritis, sprain, scoliosis).
   - E. Cardio-respiratory/Circulatory System
     - a. Investigate disorders, their treatments, and prevention techniques to maintain a healthy cardio-respiratory system (e.g., high blood pressure, anemia, hemophilia, sickle cell, asthma, allergies, bronchitis, pneumonia).
   - G. Nervous System
     - a. Investigate disorders, their treatment, and prevention techniques to maintain a healthy nervous system (e.g., mental disorders, spinal cord injuries, cerebral palsy, meningitis, chemical imbalances, hives, shingles, multiple sclerosis, Parkinson's, epilepsy).
   - H. Digestive System
     - a. List the most common disorders, describe how to treat them and prevention techniques to maintain a healthy digestive system (e.g., ulcers, irritable bowel syndrome, Crohn's Disease, diarrhea, constipation, gall stones, colon cancer).
   - I. Urinary/Excretory System
     - a. Investigate disorders, their treatment, and prevention techniques to maintain a healthy urinary/excretory system (e.g., kidney stones, urinary tract infections, nephritis).

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J. Endocrine System

a. Investigate disorders, their treatments, and prevention techniques to maintain a healthy endocrine system (e.g., thyroid cancer, type II diabetes, chemical imbalances).

b. List the causes of type II diabetes and describe management procedures and prevention techniques.

K. Reproductive System

a. Recognize normal vs. abnormal conditions of the reproductive system.

b. Explain how the following affect the functioning of the reproductive system: ovarian cysts, HPV/cervical cancer, premenstrual syndrome, infertility, ovarian cancer, testicular cancer, and prostate cancer.

c. Discuss the importance of routine physical examinations and tests (e.g., pap smears, mammograms, prostate examination) to reduce the risks of problems related to cancer and other chronic diseases.

L. Lymphatic-Immune System

a. Investigate disorders, their treatments, and prevention techniques to maintain a healthy lymphatic/immune system (e.g., common cold, influenza, tonsillitis, strep throat).

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2. Social, Emotional and Mental Health

A. Influence of Family and Peers

a. Cite evidence that supports the rights both individuals and the communities have when making social health decisions.

b. Describe patterns of physical, social, and mental/emotional health that promote healthy long-term relationships (e.g., dating, work environment, friendship, and marriage).

B. Responsibilities in Society

a. Develop a list of attributes needed to live effectively with others.

C. Communication Skills

a. Compare and contrast constructive versus destructive defense mechanisms as a means for handling one's emotions.

b. Predict how the dynamics of relationships with family, groups, and community change as the individual matures.

Health Maintenance and Enhancement

1. Personal and Family Health

A. Personal Health

a. Show the steps used in the problem solving model to examine system functions and disease formation encountered in daily living situations (e.g., lead poisoning, second-hand smoke).

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B. Preventive Care

a. Discuss the concept of preventive care and its importance in maintaining and improving health.

D. Health and Skill Related Fitness

a. Analyze factors (e.g., time, cost, accessibility) and benefits (physical and psychological) related to regular participation in physical activity.

b. Analyze present fitness levels to create a personal fitness plan which meets current and future needs necessary for the maintenance of total fitness.

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2. Nutrition

A. Essential Nutrients and Food Groupings

a. Assess key nutrients and their specific functions and influences on body processes (e.g., disease prevention).

b. Assess how nutritional needs change throughout the life cycle.

B. Balance, Variety and Moderation

a. Prove how a well-balanced diet that is low in fat, high in fiber, vitamins and minerals can reduce the risk of certain disease.

b. Investigate and analyze the factors that influence dietary choices (e.g., lifestyle, ethnicity, family, media, and advertising).

c. Analyze food choices and discuss how it should be used to develop a proper diet.

C. Food Labels

a. Apply concepts using food labels to meet the dietary needs of individuals for a healthy lifestyle (e.g., diabetes, lactose intolerance, food allergies).

D. Food Handling and Safety

a. Discuss the cause and effect relationships that influence a safe food supply (e.g., regulatory agencies, food handling and production, food storage techniques, pesticides, additives, bioterrorism).

E. Food Energy and Physical Activity

a. Design a nutritional plan and fitness program based on the relationship between food intake and activity level with regard to weight management and healthy living (e.g., caloric intake, calorie expenditure, weight gain, weight maintenance, and safe weight loss).

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3. Consumer Health and Safety

A. Media Influence on Health Habits and Decisions

a. Evaluate the role the media can play in influencing young adults' self concept by idealizing body image and elite performance levels of famous people.

b. Analyze the health claims that the media make and their impact on physical, mental/emotional, and social health.

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B. Consumer Rights and Issues

a. Analyze the reliability of health care information, services and products that could affect consumer decision-making (e.g., finding specialists such as CDC, county health departments, extension centers; insurance carriers, clinics, hospitals, OB/GYN, and emergency rooms).

C. Community Services/Careers

a. Develop a list of individual and/or governmental agencies and explain their responsibility for providing assistance to people for their health needs (e.g., Al-anon for drug abuse or dermatologist for acne).

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4. Life Management Skills

A. Decision Making and Problem Solving

a. Apply practices that preserve and enhance the safety and health of others (e.g., conflict resolution, peer mediation, seeking adult or professional consultation, stress management, goal setting, decision-making, assertive behavior, resisting peer pressure, asset development).

D. Stress Management and Coping Skills

a. Create a plan using life management skills to address personal and social concerns that are a part of daily living (e.g., learning to manage time and stress, setting goals, dealing with conflicts, working collaboratively).

E. Harassment/Bullying and Violence Prevention

a. Develop a list of intervention skills that can be used to prevent violence and describe when and how to use these skills.

Risk Assessment and Reduction

1. Disease Prevention and Control

A. Communicable vs. Non-Communicable Diseases

a. Describe the effects of positive lifestyles behaviors on the occurrence of disease (e.g., sunscreen, physical activity, diet, sleep, stress management).

b. Conduct research to answer questions regarding epidemiological studies and cite evidence about the management and prevention of communicable and non-communicable diseases (e.g., local health department statistics, youth risk behavior survey (YRBS), Centers for Disease Control (CDC), National Institute of Health (NIH).

c. Analyze past problems related to chronic diseases to develop strategies to predict, prevent, solve or manage present or future disease-related problems (e.g., ethnic, cultural and family histories.

B. Body Defenses and Recovery

a. Describe the primary and secondary defenses for prevention of disease and discuss how they help to maintain or improve them.

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C. Types of Pathogens and Transmission

a. Formulate and support an interpretation regarding the reoccurrence of resistant strains of pathogens (e.g., strep, herpes, mononucleosis, gonorrhea, Chlamydia, HIV, Staff Infection).

b. Use the scientific process of laboratory investigation to test hypotheses on pathogen transmission (e.g., hand sanitizers, Germglow, disinfectants).

D. Adolescent Health Issues and Sexually Transmitted Infections

a. Compare signs and symptoms of common sexually transmitted infections.

b. Explain how sexually transmitted infections can affect an individual's physical, social, mental/emotional, intellectual, professional, and economic well-being (e.g., HIV/AIDS sterility, Kaposi Sarcoma, pneumonia, PCP, stress, oral thrush, yeast infections).

F. Abstinence, Prevention Behaviors, and Teen Pregnancy

a. Analyze and evaluate how teen pregnancy and parenting can impact personal, family and societal perspectives (e.g., dropout, low self-esteem, abandonment, and economics).

b. Investigate and analyze the cause and effect relationship between obtaining prenatal care and the health of the mother and baby. (e.g., nutrition, alcohol and tobacco consumption, physical activity, age, other drug use) and it's effects on the unborn child (e.g., leg deformities, retardation, learning disabilities, addiction, low birth weight).

c. Evaluate the progression of reliability of various contraceptive methods from most reliable to least reliable (e.g., abstinence, barrier methods, oral methods, surgical methods, injectable methods, implants).

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2. Injury Prevention and Safety

A. Safety for Home, School, and Communities

a. Describe and analyze methods that can be effective in preventing societal problems affecting teens (e.g., rape, assault, homicide, and other personal safety risks, gangs).

B. First Aid Procedures

a. Identify, from a given list, those situations that are life threatening and perform basic life saving maneuvers (e.g., CPR, abdominal thrust, bleeding control, shock, burns, asthma, bee stings, snake bites, poisoning).

C. Activity Related Injuries and Environmental Conditions

a. Recognize activity-related conditions (e.g., bleeding, shock, asthma, low blood sugar, diabetes, dehydration) and perform appropriate first aid procedures and practices for each.

b. Recognize weather-related emergencies (e.g., dehydration, asthma, heat exhaustion, heat stroke, hypothermia, frostbite) and perform appropriate first aid procedures and practices.

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D. Water-Related Emergencies

a. List the common water-related emergencies and describe prevention and treatment techniques.

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3. Substance Education

A. Safe and Unsafe Substances

a. Assess the short and long-term effects that performance enhancing aids have on the body processes (e.g., liver damage, heart failure, brain aneurysm, anger, "road rage," acne, violence, memory loss, hepatitis, HIV) and on individuals and society (e.g., body image, obsession with winning, violent behavior, black market/illegal purchases).

B. Purpose and Guidelines for Prescription, OTC Drugs and Natural Substances

a. Explain why individuals need to follow label guidelines for all substances (e.g., compatibility of ingested substances).

C. Substance Use vs. Non-Use

a. Evaluate the short and long term effects of alcohol, tobacco, and other substances on the body (e.g., changes in mood, thought processes, mental ability, coordination, reaction time) and draw conclusions on the impact of these substances on personal, social, and economic threats to society.

b. Review healthy alternatives to substance use and investigate effective strategies to promote individual, family, and community health.

c. Assess the risk of chemical dependency and locate available help if alcohol, tobacco, and other substance use becomes a problem.

d. Evaluate personal risks for chemical dependency based upon personal, family, and environmental factors.

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4. Environmental Health

A. Effects of Pollution on Health

a. Define global warming and its effects on the health of individuals worldwide.

b. Compare present environmental health problems to past environment health problems and develop strategies to reduce or correct these problems for the future (e.g., destruction of the ozone layer, asbestos, second-hand smoke, nuclear disasters, carpooling).

B. Individual Responsibility

a. Compare ways that individuals, communities, state and federal government can cooperate to promote environmental health (e.g., recycling, adopt-a-highway programs, river clean-up, land preservation, community beautification, advocacy).