

Scope & Sequence Strand: Functions and Interrelationships of Systems

Content Standard 1: Structure and Functions of the Body

A. Muscular System

1. Students will recognize the three different types of muscle tissue (smooth, cardiac, skeletal) and differentiate between them.
 - a. Sample Teaching Strategy
 1. Use a skinned piece of chicken, analyze the muscle tissue and its structure.
 - b. Resources
 1. <http://www.accessexcellence.org/AE/ATG/data/released/0498-JimEkstrom/>
2. Students will explain how muscles work in pairs for movement to occur and provide examples (e.g., flexors and extensors; biceps contract and triceps extend to flex your elbow bringing hand to shoulder).
 - a. Sample Teaching Strategies
 1. Use chicken wings to test and observe how muscles work together.
 - b. Resources
 1. <http://www.accessexcellence.org/AE/ATG/data/released/0498-JimEkstrom/>
 2. Use a clothespin, flexing it between thumb and forefinger for a determined amount of time to demonstrate how muscles function together to perform movement.

B. Skeletal System

1. Students will differentiate among the kinds of joints in the skeletal system (e.g., ball-and-socket, hinge, gliding, moveable, immovable).
 - a. Sample Teaching Strategy
 1. Have students perform various physical movements (e.g. rotating arms in a circle, pushing and pulling a chair, lift a book from the desk, turn head from side to side, flex and extend fingers, crouch) and determine which type of joint is involved in the motion.
 - b. Resources
 1. <http://www.innerbody.com/image/skel07.html>
2. Students will explain the way the skeletal system works with other body systems (e.g. circulatory system, muscular system, and nervous system).
 - a. Sample Teaching Strategy
 1. Using a skeletal model or a virtual skeleton, show how the skeletal system and its proper functioning affect the rest of the body systems.

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b. Resources

1. <http://library.thinkquest.org/10348/>

C. Circulatory/Cardiovascular System

1. Students will illustrate the blood flow through the body using a diagram.

a. Sample Teaching Strategy

1. Design a model of how the blood flows throughout the body and how it works in conjunction with the respiratory system.

2. Students will explain how aerobic exercise impacts an individual physically, mentally, and emotionally.

a. Sample Teaching Strategy

1. Have students perform various exercises of different intensity, (e.g., walking slowly, lifting books many times quickly, jumping jacks). After each exercise, students should take note of their heart rate, breaths per minute and any other feelings that arise from the exercise.
2. Students can work in groups to brainstorm a list of the benefits of exercise.
3. Administer a “How healthy are you?” style quiz and have students discuss their outcomes.

b. Resources

1. <https://www.hnfs.net/adap/howhealthy/quiz.asp>

D. Respiratory System

1. Students will illustrate air flow through the respiratory system using a template.

a. Sample Teaching Strategy

1. Make a model of the human respiratory system using everyday items (e.g. balloons = lungs, drinking straws = bronchial tubes, etc.)

b. Resources

1. <http://webpages.uah.edu/~mccordcr/portfolio/respiratorysystemmodellessonplan.htm>

E. Digestive System

1. Students will identify the function of each organ in the digestive system (e.g., stomach-digestive juices, pancreas-insulin, gall bladder-storage of bile, liver-removes toxins, small intestines-absorbs nutrients, large intestines-removes solid waste).

a. Sample Teaching Strategy

1. Prepare an unlabeled illustration of the digestive system and have students label the parts.
2. Compare the parts of the digestive system to everyday items found in the home.

3. Have students write a study of human digestion from an alien point of view.
- b. Resources
 1. http://216.239.51.104/search?q=cache:NgjW0iI-OXcJ:www.questacon.edu.au/html/assets/pdf/The_Digestive_System.pdf+digestive+system+model&hl=en&gl=us&ct=clnk&cd=4
- F. System Interactions and Interrelationships
 1. Students will illustrate the interrelationships among and between systems (e.g., muscular-skeletal, respiratory-cardiovascular) that lead to good health.
 - a. Sample Teaching Strategy
 1. Allow students to collectively identify the major working systems in an automobile (e.g. engine, fuel, air intake, drive train), and compare these systems to the working systems of the human body.
 - b. Resources
 1. http://www.msncucleus.org/membership/html/k-6/lc/humanbio/3/lchb3_1a.html

Scope & Sequence Strand: Health Maintenance and Enhancement

Content Standard 1: Personal and Family Health

- A. Health and Skill Related Fitness
 1. Students will illustrate the meaningful relationship between maintaining optimum health and the development of skill related activities.
 - a. Sample Teaching Strategies
 1. Have students create definitions for “optimum health” and “skill related activities.”
 2. After defining the terms, students can formulate and write poems or short stories about ways that develop physical activity skills will help lead to “optimum health.”

Content Standard 2: Nutrition

- A. Essential Nutrients Throughout Life Cycle
 1. Students will describe and differentiate the contribution specific nutrients provide toward growth, repair, and cellular needs of the body (e.g., fats, carbohydrates, proteins, vitamins, minerals, and water).

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- a. Sample Teaching Strategy
 - 1. Students can work in pairs or groups to make large (poster board size) charts listing each of the essential nutrients and their physiological contributions to the human body.
 - b. Resources
 - 1. <http://www.linksnorth.com/nutrition/nutrients.html>
- B. Food Pyramid
- 1. Students will illustrate the basic premise behind the use of the food pyramid, which categories foods belong to, as well as the recommended daily intake of each section of the pyramid.
 - a. Sample Teaching Strategy
 - 1. Distribute copies of the food pyramid to students, and allow students time to look at their average daily food intake and compare it to those recommended on the pyramid.
 - b. Resources
 - 1. www.mypyramid.gov
- C. Balance, Variety and Moderation
- 1. Students will compare the nutrient contribution of a food to its energy/caloric contribution.
 - a. Sample Teaching Strategy
 - 1. Ask students, “What is a calorie?” Write responses on board or overhead.
 - 2. Give students a pre-made list of a variety of foods and ask them to number them by caloric count from least to greatest number of calories. Compare students’ answers to correct answers.
 - 3. Give students a pre-made list of physical activities and have students order the activities from least to greatest in terms of calories burned. Compare students’ answers to correct answers.
 - 2. Create a meal plan(s) through the selection of appropriate food based on energy needs, food preferences and nutrient requirements as represented in “My Pyramid.”
 - a. Sample Teaching Strategy
 - 1. Make students “chefs for a week”. Utilize the food pyramid they will create a menu for seven days of “healthy” meals focusing on variety and caloric intake.
 - b. Resources
 - 1. www.mypyramid.gov
 - 3. Evaluate factors that influence food choices and their impact on nutrition and health. Factors include: culture, family, emotions, peers, media.
 - a. Sample Teaching Strategy

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1. Have students keep a food journal for a week, showing everything they have taken in during a seven day period. Using the journal, students can look at the times at which they ate certain foods and reason why they ate them.

b. Resources

1. <http://weightloss.about.com/cs/ourtoptips/l/blfooddiary.htm>
2. <http://www.caloriescount.org/onlinediary.html>
3. <http://www.netfit.co.uk/fooddiary.pdf>

D. Healthy Body Image

1. Students will formulate appropriate strategies to address problems that can affect a healthy body image during adolescence (e.g., culture, family, peers, media, personality, emotions).

a. Sample Teaching Strategy

1. Have students take a body image quiz.
2. Use media sources such as magazines, television, movies, etc. to discuss society's views on what is "healthy", and how this corresponds or contrasts with the biblical view of "health".
3. Work in small groups to develop posters that include Christian examples of healthy body images.

b. Resources

1. <http://www.childline.org.uk/extra/quiz-howdoyoufeelaboutyourlooks.asp>
2. http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Guys_how_do_you_feel_about_your_body?OpenDocument

E. Food Labels

1. Students will analyze and critique food labeling information to determine calories, nutrients, serving size, types of ingredients and nutritional value in a product.

a. Sample Teaching Strategy

1. Visit the website www.getkidsinaction.org/3_eating/foodlabel.php?n=3 and have students become familiar with food labels using the website.
2. Have students collect and bring in food labels. Every student needs at least six food labels. Have students classify labels in order from least number of calories to most calories. Next, look at serving size and see which food has the largest serving size. Each student should pick the food label from their group that they believe is the healthiest choice and attach it to a large white piece of construction paper. Then write the name of the dietary information on the sides of the paper and draw arrows from each title to its corresponding part on the label. Display the

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posters around the room and allow students to move among the posters to compare the food products. Afterward, have a discussion about which food products students think would be the healthiest choices.

3. Ask the students to design the packaging and labeling of a new food product. An empty food box can be used as a base for the new designs. The food products could then be put on display and students can explain them.

F. Food Safety

1. Students will apply the food basic rules of food handling to different food preparations situations (e.g., clean, chill, cook, separate).

a. Sample Teaching Strategy

1. Have students bring in their favorite recipe for each component of a meal. Divide students into groups to share recipes and decide on a meal to plan. Then list the food handling rules that should be observed while preparing the meal. Make a list of what could happen if the precautions are not followed.
2. Have students make kitchen checklists that can be laminated and posted in their kitchens at home to remind everyone in the family about the basic rules of food handling and preparation. These can also be made into refrigerator magnets.

b. Resources

1. http://www.fsis.usda.gov/Fact_Sheets/Basics_for_Handling_Food_Safely/index.asp

G. Food Energy and Physical Activity

1. Students will summarize the direct relationship between diet and exercise.

a. Sample Teaching Strategy

1. Using the idea of a balance, talk about food on one side and exercise on the other side. Persons who want to maintain their weight should balance their caloric intake with their caloric output (work). If a person wants to lose weight, more calories need to be burned than taken in. If a person wants to gain weight, more calories need to be taken in than burned. Diagrams illustrating these ideas can be drawn and labeled. Use symbols that represent healthy food choices as well as activities that provide exercise and burning of calories.
2. Take a class survey to find out how much time each week students spend exercising. Calculate an average for the class. Have students set goals indicating how to increase their amount of exercise. Research information about how many calories are burned during the performance of various

types of activities. Keep a journal to approximate the number of calories burned by physical activity each day.

b. Resources

1. http://www.abc.net.au/science/surfingscientist/pdf/lesson_plan13.pdf

Scope & Sequence Strand: Social Responsibilities

Content Standard 1: Building Healthy Relationships

A. Conflict Resolution

1. Students will assess conflict situations and apply conflict resolution/mediation strategies.

a. Sample Teaching Strategy

1. Have students keep a journal for a period of time, recording the types of conflict they witness in their daily lives. Come together as a class and discuss the conflicts that they observed. (Keep names out of the discussion). Divide the class into groups and assign a particular type of conflict to each group. Each group should present three possible ways to deal with the situation and then decide on which they believe would be the best solution. Share the outcomes of the group discussions with the entire class.
2. Develop a conflict situation, select a strategy to address it and evaluate its effectiveness.
3. Divide the students into groups and have each group choose a fairy tale or nursery rhyme that involves conflict. Have each group plan a skit that illustrates the conflict between the characters and then takes those characters through the process of conflict resolution. The skits should include how the end of each story would change based on how the conflict was resolved.

b. Resources

1. http://www.learningpeace.com/pages/LP_04.htm

Content Standard 2: Life Management Skills

A. Violence Prevention/Intervention

1. Students will identify violent acts in our society (e.g., assault, homicide, rape, robbery)

a. Sample Teaching Strategy

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1. Have students search through the newspaper to find examples of acts of violence in our society. Attach them to a bulletin board or other location under a heading (e.g., assault, homicide, rape, robbery, etc.). Generate a list of activities and programs that could make the community safer.
- B. Harassment/Bullying & Cultural Influences
1. Students will identify bullying behaviors.
 - a. Sample Teaching Strategy
 1. Formulate personal and school-wide plan(s) to address and reduce bullying.
 2. Divide the class into groups and have them create a poster campaign to send the message that bullying will not be tolerated in school. Hang posters around the school. Be sure to include Christ-pleasing behaviors.
 3. Class can be divided into groups that will formulate a classroom or school “Bill of Rights” that focuses on how students should treat one another. This “Bill of Rights” should address the topics of exclusion, gossip, verbal bullying, and physical harm.
 2. Students will recognize and evaluate sexual harassment issues.
 - a. Sample Teaching Strategy
 1. Students can take an online quiz to spark the thought process as to what actions constitute sexual harassment.
 2. Create a plan to address these issues by having students discuss the steps that they would need to take if something of this nature (sexual harassment) were to happen to them.
 - b. Resources
 1. <http://teenadvice.about.com/gi/dynamic/offsite.htm?zi=1/XJ&sdn=teenadvice&zu=http%3A%2F%2Fwww.wgby.org%2Fedu%2Fflirt%2Fagdisq.html>

Scope & Sequence Strand: Risk Assessment and Reduction

Content Standard 1: Injury Prevention and Safety

- A. Activity-Related Injuries and Conditions
1. Students will apply concepts about weather safety (recognize and attend to changing conditions), exercise precautions during activities and follow appropriate safety rules and use of equipment.
 - a. Sample Teaching Strategy
 1. Have students list the many different exercise activities that they participate in throughout the year.

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2. Divide a sheet of white paper into four boxes. Have students draw the weather conditions that occur in each season. On the back of the drawings, students will write the precautions that are necessary for exercising based on weather conditions in each season.
 - b. Resources
 1. <http://sportsmedicine.about.com/cs/environment/a/aa121100a.htm>
 2. <http://www.mayoclinic.com/health/exercise/HQ00316>
2. Students will make informed decisions to reduce the risk of injuries during exercise, sports and other activities.
 - a. Sample Teaching Strategy
 1. Groups of students can role-play getting ready for different sports activities during different seasons. Include the equipment and steps needed to prevent injuries. Students can also show what may result if these precautions are not taken before participation in an activity.