

COURSE: Health	GRADE(S): 10 th Grade
UNIT: Wellness-Nutrition	TIMEFRAME: 5 Lessons

<p>NATIONAL STANDARDS:</p> <p>STANDARD 1: Students will comprehend concepts related to health promotion and disease prevention to enhance health.</p> <p>STANDARD 2: Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.</p> <p>STANDARD 5: Students will demonstrate the ability to use decision-making skills to enhance skills.</p> <p>STANDARD 6: Students will demonstrate the ability to use goal-setting skills to enhance health.</p> <p>STANDARD 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.</p>
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<p>STATE STANDARDS:</p> <p>10.1. Concept of Health</p> <p>10.1.12.A. Evaluate factors that impact growth and development during adulthood and late adulthood.</p> <p>10.1.12.B. Evaluate factors that impact the body systems and apply protective/preventive strategies.</p> <p>10.1.12.C. Analyze factors that impact nutritional choices of adults.</p> <p>10.1.12.D. Evaluate issues relating to the use/non-use of drugs.</p> <p>10.1.12.E. Identify and analyze factors that influence the prevention and control of health problems.</p> <p>10.2. Healthful Living</p> <p>10.2.12.A. Evaluate health care products and services that impact adult health practices.</p> <p>10.2.12.C. Compare and contrast the positive and negative effects of the media on adult personal health and safety.</p> <p>10.3. Safety and Injury Prevention</p> <p>10.3.12.D. Evaluate the benefits, risks, and safety factors associated with self-selected life-long physical activities.</p> <p><i>Reading Assessment Anchors:</i></p> <p>R11.A.2 Understand nonfiction appropriate to grade level</p> <p>R11.A.2.1 Identify and apply the meaning of vocabulary in nonfiction</p> <p>R11.A.2.3 Make inferences, draw conclusions, and make generalizations based on text</p> <p>R11.A.2.4 Identify and explain main ideas and relevant details</p>

<p>UNIT OBJECTIVES:</p> <p>Identify a personal wellness goal and formulate a plan for improvement.</p>	<p>CONTENT:</p> <p>I. Wellness: an overall state of well-being, or total health. It is a way of life. It involves making choices and decisions each day that promote good health.</p> <ul style="list-style-type: none"> - Wellness Wheel <ul style="list-style-type: none"> o Fitness o Nutrition o Stress Management o Health & Safety o Self-image
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Analyze personal diet in relation to the RDA and predict the immediate and long-term impact on their health.

II. Health Services

- Crisis-oriented (reaction to illness or injury at the time it occurs) vs. Preventative-oriented Health practicing healthy habits to keep a person well and free from disease and other ailments; wear seatbelts, apply sunscreen, avoid unsafe areas, use protective gear)
 - o Related Diseases
 - Heart Disease
 - Stroke
 - Diabetes
 - Obesity
 - Cancer

III. Wellness Lifestyle Plan-personal behaviors and habits related to the way a person lives, that help determine his or her level of health

- Lifestyle Quiz
 - o Personal Health Contract
 - Risk Factors
 - Good Health Habits
 - Risk Reduction Plan
 - Choose a primary goal
 - Set short term objective
 - Build in rewards
 - Keep a record-log
 - Build in support

IV. UCLA 7 Guidelines for Longer Life (modified)

- 3 or More Meals A Day
- Breakfast Everyday
- Adequate Sleep
- Maintain Ideal Weight
- No Smoking
- Moderate Alcohol
- Exercise
- *Nutrients* are the substances in food that your body needs to function properly to grow, to repair itself, and to supply you with energy.
 - o Carbohydrates are the starches and sugars found in food. They are the body's preferred source of energy, providing 4 calories per gram. When not used for energy, it is stored as body fat. (Should comprise 55 to 65% of daily calories, mainly from complex.)
 - Simple carbohydrates, or sugars, are present naturally in fruits, some vegetables, and milk.
 - Complex carbohydrates, or starches, are found in great supply in rice, and other grains, seeds, nuts, legumes, and potatoes.
 - Chemically more complex than simple carbohydrates. They are made of *many* sugars linked

together.

- ▶ Fiber is a special form of complex carbohydrate found in the tough, stringy part of vegetables, fruits, and grains. It aids digestion, prevents constipation, controls diabetes and may reduce the risk of some cancers and heart disease.
- Proteins are nutrients that help build and maintain body tissues. (Muscle, bone, connective tissue, teeth, skin, blood, and vital organs all contain protein.) Provide four calories per gram. Unused protein calories are converted to fat for storage.
 - Amino acids are chains of building blocks that make up proteins. The body can make 11 out of 20 amino acids.
 - ▶ Essential amino acids are the 9 your body can't make. Must come from the foods you eat.
 - ▶ Complete proteins are foods that contain all the essential amino acids. These sources include animal products, including milk and many soybean products.
 - ▶ Incomplete proteins are foods that lack some of the essential amino acids. They are derived from the seeds of plants: legumes, nuts, whole grains, and the seeds themselves.
- Fats are essential for growth and healthy skin. They carry vitamins A, D, E, and K into the blood. They add flavor to food and help satisfy hunger since they take longer to digest. Provide nine calories per gram of energy. Dietary guidelines recommend fat intake to no more than 30% of calories.
 - Saturated fats are animal fats and tropical oils. Usually solid or semi solid at room temperature. A high intake of saturated fats is associated with an increased risk of heart disease.
 - Unsaturated fats are most vegetable fats, including olive, canola, soybean, corn and cottonseed oils. They become liquids, or oils, at room temperature. They have been associated with reduced risk of heart disease.
 - Cholesterol is a fat-like substance produced in the liver of all animals and found only in foods of animal origin. It is instrumental in the production of the sex hormones, of vitamin D and of the protective sheath around nerve fibers. Elevated blood cholesterol levels

constitute a major risk factor for heart and other circulatory diseases. Limiting the consumption of dietary fat, especially saturated fat, may reduce the risk.

- o Vitamins are compounds that help regulate many vital body processes, including the digestion, absorption and metabolism of other nutrients. They are micronutrients, (needed in small amounts.) Of the 13 vitamins that play a key role in good nutrition, only one – vitamin D – is manufactured by the body. The rest must be derived from food.
 - Water-soluble vitamins include vitamin C and the eight vitamins in the Vitamin B complex. They dissolve in water and pass easily into the bloodstream in the process of digestion. Excess amounts are excreted in urine. Not stored in the body, so they must be replenished.
 - Fat-soluble vitamins are absorbed and transported by fat; they include Vitamins A, D, E, and K. They are stored in the body's fatty tissue, the liver, and the kidneys. Excess buildup can have a toxic or other damaging effect on the body.
- o Minerals are inorganic substances that the body cannot manufacture but that act as catalysts, regulating many vital body processes. (Micronutrients.) Some minerals are needed in larger amounts than others.
 - *Iron* is important during teen years when growth is rapid. Essential for the hemoglobin in the blood, which carries oxygen throughout the body. Lack of iron, results in tiredness and little endurance. Found in meat, shellfish, legumes, peanuts, dried fruits, fortified breakfast cereal, enriched rice.
 - *Calcium* gives structure to bones and helps develop and maintain bone strength. It also aids muscle contraction, blood clotting and the proper functioning of the nervous system. Dairy products, some leafy green vegetables, and canned salmon are good sources. A lack of calcium in the teen years can lead to poor bone density and later in life to osteoporosis.
 - Three other important minerals belong to a group called *electrolytes*, (they become electrically charged when in solution, as they are in the body fluids.) Sodium and potassium help maintain the balance of fluid within body cells.

Differentiate between the main components of the food guide pyramid and the types of nutrients.

Sodium and chloride are found in table salt. Bananas and orange juice are excellent sources of potassium.

- o *Water* makes up the greatest percentage of the body. It is a regulator and is vital to every body function. The body uses about 10 cups a day, more if you perspire.

V. The Food Guide Pyramid

- The Grain Group

- o Two subgroups of Grains
 - Whole grains contain the entire grain kernel: the bran, germ, and endosperm. I.e. Whole-wheat flour, oatmeal, brown rice, whole cornmeal, etc.
 - Refined grains have been milled, a process that removes the bran and germ. This is done to improve the shelf-life, but it also removes dietary fiber, iron, and many B vitamins. I.e. White flour, white bread, white rice.
- o Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product.
- o Most refined grains are enriched. This means certain B vitamins and iron are added back after processing. Fiber is not added back to enriched grains.

- The Vegetable Group

- o Any vegetable or 100% vegetable juice counts as a member of the vegetable group. Vegetables may be raw or cooked; fresh, frozen, canned, and/or dried/dehydrated; and may be whole, cut-up, or mashed.
- o Five sub-groups (based on nutritional content)
 - Dark green vegetables i.e. broccoli, romaine lettuce.
 - Orange vegetables i.e. carrots, sweet potatoes.
 - Dry beans and peas i.e. soy beans, split peas.
 - Starchy vegetables i.e. corn, potatoes, green peas.
 - Other vegetables i.e. beets, celery, onions, green beans.

- The Fruit Group

- o Any fruit or 100% fruit juice counts as part of the fruit group. I.e. Apples, Prunes, Tomatoes, Pears

- The Milk Group

- o All fluid milk products and many foods made from milk are considered part of this

Identify the role food plays in their life.

- o Selection Tip- Choose fat-free or low-fat milk, yogurt, and cheese. If you choose milk or yogurt that is not fat-free, or cheese that is not low-fat, the fat in the product counts as part of the discretionary calorie allowance.
- The Meat & Beans Group
 - o All foods made from meat, poultry, fish, dry beans or peas, eggs, nuts, and seeds are considered part of this group.
- Oils
 - o Oils are fats that are liquid at room temperature, like the vegetable oils used in cooking.
 - o Oils come from many different plants and fish. I.e. Canola oil, Corn oil, Olive oil, Nuts, Avocados

VI. Food in Your Life

- The nutrients in food affect how you look, feel, act, grow, and how well you function each day.
- Your eating habits stem from both a physical need for food and a psychological desire for food.
- The most basic reason for eating is physical.
 - o *Hunger* is a natural drive that protects you from starvation.
 - o When stomach is empty, its walls contract, stimulating nerve endings that signal your brain that you're hungry.
- *Appetite* is a desire, rather than a need, to eat. It is a learned response shaped by factors in your environment and by your emotions.
- There are a number of environmental factors that influence your food choices.
 - o Culture – foods associated with picnics, fairs, movies, games, holidays, ethnicity, religion, and teen eating practices.
 - o Family and friends – at first you eat what your mom put down in front of you.
 - o Advertising
 - o Time and money – are the two top factors that influence food shopping decisions. Cost, convenience, and food safety come next.
 - o Your emotions
- Choosing foods that taste good and provide nutrients without too much fat, cholesterol, and sodium, is one of the most healthful ways to reduce major risk factors for chronic diseases, including obesity, high blood pressure, and high blood cholesterol.
 - o Eating is linked to six out of ten leading causes of death in the U.S.
 - Many people are unable to distinguish between appetite and hunger.

Analyze their own diets according the Dietary Guidelines.

- *Nutrition* is the process by which the body takes in and uses food.
 - o Allows you to have energy, feel and look your best, and stay mentally alert.
 - o Proper nutrition can help prevent chronic diseases such as heart disease, certain cancers, diabetes, and stroke.
 - o Next to infancy, adolescence is the fastest period of growth a person experiences.

VII. Calories

- Definition- A measure of the amount of energy needed to raise the temperature of 1 kilogram of water 1 degree centigrade. Scientists burn foods to measure the number of calories they contain.
- Discretionary Calories- Depending on the types of foods you choose, you may be able to spend more calories than the amount required, to meet your nutrient needs. These extras can be used on fats and sugars, but there is a very small allowance of 100-300 calories. Most people use this allowance by lunch!
 - o You can use your discretionary calorie allowance to:
 - Eat more foods from any food group than the food guide recommends.
 - Eat higher calorie form foods- those that contain solid fats or added sugars. I.e. Whole milk, cheese, sausage, sweetened yogurt
 - Add fats or sweeteners to foods. I.e. Sauces, salad dressings, sugar, syrup, butter

VIII. Guidelines for a Healthful Eating Style

- Eat a variety of foods. The Recommended Dietary Allowances (RDA) are the amounts of nutrients that will prevent deficiencies and excesses in most healthy people – for Americans over age two.
 - o The Food Pyramid Guide categorizes foods into five food groups, indicating a range of servings for each that a person is advised to eat. It is a graphic tool for expressing the Dietary Guidelines.
 - Fats, oils, sweets – use sparingly
 - Milk, yogurt, cheese – 2 to 3 servings
 - Meat, poultry, fish, eggs, beans, and nuts – 2 to 3 servings
 - Vegetables – 3 to 5 servings
 - Fruits – 2 to 4 servings
 - Bread, cereal, rice, and pasta – 6 to 11 servings
- Balance the foods consumed with the

Summarize a plan on how to implement physical activity into their daily regiment.

amount of physical activity.

- o You get energy from food, and the energy value of food is measured in *units of heat* called calories. Your body requires a minimal number of calories each day in order to maintain itself.
- o *Metabolism* is the process by which your body gets energy from food. *Basal metabolism* is the minimum amount of energy required to maintain the life processes in a body. Your metabolic rate increases during activity.
- o Controlling body fat is more important to health than controlling body weight.
- o All calories add up in the same way, no matter what their source. Excess is converted into fat for storage.

- Choose plenty of grain products, vegetables, and fruits. Excellent sources of complex carbohydrates and fiber. They are low in fats and calories, and they provide essential vitamins and minerals. A high intake has been shown to decrease the risk for heart disease, obesity, and some cancers. The National Cancer Institute recommends 20 to 35 grams of fiber per day.
- Choose an eating style low in fat, saturated fat, and cholesterol.
 - o Dietary guidelines recommend no more than 30% of calories come from fat. Eating styles high in fat are linked to obesity and some cancers.
 - o A diet high in saturated fat and cholesterol also contributes to increased cholesterol levels, a risk factor for heart disease.
- Choose an eating style moderate in sugars.
- Choose an eating style moderate in salt and sodium. 2,400 mg or less a day is advised. Too much may put you at risk of high blood pressure.

IX. Physical Activity-

- Definition- Physical activity is the movement of the body that uses energy. For health benefits, physical activity should be moderate or vigorous and add up to at least 30 minutes a day.
- Moderate Physical Activities Include:
 - o Walking briskly
 - o Hiking
 - o Gardening/ yard work
 - o Dancing
 - o Golf
 - o Bicycling
 - o Weight training
- Vigorous Physical Activities Include:

Describe common eating disorders and the related health problems associated with them.

- o Running/Jogging
- o Bicycling
- o Swimming
- o Aerobics
- o Walking very fast
- o Heavy yard work (chopping wood)
- o Weight lifting
- o Basketball

X. Weight problems

- Obesity means excess body fat. Higher risk of health problems: hypertension, diabetes, high blood cholesterol, atherosclerosis, and some cancers. May affect self-esteem and social health.
- Underweight is being 10% or more below normal weight. Has little body fat as an energy reserve, and less of the protective nutrients the body stores. More difficult to fight off infection and increases the risk of health problems when surgery is needed.
- Anorexia Nervosa
 - o Definition- An eating disorder in which a person does not eat enough food for the body to function at a healthy level or maintain a healthy weight; it can result in death by starvation.
- Bulimia Nervosa
 - o Definition- An eating disorder in which a person eats a great deal of food then vomits or uses other methods, such as laxatives or over exercising, to avoid weight from the overeating.
- Binge-Eating Disorder
 - o Definition- A condition in which a person eats large amounts of food frequently or repeatedly. The person feels out of control and unable to stop eating during binges.
- Disordered Eating Patterns
 - o Definition- Conditions in which dieting, food restriction, fear of becoming overweight, and body image dissatisfaction interfere with normal daily life.
- Anorexia Athletica
 - o Definition- A sub-group of athletes with eating disorder symptoms that do not permit a diagnosis of anorexia nervosa or bulimia nervosa. It is commonly used to identify the compulsive exerciser. This is not a formal eating disorder but is identified by medical groups.
- Amenorrhea
 - o Definition- The condition of the absence of any menstrual flow in a woman who has never menstruated by the age of 16.
 - o Incidence, & Risk Factors- Most girls begin

menstruating between ages 9 and 18, with an average around 12 years old. Primary amenorrhea is not considered to have occurred until a girl is beyond age 16, if she has undergone other normal changes that occur during puberty. It may occur with or without other signs of puberty.

o Typical Causes

- Drastic weight reduction
- Malnutrition
- Chronic (long term) illnesses
- Pregnancy

XI. Related Health Problems-

- Vomiting and diarrhea can lead to dehydration, kidney damage, and irregular heartbeat.
- Chronic vomiting erodes tooth enamel, causes tooth decay, and damages tissue of the stomach, esophagus, and mouth.
- Laxative abuse interferes with digestion and absorption, causing nutrient deficiencies. May also lead to serious damage of blood composition.

XII. Dangerous eating/weight control practices

- Total exclusion of a food group.
- Weight cycling (yo-yo dieting) is a cycle of losing and regaining weight. Fad diets cause lean body tissue loss along with body fat that is replaced with more body fat. Fat burns fewer calories than muscle so the person requires fewer and fewer calories to maintain weight.
- Fasting causes the body to use its own muscle tissue for energy.
- Liquid protein, (high protein, low carbs) have such serious side effects that the FDA requires a warning label.
- Diet pills, (amphetamines), control appetite but may cause side effects. May be addictive.
- Natural herbs (ma huang) may contain a form of ephedrine which has been linked with strokes and heart attacks.
- Anabolic steroids are chemicals similar to the hormone testosterone that are illegally consumed to increase muscle mass and performance. Consequences include increased risk of cancer, sterility, acne, unusual wt. gain or loss, sexual underdevelopment and dysfunction, violence, suicidal tendencies, depression.

XIII. Understanding Food Labels:

- Requirements by Law
 - o The United States Department of

<p>Compare and contrast two different food labels.</p>	<p>Agriculture (USDA) and the Food and Drug Administration (FDA) require that most foods (meat and poultry excluded) be clearly labeled with nutritional information for the consumer.</p> <ul style="list-style-type: none"> o Mandated nutritional information includes: <ul style="list-style-type: none"> ▪ The serving size. ▪ The number of servings per container. ▪ The number of calories per serving. ▪ The amount per serving of the following nutrients: Fats- total calories and the amount of saturated fats and cholesterol, Sodium, Total Carbohydrates, Dietary Fiber, Sugars, Protein, Vitamin A, Vitamin C, Calcium, and Iron. - Consumer Choices <ul style="list-style-type: none"> o Fast food o Organic food o Vegans- People who avoid all animal products and eat plant foods only. o Vegetarianism- The practice of consuming foods only from plant sources, except eggs or dairy products in some instances.
<p>ACTIVITIES:</p> <p>Concept Attainment Strategy to define Wellness</p> <p>Students arrive at their personal definition of Wellness. (Advocacy)</p> <p>Discussion of what is needed to function efficiently and effectively: physically, emotionally, socially, mentally, and spiritually. (Interpersonal Communication)</p> <p>Students design Individual Wellness Wheels that represents important things in their lives. (Analyzing Internal and External Influences)</p> <p>Students create a visual aid to illustrate a person that represents "Wellness" (Advocacy, Analyzing Internal and External Influences)</p> <p>The following questions are placed on large butcher-block paper and attached to the wall. Students rotate and answer all questions. A class discussion follows: Graffiti Wall Strategy- discussion of questions (Sample Questions)</p>	<p>ASSESSMENTS:</p> <p>Students will design a Wellness Wheel that represents their wellness goals.</p> <p>Each student, will journal their progress on designing and implementing their Lifestyle Wellness Plan.</p> <p>Research the main components of the food guide pyramid and nutrients and write a two-page paper on their findings.</p> <p>Each student will write an analysis of their partner's diet, comparing the nutrients and calorie content with the RDA. Findings will include two short-term and long-term effects their diet may have on their health. Students will share and discuss.</p> <p>Create a bulletin board illustrating nutritious snacks and eating disorders. Possible title "Super Snack Selections".</p> <p>Create a physical activity plan to implement into their daily routine. Create a food label poster.</p>

- ✧ Is exercise something you relish or hate?
- ✧ How are you in control of your own health?
- ✧ What makes you feel successful?
- ✧ If you are in a bad mood, what do you do?
- ✧ Where do you feel most happy?
- ✧ What boundaries have you set for yourself to ensure your own emotional well-being?
- ✧ What illnesses have you had in the past six months?
- ✧ How do you feel about the STD epidemic and A.I.D.S.?
- ✧ Where would you go for help in making an important decision?
- ✧ What medical advances have the most influence on your life?

(Interpersonal Communication, Advocacy)

Wellness Lifestyle Quiz- self-assessment ("Wellness: It's Your Responsibility")

Students compare and contrast the shift in health services from crisis to preventive orientation via discussion. (Interpersonal Communication)

Students will identify habits that promote longer life through small group discussion and presentation. (Interpersonal Communication, Self-management)

Lifestyle Wellness Plan-Design and implement (Decision-Making/ Goal-Setting Skills)

Teacher lecture and notes.

Quizzes on information.

Teacher directed differentiated instructional projects and activities are ongoing and based on student need.

RESOURCES:

PMSD Materials book

Health: A Guide to Wellness Text Book by Glencoe

<http://my.webmd.com/>

Essentials of Health & Wellness (2005)
Robinson, J., McCormick, D, & Haroun, L.
Thompson Learning Inc. Clifton Park, NY.

<http://www.mypyramid.gov>

<http://www.swedauk.org/disorders/other.htm>

REMIEDIATION:

- ✧ Extra time given as needed.
- ✧ Peer helpers.
- ✧ Teacher assistance.
- ✧ Handouts to supplement notes.

Discuss food choices with the school nurse.

ENRICHMENT:

Interview three senior citizens and determine the quality of life for each one. Include age, physical activities, and status of health in a short written report. Try to determine how heredity or lifestyle factors influenced these people's health?

Three leading causes of death in 1900 were pneumonia and flu, tuberculosis, and inflammations of the digestive tract. Compare these causes of death with the current leading causes (heart disease, cancer, and stroke). Write a research paper explaining some of the reasons why these statistics have changed. List at least three resources.

Investigate and report on laws that help regulate a healthful environment in the community, such as laws that regulate smoking, littering, loitering and curfews.

Create a healthy, week-long menu that includes the nutritional values of the different food choices.

Research the method by which the FDA approves food and drugs (research paper).

Suggested Reading:

"We are Beautiful: Teen Girls Shout Out About Inner Beauty And Self-Confidence", by Woody Wlnfree Sourcebooks, Inc. 2006

"Girls Rock! Just the Way We Are: Wise Teens Offer Tweens & Moms Advice on Healthy Body Image, Self-Esteem & Personal Empowerment"< by Lisa Miller 2006

