Wellness and Preventative Health Care

Course	Rationale				
Pathophysiology	Health care providers must have an understanding of safety as it relates to community and self in order to provide quality care				
Unit VIII Strategies for the Prevention of Diseases Essential Question How does society or family impact diet and nutritional needs?	 to community and self in order to provide quality care. Objectives Upon completion of this lesson, the student will be able to: Define health and wellness Examine the relationship between diet, weight control, and fitness Identify and make healthy choices to maintain and/or improve wellness Determine how nutrition and fitness will affect overall health and quality of life Assess own wellness level Conduct research and report on nutritional diseases and disorders 				
TEKS	Engage				
130.204(c) 1E, 1F, 1G, 12A, 12B	Begin a class discussion by asking the following questions: "What can I do to control my own health?" and, "What changes can I make to take responsibility for my own health?"				
Prior Student	Key Points				
Learning	I. Nutrition Basics				
Nutrition and Wellness Lesson	 A. Carbohydrates 1. Starches and sugars found in foods 2. Potatoes, pasta, and bread 3. Body's main preferred source of energy 				
Estimated time	4. Simple and complex				
1-4 hours	 B. Calories Energy the body gets from foods The body requires a minimum number of set calories each day Take in fewer calories than burned: lose weight Take in more calories than burned: gain weight C. Fiber Found in the tough, stringy part of vegetables and fruits A special form of complex carbohydrate Although it cannot be digested, it is used as energy Plays an important role in removing waste 				

		1. Helps build strong and healthy bones, muscles, tissue,
		 Helps make new blood cells, and protect important organs, such as heart, brain, lungs, and skin
	E.	Fats
		 Most concentrated form of energy; very thick substances; do not dissolve in water
		2. Fats in beef, pork, egg yolks, and dairy foods higher in saturated fat than in fish or chicken
		 Unsaturated fat is liquid fat, proven to reduce heart disease
	F.	Cholesterol is a fat-like substance produced in the liver of
		all animals, and found only in animals
	G.	Vitamins
		 Compounds that help regulate digestion, and metabolism
		 Needed in small amounts, so they are called micronutrients
		3. Have no calories, but some do give you energy
	Η.	Minerals
		 Inorganic substances that the body cannot manufacture
		 Act like workers regulating many important body functions
		 One important mineral in the body is calcium which helps develop strong bones, and build strong teeth
II.	Stress	management
	A.	Stress – the subjective feeling of tension to perceived events
	В.	Coping – refers to how the mind reacts to stress
	C.	Coping mechanisms vary from person to person
		1. An event that stresses one person, might not stress another
		2. Conscious behavior is usually based on the success of previous coping experiences
III.	The W	orld Health Organization defines health as. "Health is a state
	of com	plete physical, mental, and social well-being and not merely
		This definition of health has been expanded with emphasis
	Π.	on holistic health
	R	We think in terms of the body working as a unit (mental
	۵.	nhysical social and emotional) in order to maintain and
		promote optimum wellness through our daily actions
	С	Wellness implies feeling good regardless of infirmity or
	0.	disease.

- D. Holistic refers to the wellbeing of the whole person. It is important to meet all of these needs when giving care to the patient/client.
- IV. Wellness and/or preventive health care emphasize keeping patients well and not waiting until they are ill to provide treatment. Health education is vital to maintaining good health.
 - A. The holistic wellness approach includes:
 - 1. Physical fitness
 - a. achieved through routine physicals, rest, good nutrition, weight control, elimination of waste, aerobic exercise, immunizations, well-baby check ups
 - b. avoid drugs, alcohol, tobacco, and excessive food intake
 - 2. Mental fitness: allows individual to interact effectively with others and feel balanced
 - a. characteristics of mentally healthy person
 - 1. self-directed
 - 2. has a sense of belonging
 - 3. trusts own senses and feelings
 - 4. accepts self
 - 5. has self-esteem
 - 6. practices stress management
 - 3. Social Well-Being: allows individual to feel comfortable with others and allows the acceptance of behavior, attitudes, and beliefs; includes enjoying companionship, sharing ideas and thoughts, having a sense of belonging and showing enthusiasm
- V. The Health Care System is a network of services available to people seeking treatment for health problems or assistance with maintaining and promoting health.
 - A. The services are primary, secondary, tertiary, and extended care
 - 1. Primary Care -- health services provided by the first health care professional or agency. Ex. Family practice doctor in an office or clinic
 - 2. Secondary Care -- health services to which primary caregivers refer patients for consultation and additional testing
 - 3. Tertiary Care -- takes place in the hospital where complex technology and specialists are available
 - 4. Extended Care -- meeting health care needs of patients who no longer require hospitalization but continue to require health services. Ex. Nursing homes, home health agencies

- VI. National Health Goals a national effort, with specific goals and strategies for improving the nation's health by preventing chronic illnesses, injuries and infectious diseases. Utilizes the combined expertise of individuals from public health services, state health departments, national health organizations, and members of the Institute of Medicine of the National Academy of Sciences. A. Goals
 - 1. Increase the span of health life for Americans
 - 2. Reduce disparities of health care access among Americans
 - 3. Achieve access to preventive services for all Americans
- VII. Agencies involved in health and wellness in the community controlling infection include
 - A. Center for Disease Control and Prevention (CDC)
 - B. Infection control departments of hospitals and other agencies
 - C. City/county/public health departments

VIII. Schedules for required and desirable immunizations A. Public Health Department (PHD)

- IX. Schedules for recommended physicals, procedures, screening, and tests
 - A. Advice from physicians, American Cancer Society, American Heart Association, etc.
 - B. Recommended breast and testicular screenings/PSA schedules

Activity

- I. Complete the Nutritional Project.
- II. Complete a disease report on a nutritional disease such as anemia, vitamin K deficiency, nutritional edema, vitamin B deficiencies, diabetes mellitus, anorexia nervosa, bulimia, hepatitis A, etc.
- III. Complete a Family Medical Tree.

Assessment

Successful completion of Nutritional Project Disease Report Rubric Successful completion of Family Medical Tree

Materials

Internet access http://www.health.gov/dietaryguidelines/dga2005/healthieryou/contents.h

<u>tm</u>

<u>http://www.caloriecontrol.org/</u> -- Contains the Calorie Counter Calculator to enable meal planning and diet management and the Enhanced Calorie Calculator to keep track of all your meals

http://fnic.nal.usda.gov/ - The Food and Nutrition Information Center

<u>http://www.hosa.org.natorg/sectb/cat-iii/hl.pdf</u> - HOSA Healthy Lifestyles guidelines

Accommodations for Learning Differences

For reinforcement, students will create a poster depicting a nutritional disorder including methods of prevention.

For enrichment, students will interview a gastroenterologist, nutritionist, or county health department representative to determine the most prevalent disease or disorder in the region associated with nutrition. Report to the class.

National and State Education Standards

National Health Science Cluster Standards HLC06.02 Safety, Health, and Environmental Health care workers will understand the fundamentals of wellness and the prevention of disease processes. They will practice preventive health behaviors among the clients.

TEKS

130.204(c) (1)E summarize biological and chemical processes that maintain homeostasis;

130.204(c) (1)F explain the changes in structure and function due to trauma and disease;

130.204(c) (1)G research the global impact of disease prevention and cost containment;

130.204(c) (12)A research wellness strategies for the prevention of disease; and

130.204(c) (12)B evaluate positive and negative effects of relationships on physical and emotional health such as peers, family, and friends.

Texas College and Career Readiness Standards

English Language Arts

II. B. Understand new vocabulary and concepts and use them accurately in reading writing and speaking.

III. B. Develop effective speaking styles for both group and one-on-one situations.

IV. A. Apply listening skills as an individual and as a member of a group in a variety of settings.

IV. B.2. Listen actively and effectively in one-on-one communication situations.

Mathematics

I. B.1. Perform computations with real and complex numbers.

IV. A.1. Select and use the appropriate type of unit for the attribute being measured.

IV. B.1. Convert from 1 measuring system to another.

Science

II. A.1. Understand the real number system and its properties.

II. A.7. Use calculators, spreadsheets, computers, etc., in data analysis.

Disease Report Template

Disease
Alternate Name(s)
Definition
Demition
Etiology
Signs & Symptoms
Diagnostic Tests
Treatment
Complications
Prognosis
Pibliography
σιοπογιαριτή

Disease Report Rubric

Criteria	Possible Points	Points Awarded
Disease Correctly names the disease.	3	
Alternate Names If applicable, includes any alternate names for the disease or disorder.	2	
Definition Includes an in-depth discussion of the history and general description of the disease with interesting facts.	10	
Etiology Includes the cause or origin of the disease or disorder.	15	
Signs & Symptoms Accurately describes the common physical and medical symptoms.	15	
Diagnostic Tests Identifies tests performed to aid in the diagnosis or detection of disease or disorder.	15	
Treatment Identifies the mode or course pursued for remedial ends for the disease or disorder.	15	
Complications Identifies any diseases or injuries that may develop during the treatment of the disease or disorder.	10	
Prognosis Includes the prediction of the probable course, outcome, frequency, and life expectancy of the disease or disorder.	10	
Bibliography Follows proper format and includes more than 3 sources.	5	
TOTAL	100	

Nutrition Project Teacher Guidelines

Pass out the Counting Calories work-sheet and have students calculate their daily caloric recommended values for each of the three nutrients as well as learn to calculate how many kilocalories of each nutrient are present in various types of food.

Assign students to record their food intake over 3 to 5 days, creating a diet log. Then, using the Nutri-Facts website <u>http://www.nutri-facts.com/search.php</u> have students calculate their caloric intake for each day on the Calorie Calculations worksheet.

After students have recorded their diet for several days, pass out the Calorie Comparisons worksheet. Have students calculate and record their average daily totals and compare these to the recommended values for each nutrient they calculated earlier.

Using the data from foods they eat, have students design an "ideal"1-day menu appropriate for their own calorie needs. Each menu must include breakfast, lunch, dinner, and snacks for one (1) day. Use these percentages: 20% Fats, 50% Carbohydrates, 30% Proteins.

ConnectEd: The California Center for College and Career and the National Consortium on Health Science and Technology Education.

Counting Calories

- The average woman needs to consume 2000 calories/day.
- The average man needs to consume 2500 calories/day.
- I need to consume total kcals each day.

According to the daily recommendations, the suggested distribution of nutrients in a healthy diet is:

- Fat = 20%
- Carbohydrate = 50%,
- Protein = 30%

Calculate how many

- Fat calories per day = 0.20 × total kcals = * kcals of Fat/day
- Carbohydrate calories per day = 0.50 × total kcals = * kcals of Carbohydrate/day
- Protein calories per day = 0.30 × total kcals = * kcals of Protein/day

These are your recommended totals (insert into bottom of Calorie Comparisons table)

Calorie Calculations Example

2% Vitamin A Fortified Milk For the next few days, you will keep track of all foods you eat and calculate your total caloric Nutrition Facts Serving Size intake using the Calorie Calculations 1 cup (244g/8.7 oz) Calories 122 kcal worksheets. Below is a sample calculation for a % Daily Value glass of milk. Total Fat 4.68 g 8% Saturated Fat 2.916 g 15% Polyunsaturated Fat 1.354 g Fat = 9 kcal/gram Monounsaturated Fat 0.173 g Carbohydrate = 4 kcal/gram 7% Cholesterol 20 mg Protein = 4 kcal/gram Sodium 122 mg 6% Total Carbohydrates 11.71g 4% **Dietary Fiber** 0.0 g 096 Sugars Protein 8.13 g Food 1: 2% Vitamin A fortified milk Serving Size = <u>1 cup</u> Total Fat: 4.68 g/serving × 9 kcal/fat g x <u>1</u> servings = <u>42.12</u> kcals of fat Total Carbohydrates: <u>11.71</u> g/serving × 4 kcal/carb g × <u>1</u> serving = <u>46.84</u> kcals of carb Total Protein: 8.13 g/serving × 4 kcal/protein g × 1 servings = 32.52 kcals of protein Calculated total calories = <u>121.48</u> _____ kcal (42.12 + 46.84 + 32.52) Printed total calories (on label) = <u>122</u> kcal

Calorie Calculations -- Day _____

Food 1:		Sor	vina Sizo -	
Total Fat:	g/serving × 9 kcal/fat g	×	servings =	kcals of fat
Total Carbohydrates:	g/serving × 4 kcal/carb g	×	servings =	kcals of carb
Total Protein:	g/serving × 4 kcal/protein g	×	servings =	kcals of protein
Calculated total calories =	kcal			
Printed total calories (on label) =	kcal			
Food 2:		Ser	ving Size =	
Total Fat:	_ g/serving × 9 kcal/fat g	×	servings =	kcals of fat
Total Carbohydrates:	_ g/serving × 4 kcal/carb g	×	servings =	kcals of carb
Total Protein:	_ g/serving × 4 kcal/protein g	×	servings =	kcals of protein
Calculated total calories =	kcal			
Printed total calories (on label) =	kcal			
Food 3:		Ser	ving Size =	
Total Fat:	_g/serving × 9 kcal/fat g	×	servings =	kcals of fat
Total Carbohydrates:	_ g/serving × 4 kcal/carb g	×	servings =	kcals of carb
Total Protein:	_ g/serving × 4 kcal/protein g	×	servings =	kcals of protein
Calculated total calories =	kcal			
Printed total calories (on label) =	kcal			
Food 4:		Serving Size =		
Total Fat:	g/serving × 9 kcal/fat g	×	servings =	kcals of fat
Total Carbohydrates:	_ g/serving × 4 kcal/carb g	×	servings =	kcals of carb
Total Protein:	_ g/serving × 4 kcal/protein g	×	servings =	kcals of protein
Calculated total calories =	kcal			
Printed total calories (on label) =	kcal			
Food 5:		Serving Size =		
Total Fat:	g/serving × 9 kcal/fat g	×	servings =	kcals of fat
Total Carbohydrates:	_ g/serving × 4 kcal/carb g	×	servings =	kcals of carb
Total Protein:	_g/serving × 4 kcal/protein g	×	servings =	kcals of protein
Calculated total calories =	kcal			
Printed total calories (on label) =	kcal			

lame		Date	Period
Ca	lorie Calculations	Day	
Food 6:		Serving Size =	
Total Fat:	g/serving × 9 kcal/fat g	× servings	= kcals of fat
Total Carbohydrates:	g/serving × 4 kcal/carb g	× servings	= kcals of carb
Total Protein:	g/serving × 4 kcal/protein g	× servings	= kcals of proteir
Calculated total calories =	kcal		
Printed total calories (on label) =	kcal		
Food 7:		Serving Size =	
Total Fat:	g/serving × 9 kcal/fat g	× servings	=kcals of fat
Total Carbohydrates:	g/serving × 4 kcal/carb g	× servings	=kcals of carb
Total Protein:	g/serving × 4 kcal/protein g	× servings	s = kcals of protein
Calculated total calories =	kcal		
Printed total calories (on label) =	kcal		
Food 8:		Serving Size =	
Total Fat:	g/serving × 9 kcal/fat g	× servings	= kcals of fat
Total Carbohydrates:	g/serving × 4 kcal/carb g	× servings	= kcals of carb
Total Protein:	g/serving × 4 kcal/protein g	× servings	= kcals of protein
Calculated total calories =	kcal		
Printed total calories (on label) =	kcal		
Food 9:		Serving Size =	
Total Fat:	g/serving × 9 kcal/fat g	× servings	= kcals of fat
Total Carbohydrates:	g/serving × 4 kcal/carb g	× servings	= kcals of carb
Total Protein:	g/serving × 4 kcal/protein g	×servings	= kcals of protein
Calculated total calories =	kcal		
Printed total calories (on label) =	kcal		
Food 10:		Serving Size =	
Total Fat:	g/serving × 9 kcal/fat g	× servings	=kcals of fat
Total Carbohydrates:	g/serving × 4 kcal/carb g	× servings	= kcals of carb
Total Protein:	g/serving × 4 kcal/protein g	×servings	= kcals of protein
Calculated total calories =	kcal		
Printed total calories (on label) =	kcal		

Calorie Comparisons

1	Food Name	Total Fat kcal	Total Carb kcal	Total Protein Kcal
	1.			
	2.			
	3.			
	4.			
	5.			
Day 1	6			
	7.		() ()	
	8.			
	9.			
	10.			
37. 	1.			
	2			
	3			;
	4			,
	5			
Day 2	6			
	7			3
	8			
	9			
	10			
3	1			
	2			
	3			
	4		¢	
	5			
Day 3	6			
	7			
	8			3
	9			
	10		·	
) .	1			
	2			
	3			
	3.			
	5			
Day 4	0.		c e	
	0. 7			
	0			
	0.			
	3. 10			
	Average (I otal/# of days) =	+	+	+
	Recommended Total =	*	*	*

My Ideal Menu (list foods here)

Based on knowledge of your own nutritional and caloric needs, create a healthy and delicious menu for a single day.

Breakfast:

Lunch:

Dinner:

Snacks:

ConnectEd: The California Center for College and Career and the National Consortium on Health Science and Technology Education.

Medical Family Tree

Great Grandparents



Starting with your great grandparents, fill in the full names and dates of birth and death. Next, add as much as you can about the health of your close relatives: include chronic ailments, surgeries, causes of death, and physical characteristics.