Nutrition and Hydration

Terminology Defined

1. **Anemia** – a deficiency of red blood cells, hemoglobin or both.
2. **Aspiration** – breathing fluid or food into the lungs.
3. **Calorie** – the amount of energy produced from the burning of food.
4. **Carbohydrate** – nutrient which provides the greatest amount of energy in the average diet.
5. **Dehydration** – a decrease of the amount of water in body tissue.
6. **Dysphagia** – difficulty swallowing.
7. **Fat** – nutrient that provides most concentrated form of energy.
8. **Malnutrition** – poor nutrition that lacks adequate food and nutrients.
9. **Metabolism** – the burning of food for heat and energy by the cells.
10. **NPO** – Nothing by mouth
11. **Nutrient** – a substance that is ingested, digested, absorbed and used by the body.
12. **Nutrition** – the entire process by which the body takes in food for growth and repair and uses it to maintain health.
13. **Osteoporosis** – the most common metabolic disease of bone in the United States, caused by a decrease in the mass of bony tissue.
14. **Peristalsis** – involuntary muscle contractions in the digestive system that move food through the alimentary canal.
15. **Protein** – nutrient essential for growth and repair of tissue.
16. **Special Diet (also called therapeutic and/or modified diet)** – modification of the normal diet used in the treatment of specific health conditions.

Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
	I. Principles of Nutrition	
6.0 Identify the general principles of basic nutrition	A. Good Nutrition 1. Promotes physical and mental health 2. Provides increased resistance to illness 3. Produces added energy and vitality 4. Aids in the healing process 5. Assists one to feel and sleep better B. Functions of Food 1. Provides energy 2. Growth and repair of tissue 3. Maintenance and regulation of body processes	
6.1 Recognize factors that influence dietary practices	C. Factors influencing dietary practices 1. Personal preference 2. Appetite 3. Finance 4. Illness 5. Culture	
6.1.1 List examples of foods avoided by various religious denominations	D. Culture influences dietary practices, food choices, and food preparation 1. Many Buddhists are vegetarians, but some may include fish in their diet. 2. Some Christians, mostly Roman Catholics, do not eat meat on Fridays during Lent. 3. Mormons may not drink alcohol, coffee, or tea. 4. Many Jewish people eat kosher foods, but do not eat pork, lobster, shrimp, or clams (shellfish). Kosher food is prepared according to Jewish dietary laws. Kosher and non-kosher foods cannot come in contact with the same plates. Jewish people who observe dietary laws may not eat meat at the same meal with dairy products. 5. Muslims do not eat pork, may not eat certain fowl, may not drink alcohol and have regular periods of fasting.	Discuss the religious practices related to food by the various denominations represented in the class.

Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
6.1.2 Cite age-related changes that affect the resident's nutritional status	E. Age-related changes affecting nutrition 1. Need for fewer calories 2. Vitamin and mineral requirements change 3. Drugs that affect how nutrients are absorbed and used 4. Teeth/dentures affect ability to chew food 5. Diminished sense of taste and smell 6. Assistance required with eating 7. Decreased saliva secretions 8. Discomfort caused by constipation 9. Decreased appetite and thirst	
6.1.3 Recognize the signs of good nutrition	F. The signs of good nutrition include: 1. Healthy, shiny looking hair 2. Clean skin and bright eyes 3. A well-developed, healthy body 4. An alert facial expression 5. An even, pleasant disposition 6. Restful sleep patterns 7. Healthy appetite 8. Regular elimination habits 9. Appropriate body weight	

Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
6.1.4 Report five results of poor nutrition	G. Results of poor nutrition 1. Hair and eyes appear dull 2. Irregular bowel habits 3. Weight changes 4. Osteoporosis and other diseases 5. Lack of interest – mental slowdown 6. Skin color and appearance poor 7. Anemia leading to (a) Tired feeling (b) Shortness of breath (c) Increased pulse (d) Pale skin (e) Poor sleep patterns (f) Headaches (g) Problems with digestion	
6.1.5	H. Six Nutrients 1. Water (a) Most essential nutrient (b) Needed for every cell in body (c) Main part of the blood (d) Importance to body (e) Helps move oxygen and nutrients into cells and removes waste products out of cells (f) Helps with digestion and absorption of food (g) Helps maintain temperature by perspiration (h) Only can survive a few days without water 2. Fats (a) Good source of energy and gives flavor to food (b) Certain fats may increase cholesterol levels and lead to heart disease (c) Sources of fat – butter, oil, fatty meat, etc. 3. Carbohydrates	

Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
	(a) Supplies energy and helps body use fats (b) Certain carbohydrates add fiber to diet that help with elimination (c) Sources of carbohydrates – breads, fruits, candy, sugary soft drinks, etc. 4. Protein (a) Needed by every cell to help grow new tissue and help with tissue repair (b) Sources of proteins – meats, cheese, beans, etc. 5. Vitamins (a) Help the body function normally (b) Body gets majority of vitamins from certain foods (c) Examples are Vitamins A and C 6. Minerals (a) Help the body function normally (b) One mineral, calcium, keeps bones and teeth strong (c) One mineral, iron, helps blood carry oxygen to all parts of the body	
	II. Dietary Guidelines for Americans (DGA)	
6.2 Discuss Dietary Guidelines for Americans (DGA). Identify recommendations from the 2025 – 2030 Dietary Guidelines for Americans	A. 2025 – 2030 Dietary Guidelines for Americans (DGA) The Dietary Guidelines for Americans (DGA) provides food-based recommendations to promote health, help prevent diet related chronic diseases and meet nutritional needs of Americans. The DGA is the cornerstone for federal nutrition programs. When deciding what to eat or drink, choose options that are full of nutrients. Eat real food.	Explore the following website: Dietary Guidelines for Americans, 2025–2030

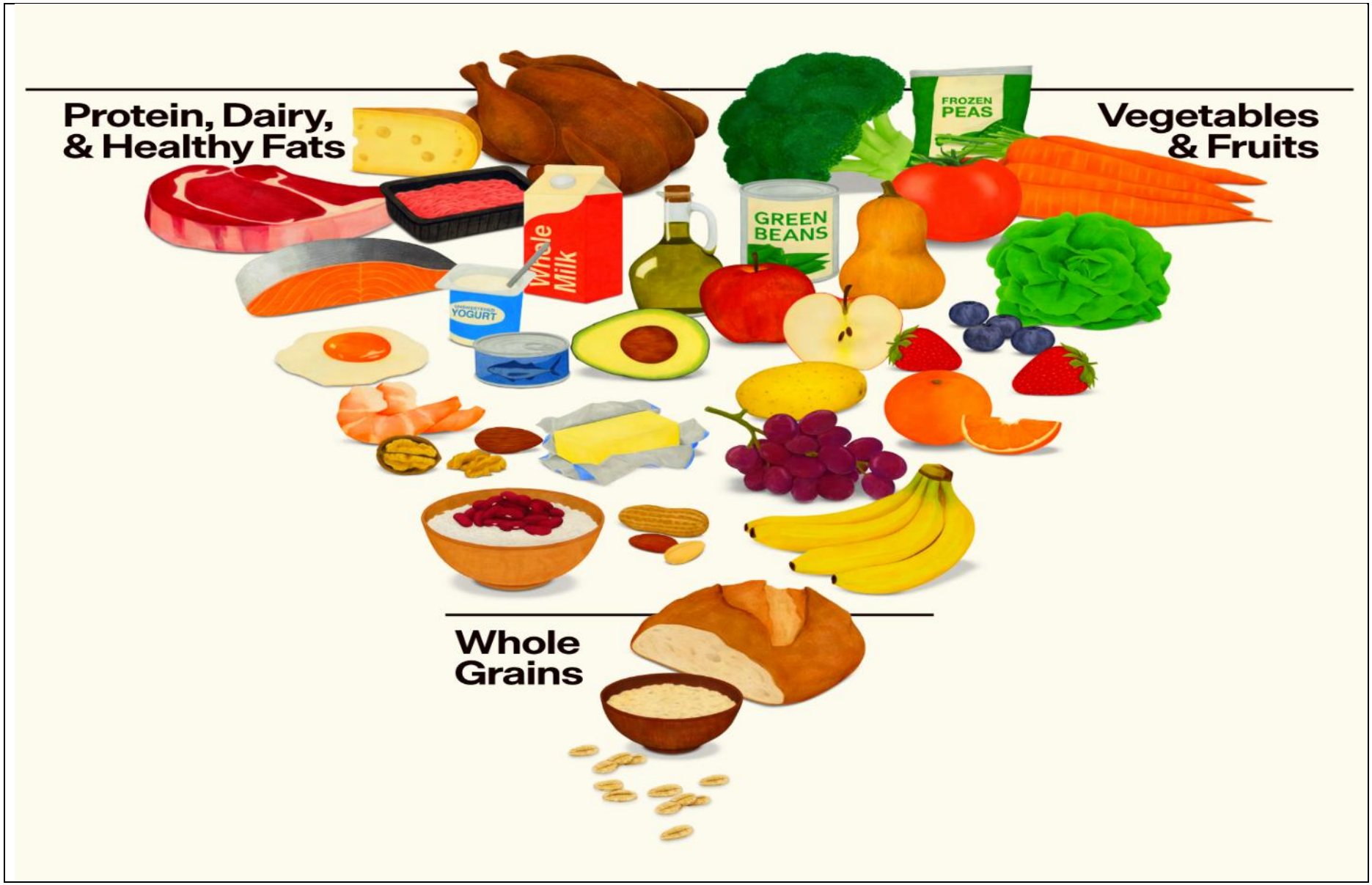
Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
	B. 2025 – 2030 Dietary Guidelines for Americans (DGA) An important goal of the U.S. government is to help guide adults and children to be as healthy as possible. One way to do so has been to make dietary recommendations as visual representations of nutrition guidelines. The dietary recommendations are updated every 5 years to keep up with current research and health data. The most recent update of the Dietary Guidelines for Americans is for the years 2025 – 2030. It uses an inverted pyramid as a visual model.	
	C. 2025 – 2030 Dietary Guidelines for Americans (DGA) **Vegetables and Fruits** • Provide nutrients vital for the health and maintenance of the body. • Eat whole vegetables and fruits in their original form. • Frozen, dried, or canned vegetables or fruits with no or very limited added sugars can also be good options. Eating vegetables provides health benefits. Those who eat fruit and vegetables as part of an overall healthy diet are likely to have a reduced risk of some diseases. Vegetables provide nutrients vital for the health and maintenance of the body. Eating fruit has many health benefits. People who eat fruits and vegetables as part of an overall diet may lower their risk for certain diseases. Fruits provide nutrients needed to maintain your health and body.	

Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
	E. 2025 – 2030 Dietary Guidelines for Americans (DGA) **Grains** • Include fiber-rich whole grains. • Reduce the consumption of highly processed, refined carbohydrates • Whole grains serving goals are adjusted based on individual caloric requirements. Eating whole grains provides health benefits. People who eat whole grains regularly may have a reduced risk of some disease. Whole grains provide many nutrients that are vital for the health and maintenance of our bodies.	
	F. 2025 – 2030 Dietary Guidelines for Americans (DGA) **Dairy** • Dairy is an excellent source of protein, healthy fats, vitamins, and minerals. • Include full-fat dairy with no added sugar • Dairy serving goals are adjusted as needed based on individual caloric requirements. Eating or drinking dairy products offers health benefits, like building and maintaining strong bones. Dairy food group provides nutrients that are vital for the health and maintenance of the body. These nutrients include calcium, potassium, vitamin D, and protein.	
	G. 2025 – 2030 Dietary Guidelines for Americans (DGA) **Protein**	

Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
	• Make high-quality, nutrient-dense protein foods a priority • Choose baked, broiled, roasted, stir-fried, or grilled cooking methods over deep fried. • Consume meat with no or limited added sugars, refined carbohydrates or starches, or chemical additives. Protein foods provide nutrients important for maintaining your health and body. Protein Foods include animal- and plant-based protein foods, including meat, poultry, eggs, seafood, beans, peas, lentils, legumes, nuts, seeds, and soy.	
	III. Special Diets (also called therapeutic and modified diets)	
6.3 Define special diets and recognize the need for alterations in a regular die	A. Purposes of special diets 1. Add or eliminate calories to cause a change in body weight 2. Assist with digestion of food by taking foods out of the diet that irritate the digestive system 3. Restrict salt intake to prevent or decrease edema 4. Help body organs to maintain and/or regain normal function 5.Treat metabolic disorders by regulating amount of food B. Types of special diets 1. Clear liquids 2. Full liquids 3. Mechanical Soft, Chopped, and/or Pureed 4. Fiber Restricted 5. High-Fiber 6. Bland	

Unit 6 – Nutrition and Hydration		
Objectives	**Content**	**Learning Activities**
	7. Calorie-Restricted 8. High-Calorie 9. High-Iron 10. Low Cholesterol 11. High-Protein 12. Sodium-Controlled 13. Diabetic Diet 14. Gluten Free 15. Vegetarian Diets: Lacto-ovo; Lacto-vegetarian; and, Vegan C. Thickened liquids 1. Nectar Thick: thickness of a thick juice (i.e. tomato juice) 2. Honey Thick: will pour very slowly (use a spoon to consume) 3. Pudding Thick: the liquids have become semi-solid and a spoon should stand up straight when put into the middle of the drink (use a spoon to consume) D. Residents may have difficulty accepting special diets	
6.4 Discuss the illustrations and tables (2025 Dietary Guidelines for Americans and Nutrients)	E. Illustration – 2025 Dietary Guidelines for Americans Key areas within the guidance include: • Individualized diets: Eating the right amount for one's age, height, weight, and level of physical activity. • Include high-quality nutrient-dense protein from animal and plant-based sources. • Consume full-fat dairy products with no added sugars. • Eat fruits and vegetables throughout the day to include a variety of colorful, nutrient-dense fruits	DHHS and USDA Release 2025-2030 Dietary Guidelines for Americans Dietary Guidelines for Americans, 2025–2030: Daily Servings by Calorie Level

	and vegetables in their original form (frozen, canned or dried with no or very limited added sugars are good options). • Incorporate healthy fats • Prioritize fiber-rich whole grains significantly reducing white bread. • Limit highly process foods, added sugars, and refined carbohydrates • Limit alcoholic beverages	


Protein, Dairy,
& Healthy Fats
Vegetables
& Fruits
Whole
Grains
FROZEN
PEAS
GREEN
BEANS
Whole
Milk
YOGURT

Type of Diet	Description	Purpose	Foods Allowed or Not Allowed
Clear Liquids	Can see through, non-irritating, non-gassy	Post-operative, acute illness, infection, nausea/vomiting, prepare for GI procedures	Water, tea, black coffee, carbonated drinks, gelatin, clear fruit juices (apple, grape, cranberry), clear broth
Full Liquids	All liquids	Next step after clear liquids, fever, nausea/ vomiting, resident unable to chew/swallow/digest solid foods	All clear liquids, plus custard, strained soups, strained fruit/ vegetable juices, milk, milk shakes, strained cooked cereal, plain ice-cream, sherbet, pudding, yogurt, popsicles
Mechanical Soft	Semi-solids, easily digested	Next step after full liquids, fever, nausea/ vomiting, resident unable to chew/swallow/digest solid foods	all liquids, plus non-fried eggs, non-fried meat/fish/poultry, mild cheeses, strained fruit juices, non-crusted breads, cooked cereal, cooked/pureed vegetables, cooked/canned non-seeded peeled fruits, plain cookies/cakes without nuts or fruit
Fiber Restricted	Leaves little residue and fiber in colon	Colon diseases, diarrhea	Coffee, tea, milk, carbonated drinks, strained fruit juices, refined bread/crackers/pasta (white), rice, cottage/cream cheese, non-fried eggs, plain puddings/cakes, gelatin, custard, sherbet/ice cream, strained vegetable juices, cooked/canned non-seeded peeled fruits, non-fried potatoes, strained cooked vegetables, NO RAW FRUITS OR VEGETABLES
High-Fiber	Increases residue and fiber in colon, stimulates movement of food	Constipation, GI disorders	All fruits and vegetables, whole-wheat bread, whole-grain cereals/rice, fried foods, milk, cream, butter, cheese, meats
Bland	Non-irritating, low in roughage, moderate temperature, not spicy	Ulcers, gallbladder/some intestinal disorders, after abdominal surgery	Lean meats, non-fried foods, white bread, creamed/refined cereals, cream/cottage cheese, gelatin, plain pudding/cakes/cookies, eggs, butter/cream, canned non-seeded peeled fruits/vegetables, potatoes, pasta, rice, strained/soft cooked carrots, creamed soups, NO FRIED FOODS

Type of Diet	**Description**	**Purpose**	**Foods Allowed or Not Allowed**
High-Calorie	Calories increased to 3000 to 4000 daily	Weight gain, some thyroid problems	Increases in all foods, large amounts of regular diet, meals plus 3 in-between meal snacks
High-Iron	Foods high in iron	Anemia, blood loss, non-menopausal women	Liver and other meats from organs, lean meats, egg yolks, shellfish, dried fruits/beans, green leafy vegetables, lima beans, peanut butter, enriched breads/cereals
Low Cholesterol	Fat controlled, foods low in fat and prepared without adding fat	Heart/gallbladder/liver/pancreatic disease, disorders of fat digestion	Fat-free (skim) milk, buttermilk, cottage cheese, gelatin, sherbet, fruit, baked/broiled/roasted meat/poultry/fish, fat free broth/soup, margarine, rice, pasta, breads, cereals, vegetables, potatoes
High-Protein	Promotes tissue healing	Burns, high fever, infection	Meat, milk, eggs, cheese, fish, poultry, breads/ cereals, green leafy vegetables
Sodium-Controlled	Sodium (salt) controlled	Heart/liver/some kidney diseases, fluid retention	Allowed: fruits/vegetables and unsalted butter; not allowed: highly salted foods and foods high in sodium, adding salt at the table; restricted: adding salt for seasoning while cooking
Diabetic Diet	Dependent upon individual needs, calories and carbohydrates carefully controlled, fats and proteins regulated	Diabetes	Right amounts and types of foods, at the right times, during mealtimes and snacks
Gluten Free	Free of gluten, which is a protein found in wheat, rye, and barley.	Celiac Disease	Avoid foods containing wheat flour, such as tortilla, crackers, breads, cakes, pastas and cereals. Some sauces and dressings also contain wheat. Hot dogs, broth, candy, and medication may also contain gluten.
Vegetarian Diets: **1. Lacto-ovo**	Excludes all meats, fish, and poultry, but allows	Diabetes Obesity Religious reasons	Avoid meats, fish, and poultry.

	eggs and dairy products	Dislike of meat Compassion for animals Belief in nonviolence Financial issues	
Type of Diet	**Description**	**Purpose**	**Foods Allowed or Not Allowed**
Vegetarian Diets: **2. Lacto-vegetarian**	Excludes all meats, fish, poultry, and eggs, but allows dairy products.	Diabetes Obesity Religious reasons Dislike of meat Compassion for animals Belief in nonviolence Financial issues	Avoid meats, fish, poultry, and eggs.
Vegetarian Diets: **3. Vegan**	Excludes all meats, fish, poultry, eggs, and dairy products, along with all foods that are derived from animals.	Diabetes Obesity Religious reasons Dislike of meat Compassion for animals Belief in nonviolence Financial issues	Avoid all meats, fish, poultry, eggs, dairy products, and all foods that are derived from animals.

Nutrients

Fats – diet high in fat can lead to hardening of the arteries, which can cause stroke or heart attack
Cholesterol – diet high in cholesterol can lead to hardening of the arteries, which can cause stroke or heart attack
Sodium – vital in fluid balance and function of nerves and muscles, important nutrient to observe with residents with high blood pressure
Carbohydrates – supplies energy and helps body use fats, important nutrient to observe with diabetics
Protein – needed for tissue growth and repair, important nutrient for residents who had surgery or have pressure ulcers
Calcium – keeps bones and teeth strong
Iron – helps blood carry oxygen to all parts of the body
Fiber – assists with elimination

Foods High in Fats	**Foods Low in Fats**	**Foods High in Cholesterol (Hint: Comes from Animals)**
• Meats • Butter, shortening, lard, oils • Milk • Cheese • Egg yolks • Nuts	• Skim milk • Cottage cheese • Lean meat, poultry, fish (baked) • Vegetables • Fruits	• Eggs • Liver, whole milk, dairy products • Butter, cream • Shrimp • Duck and goose
Foods High in Salt (Sodium)	**Foods Low in Salt (Sodium)**	**Foods High in Protein**
• Processed foods – bacon, luncheon meats, hot dogs • Buttermilk and cheese • Condiments – mayonnaise, salad dressings, ketchup, mustard • Mexican foods • Sauces – soy, teriyaki, steak, barbecue • Soups – canned, packaged • Vegetable juices, canned vegetables, pickled vegetables • Salted snack foods – pretzels, corn chips, potato chips, crackers • Baked goods – biscuits, muffins, cake, cookies, pie	• Fruits • Vegetables • Unsalted butter	• Meats • Fish • Poultry • Eggs • Milk and milk products • Beans and peas • Nuts • Green leafy vegetables

Foods High in Carbohydrates	**Foods High in Calcium**
• Soft drinks, fruit juices • Vegetables • Fruits • Cereals, breads • Candy	• Egg yolks • Milk and milk products • Beans and dried peas • Green leafy vegetables • Whole grains • Nuts

	IV. Adaptive Devices	
6.4.1 Recognize adaptive devices used to assist residents with eating	1. Angled utensils – for limited arm or wrist movement 2. Sipper cup (pictured) 3. Large grip handled utensils 4. Plate with lip around the edge – keeps food on plate 5. Snap on food guard – keeps food on plate	Demonstrate the use of adaptive devices. Encourage students to handle the equipment.
	V. Preparing and Serving Resident's Meals	
6.5 Identify the responsibilities in preparing and serving residents meals	1. Meals should be an enjoyable and social experience 2. Provide pleasant environment (a) Clean area (b) Odor-free area (c) Adequate lighting 3. Flowers/decorations and music add interest to dining area 4. Resident Preparation (a) Face and hands washed (b) Raise the head of the bed (c) Assure resident is in comfortable position (sitting upright at 90 degrees) 5. Check to be certain resident receives right tray and has the correct diet 6. Food should be attractively served and placed within reach 7. Check the tray to see that everything needed is there 8. Assist resident as needed (a) cutting meat (b) pouring liquids (c) buttering bread (d) opening containers	

	9. Residents should be encouraged to do as much as possible for themselves 10. Allow time for resident to complete meal 11. Display a pleasant, patient attitude 12. Remove tray when meal is finished 13. Report unconsumed food to supervisory nurse 14. Call signal and supplies positioned within reach 15. Hands washed before and after assistance with feeding resident	
	VI. Feeding Techniques	
6.6 Describe feeding technique	1. Use a spoon and fill it only half-full 2. Give the food from the tip of the spoon 3. Introduce food on non-paralyzed side of mouth 4. For blind or confused residents, name each mouthful of food 5. Offer foods in logical order 6. Allow hot foods to cool 7. Feed the resident slowly 8. Encourage but do not force 9. Warn resident if offering something hot 10. Use a straw for liquids, if resident prefer 11. Be sure mouth is empty before offering more food	Have students practice feeding techniques with their class members using appropriate techniques
	VII. Supplementary Nourishments	
6.7 Discuss the various types of supplementary nourishments	1. Types of Nourishments (a) Milk (b) Juice (c) Gelatin (d) Custard, ice cream sherbet (e) Crackers (f) Nutritional supplementation products (example: Ensure) 2. Usually served (a) Midmorning (b) Mid-afternoon (c) Bedtime 3. Ordered by physician (a) Serve as directed by supervisory nurse 4. Provide necessary eating utensils/straw/napkin	

	VIII. Serving Supplementary Nourishments	
6.8 Demonstrate the procedure for serving supplementary nourishments	1. Supplies – nourishments, napkins, feeding aids (straws, flatware) 2. Procedure – Serving Supplementary Nourishments	Demonstration: Performance Checklist #3 Serving Supplementary Nourishments Return demonstration after practice. Follow facility policy for distribution of nourishments
	IX. Fresh Drinking Water	
6.9 Identify the special fluid orders that the physician could write for residents	1. Fresh water should be provided periodically throughout the day 2. Encourage residents to drink 6-8 glasses daily if appropriate 3. Note residents who have special fluid orders. (a) N.P.O. (b) Fluid restrictions - Remind resident of restrictions (c) Force fluids (d) Offer fluids in small quantities (e) No ice 4. Offer fluids (resident preference) without being asked 5. Remind resident of importance of fluids in getting better	
6.9.1 Demonstrate the procedure for providing fresh drinking water	1. Providing Fresh Drinking Water (a) Supplies – cart, pitchers, cups, scoop for ice, straws (b) Procedure – Providing Fresh Drinking Water	Demonstration: Performance Checklist #4 Providing Fresh Drinking Water Return demonstration after practice. Follow facility policy for distribution of drinking water
	X. Aging Changes	
6.10 Identify normal changes in the digestive system as	1. Decreased number of taste buds 2. Slowing of peristalsis causing constipation 3. Slower absorption of nutrients	Discuss a reason that would explain why some residents

they relate to the aging process	4. Difficulty chewing and swallowing 5. Loss of bowel muscle tone 6. Decrease in amount of digestive enzymes and saliva production 7. Decreased appetite 8. Loss of teeth 9. Altered taste and smell	would add a lot of salt to their food
	XI. Challenging Feeding Problems	
6.11 Discuss signs and symptoms of dysphagia	1. Dysphagia 2. Signs and Symptoms (a) Foods "pocket" in cheeks (b) Resident says food will not go down (c) Excessive drooling (d) Unexplained weight loss (e) Frequently coughs or chokes (f) Complains of heartburn (g) Recurrent pneumonia 3. Report to nurse supervisor signs of dysphagia when feeding a resident 4. Do not continue to feed resident with dysphagia	
6.11.1 Demonstrate feeding techniques for use with the resident who has had a stroke	1. A stroke victim with dysphagia should not be fed by feeding assistant. If dysphagia not present: (a) Introduce the spoon on the unaffected side of the mouth (b) Utilize adaptive feeding utensils (c) Observe for "pocketing" of food on affected side (d) One sip, then swallow (e) Approach from the unaffected side	
6.11.2 Demonstrate feeding techniques for use with the blind resident	1. Blindness (a) Tell the resident what is on the tray (b) Arrange and describe location of foods according to the face of a clock	Demonstration: Performance checklist #5 Feeding a Resident Return demonstration after practice