

BOE Approved August 2006

INTRODUCTION TO  
FOOD SCIENCE AND NUTRITION  
(FORMERLY FOODS)

GRADE 7

TOWNSHIP OF OCEAN INTERMEDIATE SCHOOL  
DEPARTMENT OF FAMILY AND CONSUMER SCIENCE

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## CURRICULUM PROFICIENCY REQUIREMENTS

Department: Family & Consumer Science

Title: Introduction to Food Science & Nutrition

Course Length: 18 weeks    Credits: 2.5    Level: Heterogeneous  
Grade 7

Prerequisite: None

Absentee Policy: Refer to the present absentee policy found in the student handbook.

Overview of the Course: In this course students will understand more in-depth the nutritional contribution of the food guide pyramid to their diet and will be able to select and prepare foods from each. The students will also learn the art of meal management and menu planning with emphasis on breakfast, lunch, and a dinner party.

### Course Requirements:

Students will be required to:

1. Keep a notebook or folder for all class work.
2. Complete textbook readings and worksheets as assigned.
3. Conduct cooking laboratory work according to specified directions as well as proper safety, sanitation, table setting, and manners.
4. Take all tests and quizzes given.
5. Maintain their work areas.

Proficiencies: At the end of 18 weeks students taking Introduction to Food Science and Nutrition will be able to:

1. Demonstrate the ability to use safe practices in the kitchen.
2. Keep a three-day food diary and evaluate it according to the food guide pyramid.
3. Convert abbreviations used in recipes into words.
4. Select and use the best available utensil for a task.
5. Use appropriate methods to measure dry and liquid ingredients.
6. Plan meals with interesting colors, textures, shapes, and

flavor.

7. Set a table properly for an informal meal.
8. Prepare various foods for the best results.
9. Identify careers related to foods.

Evaluation: The following grading system will be used: For each quarter, students must receive a passing grade for the following:  
(70% or more)

1. Daily laboratory work - 33 1/3%
2. Quizzes and tests - 33 1/3%
3. Daily participation - 33 1/3%

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Special Requirements:

Parents should be aware that students will be working with the following equipment:

1. Electric ranges
2. Electric mixers and other electrical appliances
3. Knives
4. Various utensils

### COURSE DESCRIPTION

In the course Introduction to Food Science the students will understand more in depth the nutritional contribution and use of the food guide pyramid to their diet. Foods will be prepared from each of the six groups.

The students will learn the art of meal management and menu planning with an emphasis on breakfast, soups, salads, sandwiches, and cookies.

At the completion of the course students will plan a buffet meal demonstrating all areas that were covered during the semester.

**Recommended Textbook:** Discovering Foods, Third Edition

**STATEMENT OF PURPOSE/PHILOSOPHY****GRADE 7 - PURPOSE/PHILOSOPHY**

"An individual's food choices are influenced by personal, environmental, nutritional, and health related factors. Adolescents should be able to identify these factors, choose and prepare healthful foods and develop an underlying curiosity concerning the nature of a food's nutritional components and scientific properties. This knowledge will provide them with the ability to follow a healthy lifestyle through adherence to sound nutritional practices and to influence their families to do the same."

**Source:** Competency-Based Curriculum Guide Life Skills, State of NJ, Dept of Ed., 1993

### COURSE GOALS

The goals in this course are to help students:

1. Become more efficient in the foods laboratory and achieve more personal satisfaction in their experiences with food as a result of deliberate planning and decision making based on information about management techniques and nutritional information.
2. Identify the many careers in the areas of Food and Nutrition.

## EVALUATION

In order to determine if students have achieved the outcomes identified in this course of study, both formative and summative evaluation techniques are used.

### Formative Evaluation

The continuing performance of students is monitored by the following methods:

1. Quizzes
2. Unit tests
3. Written class work assignments
4. Foods Laboratory Experience

### Summative Evaluation

1. Post tests
2. Practice exams



## Proficiency Level

Eighty-five percent (85%) of the students enrolled in Introduction to Food Science and Nutrition will attain a minimum grade of seventy percent (70%) on the post test that has been designed to measure the core knowledge from this course.

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## FOOD SCIENCE & NUTRITION UNIT

### Topic 1: Nutrition

(correlated to Course Proficiencies 2, 6)

### Student Outcomes

After completing this unit of study, students should be able to

1. Describe the nutrients and what they do
2. Identify food sources of nutrients
3. Explain the purpose of food guides
4. Describe how the Dietary Guidelines for Americans can guide food choices
5. Use the Daily Food Guide in making food choices
6. Evaluate and improve food choices

## **Concepts**

Carbohydrate - simple sugar, complex starch, complex fiber,  
protein - complete, incomplete, fat, minerals, vitamins, water,  
calories = energy, food pyramid, daily food guides

## **Teaching Strategies**

1. Chapter 5 in Discovering Foods with worksheet
2. Handout, "How Nutrients Work for You"
3. Chapter 6 in Discovering Foods with worksheet
4. Video, "Daily Food Choices for Healthy Living"
5. Handouts, "The Food Guide Pyramid," "Meal Planning Checklist," "Vitamin Functions and Sources"
6. Worksheets, "Meal Planning Savvy," "One Day Food Diary"

## **FOOD SCIENCE & NUTRITION UNIT**

### **Topic 2: Kitchen Management**

(correlated to Course Proficiencies 1, 3, 4, 5)

### **Student Outcomes**

After completing this unit of study, students should be able to

1. Identify the various information given in a recipe
2. Describe the meaning of basic food preparation terms

3. Describe what small kitchen equipment looks like
4. Explain what small kitchen equipment is used for
5. Identify units of measurement commonly used in recipes
6. Increase and decrease recipes
7. Correctly and accurately measure dry and liquid ingredients
8. Correctly and accurately measure solid fats

### **Concepts**

Recipe format, cooking and food preparation terms, small kitchen equipment, dry measuring cups, liquid measuring cups, measurement abbreviations, measurement equivalents, methods of cooking: boil, broil, steam, simmer, roast, bake, fry

### **Teaching Strategies**

1. Chapters 11, 12, 13 in Discovering Foods with worksheets
2. Video, "Using Basic Hand Tools: Don't Step on These"
3. Handouts, "Cooking Terms," "Kitchen Tools and Uses," "The Recipe: A Road Map to Success," "Measuring Information"
4. Worksheets, Chapters 11, 12, 13, "Cooking Equipment," "All Purpose Kitchen Utensils," "What Do You Bake It In?," "Cooking on Top of the Stove," "Reading and Understanding Directions (Yellow Cake Mix)"
5. Demonstrate measuring common ingredients
6. Equipment hunt game
7. Laboratory Activities:
  - Soft pretzels
  - Brownies
  - Hot chocolate

## **FOOD SCIENCE & NUTRITION UNIT**

**Topic 3: Safety in the Kitchen**  
(correlated to Course Proficiency 1)

## **Student Outcomes**

After completing this unit of study, students should be able to

1. Identify safety hazards in the kitchen
2. Describe how to prevent kitchen accidents
3. Describe how bacteria make food unsafe
4. Discuss how to keep food safe by storing it properly
5. Discuss how to keep food safe by practicing sanitation

## **Concepts**

Safe, unsafe, bacteria, food borne illness, germs, salmonella, danger zone, prevention of falls, fires, cuts, burns, fires, and chemical poisoning

## **Teaching Strategies**

1. Videos, "Kitchen Safety and Sanitation," "Danger Zone," "General Kitchen Safety: Keeping a Clean Floor and Clear Head," "Cleaning the Kitchen: Things My Parents Never Told Me," "Safe Food Storage: I Thought It Would Last Forever"
2. Demonstrate how to wash hands
3. Demonstrate how to wash dishes
4. Demonstrate safe kitchen practices
5. Handouts, "Kitchen Safety Rules," "Food Lab Safety and Clean Up Guidelines," "Laboratory Duties"

## FOOD SCIENCE & NUTRITION UNIT

### Topic 4: Meal Management and Service (correlated to Course Proficiencies 2, 6, 7)

#### Student Outcomes

After completing this unit of study, students should be able to

1. Plan a menu for a meal that is appealing using time management
2. Identify basic methods for serving a meal
3. Describe how to set the table
4. Discuss rules for table behavior and etiquette

#### Concepts

Meal appeal: flavors, color, shape, texture, and temperature, plate service, family style, buffet, tableware, flatware, formal style, manners, etiquette, "finger foods"

#### Teaching Strategies

1. Chapters 20, 21 in Discovering Foods
2. Handouts, "Meal Planning Checklist," "Table Manners"
3. Worksheets, "Meal Planning Savvy," "Chapter 21 Study Guide," "Planning Appealing Meals," "Be Aware of Tableware," "Mind Your Manners," "Table Setting"
4. Videos, "Paper Plates to Silver Spoons," "Presentation of the Meal: Are You Being Stared At?," "Entertaining/Meal Styles: When to Serve What," "Etiquette: How Not To Impress Royalty," "The Art of Dining"

**FOOD SCIENCE & NUTRITION UNIT****Topic 5: Grain Products**

(correlated to Course Proficiencies 1, 4, 5, ,7, 8)

**Student Outcomes**

After completing this unit of study, students should be able to

1. Identify how grain products fit into a healthful eating plan
2. Describe how to select and store grains
3. Prepare grain products

**Concepts**

Grains, seed or kernel, parts of a grain - bran, endosperm, germ, refined, enriched, whole grain, wheat, corn, oats, barley, rye, millet, buckwheat, grits, rice - short grain, long grain, brown, milled, wild

**Teaching Strategies**

1. Filmstrip, "The Grain Robbery"
2. Chapter 25 in Discovering Foods
3. Laboratory Activities:
  - Oatmeal chocolate chip walnut cake
  - Blueberry or banana breads
  - Irish soda bread
  - Pasta with sauce
  - Grain Taste Test
  - Bread Pudding
4. Video, "Pasta - The Inside Story"
5. Worksheets, "Grain Robbery," "Chapter 25 Study Sheet"
6. Handouts, "Parts of Grains," "Grain Review Sheet"

**FOOD SCIENCE & NUTRITION UNIT****Topic 6: Vegetables & Fruits**

(correlated to Course Proficiencies 1, 4, 5, 6, 7, 8)

**Student Outcomes**

After completing this unit of study, students should be able to

1. Describe the nutritional value of vegetables and fruits
2. Select high quality vegetables and fruits
3. Store vegetables and fruits to properly retain quality
4. Prepare vegetables and fruits maintaining nutritional value and appropriate appearance

**Concepts**

Vegetables, edible parts of a plant - flowers, fruit, stem, seeds, tuber, root, bulb, leaf - dark green and deep yellow vegetables (Vitamin A), citrus fruits - Vitamin C (ascorbic acid), forms to purchase - canned, fresh, frozen, dried, best methods to cook - bake with skin, steam, microwave, saute

**Teaching Strategies**

1. Chapters 26, 27 in Discovering Foods
2. Videos, "Good Food Bad Food - Part II - Dietary Heroes," "Fruit: Nature's Candy," "Selecting and Storing Vegetables," "Preparing Vegetables"
3. Filmstrip, "Give Produce Priority"
4. Worksheets, "Good Food Bad Food - Part II," "Fruit - Nature's Candy," "Give Produce Priority," "Vegetables"
5. Laboratory Activities:
  - Fresh vegetables with vegetable dip
  - Spaghetti sauce
  - Baked apple slices
  - Blueberry or banana bread
  - Applesauce
  - Carrot pineapple cake
  - Broccoli squares

Citrus punch  
Orange juice comparison  
Potato Soup  
Broccoli Cheese Casserole

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### FOOD SCIENCE & NUTRITION UNIT

**Topic 7: Milk**  
(correlated to Course Proficiencies 1, 4, 5, 6, 7, 8)

#### Student Outcomes

After completing this unit of study, students should be able to

1. Describe how milk fits into a healthful eating plan
2. Select and store milk
3. Prepare cooked milk products
4. Name foods that belong to the milk group in the food guide pyramid

#### Concepts

Milk = protein food, low temperature, slowly, pasteurized, homogenized, whole, low fat, condensed, skim, evaporated

#### Teaching Strategies

1. Chapter 23 in Discovering Foods
2. Videos, "Milk for Moore," "The Dairy Plant"
3. Worksheet, "Chapter 23 Study Guide"
4. Handout, "Milk Review Sheet"
5. Laboratory Activities:
  - Macaroni and cheese
  - Tapioca pudding
  - Bread pudding
  - Hot chocolate
  - Milk taste test
  - Pumpkin custard



**FOOD SCIENCE & NUTRITION UNIT****Topic 8: Meat**

(correlated to Course Proficiencies 1, 4, 5, 6, ,7, 8)

**Student Outcomes**

After completing this unit of study, students should be able to

1. Explain how meat fits into a healthful eating plan
2. Describe how to select and store meat
3. Prepare meat using a cooking method appropriate to the cut of meat

**Concepts**

Beef, lamb, veal, pork, variety meats, tender, less tender, wholesale, cooking meat - retail, grade of meat, prime, choice, good, moist heat methods - stew, braise, dry heat methods - roast, broil, pan fry, serving size and cost per serving, trichinosis

**Teaching Strategies**

1. Chapter 31 in Discovering Foods
2. Filmstrips, "Beef Buying Basics," "Mr. Pig Meets the Press"
3. Video, "Cooking Today's Beef"
4. Handouts, "Meat Review," "Retail Cuts of Beef," "Cookery Methods," "Cost Per Serving"
5. Worksheets, "Meat Chapter 31 Study Guide," "Buying Basics"

6. Laboratory Activities:  
    Beef tacos  
    Sloppey Joes  
    Meat Pinwheels  
    Hot Dog Taste Test

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## FOOD SCIENCE & NUTRITION UNIT

**Topic 9: Eggs**  
(correlated to Course Proficiencies 4, 5, 6, 7, 8)

### Student Outcomes

After completing this unit of study, students should be able to

1. Describe how eggs fit into a healthful eating plan
2. Explain how to select and store eggs
3. Prepare eggs

### Concepts

Ways to cook eggs - fried, baked, poached, scrambled, hard cooked, soft cooked; ways eggs are used in recipes - coat, emulsify, tenderize, blend, flavor, leaven, thicken; grades, sizes, shell color, nutrients in composition

### Teaching Strategies

1. Filmstrip, "The Incredible Edible Egg"
2. Video, "The Egg Basket"
3. Handouts, "The Inside Story," "Eggs From Hen to Home,"

- "Egg Review Study Sheet"
4. Worksheets, "Discover the Eggstraordinary Egg," "Egg Composition," "Egg Sizes and Grades"
  5. Laboratory Activities:
    - Omelet
    - Fried rice
    - Deviled eggs
    - Brunch casserole

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## FOOD SCIENCE & NUTRITION UNIT

### Topic 10: Breakfast

(correlated to Course Proficiencies 1, 4, 5, 6, 7, 8)

#### Student Outcomes

After completing this unit of study, students should be able to

1. Explain the importance of breakfast and the nutritional requirements
2. Explain the components of a good breakfast
3. Evaluate some common breakfasts
4. Evaluate breakfast cereals
5. Prepare breakfast foods

#### Concepts

"Break-fast" - what to eat, calorie needs, traditional vs. non-traditional foods, cereal - hot, cold, fiber

## Teaching Strategies

1. Filmstrip, "The Best Breakfast"
2. Handouts, "How to Read a Cereal Box," "A Matter of Taste"
3. Worksheets, "The Best Breakfast," "Better Breakfasts"
4. Evaluate a cereal box
5. Laboratory Activities:
  - Complete breakfast - French toast, sausages, orange juice, hot chocolate
  - Granola
  - Omelet

## FOOD SCIENCE & NUTRITION UNIT

### Topic 11: Soup

(correlated to Course Proficiencies 1, 4, 5, 6, 7, 8)

### Student Outcomes

After completing this unit of study, students should be able to

1. Describe how soups fit into a healthful eating plan
2. Identify how to select and store convenience forms of soup
3. Describe how to make convenience forms of soup more nutritional
4. Prepare simple soups

## **Concepts**

Bouillon, broth, stock, chowder

## **Teaching Strategies**

1. Chapter 34 in Discovering Foods
2. Video, "The Soup Kettle"
3. Worksheet, "Chapter 34 Study Guide"
4. Handout, "Soup's Up"
5. Laboratory Activities:
  - Egg drop soup
  - Cream of potato soup
  - Peanut butter soup
  - Cream of broccoli soup

## **FOOD SCIENCE & NUTRITIONAL UNIT**

### **Topic 12: Salad**

(correlates to Course Proficiencies 1, 4, 5, 6, 7, 8)

### **Student Outcomes**

After completing this unit of study, students should be able to

1. Identify how salads fit into a healthful eating plan

2. Describe how to select and store salad ingredients
3. Prepare salads

### **Concepts**

Types of salads - arranged, tossed, molded gelatin; ways used in meal planning - appetizer, accompaniment, main dish, dessert; parts of salad - base, body, dressing, salad dressings, greens

### **Teaching Strategies**

1. Chapter 33 in Discovering Foods
2. Video, "Salad Supreme"
3. Worksheet, "Chapter 33 Study Guide"
4. Laboratory Activities:
  - Pasta salad
  - Waldorf salad
  - Molded rosey gelatin mold
  - German potato salad
  - Picnic macaroni salad

## **FOOD SCIENCE & NUTRITIONAL UNIT**

**Topic 13: Cookies and Cake**  
(correlated to Course Proficiencies 1, 4, 5, 6, 7, 8)

## **Student Outcomes**

After completing this unit of study, students should be able to

1. Identify how cookies and cakes fit into a healthful eating plan
2. Identify the six classifications of cookies
3. Explain how to prepare and store different kinds of cookies and cakes
4. Prepare cookies and cakes

## **Concepts**

Bar, drop, molded, rolled, refrigerator, pressed; shortened, unshortened; soft dough, stiff dough; soft cookies, crisp cookies

## **Teaching Strategies**

1. Chapter 40 in Discovering Foods
2. Videos, "All About Cookies," "Irresistible Cookies," "The Magic of Gingerbread Houses," "Creative Cakes for All Occasions"
3. Worksheet, "Chapter 40 Study Guide"
4. Handouts, "How to Frost a Layer Cake," "Cookie and Cake Review"
5. The cookie exchange
6. Laboratory Activities:
  - Holiday cookies
  - Coconut macaroons
  - Trail mix cookies
  - Pumpkin chocolate chip cookies
  - Peanut butter cookies
  - Oatmeal chocolate chip bars
  - Pumpkin bars
  - Chocolate mayonnaise cake
  - Butter cream icing

## FOOD SCIENCE & NUTRITION UNIT

### Topic 14: Sandwiches

(correlated to Course Proficiencies 1, 4, 5, 6, 7, 8)

#### Student Outcomes

After completing this unit of study, students should be able to

1. Identify how sandwiches fit into a healthful eating plan
2. Describe the history of the sandwich
3. Prepare sandwiches

#### Concepts

Hot sandwiches, cold sandwiches, part or tea sandwiches, "open faced," sandwich spreads, sandwich fillings

#### Teaching Strategies

1. Video, "The Sandwich Buffet" (Frugal Gourmet)
2. Worksheet, "Sandwiches Information Sheet"
3. Laboratory Activities:
  - Sloppy Joes
  - Heros - cold, meatball
  - Reuben or Rachel
  - Eggwiches
  - Breakfast sandwich
  - Grilled ham and cheese



**FOOD SCIENCE & NUTRITION UNIT****Topic 15: Careers in Food Science and Nutrition  
(correlated to Course Proficiency 9)****Student Outcomes**

After completing this unit of study, students should be able to

1. Identify different kinds of careers in the foods industry
2. Discuss how to prepare now for a successful career

**Concepts**

Careers: nutritionist, dietician, food scientist, chef, food processing job skills, food service, food technologist

**Teaching Strategies**

1. Chapter 3 in Discovering Foods
2. Field trips or speakers from: school kitchen, hospital dietary department, fast food restaurant, bakery, grocery store
3. Filmstrip, "Careers in Foods and Nutrition"
4. Make a collage of food science or nutrition careers

**RESOURCES USED**

Discovering Foods Teacher Resource Binder

Competency Based Curriculum Guide Life Skills, State of New Jersey Department of Education, 1993.