Contents

Chapter 1 How to Use This Book	1
What Is a Case Study?	1
Sample Case Study: Derrick's Malaise	
Where Can I Find the Answers to These Problems?	3
Where Does the Analysis Part Come In?	3
Key Words and Their Meanings: Look Up the Unfamiliar Terms	3
Read the Relevant Literature	3
Organize Your Information	4
Prepare a Summary for Yourself of the Previous Key Points	
What Do the Terms Used in This Book Mean?	
Learning Activity 1.1	8
Learning Activity 1.2	9
,	
Chapter 2 Disease	
What Is a Disease?	
How Is Disease Studied? Who Studies Disease?	
Do We Keep Track of Disease?	12
What Causes a Disease to Develop?	12
What Are Signs and Symptoms?	
What Kinds of Laboratory Work Could Be Helpful in Describing the Case?	
What Kinds of Tissues Can Be Used for Laboratory Assessment?	
How Long Does a Disease Last?	
Learning Activity 2.1: Epidemiology Case Study	16
Suspected Legionnaires' Disease in Bogalusa	16
The Story	
Background on Bogalusa	17
Conclusion	19
	0.1
Chapter 3 Homeostasis	
What Is Homeostasis?	
How Is Homeostasis Regulated?	2
What Is the Relevance of Homeostatic Control to Our Understanding of the	0.0
Physiology of Nutrition?	23
Malnutrition as Part of a Homeostatic Disturbance	
Sodium	
Potassium	
Chloride	26

Calcium	27
Magnesium	
Other Instances of Homeostatic Regulation	
Growth and Development	
Obesity	28
Homeostasis in Body Weight Regulation	30
Treatment of Obesity	
Drugs in the Treatment of Obesity	31
Diet Products	31
Bariatric Surgery	32
Conclusion	33
Learning Activity 3.1: Keeping a Food Diary	34
Case Study 3.1: Marcus Wants to Stop Gaining Weight	35
Problem Analysis and Resolution	36
Case Study 3.2: Susie's Goldfish Jumps Out of the Bowl	37
Problem Analysis and Resolution	37
Case Study 3.3: Beth Decides	38
Problem Analysis and Resolution	38
Case Study 3.4: Baby Bo Can't Get Enough	40
Problem Analysis and Resolution	40
Case Study 3.5: Discovering a Concentration Camp	42
Problem Analysis and Resolution	42
	4.0
Chapter 4 Blood	
Causes of Nutritional Anemia	
Pharmacological Treatment of Iron Deficiency	
Toxicology of Iron Overload	
Other Nutrients and Anemia	
Non-Nutritional Anemia	
Blood Groups	
Blood Clotting	
White Cells	
Blood Pressure	
Learning Activity 4.1: Your Nutritional Status	
Case Study 4.1: Cynthia Has an Automobile Accident	
Problem Analysis and Resolution	
Case Study 4.2: Nebraska Pioneer Women	
Problem Analysis and Resolution	
Case Study 4.3: Maureen Decides to Adopt Vegetarianism	
Problem Analysis and Resolution	56
Chapter 5 You Are What You Eat	57
Dietary Guidelines	
Diet Assessment	
Nutritional Assessment	
Laboratory Tests	
Case Study 5.1: Elise Complains of Trouble Driving at Night	
Problem Analysis and Resolution	
,	

Case Study 5.2: Uncle John Is an Alcoholic	65
Problem Analysis and Resolution	
Case Study 5.3: Little Lizzie Has Scurvy	
Problem Analysis and Resolution	
•	
Chapter 6 How Is Food Used?	
How Do We Get the Nutrients in the Food into Our Bodies?	
Absorption	
Protein Digestion	
Amino Acid Absorption	
Carbohydrate Digestion	
Carbohydrate Absorption	71
Lipid Digestion and Absorption	
Case Study 6.1: Steven Has a Belly Ache	
Problem Analysis and Resolution	
Case Study 6.2: John Has a Pain	
Problem Analysis and Resolution	
Case Study 6.3: Emily's Baby	
Problem Analysis and Resolution	
Case Study 6.4: Herbert Is on a Food Supplement Kick	
Problem Analysis and Resolution	
Case Study 6.5: Herman Is Convinced He Has Heart Trouble	
Problem Analysis and Resolution	79
Chapter 7 We Are What We Inherit	
Chapter 7 We Are What We Inherit	81
Chapter 7 We Are What We Inherit	8181
Chapter 7 We Are What We Inherit	818183
Chapter 7 We Are What We Inherit	81838488
Chapter 7 We Are What We Inherit	81838488
Chapter 7 We Are What We Inherit	8183848889
Chapter 7 We Are What We Inherit	818384888990
Chapter 7 We Are What We Inherit	818384888990
Chapter 7 We Are What We Inherit	81 83 84 89 89 90
Chapter 7 We Are What We Inherit	8181838489899090
Chapter 7 We Are What We Inherit	8181838489899090
Chapter 7 We Are What We Inherit	8181838889909091
Chapter 7 We Are What We Inherit	81838489909191
Chapter 7 We Are What We Inherit	8183848990919193
Chapter 7 We Are What We Inherit What Is a Gene? What Is Our Genotype? What Is Our Phenotype? What Is the Difference between the Terms, Genotype and Phenotype? How Do We Inherit Our Genotype and Phenotype? How Does Our Environment Shape the Phenotypic Expression of Our Genotype? Learning Activity 7.1: Your Family Tree Case Study 7.1: An African Adventure Problem Analysis and Resolution. Case Study 7.2: BoBo Hates Milk; It Gives Him a Tummy Ache Problem Analysis and Resolution. Case Study 7.3: Sylvia, Raymond, and Reginald Have a Fat Mother with Type 2 Diabetes Problem Analysis and Resolution. Chapter 8 Pets and People. How the Immune System Works Antibodies	81838489909191919393
Chapter 7 We Are What We Inherit	8181838489909191919395
Chapter 7 We Are What We Inherit	818183848990919191939395
Chapter 7 We Are What We Inherit	81818388899091919395969898
Chapter 7 We Are What We Inherit	8183848990919193939699
Chapter 7 We Are What We Inherit	818384899091939393959999
Chapter 7 We Are What We Inherit	8181838489909191939596999991

Case Study 8.4: Betty Changes Allegiances	
Problem Analysis and Resolution	
Case Study 8.5: Julia Is Thin	102
Problem Analysis and Resolution	102
Chapter 9 Food and Health	103
Food Safety	103
Food-Borne Pathogens	
Bacteria	103
Viruses	105
Eukaryotic Contaminants (Molds and Parasites)	106
Recognition	106
Prevention	
Case Study 9.1: Traveler's Tummy	
Problem Analysis and Resolution	
Case Study 9.2: Oh Those Tomatoes!	109
Problem Analysis and Resolution	109
Case Study 9.3: Jesse and His Family Get Sick	110
Problem Analysis and Resolution	110
Chapter 10 Stones and Bones	
Bone Mineralization	
Bone Diseases	
Osteoporosis	
Osteomalacia	
Skeletal Problems Associated with Renal Disease	
Other Diseases of the Bone	
Renal Stone Disease	
Types of Stones	
Case Study 10.1: Aunt Tillie Is Getting Shorter	117
Problem Analysis and Resolution	
Case Study 10.2: Mike Writhes on the Floor	
Problem Analysis and Resolution	
Case Study 10.3: Bertha Takes a Fall	
Problem Analysis and Resolution	119
Chapter 11 Age and Nutrition	101
Chapter 11 Age and Nutrition	
The Aging Process	
Age-Related Changes in Metabolism	
Case Study 11.1: Grandma Is Tired	
Case Study 11.2: Lydia Has Palpitations	
Problem Analysis and Resolution	
1 Toblem Analysis and Resolution	120
Chanter 12 Cetting from Here to There_Muscle	127
Chapter 12 Getting from Here to There—Muscle	
How Nutrition Affects Muscle Function	
Muscle Problems	
Learning Activity 12.1: Your Basal Energy Need	
Learning Activity 12.1. Tour basar Litergy INCCU.	101

Learning Activity 12.2: Activity Cost	132
Learning Activity 12.3: Exploring Performance-Enhancing Products	134
Case Study 12.1: Jason Is a Cyclist	135
Problem Analysis and Resolution	135
Case Study 12.2: Jackson Aspires to Play Professional Football	
Problem Analysis and Resolution	136
Case Study 12.3: Tonya Has a Heart Attack	
Problem Analysis and Resolution	
Case Study 12.4: Edward Enlists in the Army	
Problem Analysis and Resolution	
Glossary	139
Index	149