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(for Campbell, Biology in Focus, 2nd Edition,
aligned to 2019 AP Bio Course and Exam Description)

Course Overview

Module 1 (Chapter 1): Big Ideas/Key Themes of biology

Unit 1: The Chemistry of Life

Chapter 2: Basic Chemistry

Topic 1.1: Chapter 2, Concept 2.5: Water and Life

Chapter 3, part 1: Carbon and Functional Groups

Topics 1.3 - 1.6: Chapter 3, part 2: Biochemistry

Unit 2: Cells Structure and Function

Topics 2.1 - 2.3, 2.10: Chapter 4: Eukaryotic Cell Structure

Topics 2-5 - 2.9: Chapter 5, concepts 5-1 to 5.5: Cell Membrane Structure and Function

Unit 3: Cellular Energetics

Topic 3.1 - 3.4: Chapter 6: Metabolism (Energy, ATP and Enzymes)

Topic 3.6¹: Chapter 7: Cellular Respiration and Fermentation

Topic 3.5: Chapter 8: Photosynthesis

Unit 4: Cell Communication and the Cell Cycle

Topics 4.1 to 4.4: Concept 5.6: Cell communication

Topic 4.5: Chapter 32: Feedback Control, Homeostasis, Thermoregulation

Topic 4.6: Chapter 9, The Cell Cycle and Control of the Cell Cycle

Unit 5: Heredity

Topics 5.1 and 5.2: Chapter 10 and Concept 12.4: Meiosis and Chromosomal Variations

Topics 5.3 - 5.6: Chapters 11 and 12: Genetics (Mendelian, blood type, sex linkage, linkage)

Unit 6: Gene Expression and Regulation

Topic 6.1: Chapter 13: DNA Discovery, Structure and Replication

Topics 6.2 - 6.4, 6.7: Chapter 14: From Gene to Protein (transcription and translation)

Topic 6.7: Chapter 17: Viruses

Topic 6.5, 6.7: Concepts 24.2, 24.3, and 15.1: Bacterial Genetics

Topic 6.5: Concepts 15.2, 15.3, 15.4: Eukaryotic Gene Expression and Genomics

Topic 6.6: Chapter 16: Animal Development, Stem Cells, and Cancer

Topic 6.8: Concept 13.4: Genetic Engineering

Unit 7: Natural Selection/Evolution

Topics 7.1 - 7.3, 7.6, 7.8: Chapter 19: Descent with Modification (Natural Selection, Evidence for Evolution)

Topic 7.9: Chapter 20: Phylogenetics and Cladistics

Topic 7.4, 7.5: Chapter 21: The Evolution of Populations/Population Genetics

¹ I've always found it easier to teach respiration before photosynthesis, and that's what I'm doing here.

Thank you to Mr. W in creating this.

<https://sciencemusicvideos.com/curriculum/campbell-biology-in-focus-2nd-ed-study-questions/>