
AP Topic Correlation to *Campbell Biology, Ninth Edition, by Reece et al.*

The following chart is intended to help you study for the AP Biology Exam. The left column includes a series of AP Biology topics with which you should be familiar before you take the AP Biology Exam. The right column includes a detailed breakdown of corresponding chapters and Concepts in your *Campbell Biology, Ninth Edition, by Reece et al.*, textbook. You may want to use this chart throughout the year to review what you've learned. It is also an excellent place to begin your pre-exam review of subjects.

AP BIOLOGY TOPICS**CORRELATION TO *CAMPBELL BIOLOGY, 9E AP EDITION***

I. Molecules and Cells**A. Chemistry of Life**

1. Water
2. Organic molecules in organisms
3. Free energy changes
4. Enzymes

B. Cells

1. Prokaryotic and eukaryotic cells
2. Membranes
3. Subcellular organization
4. Cell cycle and its regulation

C. Cellular Energetics

1. Coupled reactions
2. Fermentation and cellular respiration
3. Photosynthesis

Units 1 and 2**Chapters 3, 4, 5, 8**

- Concepts 3.1–3.3
Concepts 4.1–4.3, 5.1–5.5
Concepts 8.1–8.3
Concepts 8.4–8.5

Chapters 6, 7, 11, 12

- Concepts 6.1–6.7, 27.1–27.6
Concepts 6.2, 6.4, 7.1–7.5, 11.1–11.4
Concepts 6.2–6.7
Concepts 12.1–12.3

Chapters 8, 9, 10

- Concepts 8.3, 9.1–9.4
Concepts 9.1–9.6
Concepts 10.1–10.4
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II. Heredity and Evolution**A. Heredity**

1. Meiosis and gametogenesis
2. Eukaryotic chromosomes
3. Inheritance patterns

B. Molecular Genetics

1. RNA and DNA structure and function
2. Gene regulation
3. Mutation
4. Viral structure and replication
5. Nucleic acid technology and applications

C. Evolutionary Biology

1. Early evolution of life
2. Evidence for evolution
3. Mechanisms of evolution

Units 3, 4, and 5**Chapters 13–15**

- Concepts 13.1–13.4
Concepts 15.1–15.3, 16.3
Concepts 14.1–14.4, 15.2–15.5

Chapters 16–20

- Concepts 16.1–16.2, 17.1–17.4
Concepts 18.1–18.5
Concepts 15.4, 17.5, 18.5, 21.5
Concepts 19.1–19.3
Concepts 20.1–20.4, 21.1–21.2

Chapters 22–26

- Concepts 25.1–25.4
Concepts 22.2–22.3, 24.2–24.4, 25.2–25.5, 26.4–26.5
Concepts 22.1–22.3, 23.1–23.4, 24.1–24.4, 25.4–25.5, 26.4, 26.6
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III. Organisms and Populations

A. Diversity of Organisms

1. Evolutionary patterns
2. Survey of the diversity of life
3. Phylogenetic classification
4. Evolutionary relationships

B. Structure and Function of Plants and Animals

1. Reproduction, growth, and development (plants)
2. Reproduction, growth, and development (animals)
3. Structural, physiological, and behavioral adaptations (plants)
4. Structural, physiological, and behavioral adaptations (animals)
5. Response to the environment (plants)
6. Response to the environment (animals)

C. Ecology

1. Population dynamics
2. Communities and ecosystems
3. Global issues

Units 4, 5, 6, 7, and 8

Chapters 25–34

Concepts 26.1, 26.3, 29.1–29.2, 32.1–32.4

Concepts 27.1–27.4, 28.1–28.6, 29.2–29.3, 30.1–30.3, 31.1–31.4, 32.1, 32.4, 33.1–33.5, 34.1–34.8

Concepts 26.1–26.3, 26.6, 27.4, 28.1, 29.1–29.3, 30.2–30.3, 31.3–31.4, 32.4, 33.1–33.5, 34.1–34.8

Concepts 26.1, 26.6

Chapters 29, 30, 35–39, 40–51

Concepts 29.2–29.3, 30.1–30.3, 35.1–35.5, 38.1–38.2

Concepts 46.1–46.6, 47.1–47.3

Concepts 29.1–29.3, 30.1–30.3, 35.1–35.2, 36.1–36.6, 37.1–37.3, 38.1–38.2, 39.1–39.5

Concepts 40.1–40.4, 41.1–41.5, 42.1–42.7, 43.1–43.3, 44.1–44.6, 45.1–45.4, 46.1–46.6, 48.1–48.4, 49.1–49.3, 50.5–50.6, 51.2–51.5

Concepts 39.1–39.5

Concepts 40.3, 43.1–43.2, 44.1–44.2, 45.2–45.4, 48.1–48.4, 49.1–49.3, 50.1–50.4, 51.1–51.2

Chapters 52–56

Concepts 53.1–53.6

Concepts 52.3–52.4, 54.1–54.5, 55.1–55.5

Concepts 52.1–52.2, 53.6, 55.5, 56.1–56.5