

Textbook Review

Chapter 1

Reading: Chapter 1 – pages 1-34 (skip page 29 Hardy-Weinberg Equilibrium)

Questions: Page 33 – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 21.

1. **Principles of Science:** scientific method, experimental and evolutionary sciences
2. **Origins of Darwinian Theory:** pre-Darwin, Lamarck, Wallace, Lyell
3. **Darwin's Theory of Evolution:** perpetual change, common descent, speciation, gradualism, & natural selection. Know the random & non-random components of evolution.

Chapter 2 & 3.

1. Some material about animal ecology and architecture is taken from these chapters.

Chapter 4

Reading: Chapter 4 – pages 72-88

Questions: Page 87 – 1, 2, 3, 4, 5, 6, 7, 8, and 9.

1. **Linnaeus and Classification**
2. **Taxonomic Characters and Phylogeny:** character variation & comparative biology
3. **Theories of Taxonomy:** traditional & cladistics
4. **Species:** criteria, species concepts
5. **Major Divisions of Life:** Bacteria, “Archaea”, & Eucarya

Chapter 5

Reading: Chapter 5 – pages 88-111

Questions: Page 108 – 1, 8, 9, 10, and 15.

1. **Emergence of Eukaryotes**
2. **Symbiotic relationships** (discussed in detail with regards to Platyhelminthes)

Chapter 6

Reading: Chapter 6 – pages 112-122

Questions: Page 121 – 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, and 13.

1. **Advent of Multicellularity**
2. **Form & Function:** canal systems, cell types, skeletons, physiology, reproduction
3. **Classification:** Calcarea, Hexactinellida, & Demospongiae
4. **Phylogeny & Adaptive Radiation**

Chapter 7

Reading: Chapter 7 – pages 123-146

Questions: Page 145 – 1, 2, 3, 4, 5, 6, 7, 9, 13, 15, 18, 19, and 20.

1. **Fearsome Tiny Weapon**
2. **Phylum Cnidaria:** polyp & medusa, nemoatocysts, diploblastic tissue, & nerve net
3. **Classification:** Hydrozoa, Scyphozoa, Cubozoa, & Anthozoa; Ctenophora
4. **Phylogeny & Adaptive Radiation**

Chapter 8

Reading: Chapter 8 – pages 145-158; 161-163

Questions: Page 160 – 1, 2, 3, 5, 8, 9, 10, 11, 12, 18, and 19.

1. **Getting Ahead** (see chapter 3 for additional information)
2. **Phylum Platyhelminthes:** tegument, excretion, reproduction
3. **Classification:** “Turbellaria”, Trematoda (Digenea), Monogenea, & Cestoda
4. **Phylogeny & Adaptive Radiation**

Chapter 9

We will cover this chapter with the Ecdysozoans... it will **not** be included on exam 1.

Chapter 10

Reading: Chapter 10 – pages 178-203.

Questions: Page 201 – 1, 2, 3, 4, 5 (radula, odontophore, trochophore, veliger), 6–15.

1. **A Significant Space**
2. **Form & Function:** body plan, head-foot, visceral mass, & internal structure
3. **Less Diverse Classes:** Aplousobranchia, Monoplousobranchia, & Scaphopoda
4. **Polyplousobranchia:** chitons
5. **Gastropoda:** torsion, coiling, detorsion, major groups
6. **Bivalvia:** shell, locomotion, feeding, larval stages
7. **Cephalopoda:** shell, locomotion, external features, color changes, & ink production
8. **Phylogeny & Adaptive Radiation**

Chapter 11

Reading: Chapter 11 – pages 204-221.

Questions: Page 218 – 1, 2, 3, 4, 5, 9, 11, and 13.

1. **Dividing Up the Body**
2. **Body Plan & Characteristics**
3. **Classification:** “Polychaeta”, “Oligochaeta”, & Hirudinea
4. **Phylogeny & Adaptive Radiation**