

**City of Angels School  
Independent Study  
Los Angeles Unified School District**

**Field Test  
01/07/08**

**Biology B: Course #360702  
Student's Instructional Guide**

TEXT: Prentice Hall Biology, Miller and Levine  
Prentice Hall Biology, Adapted Reading and Study Workbook B

**Student** \_\_\_\_\_

**Teacher** \_\_\_\_\_

**Beginning Date** \_\_\_\_\_

**Ending Date** \_\_\_\_\_

**Final Mark** \_\_\_\_\_ **Credits** 5

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**

(1) **Read** - **Prentice Hall Biology, Chapter 15: Darwin's Theory of Evolution**  
**Prentice Hall Biology, Chapter 16: Evolution of Populations**

- Section 15-1: *all*, pages 369- 372
  - Section 15-2: *Biology and History timeline*, pages 374-375
  - Section 15-3: *all*, pages 378-386
  - Section 16-1: *all*, pages 393-396
  - Section 16-2: *Natural Selection on Single-Gene Traits*, pages 397-398
  - Section 16-3: *Speciation of Darwin's Finches*, pages 408-409
- Adapted Reading and Study Workbook B**, pages 135-137 and 143-145

(2) **Homework**

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 15-1: evolution, theory, fossils,
  - Section 15-3: artificial selection, struggle for existence, fitness, adaptation, survival of the fittest, natural selection, descent with modification, common descent, homologous structures, vestigial organs
  - Section 16-1: gene pool, relative frequency, single-gene trait, polygenic traits
  - Section 16-2: directional selection, stabilizing selection, disruptive selection
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 15-1: page 372 (1-5)
  - Section 15-3: page 386 (1-4)
  - Section 16-1: page 396 (1-5)
  - Section 16-2: page 402 (1)
- **Workbook** - Adapted Reading and Study B, pages 138-142 and 146-154

(3) **Labs** - **pick one** of the following:

- Active Art - go online [www.PHSchool.com](http://www.PHSchool.com) – do both. Enter student code to do experiment and answer questions online. Print out and turn in answered questions.
  - *Artificial Selection*, student code cbp-5153, text p. 379
  - *Genetic Drift*, student cbp-5162, text p. 400
- Virtual Lab CD – do all 3 labs - Print record sheet lab to complete and turn in.
  - *Lab 13: Estimating Allele Frequencies...*
  - *Lab 14: Testing an Ideal ...Population*
  - *Lab 15: Selection against a Deleterious Allele*
- BioDetectives DVD. Watch program and turn in answered questions asked within.
  - *Unit 5: "The Galapagos Island: A Glimpse Into the Past"*

(4) **Test** – to be completed in class.

- **Chapter Assessment**, pg 413 (1-10) & 389 (1-10)  
**Standards Practice**, pg 391 (1-10) & 415 (1-10)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**

## Assignment No. 2

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This assignment is designed to meet CA Standards 8f, 8g

(1) Read - **Prentice Hall Biology, Chapter 17: The History of Life**

**Prentice Hall Biology, Chapter 18: Classification**

- Section 17-1: *Fossils and Ancient Life and Geologic Time Scale*, pages 417 and 421 only
- Section 17-2: *boldface sentences*, pages 423, 424, 426 and 427
- Section 17-3: *boldface sentences*, pages 429, 430, 431, 433
- Section 17-4: *Introduction*, page 435
- Section 18-1: *Assigning Scientific Names and Linnaeus's System...*, pages 448-450
- Section 18-2: *Evolutionary classification*, page 452
- Section 18-3: *all*, pages 457-461

**Adapted Reading and Study Workbook B**, pages 155-157 and 165-167

(2) Homework

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 17-1: paleontologists, fossil record, extinct, geologic time scale, eras
  - Section 17-3: macroevolution
  - Section 18-1: binomial nomenclature, genus, taxon, family, order, class, phylum, kingdom
  - Section 18-2: phylogeny, evolutionary classification
  - Section 18-3: domain, bacteria, eubacteria, archaea, archaebacteria, eukarya, protista, fungi, plantae, animalia
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 17-1: page 422 (1 and 3)
  - Section 17-3: page 434 (1 and 3)
  - Section 18-1: page 450 (2 and 3)
  - Section 18-2: page 455 (1)
  - Section 18-3: page 461 (1-6)
- **Workbook** - Adapted Reading and Study B, pages 158-164 and 168-173

(3) Labs

- Active Art - go online [www.PHSchool.com](http://www.PHSchool.com) – do both activities. Enter student code to do experiment and answer questions online. Print out and turn in answered questions.
  - *Fossil Formation*, student code cbp-5171, text p. 418
  - *Cladogram*, student code cbp-5182, text p. 452

(4) Test – to be completed in class.

- **Chapter Assessment**, page 443 (1-8) and 465 (1-10)  
**Standards Practice**, page 445 (1-10) and 467 (1-8)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**

### Assignment No. 3

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This assignment is designed to meet CA Standards 9a, 9g

(1) Read - **Prentice Hall Biology, Chapter 32: Mammals**

- Section 32-1: *all*, pages 821-827
- Section 32-2: *all*, pages 828-832

**Adapted Reading and Study Workbook B**, pages 312-314

(2) Homework

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 32-1: mammary glands, subcutaneous fat, rumen, diaphragm, cerebral cortex
  - Section 32-2: monotremes, marsupials, placenta
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 32-1: page 827 (1-5)
  - Section 32-2: page 832 (1-6)
- **Workbook** - Adapted Reading and Study B, pages 315-322

(3) Labs - **pick one** of the following:

- Attached worksheet. Complete and turn given copy of attached worksheet.
  - *Mammals*
- BioDetectives DVD - do both. Watch program and turn in answered questions asked within.
  - *Unit 9: “Wrongly Accused: Science and Justice”*
  - *Unit 5: “Mummies: Ties to the Past”*

(4) Test – to be completed in class.

- **Chapter Assessment**, page 845 (1-8) and **Standards Practice**, page 847 (1-10)

**Evaluation: Homework(40%) :\_\_\_\_\_ Lab(30%) :\_\_\_\_\_ Test(30%) :\_\_\_\_\_**

## Assignment No. 4

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This assignment is designed to meet CA Standards 9b, 9c, 9d, 9e, 9e

(1) Read - **Prentice Hall Biology, Chapter 35: Nervous System**

- Section 35-1: *all*, pages 891-896
- Section 35-2: *Introduction*, page 897
- Section 35-3: *Introduction*, page 901
- Section 35-4: *Introduction*, page 906
- Section 35-5: *all*, pages 910-  
**Adapted Reading and Study Workbook B**, pages 342-344

(2) Homework

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 35-1: specialized cell, epithelial tissue, connective tissue, nervous tissue, muscle tissue, homeostasis, feedback inhibition
  - Section 32-2: drug, stimulants, depressants, fetal alcohol syndrome, drug abuse, addiction
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 35-1: page 896 (1-5)
  - Section 35-5: page 914 (1-5)
- **Workbook** - Adapted Reading and Study B, pages 344-353

(3) Labs - **pick one** of the following:

- Active Art - go online [www.PHSchool.com](http://www.PHSchool.com) - do both activities. Enter student code to do experiment and answer questions online. Print out and turn in answered questions.
  - *Nerve Impulse*, code cbp-0352, text p. 899
  - *The Eye* cvp-4153, text p. 907
- Froguts CD – If student chooses Froguts as their lab, they must choose Froguts every time it is an option. Student will, in the end, complete all lessons. After lesson completion, test must be completed, completion certificate printed out and turned in.
  - *Frog*, lesson 6

(4) Test – to be completed in class.

- **Chapter Assessment**, page 917 (1, 2, 10) and **Standards Practice**, page 919 (1-11)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**

## **Assignment No. 5**

This assignment is designed to meet CA Standards 9e, 9h, 9i, 10a, 10f

### (1) **Read** - **Prentice Hall Biology, Chapter 36: Skeletal and Muscular Systems**

#### **Prentice Hall Biology, Chapter 37: Circulatory and Respiratory Systems**

- Section 36-1: *The Skeleton and Types of Joints*, pages 921 and 924
- Section 36-2: *Types of Muscle Tissue and How Muscles and Bones Interact*, p 926-927, 930
- Section 36-3: *all*, pages 933-936
- Section 37-1: *Functions of the Circulatory System*, page 943
- Section 37-2: *Introduction*, page 951
- Section 37-3: *The Human Respiratory System and Tobacco and the Respiratory System*, pages 956-958, and 961-963

#### **Adapted Reading and Study Workbook B**, pages 354-356 and 364-366

### (2) **Homework**

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 36-1: joint
  - Section 36-2: tendons
  - Section 36-3: epidermis, keratin, melanin, dermis, hair follicles
  - Section 37-3: pharynx, trachea, larynx, bronchi, alveoli, nicotine, emphysema
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 36-1: page 925 (1-3)
  - Section 36-2: page 931 (1-3)
  - Section 36-3: page 936 (1-6)
  - Section 37-3: page 963 (1-5)
- **Workbook** - Adapted Reading and Study B, pages 357-363 and 367-374

### (3) **Labs** - **pick one** of the following:

- Active Art - go online [www.PHSchool.com](http://www.PHSchool.com) – do all 3. Enter student code to do experiment and answer questions online. Print out and turn in answered questions.
  - *Joint Movement*, code cbp-0361, text p. 924
  - *The Heart*, code cbp-0371, text p. 944
  - *The Process of Breathing*, code cbp-0373, text p. 959
- Froguts CD - To chose this option, student must have done lesson 6 from assignment 4
  - *Frog*, lessons 2, 3 and 7
- Lab Simulation CD - Take self-quiz following lab. Turn in printout of completed quiz.
  - *Cardiovascular System I: The Beating Heart*
  - *Cardiovascular System II: The Vascular Highway*
- Virtual Lab CD. Print record sheet lab to complete and turn in.
  - *Lab 20: A Test of Cardiovascular Fitness*

### (4) **Test** – to be completed in class.

- **Chapter Assessment**, page 967 (1-10) and **Standards Practice**, page 969 (1-9)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**

## Assignment No. 6

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This assignment is designed to meet CA Standards 2b, 9c, 9f, 9g, 9i

- (1) Read - **Prentice Hall Biology, Chapter 38: Digestive and Excretory Systems**  
**Prentice Hall Biology, Chapter 39: Endocrine and Reproductive Systems**
- Section 38-1: *all*, pages 971-977
  - Section 38-2: *Introduction*, page 978
  - Section 38-3: *Functions of the Excretory System, Control of Kidney Function, and all figures*, pages 985 and 988
  - Section 39-1: *all*, pages 997-1002
  - Section 39-2: *all*, pages 1003-1008
  - Section 39-3: *Sexual Development and all figures*, pages 1009-1012
- Adapted Reading and Study Workbook B**, pages 375-377 and 384-386
- (2) Homework
- **Definitions** – In complete sentences, define the following highlighted vocabulary
    - Section 38-1: calorie, carbohydrates, fats, proteins, vitamins, minerals
    - Section 39-1: hormones, target cells, exocrine glands, endocrine glands, prostaglandins
    - Section 39-2: pituitary gland, diabetes mellitus, ovaries, testes
    - Section 39-3: puberty
  - **Section Assessments** - Answer all questions in complete sentences.
    - Section 38-1: page 977 (1-5)
    - Section 38-2: page 984 (1-2)
    - Section 38-3: page 989 (1-2)
    - Section 39-1: page 1002 (1-5)
  - **Workbook** - Adapted Reading and Study B, pages 378-383 and 387-394
- (3) Labs - **pick one** of the following:
- Active Art - go online [www.PHSchool.com](http://www.PHSchool.com). Enter student code to do experiment and answer questions online. Print out and turn in answered questions.
    - *Food Pyramid*, code cbp-0381, text p. 976
  - Attached worksheet. Complete and turn given copy of attached worksheet.
    - *Nutrition Project*
  - Froguts CD – Complete final specified lessons. After lesson completion, test must be completed, completion certificate printed out and turned in. Test self-corrected via computer program.
    - *Frog*, lessons 4 and 5
- (4) Test – to be completed in class.
- **Chapter Assessment**, page 1027 (1-10) and **Standards Practice**, page 1029 (1-11)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**

## Assignment No. 7

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This assignment is designed to meet CA Standards 10b, 10c, 10d, 10e, 10f

(1) Read - **Prentice Hall Biology, Chapter 40: The Immune System and Disease**

- Section 40-1: *all*, pages 1031-1035
- Section 40-2: *all*, pages 1036-1042
- Section 40-3: *Introduction*, page 1043
- Section 40-4: *Introduction*, page 1049

**Adapted Reading and Study Workbook B**, pages 395-397

(2) Homework

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 40-1: disease, pathogens, germ theory of disease, Koch’s postulates, vectors, antibiotics
  - Section 40-2: immunity, inflammatory response, fever, interferon, immune response, antigen, humoral immunity, cell-mediated immunity, antibodies, vaccination, active immunity, passive immunity
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 40-1: page 1035 (1-5)
  - Section 40-2: page 1042 (1-5)
- **Workbook** - Adapted Reading and Study B, pages 398-402

(3) Labs - **pick one** of the following:

- Attached worksheet. Complete and turn given copy of attached worksheet.
  - *Human Body Adventure*
- BioDetectives DVD – do both. Watch program and turn in answered questions asked within.
  - *Unit 10: “Influenza: Tracking a Virus”*
  - *Unit 6: “Hantavirus: A Tale of Mice and People”*
- BioDetectives worksheet - Complete and turn in given copy of workbook questions.
  - *Investigation 6: Tracking a Plague*, p. 33-36

(4) Test – to be completed in class.

- **Chapter Assessment**, page 1057 (1-10) and **Standards Practice**, page 1059 (1-10)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**



## Assignment No. 8

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This assignment is designed to meet CA Standards 6d, 6e, 6f

(1) Read - **Prentice Hall Biology, Chapter 3: The Biosphere**

**Prentice Hall Biology, Chapter 4: Ecosystems and Communities**

- Section 3-1: *Levels of Organization*, page 64
- Section 3-2: pages 67-70
- Section 3-3: *all*, pages 74-80
- Section 4-1: *Reading Strategy*, page 87
- Section 4-2: pages 90-93
- Section 4-3: pages 100-104
- Section 4-4: *all*, pages 106-112

**Adapted Reading and Study Workbook B**, pages 20-22 and 31-33

(2) Homework

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 3-1: ecology, species, populations, communities, ecosystem, biome
  - Section 3-2: autotrophs, producers, photosynthesis, chemosynthesis, heterotrophs, consumers, herbivores, carnivores, omnivores, detritivores, decomposers, food chain, food web, trophic level
  - Section 3-3: biogeochemical cycles, evaporation, transpiration, nutrients, nitrogen fixation, denitrification, primary productivity, limiting nutrient, algal bloom
  - Section 4-2: biotic factors, abiotic factors, habitat, niche, resource, competitive exclusion principle, predation, symbiosis, mutualism, commensalisms, parasitism
  - Section 4-4: plankton, phytoplankton, zooplankton, wetland, estuaries, detritus, salt marshes, mangrove swamps, photic zone, aphotic zone, zonation, coastal ocean, kelp forests, coral reefs, benthos
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 3-1: page 65 (1)
  - Section 3-2: page 73 (1-2)
  - Section 3-3: page 80 (1)
  - Section 4-1: Do Reading Strategy Outline, p. 87
- **Workbook** - Adapted Reading and Study B, pages 23-30 and 34-42

(3) Labs - **pick one** of the following:

- Active Art - go online [www.PHSchool.com](http://www.PHSchool.com) - do both activities. Enter student code to do experiment and answer questions online. Print out and turn in answered questions.
  - *Water Cycle*, student code cbp-2033, text p. 75
  - *Earth's Biomes*, student code cbp-2043, text p. 99
- BioDetectives DVD. Watch program and turn in answered questions asked within.
  - *Unit 2: "Pfiesteria: A Killer in the Water"*
- Virtual Lab CD. Print record sheet lab to complete and turn in.
  - Lab 2: *The Effect of Temperature on Dissolved Oxygen*

(4) Test – to be completed in class.

- **Chapter Assessment**, page 83 (1-10) and 115 (1-10)  
**Standards Practice**, page 85 (1-7) and 117 (1-7)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**

## **Assignment No. 9**

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This assignment is designed to meet CA Standards 6a, 6b, 6c, 6g

(1) **Read** - **Prentice Hall Biology, Chapter 5: Populations**

**Prentice Hall Biology, Chapter 6: Humans in the Biosphere**

- Section 5-1: *Analyzing Data*, page 123
- Section 5-2: *all*, pages 124-127
- Section 6-1: pages 140-143
- Section 6-2: pages 144-145
- Section 6-3: pages 150-153
- Section 6-4: *all*, pages 157-160

**Adapted Reading and Study Workbook B**, pages 43-44 and 53-55

(2) **Homework**

- **Definitions** – In complete sentences, define the following highlighted vocabulary
  - Section 5-2: limiting factor, density-dependent limiting factor, predator-prey relationship, density-independent limiting factors
  - Section 6-1: agriculture, monoculture, green revolution
  - Section 6-2: renewable resource, nonrenewable resource, sustainable development, soil erosion, desertification
  - Section 6-3: biodiversity, ecosystem diversity, species diversity, genetic diversity, extinction, endangered species, habitat fragmentation, biological magnification, invasive species
  - Section 6-4: ozone layer, global warming
- **Section Assessments** - Answer all questions in complete sentences.
  - Section 5-1: page 123 (1-3)
  - Section 5-2: page 127 (1-2)
  - Section 6-1: page 143 (1)
  - Section 6-2: page 149 (1-2)
  - Section 6-3: page 156 (1-2)
  - Section 6-4: page 160 (1)
- **Workbook** - Adapted Reading and Study B, pages 45-52 and 56-60

(3) **Labs** - **pick one** of the following:

- Active Art - go online - do both activities. Enter student code to do experiment and answer questions online. Print out and turn in answered questions.
  - *Population*, student code cbp-2052, text p. 126
  - *Fishery Resources*, student code cbp-2062, text p. 147
- Attached worksheet. Complete and turn given copy of attached worksheet.
  - *Estimating Population Size*

(4) **Test** – to be completed in class.

- **Chapter Assessment**, page 135 (1-8) and 163 (1-11)  
**Standards Practice**, page 137 (1-13) and 165 (1-10)

**Evaluation: Homework(40%) : \_\_\_\_\_ Lab(30%) : \_\_\_\_\_ Test(30%) : \_\_\_\_\_**