SUGGESTED TIME SCHEDULE

Different instructional programs provide different lengths of time for laboratory preparations, work activities, and follow-up discussions. Other factors that influence the time required for each exercise are the availability and variety of laboratory equipment and materials. Consequently, it is difficult to make precise suggestions for the amounts of time that should be set aside for particular laboratory exercises.

 The suggested time schedule was prepared with these limitations in mind. The hours listed for each exercise indicate the minimal time that probably will be needed for students who are acquainted with the subject matter of the exercise to complete the laboratory work. Students who lack background information and who have to read various sections of the textbook before beginning an exercises probably will require additional time. Similarly, students who are expected to complete the laboratory reports in class may need more time.

*Laboratory Exercise* *Minimal Time Laboratory Exercise Minimal Time*

Ex. 1 Scientific Method and Measurements 2 hr. Ex. 33 Endocrine Histology and Diabetic Physiology 3 hr.

Ex. 2 Body Organization and Terminology 3 hr. Ex. 34 Blood Cells and Blood Typing 3 hr.

Ex. 3 Chemistry of Life 2 hr. Ex. 35 Heart Structure 2 hr.

Ex. 4 Care and Use of the Microscope 2 hr. Ex. 36 Cardiac Cycle 3 hr.

Ex. 5 Cell Structure and Function 2 hr. Ex. 37 Blood Vessel Structure, Arteries, and Veins 3 hr.

Ex. 6 Movements Through Membranes 3 hr. Ex. 38 Pulse Rate and Blood Pressure 2 hr.

Ex. 7 Cell Cycle 1 hr. Ex. 39 Lymphatic System 1 hr.

Ex. 8 Epithelial Tissues 2 hr. Ex. 40 Digestive Organs 2 hr.

Ex. 9 Connective Tissues 2 hr. Ex. 41 Action of a Digestive Enzyme 2 hr.

Ex. 10 Muscle and Nervous Tissues 1 hr. Ex. 42 Respiratory Organs 2 hr.

Ex. 11 Integumentary System 2 hr. Ex. 43 Breathing and Respiratory Volumes 1 hr.

Ex. 12 Bone Structure 1 hr. Ex. 44 Kidney Structure 2 hr.

Ex. 13 Organization of the Skeleton 1 hr. Ex. 45 Urinalysis 2 hr.

Ex. 14 Skull 3 hr. Ex. 46 Male Reproductive System 2 hr.

Ex. 15 Vertebral Column and Thoracic Cage 2 hr. Ex. 47 Female Reproductive System 2 hr.

Ex. 16 Pectoral Girdle and Upper Limb 2 hr. Ex. 48 Genetics 2 hr.

Ex. 17 Pelvic Girdle and Lower Limb 2 hr. Ex. 49 Blood Testing (available online) 2 hr.

Ex. 18 Joint Structure and Movements 2 hr.

Ex. 19 Skeletal Muscle Structure and Function 1 hr.

Ex. 20 Muscles of the Head and Neck 1 hr.

Ex. 21 Muscles of the Chest, Shoulder, and Upper

 Limb 2 hr.

Ex. 22 Muscles of the Abdominal Wall and Pelvic

 Floor 1 hr.

Ex. 23 Muscles of the Hip and Lower Limb 2 hr.

Ex. 24 Surface Anatomy 2 hr.

Ex. 25 Nervous Tissue and Nerves 2 hr.

Ex. 26 Spinal Cord and Meninges 1 hr.

Ex. 27 Reflex Arc and Reflexes 1 hr.

Ex. 28 Brain and Cranial Nerves 2 hr.

Ex. 29 Dissection of the Sheep Brain 2 hr.

Ex. 30 Ear and Hearing 2 hr.

Ex. 31 Eye Structure 2 hr.

Ex. 32 Visual Tests and Demonstrations 2 hr.

LABORATORY EXERCISE 1

**SCIENTIFIC METHOD AND MEASUREMENTS**

 **Critical Thinking Application Answer**

Answers and data will vary.

**Laboratory Report Answers**

**PART A**

1. (experimental results)
2. (experimental results)
3. Answers will vary, however many students will conclude that the data will support the original hypothesis.

**PART B**

* 1. Answers will vary

LABORATORY EXERCISE 2

**BODY ORGANIZATION AND TERMINOLOGY**

**Instructional Suggestion**

If a dissectible human torso model is not available, you might want to have students consult the figures in various sections of the textbook, particularly reference plates following chapter 1, to gain some understanding of the organizational pattern of the human body.

**Figure Labels**

**FIG. 2.1**

1. Thoracic 4. Pelvic

2. Abdominal 5. Cranial

3. Abdominopelvic 6. Vertebral

**FIG. 2.2.*a***

1. Visceral pleura 4. Visceral pericardium (epicardium)

2. Pleural cavity 5. Pericardial cavity

3. Parietal pleura 6. Parietal pericardium

**FIG. 2.2*b***

7. Visceral peritoneum 9. Parietal peritoneum

8. Peritoneal cavity

**FIG. 2.5**

1. Sagittal (median; midsagittal) plane 3. Transverse (horizontal) plane

2. Frontal (coronal) plane

**FIG. 2.6*a***

1. Epigastric region 6. Left hypochondriac region

2. Right hypochondriac region 7. Left lateral (lumbar) region

3. Right lateral (lumbar) region 8. Left inguinal (iliac) region

4. Umbilical region 9. Pubic (hypogastric) region

5. Right inguinal (iliac) region

**FIG. 2.6*b***

10. Right upper quadrant (RUQ) 12. Left upper quadrant (LUQ)

11. Right lower quadrant (RLQ) 13. Left lower quadrant (LLQ)

**FIG. 2.7*a***

1. Nasal 8. Antecubital 15. Crural 22. Sternal

2. Oral 9. Abdominal 16. Tarsal 23. Pectoral

3. Cervical 10. Antebrachial 17. Cephalic 24. Umbilical

4. Acromial 11. Carpal 18. Frontal 25. Inguinal

5. Axillary 12. Palmar 19. Orbital 26. Coxal

6. Mammary 13. Digital 20. Buccal 27. Patellar

7. Brachial 14. Genital 21. Mental 28. Pedal

**FIG. 2.7*b***

1. Otic 5. Brachial 9. Sacral 13. Popliteal

2. Occipital 6. Dorsal 10. Gluteal 14. Crural (leg) or sural (calf)

3. Acromial 7. Cubital 11. Perineal 15. Plantar

4. Vertebral 8. Lumbar 12. Femoral