

A Cosmetologist's Introduction to Anatomy and Physiology

Student Workbook



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A Cosmetologist's Introduction to Anatomy and Physiology

First Edition

Student Workbook

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Objective 7

**Assignment Sheet 1 – Complete the Crossword
Puzzle of Terms (Objectives 1–6)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading

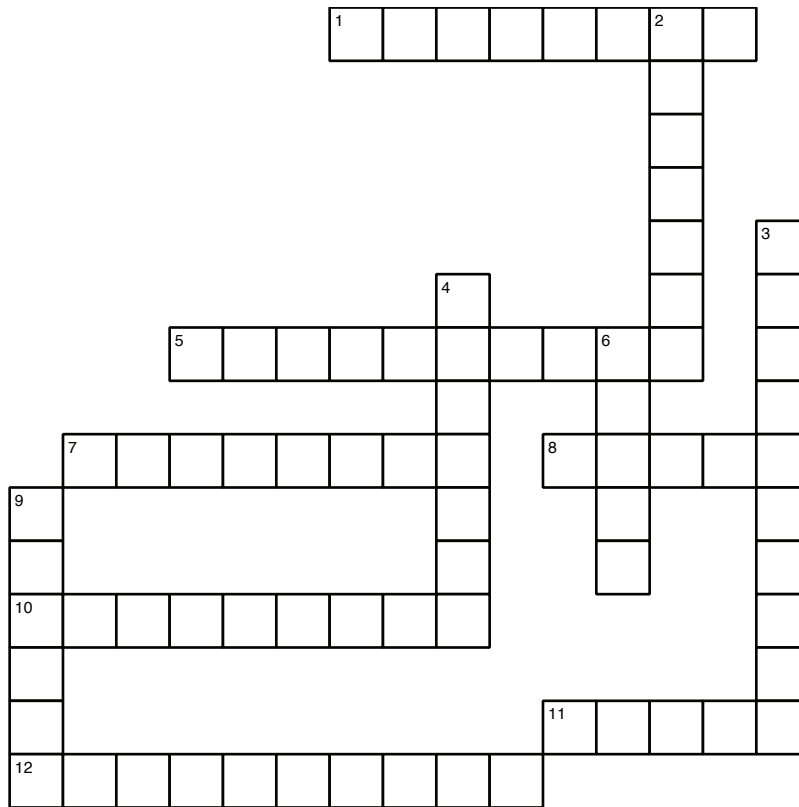


Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 1



Across

1. Of or pertaining to tears
5. The scientific study of the functions of an organism that describes how the organs work independently and in relation to the whole organism
7. A living person, animal, or plant
8. Resulting in death
10. A part of the body, such as the heart, a bone, a gland, a cell, or a limb
11. A special structure within the body that is arranged in an organized manner to perform a specific function
12. The processes that lead to chemical reaction in the body

Down

2. The scientific study of the structure of an organism that describes the size, shape, construction, and relative positions of the organs in the body
3. An organ that must function properly in order for the life of the organism to continue
4. A substance containing amino acid that originates in an organ or gland, moves through the blood to another part of the body, and stimulates activity in that region by chemical reaction
6. Any of the various structures within the body that produce specific chemicals to help with the functions of the body
9. A group of organs and related structures that work together to perform a common function

Objective 8

Assignment Sheet 2—Construct a Model of an Organ of the Human Body

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Model reflects research findings related to size, shape, color, and structure	_____
• Presentation is clear and concise and includes how the organ works in relation to the whole human body	_____
• Teamwork demonstrated throughout completion of assignment	_____

Basic Skills



Reading



Writing



Mathematics



Science



Oral Communication



Interpersonal



Technology

Directions Part 1

Research an organ of the human body using resources available on the Internet or provided by your instructor. Work with another student and write your findings below. This information will help you in constructing your model and preparing your presentation about the selected organ.

Size _____

Shape _____

Color _____

Structure _____

Body Region _____

Explain functions of the organ. _____

Describe how the organ works in relation to the whole human body.

Assignment Sheet 2

Make a rough sketch below of the organ, noting any structural features that should be included on the model.

**Directions
Part 2**

Construct a life-size model of the body organ selected using the findings collected through your research.

**Directions
Part 3**

Present findings about the organ to class members using your model as a visual aid. Point out the exact location of the organ in the human body and explain the relationship of the organ to other organs and body systems.

Objective 9

Assignment Sheet 3—Analyze a Cosmetology Scenario

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> Analysis demonstrates comprehensive knowledge of the information presented in Information Sheet and student presentations (Assignment Sheet 2) 	_____
<ul style="list-style-type: none"> Answer clear and concise 	_____
<ul style="list-style-type: none"> Handwriting is neat and legible 	_____

Basic Skills



Directions

Read the following scenario, then answer the questions that follow.

Mr. Price comes into the salon for the first time in three months. You observe discolorations on the face, neck and hands, major weight loss, and a change in his behavior indicating stress. He states that his metabolism has been out of sorts and he has lost 40 pounds over the last three months and that he has been "stressed out."

1. Which body system may be involved in the changes to Mr. Price's body?

2. Is it possible for you to provide cosmetology services for Mr. Price in his present condition?

3. What recommendation would you make to Mr. Price? _____

Objective 10

Assignment Sheet 4—Complete Module 1 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 4

1. Which of the following is NOT a function of the digestive system?
 - a. receives food substances
 - b. breaks down and absorbs food substances
 - c. circulates digested nutrients to other parts of the body
 - d. excretes waste products

Objective 5

2. The skin, hair, nails, and duct glands are part of what organ system?
 - a. endocrine system
 - b. special sense system
 - c. specialized sensation system
 - d. integumentary system

Objective 5

3. The reproductive system includes which of the following?
 - a. sex organs and ducts to the outside
 - b. sex organs and the alimentary canal
 - c. ducted and ductless glands
 - d. glands and the urinary system

Objective 1

4. Physiology is the scientific study of the _____ of an organism.
 - a. functions
 - b. structure
 - c. purpose
 - d. offspring

Assignment Sheet 4

- | | |
|-------------|---|
| Objective 2 | 5. Which of the following is NOT one of the general regions of the body?
a. head
b. trunk
c. limbs
d. external peripherals |
| Objective 4 | 6. Which of the organ systems protects the organism from injury, disease, and infection and aids in the regulation of temperature, the excretion of wastes, and the reception of sensations?
a. endocrine system
b. immune system
c. urinary system
d. integumentary system |
| Objective 4 | 7. Which of the following is NOT an activity of the nervous system?
a. receives messages
b. receives sensations
c. interprets messages
d. conducts messages |
| Objective 5 | 8. The kidneys, ureter, bladder, and urethra are part of which organ system?
a. urinary system
b. reproductive system
c. digestive system
d. endocrine system |
| Objective 1 | 9. Anatomy is the scientific study of the _____ of an organism.
a. functions
b. structure
c. purpose
d. offspring |
| Objective 4 | 10. Which of the major organ systems provides for body movement and support?
a. skeletal system
b. muscular system
c. integumentary system
d. reproductive system |

Assignment Sheet 4

Objective 4	11. Which organ system serves to regulate various body functions through glands that secrete hormones directly into the blood to slow down or increase the activity of the cells? a. endocrine system b. gland system c. secretion system d. hormone system
Objective 5	12. Which of the following is NOT part of the skeletal system? a. joints b. cartilage c. skeletal muscles d. connective tissue
Objective 5	13. What type of glands are found in the endocrine system? a. salivary b. ducted c. ductless d. sebaceous
Objective 4	14. What is the term for the organ system that functions in receiving special sensations such as sight, smell, hearing, and taste? a. special sensations system b. special senses system c. circulatory system d. specialized nervous system
Objective 4	15. Which of the following phrases best describes the function of the respiratory system? a. takes in oxygen from the air and gives off carbon dioxide, which is produced by cell metabolism b. takes in carbon dioxide from the air and gives off oxygen that is produced by cell metabolism c. transports materials throughout the body by carrying oxygen and nutrients in the blood to all the cells of the body and carrying away the waste products of the cells d. transports materials throughout the body by carrying carbon dioxide and nutrients in the blood to all the cells of the body and carrying away the waste products of the cells
Objective 5	16. Which of the following is NOT part of the respiratory system? a. nose b. pharynx c. trachea d. esophagus

Assignment Sheet 4

- | | |
|-------------|--|
| Objective 5 | 17. Which of the following is NOT an organ or structure in the muscular system?

a. smooth muscles
b. cardiac muscles
c. skeletal muscles
d. digestive muscles |
| Objective 5 | 18. The heart, blood vessels, blood, and lymphatic tissues are part of which organ system?

a. reproductive system
b. circulatory system
c. integumentary system
d. muscular system |
| Objective 3 | 19. Which of the following is the correct sequence of body structures from simplest to most complex?

a. cell, tissue, organ, organ system, organism
b. tissue, cell, organ, organ system, organism
c. cell, organ, organ system, tissue, organism
d. cell, tissue, organ system, organ, organism |
| Objective 6 | 20. Which of the following is NOT a physiological characteristic affected by hormones?

a. rate of metabolism and metabolism of specific substances such as carbohydrates and calcium
b. growth and development processes
c. secretion of other hormones
d. development of basic instincts |

Objective 25

**Assignment Sheet 1 – Complete the Crossword
Puzzle of Terms (Objectives 1–10)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading



Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

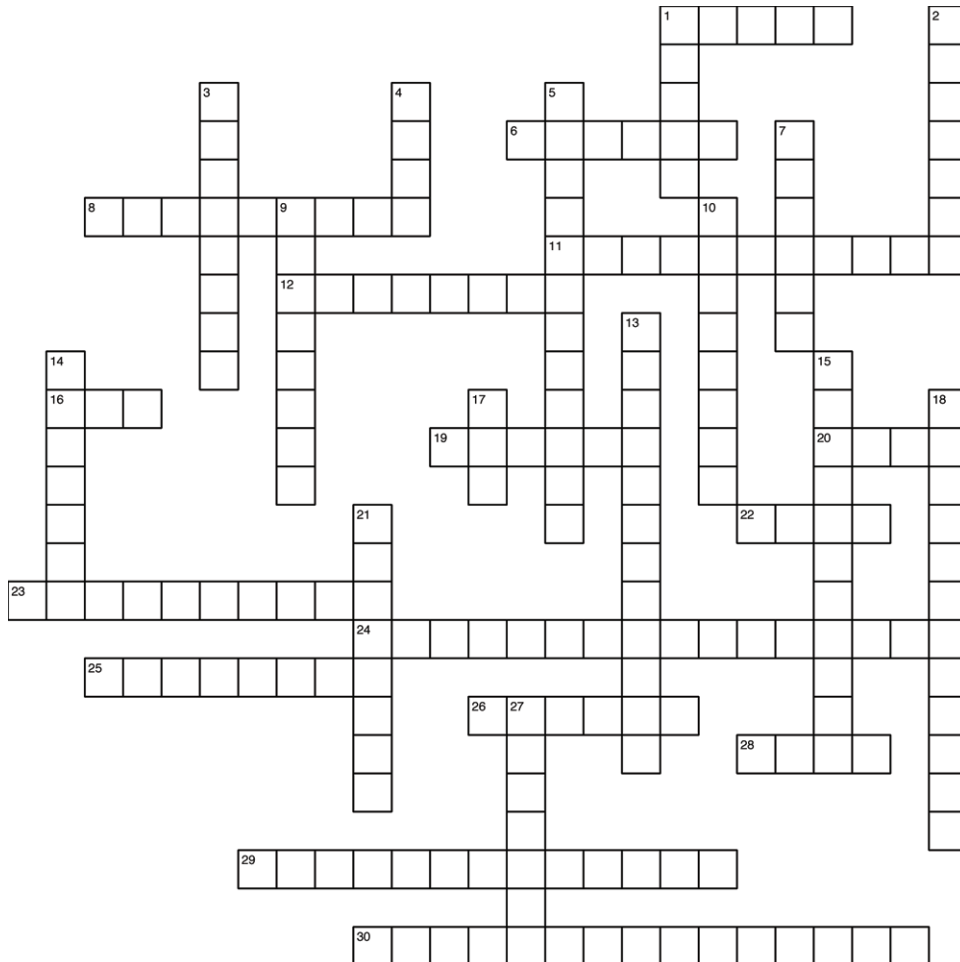
Across

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. The set of electron orbits in an atom that have the same energy level 6. A state of matter in which the substance will take on the shape of a container but will not expand to fill a container with greater volume than the substance 8. To improve the ease of movement between two objects by applying a substance that reduces friction 11. The state of the body in which conditions remain relatively stable despite changes in the environment 12. A structure consisting of two or more atoms 16. An atom or group of atoms with either a positive or a negative electrical charge 19. That portion of the universe that has shape and substance 20. A class of chemicals that have a positive ion other than hydrogen and a negative ion that is not a hydroxyl | <ol style="list-style-type: none"> 22. A substance that releases a hydrogen ion when dissolved 23. A device that is used to separate the components of a solution or liquid mixture by spinning the substance 24. A process in which one or more chemicals that are exposed to other chemicals or sources of energy such as heat change their chemical composition to produce other chemicals and often other forms of energy 25. A substance that affects the rate of change in a chemical reaction without being changed chemically 26. The capacity to do work 28. The mechanism by which atoms link to one another to form molecules involving the loss of, gaining of, or sharing of electrons in the outer shell 29. The ratio of the components of a solution or mixture 30. A compound that contains carbon and hydrogen |
|--|--|

Assignment Sheet 1

Down

1. A state of matter in which the substance has a definite shape that is maintained unless acted upon by a force that is capable of changing that shape
2. The structure in the center of an atom consisting of protons and neutrons and about which electrons orbit
3. An ion consisting of one hydrogen atom and one oxygen atom
4. A substance that releases a hydroxide ion when dissolved
5. The study of chemistry as it relates to life
7. A positively charged particle that is a fundamental component of the nucleus of atoms
9. A substance that consists of atoms of two or more different elements bonded together as molecules
10. A substance that consists of one or more components dissolved in a liquid
13. The study of extremely small life
14. A substance that consists of two or more combined components that do not interact chemically
15. The physical and chemical processes by which an organism supplies its cells and tissues with oxygen and removes carbon dioxide
17. A state of matter in which the substance will take on the shape of any container in which it is placed and will expand to fill the container
18. The number of protons, or positive charges, in the nucleus of an atom of a particular element
21. A negatively charged elementary particle of an atom
27. An elementary particle that is a fundamental component of the nucleus of atoms; it has no electric charge



Objective 26

**Assignment Sheet 2—Complete the Crossword
Puzzle of Terms (Objectives 11–18)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading

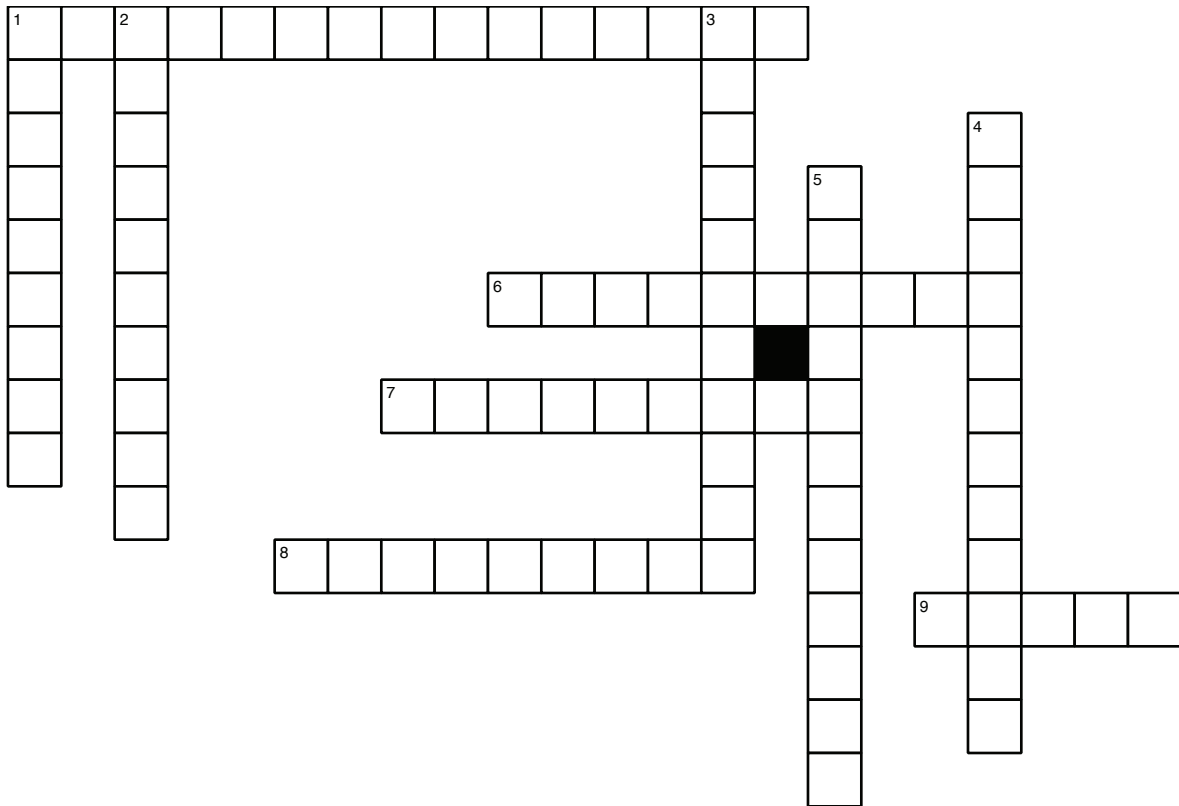


Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 2



Across

1. A thickening of the outer surface of the nucleus protoplasm that regulates the movement of materials into and out of the nucleus
6. The complex mass of proteins and other organic and inorganic materials that is capable of exhibiting the characteristics of life
7. A single hair-like projection on a sperm cell
8. The protoplasm found outside the nucleus of a cell
9. Hair-like projections of the cells that form the mucous lining of the respiratory system and other passageways

Down

1. A dense spherical structure within the nucleus that is involved in protein synthesis and that forms ribosomal RNA
2. One of the several strands of DNA that contains the genetic code that determines inherited traits
3. The protoplasm found in the nucleus of a cell
4. The characteristic of a material to allow other substances to pass through it
5. Allows some molecules to enter the cell while preventing entry by other molecules

Objective 27

Assignment Sheet 3—Construct a Model of a Typical Cell

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Model reflects research findings related to size, shape, and structure	_____
• Presentation is clear and concise and includes the functions of each part of the cell, and the functions of specialized structures found in cells	_____
• Teamwork demonstrated throughout completion of assignment	_____

Basic Skills



Reading



Writing



Science



Oral Communication



Interpersonal



Technology

Directions Part 1

Research cells of the human body using resources available on the Internet or provided by your instructor. Work with teammates to collect the following information to help you in constructing your model and preparing your group presentation about the selected cell.

Size _____

Shape _____

Major parts of a cell _____

Explain the functions of each part of a cell.

Assignment Sheet 3

Explain the functions of specialized structures found in cells.

**Directions
Part 2**

Construct a 3-D model of a typical cell showing the major parts of the cell using the findings collected through your research.

**Directions
Part 3**

Present findings to class members using your model as a visual aid. Point out each part of a cell and explain their functions and the functions of the specialized structures found in cells.

Objective 28

**Assignment Sheet 4—Complete the Crossword
Puzzle of Terms (Objectives 19–24)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading

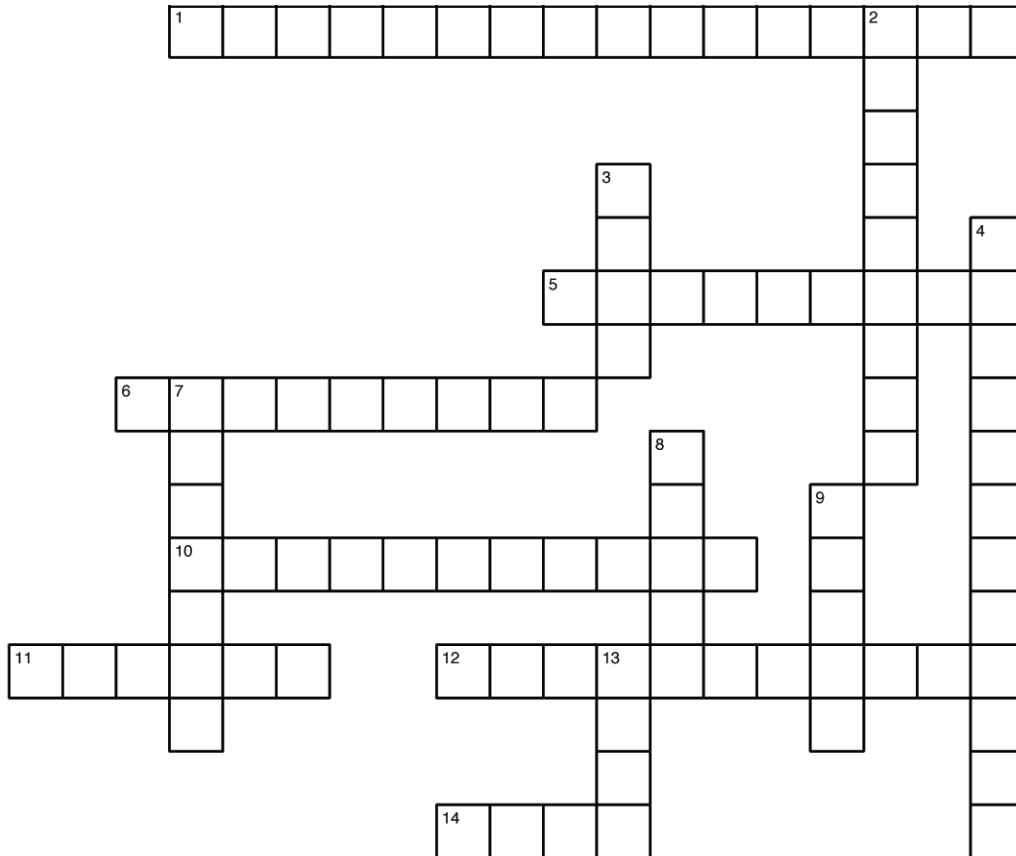


Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 4



Across

1. The conditions that tend to promote the spread of a disease, such as when the bite of an arthropod allows pathogens to enter a person's bloodstream
5. A unicellular organism that is adapted for life in water and forms cysts that pass from host to host
6. A widely distributed unicellular organism that may or may not cause disease
10. A characteristic of some organisms in which the outer tissue of parts of the body are hardened to the point that they support attached softer tissues
11. A unicellular or multicellular organism that reproduces by means of spores and that may be pathogenic or nonpathogenic
12. Consisting of one cell
14. The organism that provides the resources required to sustain a parasitic relationship

Down

2. An invertebrate organism with six or more jointed legs and an exoskeleton
3. A multicellular organism that in its parasitic form can be pathogenic to humans
4. An organism that does not have an internal skeleton and, specifically, a spinal column
7. A condition of being highly sensitive to foreign substances that enter the body often because the person's immune system does not respond to the antigen of the substance
8. The dormant form of a bacterium or the reproductive form of a fungus
9. A subcellular organism that reproduces as a parasite within other organisms and, consequently, is pathogenic
13. A capsule that forms around microorganisms before they enter dormant periods

Objective 29

Assignment Sheet 5—Develop a Presentation on Bacteria, Viruses, Fungi, or Parasites

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> • Presentation reflects research findings as to how bacteria, viruses, fungi, or parasites affect the human body 	_____
<ul style="list-style-type: none"> • Presentation is clear and concise and includes: <ul style="list-style-type: none"> — classes of microorganisms and bacteria, or — characteristics of viruses, or — characteristics of fungi, or — common parasites that afflict humans — examples of when a cosmetologist may come into contact with bacteria, viruses, fungi, or parasites — explanation of how a cosmetologist should deal with the microorganism 	_____

Basic Skills



Reading



Writing



Science



Oral Communication



Interpersonal



Technology

Directions Part 1

Divide the class into teams to complete research and develop a presentation on bacteria, viruses, fungi, or parasites. All topics should be covered by at least one team.

Research bacteria, viruses, fungi, or parasites using resources available on the Internet or provided by your instructor. Work with your team and write your findings below. This information will help you in constructing your outline and preparing your presentation about bacteria, viruses, fungi, or parasites.

Classes of microorganisms _____

Shape and characteristics of bacteria or _____

Characteristics of viruses or _____

Characteristics of fungi or _____

Common parasites that afflict humans _____

Assignment Sheet 5

Explain the effects of bacteria, viruses, fungi, or parasites on the human body.

Describe when a cosmetologist may come into contact with bacteria, viruses, fungi, or parasites and how the cosmetologist should deal with the organisms.

Directions Part 2

Using PowerPoint® software, develop a presentation using the findings collected through your research on bacteria, viruses, fungi, or parasites. Where access to PowerPoint® is not possible, use flip charts, posters or other means of media to develop the presentation. Practice the presentation with the team. Give your PowerPoint® presentation and provide explanation of the subject matter and answer any questions from your classmates or instructor.

Objective 30 Assignment Sheet 6—Analyze Cosmetology Scenarios

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Analysis demonstrates the ability to apply knowledge of the information presented in the Information Sheet to a given situation	_____
• Answers clear and concise	_____
• Handwriting is neat and legible	_____

Basic Skills



Directions

Read each scenario and answer the questions that follow.

Scenario 1

Ms. Lane comes to the salon for services and expresses that she has just returned from a two-week trip to Africa. She articulates that she has some remaining symptoms of an allergy to arthropod venom bites that she received while in Africa. She states she has been to a doctor in the states and that the bites are not malaria-causing or contagious and that arthropods are not present on her body.

1. What are some examples of arthropods? _____

2. What should you do? _____

Assignment Sheet 6

Scenario 2

Ms. Lin comes into the salon for an artificial nail replacement. She states that she has experienced some pain in the nail since her last visit and that the nail is tender to the touch. In your examination you find that the artificial nail is loose and moisture has collected under the nail. You observe a gray greenish tint to the nail plate.

1. In your professional opinion, what is the green color on the nail plate?

2. What should you do? _____

Scenario 3

Mr. Lewis brings Lequisha, his five year old daughter, into the salon and explains that her scalp appears dry and has been itching. He states that he has shampooed her hair numerous times and applied conditioner, even rubbing it into her scalp to try to correct the dryness that appears in small white flakes. He asks for any help you can give him. During your inspection, you realize that this is not a simple case of dry scalp. You observe small white nodules attached to the hair shaft and small white organisms crawling on the scalp

1. In your professional opinion, what is causing the nodules and the itch Lequisha is experiencing?

2. What should you do? _____

Assignment Sheet 6

Objective 31

Assignment Sheet 7—Complete Module 2 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills

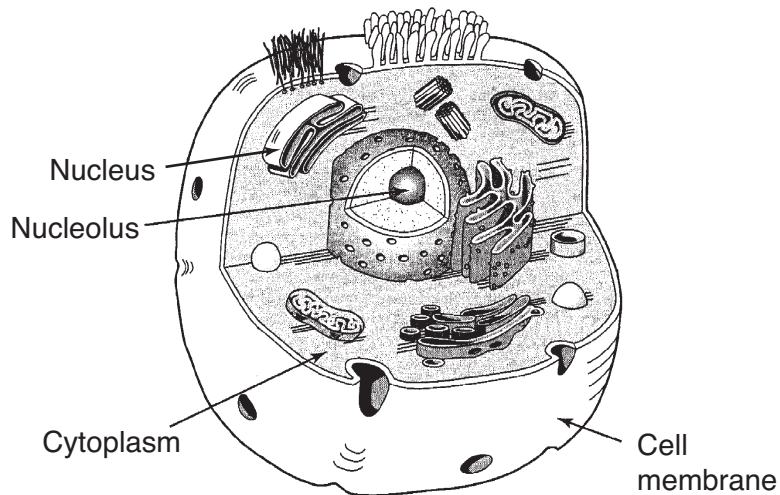


Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 13

- In the illustration below, which of the following is NOT a correct match to the part indicated?
 - nucleus
 - cell membrane
 - mitochondrion
 - cytoplasm



Assignment Sheet 7

- | | |
|--------------|--|
| Objective 21 | 2. The tough outer cell wall gives a bacterium its _____.

a. support
b. strength
c. shape
d. name |
| Objective 22 | 3. Which of the following statements is NOT true with regard to characteristics of viruses?

a. Viruses can only reproduce when they are within the living cells of a host organism.
b. A virus will use the nucleic acid and enzymes of an infected cell to produce other viruses, often multiplying to the point that the cell ruptures and dies.
c. Some viruses can become dormant so that they present no signs of infection and then become active again after a period of time, even years later.
d. Viruses cannot be transmitted from a pregnant woman to her fetus. |
| Objective 2 | 4. _____ is a state of matter in which the substance will take on the shape of a container but will not expand to fill a container with greater volume than the substance.

a. Energy
b. A solid
c. A liquid
d. A gas |
| Objective 2 | 5. Which of the following is NOT a correct statement about the role of chemistry in human health?

a. The body consists of various chemicals.
b. Most body activities involve chemical reactions.
c. For a person to remain healthy, the chemicals within the body must remain properly balanced.
d. The body's defense systems prevent chemicals outside the body from entering. |
| Objective 4 | 6. An atom is the smallest division of _____ that exhibits all of its properties and characteristics.

a. a molecule
b. an element
c. a nucleus
d. a substance |

Assignment Sheet 7

- | | |
|-------------|---|
| Objective 7 | 7. A substance that consists of atoms of two or more elements bonded together as molecules is a _____.

a. mixture
b. solution
c. compound
d. catalyst |
| Objective 7 | 8. A _____ is a substance that consists of one or more components dissolved in a liquid.

a. mixture
b. compound
c. solution
d. element |
| Objective 8 | 9. _____ serves as the primary energy source for the cells.

a. Oxygen
b. Glucose
c. Water
d. Sodium chloride |
| Objective 9 | 10. Substances that form ions when they dissolve are called _____.

a. electrolytes
b. analytes
c. electrolysis
d. solvents |
| Objective 9 | 11. _____ is a class of chemicals that has a positive ion other than hydrogen and a negative ion that is not a hydroxyl.

a. Base
b. Acid
c. Salt
d. Concentration |
| Objective 9 | 12. Which of the following statements is NOT true about electrolytes?

a. Electrolytes include salts, acids, and bases found throughout the body.
b. Body functions are most efficient when the concentrations of the electrolytes are within specific ranges.
c. Electrolytes are lost through sweating and through the elimination of urine and feces.
d. Electrolytes are stored between the skin and muscle for use when required. |

Assignment Sheet 7

Objective 14

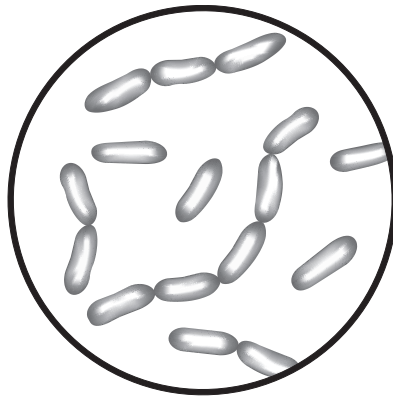
13. The _____ provides structure to the cell and supports other parts of the cell.
- nucleus
 - centrosome
 - cytoplasm
 - cell membrane

Objective 19

14. _____ is a widely distributed unicellular organism that may or may not cause disease.
- Fungus
 - Virus
 - Protozoan
 - Bacterium

Objective 20

15. What type of bacteria is shown in the illustration below?
- bacillum
 - coccus
 - spirillum
 - flagellum



Objective 23

16. Which of the following phrases is NOT true with regard to fungi?
- may be unicellular or multicellular
 - some are normally found in and on the body
 - can form cysts and become dormant
 - can spread to the inside of the body through spores

Objective 24

17. Mites and lice generally afflict the _____ of a host's body and present little direct risk to the host.
- surface
 - viscera
 - organs
 - bloodstream

Assignment Sheet 7

- | | |
|--------------|--|
| Objective 2 | 18. Injuries and diseases can change the _____ and can disrupt chemical reactions.

a. chemical balance within the body
b. overall chemical composition of the body
c. electrical charge of all the ions in the body
d. anions into cations |
| Objective 3 | 19. The state of the body in which conditions remain relatively stable despite changes in the environment is called _____.

a. equilibrium
b. chemical balance
c. homeostasis
d. hemostatic |
| Objective 6 | 20. A structure consisting of two or more atoms is a _____.

a. gas
b. solid
c. liquid
d. molecule |
| Objective 7 | 21. To separate the substances in a solution, the _____ of the solution must change so that the _____ balance between the components prevents the liquid from being able to hold the dissolved material.

a. energy, energy
b. energy, chemical
c. chemistry, energy
d. chemistry, chemical |
| Objective 10 | 22. Acids and bases are classed as strong, using a value called pH, with the most-acidic substances having a value toward _____ and the most-basic substances having a value toward _____.

a. 14, 0
b. 0, 14
c. 1, 10
d. 10, 1 |
| Objective 12 | 23. The protoplasm found outside the nucleus of a cell is _____.

a. nucleoplasm
b. cytoplasm
c. endoplasm
d. exoplasm |

Assignment Sheet 7

- | | |
|-------------------|---|
| Objective 16 & 17 | 24. Which of the following phrases correctly describes a flagellum?

a. a single hair-like projection on a sperm cell that helps to propel the sperm cell so that it can reach an ovum
b. an extension of the cell cytoplasm that lines the intestines and serves to increase the surface area of cells
c. a single hair-like projection used to signal other cells about the presence of a pathogen
d. a hair-like projection of the cells that form the mucous lining of the respiratory system and other passageways and helps to propel fluid in one direction over the surface of cells |
| Objective 19 | 25. A unicellular organism that is adapted for life in water and forms cysts that pass from host to host is a _____.

a. bacterium
b. virus
c. protozoan
d. fungus |
| Objective 24 | 26. Parasites such as lice, fleas, mosquitoes, and ticks may be _____ disease.

a. victims of
b. vectors of
c. immune to
d. invisible to |
| Objective 1 | 27. _____ is the study of extremely small life.

a. Matter
b. Energy
c. Biochemistry
d. Microbiology |
| Objective 5 | 28. The center part of an atom consists of _____.

a. protons and electrons
b. protons and neutrons
c. electrons and neutrons
d. protons and nuclei |
| Objective 7 | 29. A mixture consists of two or more combined substances that do not interact _____.

a. chemically
b. easily
c. electrically
d. physically |

Assignment Sheet 7

- | | |
|--------------|--|
| Objective 8 | 30. What compound is given off as a waste product of cell respiration?

a. carbon dioxide
b. carbon monoxide
c. oxygen
d. nitrogen |
| Objective 8 | 31. Which of the following is NOT a normal role of water in the body?

a. dissolves substances to make them more usable to the body
b. provides fluid to lubricate moving parts of the body
c. helps to maintain body temperature
d. combines with carbon to make carbohydrates |
| Objective 11 | 32. Which of the following is the correct statement of the cell theory?

a. All organisms are made of small, enclosed bodies called cells and of the products of those cells.
b. All animals are made of small, enclosed bodies called cells and of the products of those cells.
c. Cells can neither be created nor destroyed.
d. All organisms started as simple cells and evolved into organisms with many cells. |
| Objective 15 | 33. A chromosome is _____.

a. a thickening of the outer surface of the nucleus protoplasm that regulates the movement of materials into and out of the nucleus
b. a dense spherical structure within the nucleus that is involved in protein synthesis and that forms ribosomal RNA
c. one of several strands of DNA that contains the genetic code that determines inherited traits
d. a bubble-like vesicle used to move substances about the cell |
| Objective 22 | 34. _____ are nucleic acids within shells of protein.

a. Algae
b. Viruses
c. Fungi
d. Rickettsiae |

Assignment Sheet 7

- | | |
|--------------|--|
| Objective 24 | 35. Which of the following statements is NOT true with regard to parasitic worms?

a. Parasitic worms live off nutrients in the host's body or blood or on the host itself.
b. Many parasitic worms have several stages of life involving eggs, larvae, and adult stages.
c. Parasitic worms seldom inhabit specific body sites.
d. For some species of parasitic worms, the inhabited site varies with the stage of development and may even involve more than one host species. |
| Objective 2 | 36. The body _____ special chemicals that regulate body functions.

a. does not need
b. uses nerve signals instead of
c. produces
d. normally needs medication to produce |
| Objective 4 | 37. An element is one of more than _____ primary, simple substances that cannot be broken down by chemical means into any other substance.

a. 10
b. 100
c. 1,000
d. 10,000 |
| Objective 7 | 38. What is required to separate the substances in a mixture?

a. a chemical reaction
b. a change in ionization
c. the addition of a third chemical
d. a mechanical method or energy |
| Objective 7 | 39. A _____ is a substance that affects the rate of change in a chemical reaction without being changed chemically.

a. compound
b. catalyst
c. mixture
d. solution |
| Objective 9 | 40. A base is a substance that releases a _____ ion when dissolved.

a. hydrogen
b. hydroxide
c. oxygen
d. oxide |

Assignment Sheet 7

- | | |
|--------------|--|
| Objective 10 | 41. Which of the following statements is NOT true about pH in the human body?

a. Body fluids have a normal pH value with a narrow range above and below that value.
b. If the pH value of a fluid goes above or below its ideal range, chemical reactions will be affected.
c. Normal human activities can lead to major shifts in pH.
d. Most-acidic substances have a pH value toward 14 and most-basic substances have a pH value of 0. |
| Objective 19 | 42. A _____ is a multicellular or unicellular organism that reproduces by means of spores and that may be pathogenic or nonpathogenic.

a. worm
b. fungus
c. virus
d. arthropod |
| Objective 21 | 43. _____ often colonize with each other so that another way of identifying them is by the shape of their colonies.

a. Cocci and spirilli
b. Bacilli and spirilli
c. Cocci and bacilli
d. Spirilli and flagelli |
| Objective 4 | 44. “The smallest division of an element that exhibits all the properties and characteristics of the element” is the definition of which of the following terms?

a. matter
b. proton
c. neutron
d. atom |
| Objective 7 | 45. The separation of a compound into other compounds and elements requires a _____.

a. mechanical force
b. positive and a negative ion
c. chemical reaction
d. solvent |

Assignment Sheet 7

- | | |
|--------------|---|
| Objective 8 | 46. Which of the following phrases is true about the role of oxygen in the health of the body?

a. required for the chemical reaction that releases energy from nutrients
b. one of the atoms in a water molecule
c. a key element in compounds of importance to the body other than water
d. all of the above |
| Objective 8 | 47. An organic compound is one that contains _____.

a. hydrogen and oxygen
b. hydrogen, oxygen, and carbon
c. carbon and oxygen
d. carbon and hydrogen |
| Objective 9 | 48. An acid is a substance that releases a(n) _____ ion when dissolved.

a. hydrogen
b. hydroxide
c. oxygen
d. oxide |
| Objective 14 | 49. The _____ regulates cellular structure and activities, including reproduction of the cell.

a. cytoplasm
b. centrosome
c. nucleus
d. cell membrane |
| Objective 18 | 50. Which of the following phrases does NOT describe a cell function?

a. to absorb materials to support cell functions and to release energy
b. to metabolize nutrients and nitrogen
c. to synthesize protein and to reproduce itself
d. to excrete waste products and to support functions specific to that kind of cell |

Module 3

Objective 13

**Assignment Sheet 1 – Complete the Crossword
Puzzle of Terms (Objectives 1–4)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading

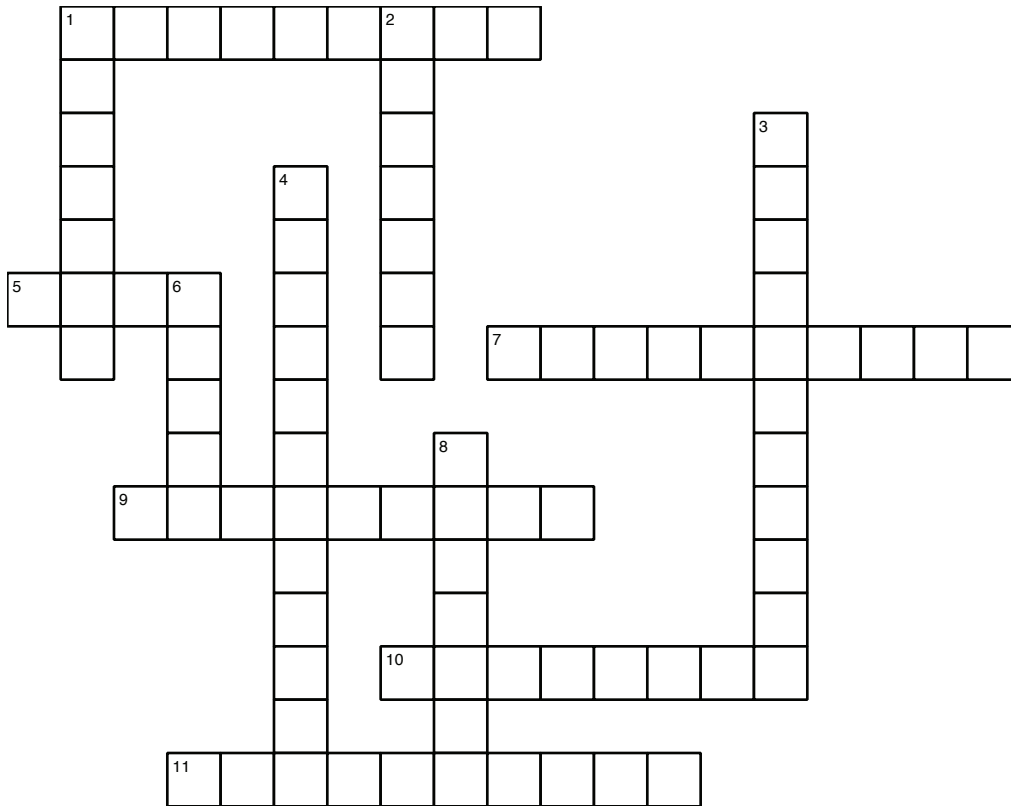


Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 1



Across

1. To destroy all the pathogens on an object or in a substance
5. An organism that serves as a permanent or temporary home for another organism
7. A special medication that slows or stops the growth of certain microorganisms
9. An invasion of the body by organisms and the reaction of the body to the presence of those organisms and to the toxins that they produce
10. An organism that is capable of producing disease in another organism
11. A chemical used to destroy or reduce the growth of pathogens on a person

Down

1. A condition that occurs in association with a disease and that can be evidence of the presence of the disease
2. The period of time which a host exhibits symptoms of a disease
3. The administration of a medication that increases the body's resistance to a specific pathogen
4. A chemical used to destroy or reduce the growth of pathogens on objects
6. A substance that is harmful to cells
8. A specific illness or disorder characterized by a recognizable set of signs and symptoms and attributable to heredity, infection, diet, or environment

Module 3

Objective 14

Assignment Sheet 2—Complete the Crossword
Puzzle of Terms (Objectives 5–12)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading

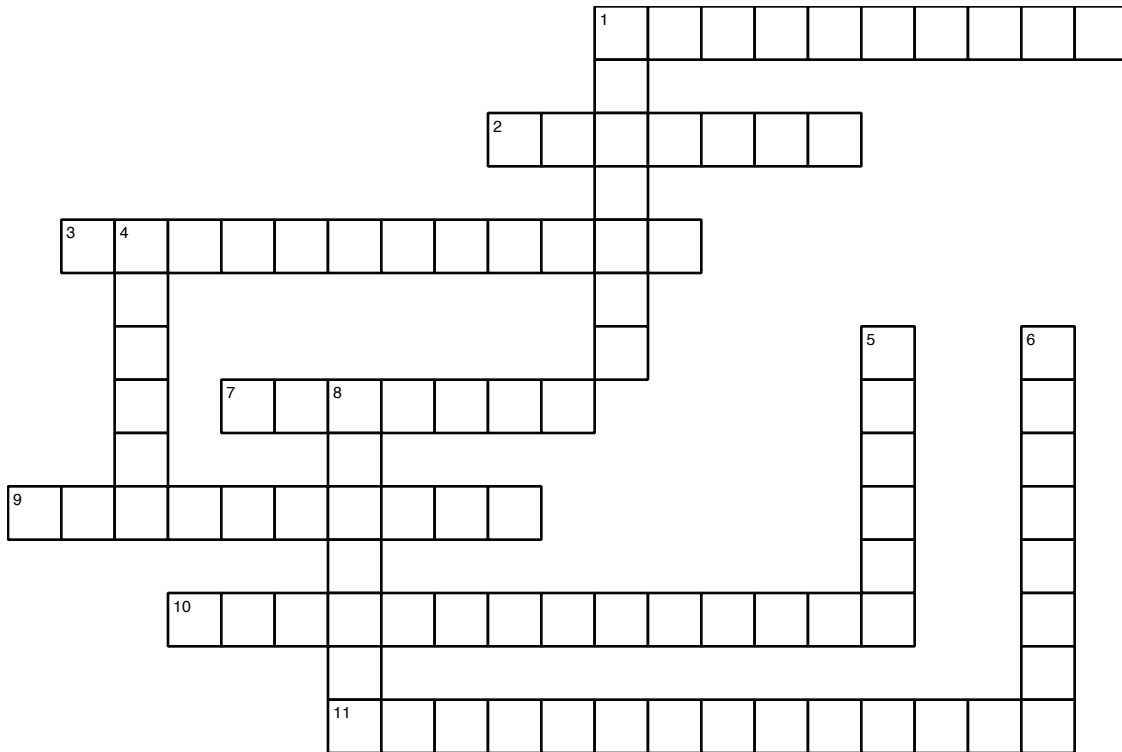


Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 2



Across

1. Communicable, such as a disease that may be transmitted by direct or indirect contact
2. Earwax, a secretion of the ceruminous glands in the ear canal
3. Being without symptoms
7. A suspension of diluted or killed microorganisms administered by injection or ingestion in order to stimulate the production of antibodies to promote an active immunity to that pathogen
9. The study of the ways in which the body resists infection
10. A process of heating a food to destroy pathogens in the food
11. The degree to which a person is likely to contract a disease

Down

1. An organism capable of spreading disease
4. Substance expelled from the respiratory tract that may contain mucus, pus, cellular materials, blood, and other materials
5. A separation of tissue
6. The state of being protected from the effects of a pathogen, generally due to having received a vaccination or because of the body's production of antibodies from a previous exposure to the organism
8. An inflammatory condition of the large intestine characterized by severe diarrhea, bleeding, ulceration of the mucosa of the intestine

Module 3

Objective 15

Assignment Sheet 3—Conduct a Sanitation Inspection of the Salon/Laboratory and Classroom

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Conducted thorough inspection of the salon/laboratory and classroom for cleanliness and sanitary conditions	_____
• Participated in an integration activity to grow and evaluate bacteria in Petri dishes	_____
• Used team dynamics to compile the report of findings	_____
• Clearly and concisely presented observations and findings to class	_____
• Teamwork demonstrated throughout completion of assignment	_____

Basic Skills



Writing



Science



Oral
Communication



Interpersonal



Critical
Thinking



Employability

Directions Part 1

Select a partner and begin inspection of the salon/laboratory and classroom. Inspection should include but not limited to the following:

Yes or No

- Inspect the salon or laboratory area
 - Liquid sanitizer is fresh and mixed to appropriate strength _____
 - Ultra-violet or other sanitizers are in good working condition and clean _____
 - Combs and brushes are free of hair and flakes _____
 - Shampoo bowls are clean _____

Check

- Take a swab for bacteria from the doorknobs to the classroom. Place in a Petri dish for bacteria culture growth. _____
- Take a swab for bacteria from the desks. Place in a Petri dish for bacteria culture growth. _____
- Take a swab for bacteria from the books. Place in a Petri dish for bacteria culture growth. _____

Module 3

Objective 16 Assignment Sheet 4—Analyze Cosmetology Scenarios

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Analysis demonstrates the ability to apply knowledge of the information presented in Information Sheet to a given situation	_____
• Answers are clear and concise	_____
• Handwriting is neat and legible	_____

Basic Skills



Directions

Read each scenario and answer the questions that follow.

Scenario 1

As Ms. Leeman enters the salon you notice that she is upset, nervous, and anxious about something. She looks at herself in the mirror more than usual and is fidgety. You greet her and ask how she is doing. She explains that she has just come from the doctor and he told her that she is a “host” for an organism but her resistance is strong and she has nothing to worry about. She is taking the medication the doctor prescribed but she just does not know how this could have happened to her. She begins to cry and asks you what can be done. She says she has no idea how she became a “host”, and what the doctor meant when he told her that her resistance was strong and she has nothing to worry about.

What should you do?

Assignment Sheet 4

Scenario 2

A phone call is received in the salon from a lady that was a client the day before with her teenage son. She informs the receptionist that her son has been diagnosed with meningitis and the doctor asked her to call the salon and let everyone know. She states that James was the stylist that assisted her son.

What should you do?

Scenario 3

During a haircut, you accidentally nip the client's ear and blood is present.

1. What should you do?

2. What is required for implements to be sterilized following contact with blood or body fluids?

Assignment Sheet 4

3. What policy and standard brought about the requirement of using EPA-registered disinfectants in the salon?

Module 3

Objective 17

Assignment Sheet 5—Complete Module 3 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 1

1. A toxin is _____.
 - a. an organism that serves as a temporary home for another organism
 - b. an organism that is capable of producing disease in another
 - c. a substance that is harmful to cells
 - d. a condition that occurs in association with a disease that can be evidence of the presence of the disease

Objective 12

2. Which of the following organisms is a leading cause of post-operative infections?
 - a. esherichia coli
 - b. bacillus anthracis
 - c. streptococcus
 - d. staphylococcus aureus

Objective 12

3. _____ is an inflammatory condition of the large intestine characterized by severe diarrhea, bleeding, and ulceration of the mucosa of the intestine.
 - a. Staph infection
 - b. Strep infection
 - c. Colitis
 - d. AIDS

Assignment Sheet 5

- | | |
|-------------|--|
| Objective 3 | 4. A special medication that slows or stops the growth of certain microorganisms is _____.

a. a vaccination
b. an antibiotic
c. an antiseptic
d. a sterilant |
| Objective 1 | 5. _____ is the presence and multiplication of an organism that results in harm or disease to a host.

a. Immunity
b. Immunology
c. Infection
d. Sanitation |
| Objective 5 | 6. Which of the following statements is NOT a normal portal of exit from the body for pathogens?

a. skin lesions
b. mouth
c. intact skin
d. genitourinary openings |
| Objective 2 | 7. The harmful effects of an infection on a host may be the direct result of an action taken by the pathogen or the result of _____ produced by the pathogen.

a. medications
b. vibrations
c. leukocytes
d. toxins |
| Objective 2 | 8. The ability of a host to avoid infection and reduce harm caused by an infecting organism is called _____.

a. virulence
b. resistance
c. dehiscence
d. necrosis |
| Objective 4 | 9. A _____ infection is one that has spread throughout a host's body from an initial site.

a. localized
b. systemic
c. organic
d. self-limiting |

Assignment Sheet 5

Objective 7	10. _____ is the study of the ways in which the body resists infection. a. Anatomy b. Physiology c. Infectionology d. Immunology
Objective 9	11. Which of the following phrases is NOT a reason for controlling the growth of microorganisms? a. To prevent the spread of illness b. To produce pathogens under controlled circumstances to gain better understanding of them and to develop vaccines and other control measures for them c. To prevent the contamination of sterile products during the production process d. To aid in faster production processes for carbonated drinks
Objective 10	12. Which of the following is a chemical method used to destroy bacteria on a living organism? a. cold b. disinfectant c. antiseptic d. ultrasonic waves
Objective 2	13. A _____ is an organism that is capable of producing disease in another organism. a. virulence b. pathogen c. toxin d. fomite
Objective 4	14. An _____ infection is one that runs a rapid and severe course and then ends abruptly. a. intermittent b. elementary c. chronic d. acute
Objective 4	15. The first-occurring infection within a period of illness is called the _____. a. initial infection b. onset infection c. primary disease d. precursor disease

Assignment Sheet 5

- | | |
|--------------|---|
| Objective 5 | 16. Which of the following statements is NOT a true statement about the spread of diseases? <ol style="list-style-type: none">Persons who have recovered from a disease or who are asymptomatic may be carriers and transmit the disease to others.The aseptic conditions in hospitals prevent diseases from being passed from person to person.The most common portals of entry for pathogens are breaks in the skin.Pathogens that live in the soil, on other surfaces, or in contaminated foods can also enter the body through portals of entry. |
| Objective 6 | 17. _____ combats pathogens by cleansing the pores and raising the level of acidity on the skin. <ol style="list-style-type: none">CerumenSebumNormal floraPerspiration |
| Objective 7 | 18. The body produces memory cells as part of _____. <ol style="list-style-type: none">naturally acquired active immunityartificially acquired active immunityboth A and Bneither A nor B |
| Objective 11 | 19. Which of the following phrases is NOT a factor that normally contributes to nosocomial infections? <ol style="list-style-type: none">a false sense of securityfacility staffingimproper hand-washing techniquesaseptic procedures |
| Objective 2 | 20. A condition, such as fever, chills, and loss of appetite, that occurs in association with a disease is a _____. <ol style="list-style-type: none">leukocytetoxinsymptominfecting organism |
| Objective 2 | 21. The ability of an infecting organism to harm a host is referred to as _____. <ol style="list-style-type: none">virulenceresistancedehiscencenecrosis |

Assignment Sheet 5

Objective 3	22. Some infections can be prevented through _____. a. vaccinations b. incubation c. contamination d. eventration
Objective 5	23. Typically, a disease will spread from an infected host's portals of _____ to a second host's portals of _____. a. entry, exit b. exit, entry c. either A or B d. neither A nor B
Objective 5	24. Which of the following is NOT a normal portal of entry into the body for pathogens? a. breaks in the skin b. nose c. intact skin d. mouth
Objective 6	25. Tears combat pathogens by _____. a. ridding the eyes of contaminants and helping to seal and lubricate the eyelids to prevent entry of organisms b. containing enzymes that help break down invading pathogens and prevent them from colonizing on the eyelids c. maintaining a slightly acidic environment to prevent microorganisms from becoming established on the eyelids d. providing a coating that prevents pathogens from making direct contact with the eyes
Objective 7	26. Genetic immunity is based on _____. a. one's inherited genetic makeup b. the pathogen's genetic makeup c. the production of antibodies d. vaccinations
Objective 7	27. When an individual is given a vaccine, her or his body produces antibodies in response to the pathogen. This is a characteristic of _____. a. naturally acquired active immunity b. artificially acquired active immunity c. both A and B d. neither A nor B

Assignment Sheet 5

- | | |
|--------------|---|
| Objective 12 | 28. Which of the following organisms is responsible for AIDS?

a. human papilloma virus
b. human immunodeficiency virus
c. pseudomonas aeruginosa
d. mycobacterium species |
| Objective 2 | 29. _____ diseases can spread from one human host to another through direct or indirect contact.

a. Communicable
b. Congenital
c. Immunological
d. Aseptic |
| Objective 4 | 30. An infection that is limited to one organ or site of a host's body is said to be _____.

a. localized
b. systemic
c. organic
d. self-limiting |
| Objective 7 | 31. When an individual contracts a disease, his or her body naturally produces _____ in response to the pathogen.

a. antigens
b. antibodies
c. vaccines
d. serum |
| Objective 8 | 32. A process that destroys pathogens on surfaces is called _____.

a. sanitation
b. asepsis
c. pasteurization
d. sterilization |
| Objective 10 | 33. Which of the following is the most-effective method of controlling all microbial growth through the effects of an autoclave?

a. cold
b. dry heat
c. moist heat
d. pressurized steam |

Assignment Sheet 5

Objective 2	34. The body produces special cells that recognize pathogens and _____. a. avoid them b. escort them from the body c. destroy them d. increase their rate of reproduction
Objectives 2 & 3	35. Which of the following statements is NOT correct with regard to infections? a. An infection may result in observable symptoms in a host, or the infection may occur without symptoms. b. Once an infection has occurred, there is no way to improve the body's ability to fight the infection. c. An infection may be localized or systemic. d. The spread of infection can be reduced by using antiseptic practices, cleaning with disinfectants, and sterilizing instruments and surgical materials.
Objective 4	36. An infection that lasts for a long period of time—from weeks to several years—is called a(n) _____ infection. a. chronic b. acute c. latent d. primary disease
Objective 4	37. A subsequent infection or complication to an existing condition is called a _____. a. recurring illness b. chronic disease c. secondary disease d. postoperative disease
Objective 8	38. A chemical used to destroy or reduce the growth of pathogens on people is called _____. a. an antiseptic b. a disinfectant c. an aseptic d. a dessicant

Assignment Sheet 5

Objective 10

39. Which control method may include gloves to prevent microbes from reaching portals of entry?
- a. barrier
 - b. filtration
 - c. sterilization
 - d. disinfectant

Objective 6

40. _____ contains enzymes that help break down invading pathogens and prevent them from colonizing in the area.
- a. Saliva
 - b. Perspiration
 - c. Tears
 - d. Mucus

Objective 11

**Assignment Sheet 1 – Complete the Crossword
Puzzle of Terms (Objectives 1–10)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading

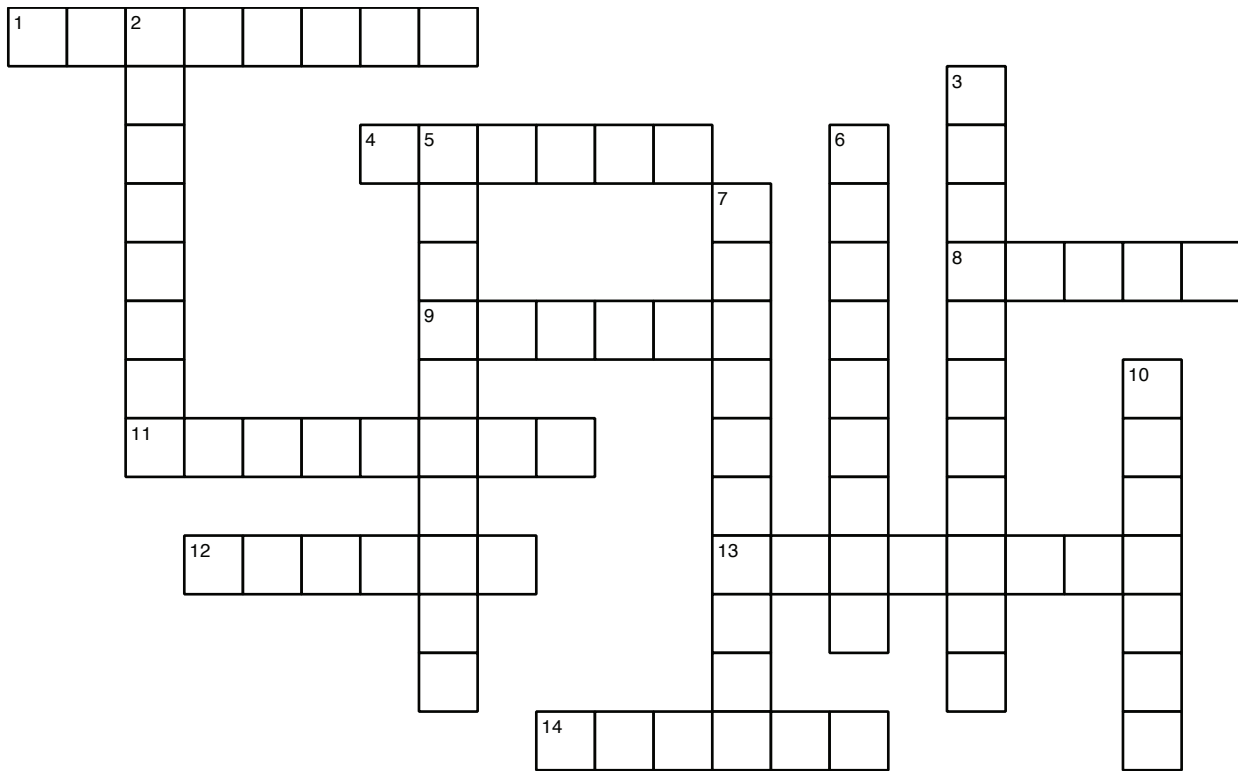


Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 1



Across

1. Smooth, involuntary muscle tissue that lines the walls of hollow organs
4. A fibrous connective tissue that connects muscle to bones
8. A structure consisting of two or more tissues that performs a specific function of the body
9. A collection of cells that share a similar structure and are organized to perform a specific function
11. A fibrous connective tissue that joins one bone to another
12. The connective tissue that makes up the inner layer of skin
13. Lined with grooves
14. A covering, especially a loose-fitting one

Down

2. Striated, voluntary muscle tissue attached to bones
3. Muscles that work automatically
5. The covering of the internal organs of the body, also the lining of the vessels, body cavities, glands, and organs
6. Muscles that are consciously controlled by the will of a person
7. A band of connective tissue that covers or binds together body structures within body cavities
10. Striated, involuntary muscle tissue that composes the walls of the heart

Objective 12

Assignment Sheet 2—Develop a Presentation on Basic Tissue of the Human Body

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Presentation reflects research findings related to name, description, function, shape or surface view	_____
• Presentations is clear and concise and includes: <ul style="list-style-type: none"> — basic types of tissue — functions of basic types of tissue — types of connective tissue — basic types of nerve tissue — factors that determine muscle-tissue classifications — factors that relate to the cosmetologist 	_____
• Teamwork demonstrated throughout completion of assignment	_____

Basic Skills



Reading



Writing



Science



Oral Communication



Interpersonal



Technology

Directions Part 1

Research basic tissue of the human body using resources available on the Internet or provided by your instructor. Work as part of a team with other students and write your findings below. This information will help you in developing and organizing your team presentation about the selected tissue.

Description _____

Function _____

Shape or surface view _____
and one of the following:

— Type of connective tissue _____
_____ and

— Functions of connective tissue _____
_____ or

Assignment Sheet 2

- Types of nerve tissue _____
_____ and
- Functions of basic parts of a neuron _____
_____ or
- Factors of muscle-tissue classifications _____
_____ and
- Factors that relate to the cosmetologist _____

Directions Part 2

Work as a team to develop a PowerPoint® presentation that will explain the findings of the research. Relate the importance of healthy tissue to the human body and to the cosmetologist. Where access to PowerPoint® is not possible, you may use flip charts, posters or other means of media to develop the presentation. Practice your presentation with team members. Give your presentation and provide explanation of the subject matter and answer any questions from your classmates or instructor.

Objective 13

Assignment Sheet 3—Complete Module 4 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 5

1. Neurons are capable of generating _____ impulses that carry information to and from the brain.
 - a. mechanical
 - b. chemical
 - c. electromagnetic
 - d. electrochemical

Objective 4

2. Which of the following statements are NOT true?
 - a. A tendon is a fibrous connective tissue that joins one bone to another.
 - b. A ligament is a fibrous connective tissue that joins one bone to another.
 - c. A tendon is a fibrous connective tissue that connects muscle to bones.
 - d. A ligament is bone tissue that joins one bone to another.

Objective 2

3. Tissue consisting of cells bound together by connective material and varying in the number of layers and the kinds of cells is _____ tissue.
 - a. connective
 - b. muscle
 - c. epithelial
 - d. nerve

Assignment Sheet 3

- | | |
|--------------|--|
| Objective 4 | 4. _____ tissue is a type of connective tissue located in the lymph nodes, spleen, tonsils, and thymus, and it forms certain types of white blood cells.

a. Lymphatic
b. Cartilage
c. Bone
d. Blood |
| Objective 7 | 5. Neurons are surrounded by specialized cells that form the _____.

a. Sheath of Schwann, which electrically isolates neurons
b. Golgi apparatus, which support the neurons
c. interstitial cells that improve the electrical conductivity of the neurons
d. none of the above |
| Objective 10 | 6. _____ are collections of tissues that are organized in such a way that they are able to perform specific functions.

a. Organs
b. Membranes
c. Organisms
d. Carbohydrates |
| Objective 7 | 7. Sensory neurons are sometimes referred to as _____ neurons.

a. efferent
b. afferent
c. effector
d. transmitter |
| Objective 1 | 8. A _____ is a collection of cells that share a similar structure and are organized to perform a specific function.

a. serous cavity
b. nerve
c. neuron
d. tissue |
| Objective 4 | 9. _____ tissue is a type of connective tissue located under the skin, and it functions to provide padding, insulation, and a place to store fats.

a. Areolar
b. Adipose
c. Bone
d. Blood |

Assignment Sheet 3

- | | |
|-------------|--|
| Objective 8 | 10. _____ tissue is striated, involuntary muscle tissue that composes the walls of the heart.

a. Cardiac
b. Skeletal
c. Cartilage
d. Visceral |
| Objective 9 | 11. A structure consisting of two or more tissues that performs a specific function for the body is _____.

a. an organ
b. a membrane
c. a viscera
d. an epi-connective junction |
| Objective 2 | 12. Tissue consisting of one or more bundles of impulse-carrying fibers that connect the brain and the spinal cord with other parts of the body is _____ tissue.

a. connective
b. muscle
c. epithelial
d. nerve |
| Objective 2 | 13. The _____ is the covering of the internal organs of the body and also the lining of the vessels, body cavities, glands, and organs.

a. epithelium
b. connective tissue
c. squamous membrane
d. columnar membrane |
| Objective 4 | 14. What type of connective tissue is located in the nose, ears, trachea, and eustachian tubes and at bone joints and provides firm-but-not-rigid structure and padding between bones?

a. cartilage
b. elastic
c. myeloid
d. lymphatic |
| Objective 3 | 15. _____ tissue conducts electrical signals through the body.

a. Epithelial
b. Connective
c. Nerve
d. Muscle |

Assignment Sheet 3

- | | |
|-------------|--|
| Objective 7 | 16. Nerve-system impulses cannot cross between neurons unless the space between is filled with special chemicals called _____.

a. nucleotides
b. transmitter fluids
c. neurotransmitters
d. conductive coagulates |
| Objective 8 | 17. _____ tissue is striated, voluntary muscle tissue attached to bones.

a. Cardiac
b. Skeletal
c. Cartilage
d. Visceral |
| Objective 7 | 18. The_____ of one neuron is separated from a _____ of an adjoining neuron by a space called a _____.

a. nephron, axon, dendrite
b. axon, dendrite, synapse
c. dendrite, synapse, nephron
d. synapse, nephron, axon |
| Objective 4 | 19. _____ tissue is a type of connective tissue located in tendons, ligaments, deep fascia, dermis, and the kidneys; it provides strong, flexible connections and the formation of scars.

a. Reticular
b. Myeloid
c. Fibrous
d. Areolar |
| Objective 6 | 20. _____ carry nervous-system impulses to the cell body of a neuron.

a. Axons
b. Nephrons
c. Synapses
d. Dendrites |
| Objective 4 | 21. Which of the following statements is NOT correct with regard to the connective tissue blood?

a. Blood tissue transports materials, including oxygen, throughout the body.
b. Blood tissue is located throughout the blood system.
c. Blood tissue combats foreign organisms and cells.
d. Blood tissue forms certain types of white blood cells. |

Assignment Sheet 3

- | | |
|-------------|--|
| Objective 7 | 22. _____ carry impulses from the central nervous system to effectors that cause responses in the muscles and glands.

a. Interneurons
b. Motor neurons
c. Sensory neurons
d. Interferent neurons |
| Objective 5 | 23. Neuroglia are located in the _____.

a. central nervous system
b. muscular system
c. integumentary system
d. parasympathetic nervous system |
| Objective 3 | 24. _____ tissue allows the movement of the movable structures of the body.

a. Epithelial
b. Connective
c. Nerve
d. Muscle |
| Objective 6 | 25. _____ carry nervous-system impulses from the cell body of a neuron.

a. Axons
b. Nephrons
c. Synapses
d. Dendrites |
| Objective 7 | 26. _____ are located in the central nervous system and support higher-order functions such as thinking and learning.

a. Interneurons
b. Motor neurons
c. Sensory neurons
d. Interferent neurons |
| Objective 8 | 27. _____ tissue is smooth, involuntary muscle tissue that lines the walls of hollow organs.

a. Cardiac
b. Skeletal
c. Cartilage
d. Visceral |

Assignment Sheet 3

- | | |
|--------------|---|
| Objective 10 | 28. The overall goal of organ-system functions is to _____.

a. shut down the body in the event of an emergency
b. energize the body in the event of an emergency
c. maintain a state of homeostasis in the body
d. provide nutrients to the body |
| Objective 7 | 29. _____ carry signals from receptors in the skin, skeletal muscles, joints, and organs to the central nervous system.

a. Interneurons
b. Motor neurons
c. Sensory neurons
d. Interferent neurons |
| Objective 10 | 30. The organs have _____ mechanisms that send signals to the central nervous system about the conditions that they monitor.

a. reflex
b. motorsensory
c. feedback
d. neurotransmitter |
| Objective 3 | 31. Providing a protective barrier against extreme temperatures, environmental contaminants, and invasions by microorganisms while allowing secretion and excretion of wastes is the main function of _____ tissue.

a. epithelial
b. connective
c. nerve
d. muscle |
| Objective 4 | 32. Which of the following statements is NOT true with regard to bone connective tissue?

a. Bone tissue produces lymph, which is circulated by the lymphatic system.
b. Bone tissue is located in the skeleton.
c. Bone tissue forms bones that support the body.
d. Bone tissue forms bones that protect organs and tissues. |

Assignment Sheet 3

Objective 3

33. _____ tissue binds to other tissue structures to support and organize the body, binds to foreign cells to protect the body, and binds to molecules to transport materials through the body.

- a. Epithelial
- b. Connective
- c. Nerve
- d. Muscle

Objective 8

34. Which of the following is NOT a factor that determines muscle-tissue classifications?

- a. Structural composition
- b. Level of conscious control
- c. Strength
- d. Location

Objective 18

**Assignment Sheet 1 – Complete the Crossword
Puzzle of Terms (Objectives 1–7)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading

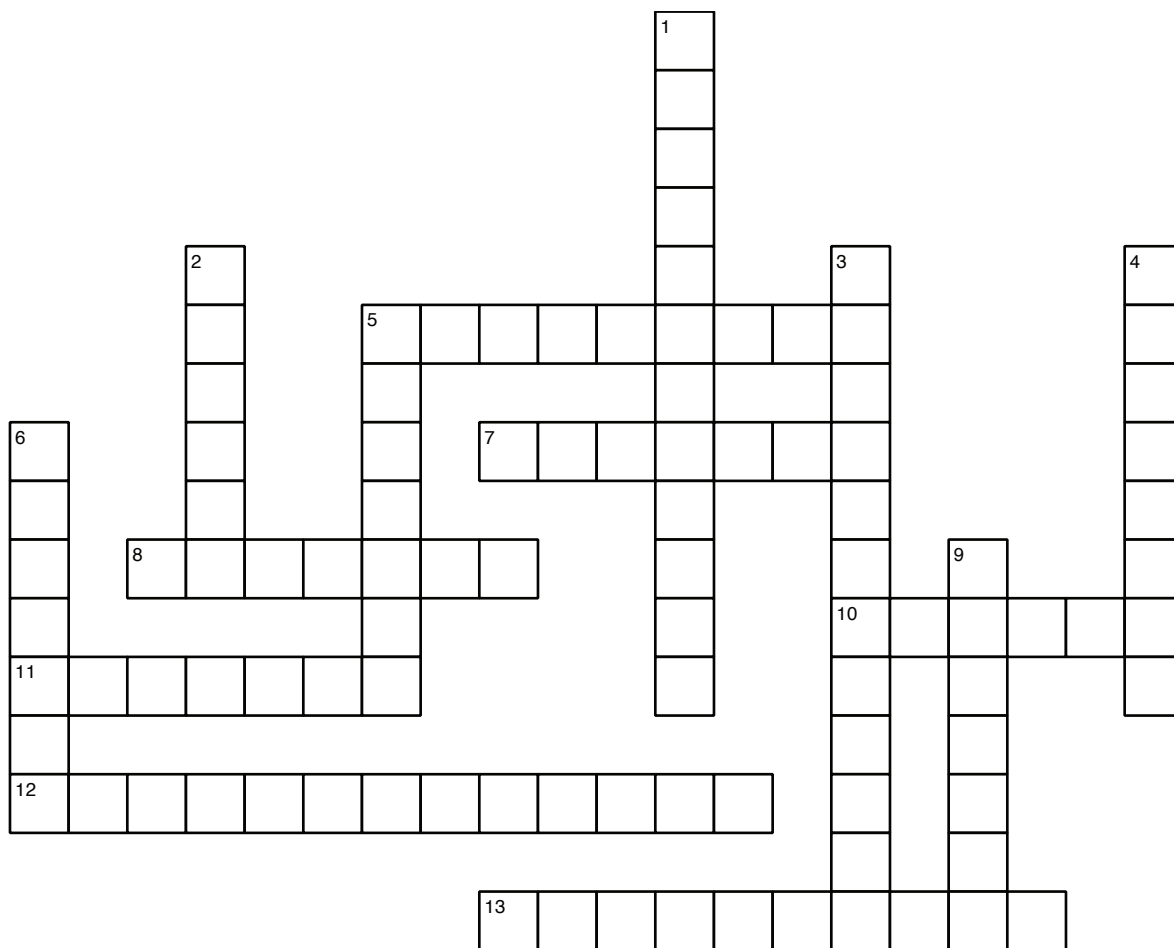


Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 1



Across

5. Containing nerve endings and, therefore, can feel sensation
7. The Latin term for “horn”
8. A fibrous, sulfur-containing protein that is the primary component of the epidermis, hair, nails, and enamel of the teeth
10. A small space or a cavity within a tissue
11. The Latin term for “clear”
12. A kind of connective tissue having little tensile strength and consisting of loosely woven fibers and areolae
13. The structures that cover the exposed surfaces of the body

Down

1. Beneath the skin
2. The Latin term for “base layer”
3. The Latin term for “germination”
4. Containing blood or lymph vessels
5. The Latin term for “layer”
6. A protrusion that extends into the epidermal area
9. A protein that absorbs ultraviolet light to give coloration to body structures; also referred to as a pigment

Objective 19

**Assignment Sheet 2—Complete the Crossword
Puzzle of Terms (Objectives 8–14)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

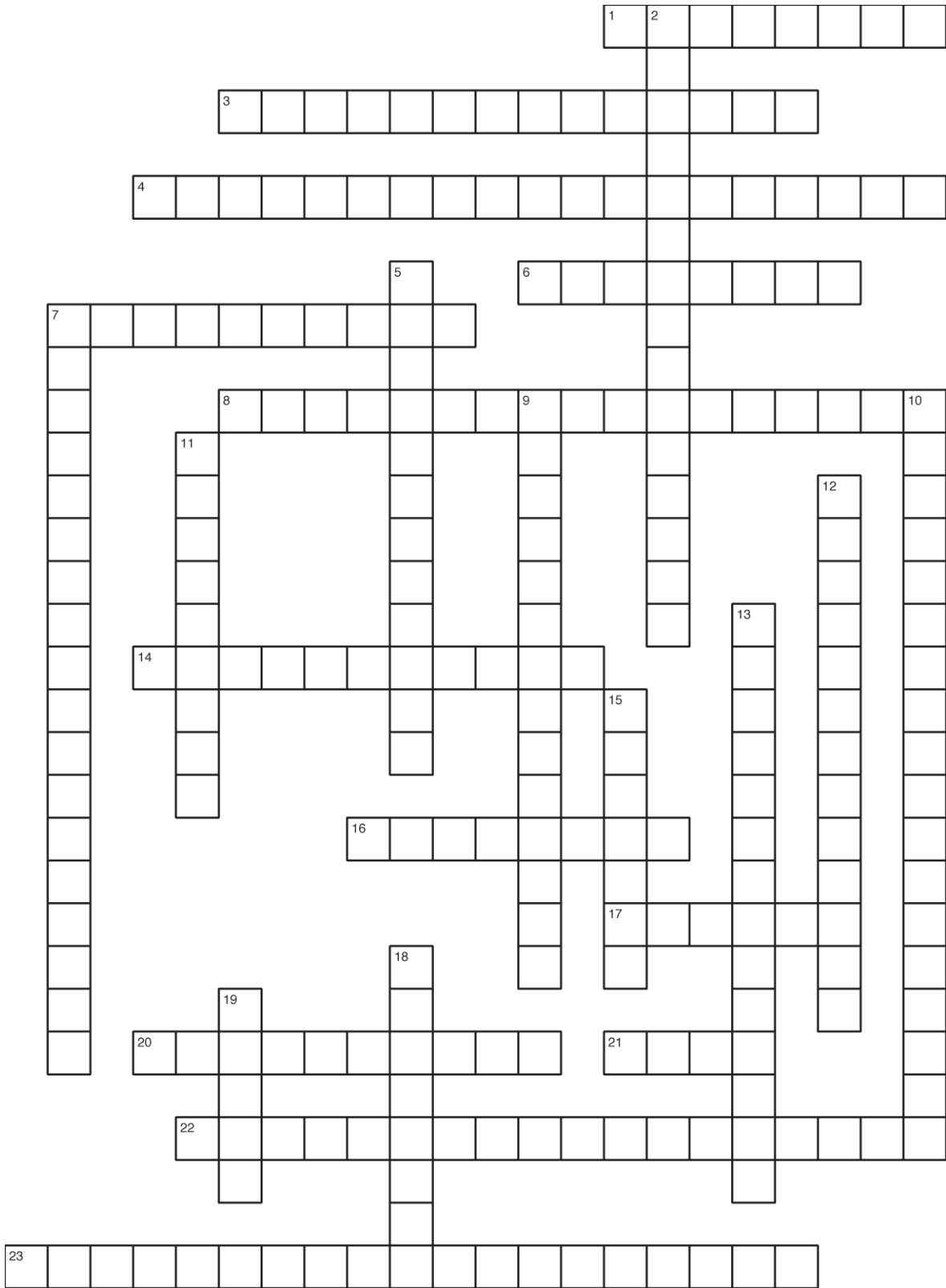
Across

1. Grey hair
3. Excessive hair growth
4. Hair loss all over the body
6. Condition characterized by the lack of pigment and normally affects eyes, skin, and hair
7. Small white flakes appearing on hair or scalp; also known as dandruff
8. Hair loss early in life
14. Beaded hair
16. Baldness
17. The Latin term meaning “little moon”; the crescent-shaped white area at the base of a nail
20. A small structure located in the deep layers of the dermis with a duct that exits through a pore in the epidermis; the gland consists of a coiled tube surrounded by capillaries
21. A horny, translucent cover protecting the tip of each finger and toe and the underlying tissue associated within
22. A formation of specialized cells within the skin that performs a particular function
23. Split end

Down

2. Hair loss later in life
5. Ringworm caused by a vegetable parasite
7. Head lice
9. Bald patches, usually caused by body disorders; hair generally grows back
10. Bundles of involuntary muscle fiber that contract against the follicle when the skin is cold or during certain emotional states, causing the hair shaft to stand upright
11. Any diseased condition of the hair
12. Ingrown hair
13. The gland that is connected to the dermal shaft that surrounds the root of a hair
15. The thin edge of cornified epithelium at the base of a nail
18. A tube that extends from the dermis through the epidermis and to the surface of the skin
19. The oily secretion of the sebaceous glands of the skin; composed of keratin, fat, and cellular debris

Assignment Sheet 2



Objective 20

**Assignment Sheet 3—Complete the Crossword
Puzzle of Terms (Objectives 15 and 16)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading



Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Across

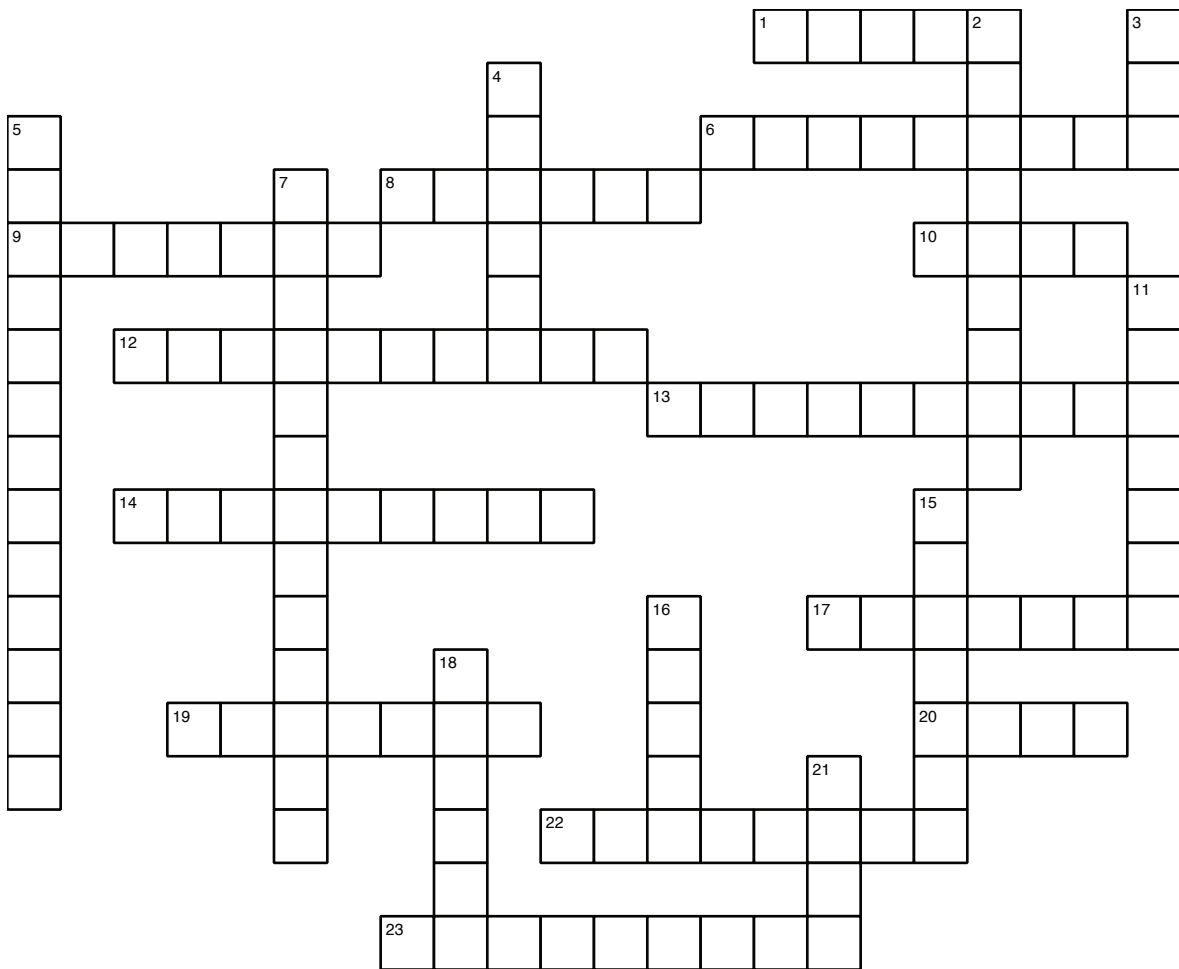
1. A growth that extends into the cavity of a mucous membrane or appears on the skin
6. Blackheads; mass of hardened sebum in a hair follicle
8. Whitehead; small whitish mass of the epidermis, due to retention of sebum
9. Congestion appearing primarily on the cheeks and nose, characterized by redness, dilation of blood vessels, and the formation of papules and pustules
10. A suddenly appearing raised patch that is usually redder than the surrounding skin; is often accompanied by severe itching; and is usually caused by an allergic reaction, infection, or stress
12. Medical term for athlete’s foot or ringworm; a fungal infection of the foot; in advanced stages, deep, itchy, colorless vesicles appear and may be located on one foot or both
13. Inflammatory condition of the skin
14. Overactivity of the sebaceous glands; usually produces a shiny appearance on the nose and forehead
17. An elevation of skin filled with pus
19. A wart that is caused by a virus and may be contagious; also known as “plantar warts”
20. A sac that contains any fluid substance other than pus
22. An inflammation and infection of the dermis and subcutaneous tissue caused by bacteria that enter the skin through a hair follicle; a boil

23. A painful, pus-producing infection above and below the skin; can infect hair follicles

Down

2. Skin disease characterized by red patches, covered with white-silver scales; rarely occurs on the face but is found on the scalp, elbows, knees, chest, and lower back
3. An accumulation of white blood cells, pathogens, dead or damaged cells, and other substances associated with an infection
4. Thick scar resulting from the excessive growth of fibrous tissue
5. Fever blister or cold sores found on the lips or nostrils; caused by a virus; disease characterized by red, swollen, raised vesicles
7. Commonly known as ringworm; highly contagious fungal infection that affects the skin, scalp, or the nails
11. Crack or break in the skin; found on hands and heels
15. A blister
16. An inflammatory lesion on the skin that may contain pus
18. Inflammatory, painful disease of the skin, acute or chronic in nature; characteristics may include both dry or moist lesions
21. An infection and inflammation of the sebaceous glands

Assignment Sheet 3



Objective 21

Assignment Sheet 4—Complete the Crossword Puzzle of Terms (Objective 17)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading



Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Across

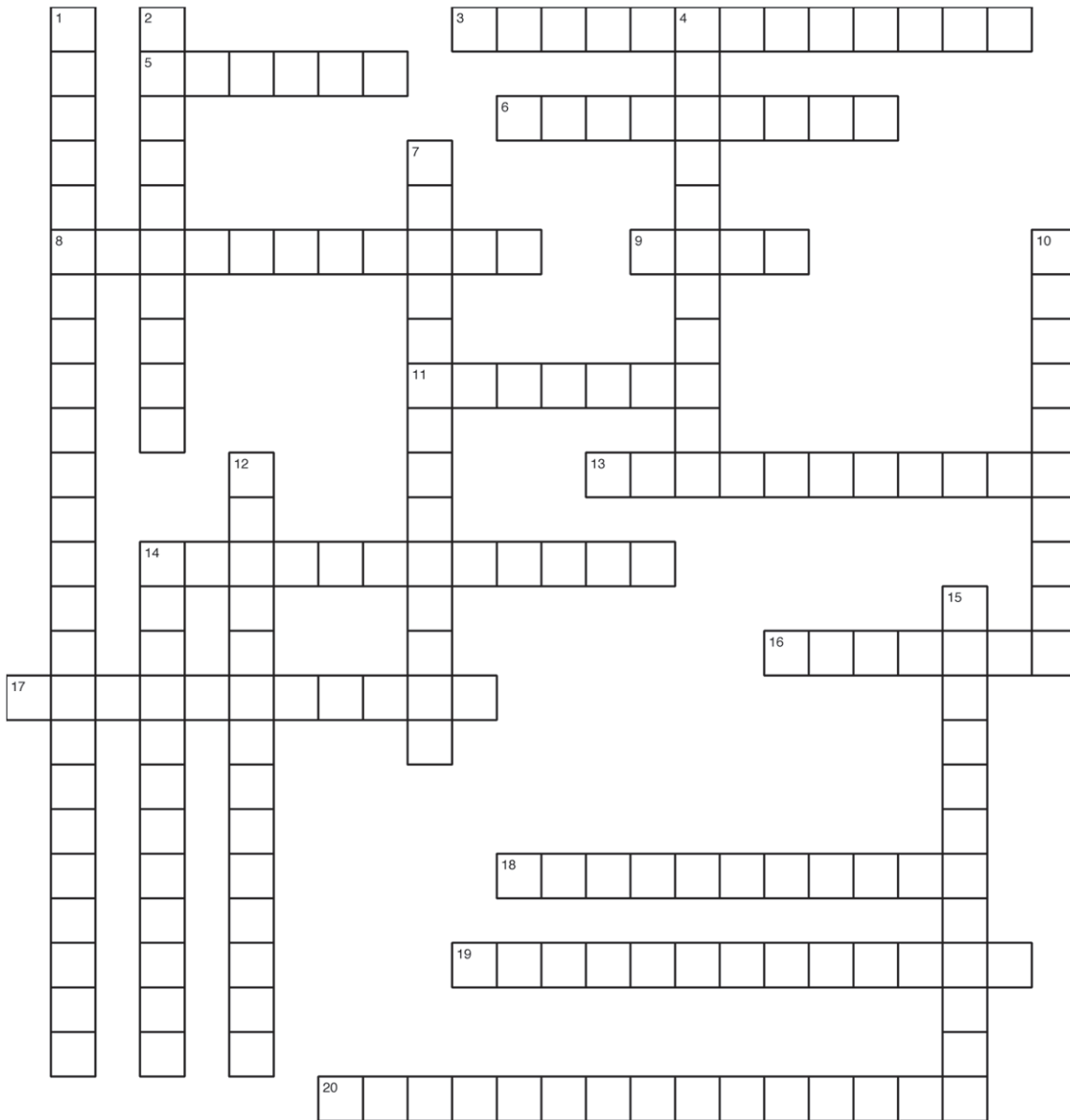
3. Caused by improper filing, excessive use of cuticle solvents and nail polish remover, or injury to the finger
5. Split cuticle that may become infected and bleed; caused by accidental injury, by pulling or tearing due to nail biting, or by improperly cutting or clipping the cuticle
6. Forward growth of the cuticle which adheres to the base of the nail
8. Swelling of the nail
9. Fungal infection caused by trapped moisture; green spot under artificial nail or polish on natural nail
11. Inflammation of the nail matrix, accompanied by pus formation
13. Thin nails caused by chronic illness, nerve disorder, or a systemic disturbance
14. Growth of horny epithelium in the nail bed
16. Depressions in the nail; caused by an injury to the matrix, illness, or nutritional disturbance
17. A condition of the nail separating from the nail bed, caused by stress to long nails
18. White spots on the nail; caused by tiny air bubbles in the name or by the presence of incompletely keratinized cells due to an injury to the nail base

19. Wasting away of the nail; caused by injury to the nail matrix or disease
20. Technical term for ingrown nails; may affect finger or toe

Down

1. Ringworm of the nail; caused by vegetable parasite
2. An infection of the fold of skin at the margin of a nail
4. Nervous habit which causes individual to chew the nail; hardened cuticles may result in nail becoming permanently deformed
7. Pertains to enlarged and increased curvature of the nail; often referred to as “claw nails”
10. Overgrowth or thickening of the nail plate; can be caused by internal disturbance, local infection, continued trauma such as ill fitting shoes, or by heredity
12. Condition caused by poor blood circulation or heat disorder
14. Periodic shedding of part or all of nail
15. Wavy ridges on the nail; caused by uneven growth patterns due to interruptions in growth from illness

Assignment Sheet 4



Objective 22

Assignment Sheet 5—Create a Graphic Organizer

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Organizer reflects a comparison of the major structures that makes up the integumentary system and characteristics of each	_____
• Organizer is clear and concise and includes: — Function of the skin and — Function of one auxiliary appendage	_____
• Used the completed graphic organizer to write paper comparing the major structures that make up the integumentary system	_____
• Followed teacher's directions pertaining to the style and length of paper to be written	_____
• Used computer to write the paper	_____

Basic Skills



Directions Part 1

Select the type of Graphic Organizer to use or use the one your teacher provides. Research the Integumentary System of the human body using resources available on the Internet or provided by your instructor. Work individually or as a team to determine your findings.

Make a rough sketch of the graphic organizer you will use. Input your findings concerning the major structures of the skin and one auxiliary appendage and the function of the skin and function of the same auxiliary appendage. This will assist you in organizing your thoughts for the development of the written paper.

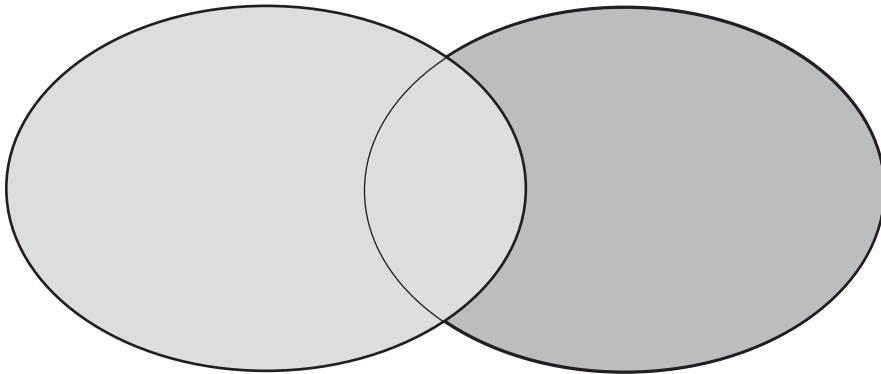
In the space where the circles overlap, write information that relates to both the function of the skin and the function of an auxiliary appendage. In the space of the individual circles, write information that is different between the function of the skin and the function of an auxiliary appendage.

Directions Part 2

Using the information on your graphic organizer, develop a paper comparing the major structures that make up the integumentary system. Follow your teacher's directions pertaining to length and style, and use a computer, if available, to write your paper.

Assignment Sheet 5

Example: Graphic Organizer



Objective 23

Assignment Sheet 6—Review the Structures, Layers, and Glands of the Skin

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Answers were posed in the form of a question	_____
• Answers indicated knowledge of subject matter	_____
• Teamwork exhibited throughout the activity	_____

Basic Skills



Reading



Science



Oral Communication



Interpersonal

Directions

Using the principles of the Jeopardy game show, students should state questions to the answers provided by the instructor or selected game host. Teams of 2 to 5 students should be formed to compete in this activity.

Jeopardy Example: The outer layer of the dermis that lies next to the basal layer of the epidermis and is patterned with papillae and hollows.

Correct team response would be: What is the papillary layer?

The purpose of this activity is to learn more or reinforce knowledge concerning information relating to the integumentary system, including:

- Major structures of the skin
- Layers of the epidermis
- Layers of the dermis
- Functions of glands in the skin

Suggested Game Rules

1. Determine first team by picking numbers.
2. Determine the time given to each team to give an answer.
3. Award 10 points for each correct response.
4. Give each team an opportunity to answer two correctly before moving to the next team. A missed question results in immediate movement to next team.
5. Points are never deducted.
6. First team to 100 wins competition, or if time is limited, the team with the highest points at the end of the designated time period, is declared the winner.

Objective 24 **Assignment Sheet 7—Analyze Cosmetology Scenarios**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Analysis demonstrates the ability to apply knowledge of the information presented in the Information Sheet to a given situation	_____
• Answers are clear and concise	_____
• Handwriting is neat and legible	_____

Basic Skills



Reading



Writing



Science



Oral Communication



Interpersonal



Critical Thinking

Directions

Read each scenario and answer the questions that follow.

Scenario 1

Mr. Eagle, a new client, comes in for a shampoo and haircut. As you prepare Mr. Eagle for the shampoo, you notice several lumps on his scalp. In analyzing the lumps, you find smooth raised areas of various sizes. The skin is closed and no pus is present.

Mr. Eagle makes the following statement, “As you can see, I have several cysts on my scalp, but they are not tender. I have had them for a long time. I could have them removed but I see no reason because they don’t cause me or anyone else any problems. You have nothing to worry about except leaving my hair long enough to cover them.”

1. What type of cysts does Mr. Eagle have on his scalp? _____

2. What characteristic of the hair is involved with the abnormality?

3. What causes this characteristic? _____

Assignment Sheet 7

Scenario 2

4. What should you do? _____

While Mr. Eagle is in the salon, he asks you to look at several of his fingernails. Two of the fingernails have redness, swelling, and pus in the tissue surrounding the nail plate. Three other fingernails appear to have separated from the nail bed.

1. What is the technical term for infection of the fold of skin surrounding the nail? _____
2. What is the technical term for the condition of the nail separating from the nail bed? _____
3. What is the most common cause of the nail separating from the nail bed? _____

4. What should you do? _____

Scenario 3

Mr. Sebastian comes in to the salon for a haircut. You notice a pustule on his neck.

1. Define pus. _____

2. Define pustule. _____

3. What is a common cause of a pustule on the neck of men? _____

4. What do you do? _____

Objective 25

Assignment Sheet 8—Complete Module 5 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 9

1. An oily secretion composed of keratin, fat, and cellular debris is the _____.
 - a. nitrogenous waste
 - b. cerumen
 - c. paronychia
 - d. sebum

Objective 15

2. An inflammatory lesion on the skin that may contain pus is called a(n) _____.
 - a. *ulcer*
 - b. *ungual lesion*
 - c. *cyst*
 - d. *acne fissure*

Objective 15

3. An inflammation and infection of the dermis and subcutaneous tissue caused by bacteria that enter the skin through a hair follicle is called a _____.
 - a. *cyst*
 - b. *furuncle*
 - c. *carbuncle*
 - d. *ulcer*

Assignment Sheet 8

- | | |
|--------------|--|
| Objective 10 | 4. Nails consist of epidermal cells that have been converted to _____.
a. keratin
b. melanin
c. cerumen
d. lanolin |
| Objective 7 | 5. The papillary layer is patterned with _____.
a. papillae and gland ducts
b. papillae and hollows
c. arrector pili and gland ducts
d. arrector pili and hollows |
| Objective 1 | 6. The _____ is the structures that cover the exposed surfaces of the body.
a. melanin
b. keratin
c. lymph
d. integument |
| Objective 5 | 7. Which of the following is NOT a correct statement?
a. The dermis is vascular.
b. The dermis is nonsensitive.
c. The greater part of the thickness of the epidermis is dead cells.
d. The epidermis consists of stratified squamous epithelial tissue. |
| Objective 7 | 8. Which of the following is NOT a correct statement?
a. The reticular layer of the dermis forms a network of interlacing cells and fibers.
b. The reticular layer is the inner layer of the dermis.
c. The papillary layer lies next to the basal layer of the epidermis.
d. The papillary layer contains cementing substances to form the dermal-epidermal junction so that a separate membrane is not required. |
| Objective 8 | 9. A formation of specialized cells within the skin that performs a particular function is called _____.
a. an <i>axilla</i>
b. a <i>papilla</i>
c. an <i>auxiliary appendage</i>
d. a <i>papillary appendage</i> |

Assignment Sheet 8

- | | |
|--------------|---|
| Objective 9 | 10. Hair grows from a _____ in the skin.
a. follicle
b. pore
c. lumen
d. furuncle |
| Objective 11 | 11. Which of the following phrases is NOT a function of the sebaceous glands?
a. secrete sebum to lubricate and soften hair shafts
b. prevent excessive water evaporation and water absorption through the skin
c. lessen the amount of heat lost through the skin
d. secrete toxins that reduce the populations of pathogens on the skin |
| Objective 5 | 12. Which of the following statements is NOT correct about the hypodermis?
a. The hypodermis is also called the <i>subcutaneous layer</i> .
b. The hypodermis lies between the dermis and the epidermis.
c. The hypodermis consists of areolar tissue and fat.
d. The hypodermis exhibits varying amounts of fat content depending on factors such as body location, gender, nutrition, and health. |
| Objective 15 | 13. A growth that extends into the cavity of a mucous membrane is called a _____.
a. <i>boil</i>
b. <i>polyp</i>
c. <i>fissure</i>
d. <i>vesicle</i> |
| Objective 6 | 14. _____ is a fibrous, sulfur-containing protein that is the primary component of the epidermis, hair, nails, and enamel of the teeth.
a. Stratum corneum
b. Stratum lucidum
c. Keratin
d. Keratohyalin |
| Objective 10 | 15. Nails grow an average of _____ inch per month.
a. 1/4
b. 1/2
c. 1/8
d. 1/3 |

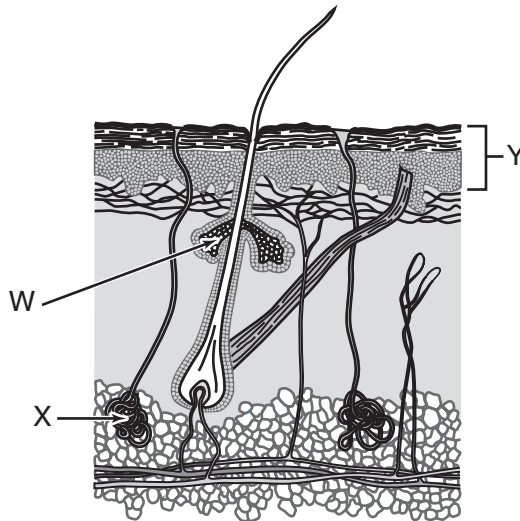
Assignment Sheet 8

Objective 14

16. Hair loss early in life (before middle age) is referred to as alopecia _____.
- a. areata
 - b. prematura
 - c. selinis
 - d. universalis

Objective 13

17. The structure indicated by the letter "W" in the illustration below is a _____.
- a. hair follicle
 - b. hair root
 - c. papilla
 - d. sebaceous gland



Objective 13

18. The structure indicated by the letter "X" in the illustration above is a _____.
- a. follicle
 - b. pore
 - c. sweat gland
 - d. papilla

Objective 13

19. The structure indicated by the letter "Y" in the illustration above is the _____.
- a. stratum granulosum
 - b. stratum basale
 - c. epidermis
 - d. reticular layer

Assignment Sheet 8

Objective 17

20. White spots in the nail are called _____.
- a. *furrows*
 - b. *pterygium*
 - c. *corrugations*
 - d. *leukonychia*

Objective 15

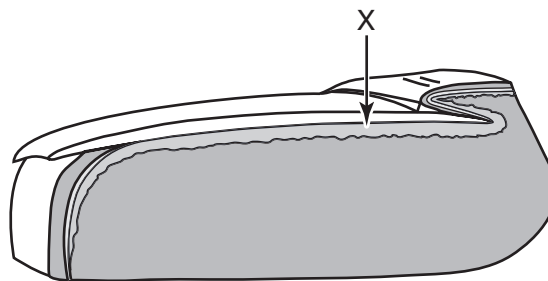
21. A sac that contains any fluid substance other than pus is called a ____.
- a. *boil*
 - b. *vesicle*
 - c. *polyp*
 - d. *cyst*

Objective 5

22. The term vascular means _____.
- a. containing blood or lymph vessels
 - b. containing nerve endings
 - c. containing molecules of simple carbohydrates
 - d. containing pus

Objective 13

23. The structure indicated by the letter "X" in the illustration below is the _____ area of a nail.
- a. cuticle
 - b. subungual
 - c. *lucidum*
 - d. lunula



Objective 6

24. The Latin term for "horn" is _____.
- a. *stratum*
 - b. *corneum*
 - c. *lucidum*
 - d. *granulosum*

Assignment Sheet 8

- Objective 15 25. An infection of the fold of skin at the margin of a nail is called a _____.
a. *keloid*
b. *polyp*
c. *milium*
d. *comedone*
- Objective 14 26. _____ refers to any diseased condition of the hair.
a. Trichosis
b. Trichoptilosis
c. Monilethrix
d. Hypertrichosis
- Objective 16 27. _____ is a skin disease characterized by red patches, covered with white-silver scales.
a. Dermatitis
b. Psoriasis
c. Eczema
d. Tinea
- Objective 11 28. Which of the following is NOT a true statement about sweat glands?
a. Sweat glands consist of a coiled tube surrounded by capillaries.
b. Sweat glands are located in the deep layers of the dermis with ducts that exit through pores in the epidermis.
c. Sweat glands help to maintain homeostasis of fluids and electrolytes and body temperature.
d. Sweat glands excrete hydrogenous wastes.
- Objective 9 29. The eyelashes, nasal hairs, and hair on the ears _____.
a. serve no useful purpose
b. are not the same structure and composition as hair on the rest of the body
c. provide some level of protection against dust and foreign matter
d. do not require sebaceous glands because of the lacrimal glands, mucous membrane, and ceruminous glands
- Objective 6 30. The _____ is found only on the palms of the hands and the soles of the feet.
a. stratum basale
b. stratum lucidum
c. stratum granulosum
d. stratum germinativum

Assignment Sheet 8

Objective 4	31. Which of the following phrases is NOT a function of the skin? <ol style="list-style-type: none">provides a mechanical barrier against microorganisms, sunlight, and chemicals to protect the bodyhouses nerve endings that sense pain, temperature, touch, and pressurehelps to regulate body temperature and to maintain fluid and electrolyte balancestores waste materials for later excretion through the urinary tract
Objective 2	32. The skin and the auxiliary appendages are the two major structures that make up the _____. <ol style="list-style-type: none">melaninkeratinlymphintegument
Objective 5	33. The dermis consists of _____. <ol style="list-style-type: none">dense, fibrous connective tissuestratified squamous epithelial tissuestratified squamous connective tissuedense, fibrous epithelial tissue
Objective 14	34. Small white flakes appearing on hair or scalp are called _____. <ol style="list-style-type: none">canitiestrichoptilosispityriasismonilethrix
Objective 9	35. A hair consists of a part that protrudes from the skin called the _____—and a subdermal section called the _____. <ol style="list-style-type: none"><i>root; shaft</i><i>shaft, root</i><i>base, strand</i><i>strand, base</i>
Objective 15	36. Congestion appearing primarily on the cheeks and nose, characterized by redness, dilation of blood vessels, and the formation of papules and pustules is called _____. <ol style="list-style-type: none"><i>seborrhea</i><i>rosacea</i><i>paronchia</i><i>hive</i>

Assignment Sheet 8

- Objective 12 37. The nerve endings found in the skin sense _____.
- a. touch, pressure, heat, cold, and pain
 - b. touch, heat, cold, and pain
 - c. touch, heat, and pain
 - d. touch and pain
- Objective 15 38. A thick scar resulting from excessive growth of fibrous tissue is called a _____.
- a. *keloid*
 - b. *polyp*
 - c. *milium*
 - d. *comedone*
- Objective 6 39. _____ is the Latin term for “layer.”
- a. Stratum
 - b. Corneum
 - c. Lucidum
 - d. Granulosum
- Objective 3 40. A protein that absorbs ultraviolet light to give coloration to body structures is _____.
- a. dermal-epidermal
 - b. areola
 - c. fascia
 - d. melanin
- Objective 14 41. Pediculosis capitis is the medical term for _____.
- a. beaded hair
 - b. ingrown hair
 - c. head lice
 - d. knotted hair
- Objective 17 42. _____ refers to split cuticles that may become infected and bleed.
- a. Pterygium
 - b. Corrugations
 - c. Leukonychia
 - d. Agnail

Assignment Sheet 8

- | | |
|--------------|---|
| Objective 15 | 43. A crack and break in the skin is called a(n) _____.
a. <i>fissure</i>
b. <i>keloid</i>
c. <i>carbuncle</i>
d. <i>ulcer</i> |
| Objective 9 | 44. A tube that extends from the dermis through the epidermis and to the surface of the skin is a _____.
a. desmosome
b. follicle
c. papilla
d. basale |
| Objective 5 | 45. The _____ is the thin, nonvascular, nonsensitive outermost layer of the skin.
a. epidermis
b. dermis
c. peridermis
d. subdermis |
| Objective 9 | 46. Hair is kept soft by _____ that is secreted by two or more _____ glands.
a. papillum; papillary
b. sweat; sweat
c. serum; serous
d. sebum; sebaceous |
| Objective 5 | 47. The hypodermis consists of _____.
a. dense, fibrous connective tissue
b. dense, fibrous epithelial tissue
c. areolar tissue and fat
d. areolar tissue and connective tissue |
| Objective 6 | 48. In the stratum corneum, _____.
a. columnar cells continually undergo mitosis to make new cells and push older cells outward
b. the skin connects to the cornea of the eye
c. dead cells have been converted into keratin that flakes off
d. new cells for hair follicles are produced |

Assignment Sheet 8

- Objective 16 49. _____ is a wart that is caused by a virus and may be contagious; also known as "Plantar Warts."
- a. Verruca
 - b. Tinea
 - c. Herpes simplex
 - d. Psoriasis
- Objective 17 50. _____ is caused by improper filing, excessive use of cuticle solvents and nail polish remover, or injury to finger.
- a. Onychophagy
 - b. Onychorrhexis
 - c. Onychocryptosis
 - d. Onychocyanosis
- Objective 9 51. Hair is found on outer parts of the body except _____.
- a. the contact areas of the hands and feet
 - b. the eyelids
 - c. the tongue
 - d. the ears
- Objective 5 52. The dermis contains the _____.
- a. auxiliary appendages
 - b. stratum corneum
 - c. stratum lucidum
 - d. stratum spinosum
- Objective 15 53. _____ is an infection and inflammation of the sebaceous glands.
- a. Sebum
 - b. Sebaceous
 - c. Acne
 - d. Decubitus
- Objective 6 54. The Latin term for "clear" is _____.
- a. stratum
 - b. corneum
 - c. lucidum
 - d. granulosum
- Objective 15 55. A blister is also called a _____.
- a. *furuncle*
 - b. *fissure*
 - c. *polyp*
 - d. *vesicle*

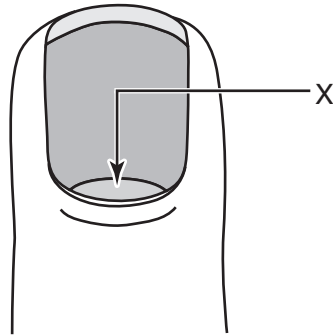
Assignment Sheet 8

Objective 10	56. Nails grow from _____ cells lying under the _____ at the proximal end of a nail. a. epithelial; cuticle b. epithelial; lunula c. connective tissue; cuticle d. connective tissue; lunula
Objective 14	57. _____ is an ingrown hair. a. Pediculosis capitis b. Alopecia areata c. Pili incarnati d. Trichorrhexis nodosa
Objective 17	58. _____ is the inflammation of the nail matrix, accompanied by pus formation. a. Onychogryposis b. Onychophosis c. Onychia d. Onychophyma
Objective 10	59. The region under a nail is called the _____ area of the nail bed. a. <i>subdermal</i> b. <i>sublingual</i> c. <i>subordinal</i> d. <i>subungual</i>
Objective 15	60. A suddenly appearing raised patch that is usually redder than the surrounding skin; is often accompanied by severe itching; and is usually caused by an allergic reaction, infection, or stress is called a _____. a. <i>hive</i> b. <i>furuncle</i> c. <i>carbuncle</i> d. <i>ulceration</i>
Objective 3	61. Skin color is the result of _____ and the amount of _____ near the surface of the skin. a. melanin; lymph b. melanin; blood c. keratin; lymph d. keratin; blood

Assignment Sheet 8

Objective 13

62. The structure indicated by the letter "X" in the illustration below is _____ of a nail.
- a. the cuticle
 - b. the lunula
 - c. the subungual area
 - d. the lucidium



Objective 16

63. An inflammatory, painful disease of the skin characterized by both dry or moist lesions is called _____.
- a. *dermatitis*
 - b. *psoriasis*
 - c. *eczema*
 - d. *tinea*

Objective 14

64. _____ is the medical term for split ends.
- a. Trichosis
 - b. Trichorrhexis nodosa
 - c. Trichoptilosis
 - d. Monilethrix

Objective 16

65. _____ is commonly known as ringworm, a highly contagious fungal infection that can infect the skin, scalp, or the nails.
- a. Tinea pedis
 - b. Psoriasis
 - c. Dermatitis
 - d. Eczema

Objective 14

**Assignment Sheet 1 – Complete the Crossword
Puzzle of Terms (Objectives 1–6)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

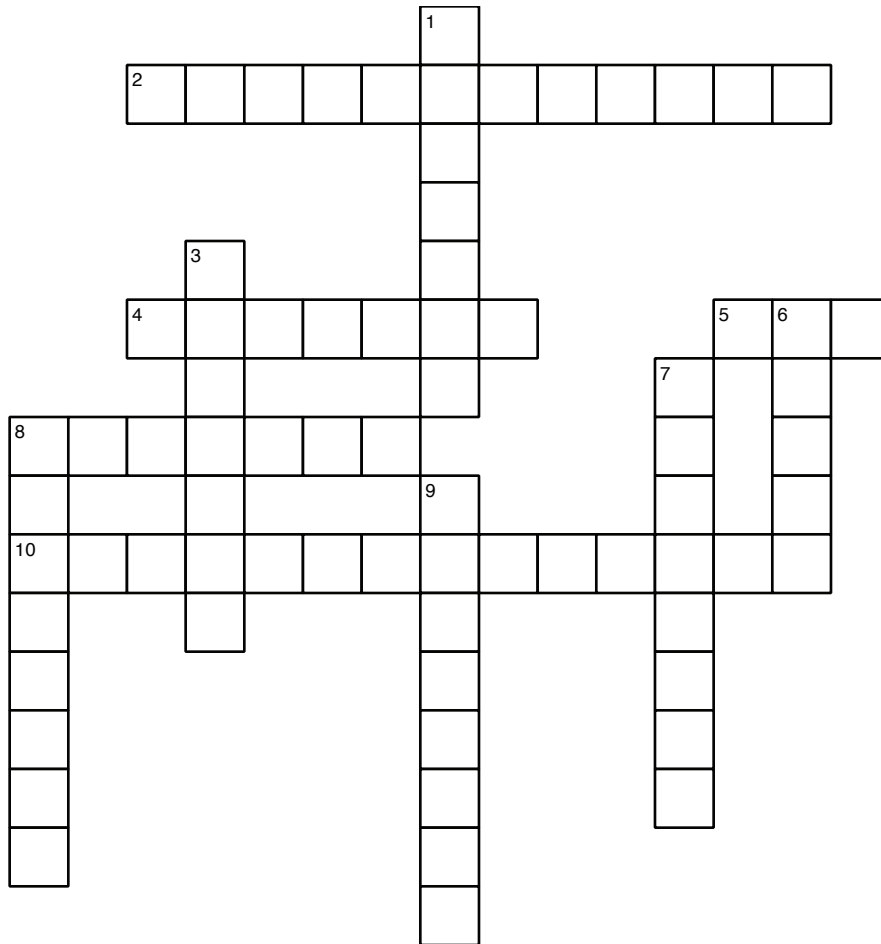
Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

Assignment Sheet 1



Across

2. The bones of the skull, particularly the bones that enclose the brain
4. The ankle bones that form the heel and the proximal or posterior half of the foot
5. Any of the paired, curved, bony, or partly cartilaginous rods that stiffen the walls of the body
8. A shoulder blade
10. All of the bones and cartilage of the body that collectively provide the supporting framework for the muscles and organs

Down

1. The kneecap
3. The wrist bones
6. The flat portion of the hip
7. One of the bony or cartilaginous segments composing the spinal column
8. Any one of numerous small, round, bony masses embedded in certain tendons that may be subjected to compression and tension
9. The collarbone

Objective 15

**Assignment Sheet 2—Complete the Crossword
Puzzle of Terms (Objectives 7–13)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

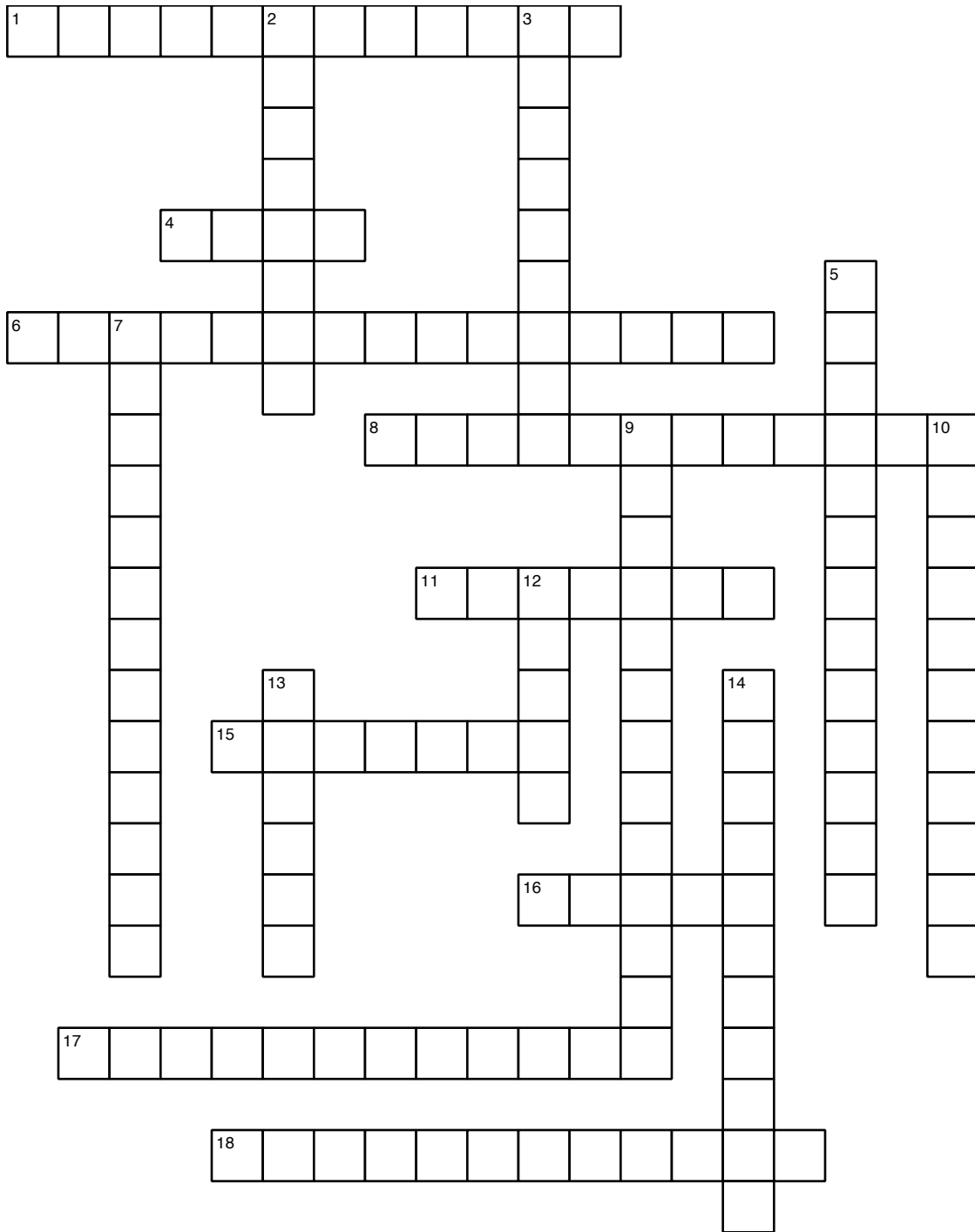
Across

1. One of the smallest and most-fragile bones of the face, located at the anterior part of the medial wall of the orbit
4. The second cervical vertebra about which the atlas rotates, allowing the head to be turned, extended, and flexed
6. The portion of the maxilla or the mandible that forms the dental arch
8. The winged compound bone of the base of the skull and anterior to the temporal bone
11. The bony part of the skull that holds the brain
15. One of a pair of large bones that form the upper jaw
16. One of a pair of bony, conical cavities in the skull that accommodate the eyeballs and associated structures
17. Either of a pair of compound bones at the side of the skull that contains various cavities and recesses associated with the ear
18. Either of a pair of bones of the roof of the skull between the frontal bone and the occipital bone

Down

2. The large bone that forms the lower jaw
3. The bone forming the nasal cavity
5. One of a pair of bones that forms the prominence of the cheek and part of the orbit; a cheekbone
7. The weight-supporting, solid central portion of a vertebra
9. The cuplike bone at the back of the skull that is marked by a large opening by which the skull articulates with the atlas
10. A light, spongy, cubical bone forming much of the walls of the nasal cavity and part of those of the orbits
12. The first vertebra of the neck
13. The organ of voice that is part of the air passage
14. A single bone that forms the front of the skull

Assignment Sheet 2



Objective 16

Assignment Sheet 3—Locate and Identify Bones of the Cranium

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> • While performing a shampoo: <ul style="list-style-type: none"> — Identify the bones of the cranium as you massage the muscle over each bone. 	_____
<ul style="list-style-type: none"> • Teamwork demonstrated throughout completion of assignment 	_____

Basic Skills



Writing



Science



Oral Communication



Interpersonal



Employability

Directions Part 1

Work in teams of two with the purpose of using peer tutoring to assist each other in locating and identifying the bones of the cranium during a shampoo. Work with your partner to develop keys to help you remember the names and locations of the major bones of the cranium. Write the location of the bone in the space provided below and the key you developed to help you remember. This information will help you in preparing for the identification and location of the bones of the cranium during the shampoos.

Front Forehead
 Key: Example; frontal — front of head

Parietal: _____
 Key: _____

Occipital: _____
 Key: _____

Temporal: _____
 Key: _____

Sphenoid: _____
 Key: _____

Assignment Sheet 3

Directions Part 2

Perform a shampoo on your partner. Use the completed form to assist in identifying the bones of the cranium and the location of each. Each partner should receive a shampoo. As you continue in your training each time you perform a shampoo, visualize the bones of the cranium and the location of each. Review in your mind the name of the bone as you massage the muscle covering the bone.

Objective 17

Assignment Sheet 4—Locate and Identify Bones of the Face

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> • While performing a facial massage: <ul style="list-style-type: none"> — Identify the bones of the face as you massage the muscle over each bone. 	_____
<ul style="list-style-type: none"> • Teamwork demonstrated throughout completion of assignment 	_____

Basic Skills



Writing



Science



Oral Communication



Interpersonal



Employability

Directions Part 1

Work in teams of two with the purpose of using peer tutoring to assist each other in locating and identifying the bones of the face. Work with your partner to develop keys to help you remember the names and locations of the major bones of the face. Write the location of the bone in the space provided below and the key you developed to help you remember. This information will help you in preparing for the identification and location of the bones of the face during the facial massage.

Maxilla 2 large ones that form the upper jaw
 Key: Maxine above the man-dible

Mandible: _____
 Key: _____

Nasal: _____
 Key: _____

Lacrimal: _____
 Key: _____

Zygomatic: _____
 Key: _____

Assignment Sheet 4

Directions Part 2

Perform a facial massage on your partner. Use the completed form to assist in identifying the bones of the face and the location of each. Each partner should receive a facial massage. As you continue in your training each time you perform a facial massage, visualize the bones of the cranium and the location of each. Review in your mind the name of the bone as you massage the muscle covering the bone.

Objective 18 Assignment Sheet 5—Analyze Cosmetology Scenarios

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> • Analysis demonstrates the ability to apply knowledge of the information presented in the Information Sheet to a given situation 	_____
<ul style="list-style-type: none"> • Answers are clear and concise 	_____
<ul style="list-style-type: none"> • Handwriting is neat and legible 	_____

Basic Skills



Reading



Writing



Science



Oral Communication



Interpersonal



Critical Thinking

Directions

Read each scenario and answer the questions that follow.

Scenario 1

Ms. Wilson has a difficult time lying in the shampoo bowl. She always complains that the shampoo bowl hurts her neck.

1. Which region of the vertebral column is most likely involved with the complications Ms. Wilson is experiencing?

2. What should you do?

Assignment Sheet 5

Scenario 2

Dr. Lim comes to the salon for a manicure. She asks that you massage the muscles covering her phalanges, metatarsals, tarsals, tibia, and fibula.

1. What areas of the body is she addressing?

2. What should you do?

Scenario 3

Mansur comes into the salon for a haircut and shampoo. His arm is in a cast and sling. He states that he had an accident on his motorcycle and fractured the clavicle, chipped the scapula and has a hair line fracture of the humerus.

1. Where are the bones that are involved located?

Clavicle: _____

Scapula: _____

Humerus: _____

2. Would you offer to give Mansur a neck massage? _____

3. What should you do?

Assignment Sheet 5

Scenario 4

Ms. Roehrig is an elderly woman and has shrunk in height over the years. She has developed curvature of the spine, which appears as a hump on her back, which makes it almost impossible to give her a shampoo without getting her back and the floor under the shampoo bowl wet.

1. What is the medical term that is given to the disorder Ms. Roehrig appears to have?

2. What part of the body has been affected by this disorder?

3. What should you do?

Objective 19

Assignment Sheet 6—Complete Module 6 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 7

1. The _____ is one of the smallest and most-fragile bones of the face.
 - a. lacrimal bone
 - b. maxilla
 - c. mandible
 - d. zygomatic process

Objective 9

2. Which of the following phrases is NOT a characteristic of the hyoid bone?
 - a. is a segmented, O-shaped bone in the neck between the mandible and the lower part of the larynx
 - b. is the only bone in the body that does not articulate with another bone
 - c. is suspended ligaments on processes from the temporal bone in the cranium
 - d. provides an attachment for the tongue

Objective 10

3. The _____ is the weight-supporting, solid central portion of a vertebra.
 - a. axis
 - b. atlas
 - c. vertebral body
 - d. intervertebral disc

Assignment Sheet 6

Objective 12

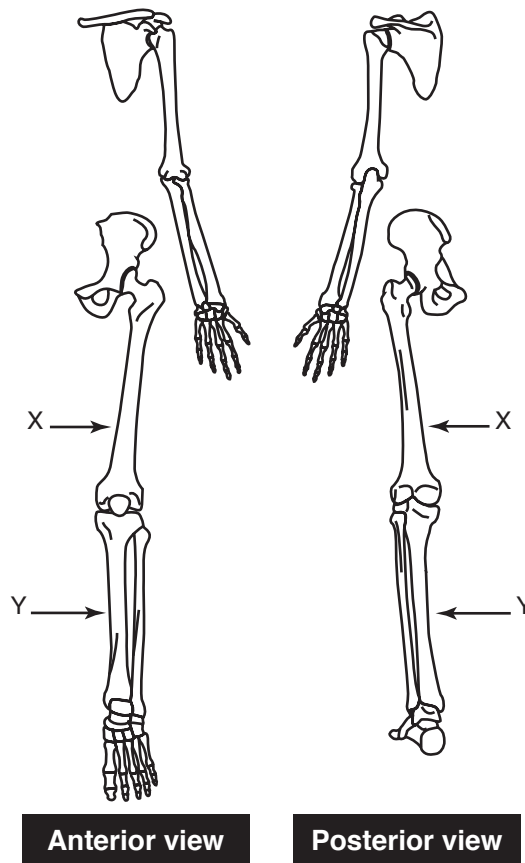
4. Which of the following is NOT a section of the sternum?
- a. manubrium
 - b. gladiolus
 - c. mararigolus
 - d. xiphoid process

Objective 12

5. There are a total of _____ rib pairs.
- a. 7
 - b. 10
 - c. 12
 - d. 16

Objective 6

6. The item indicated by the letter "X" in the illustration below is the _____.
- a. tibia
 - b. fibia
 - c. tarsal
 - d. femur



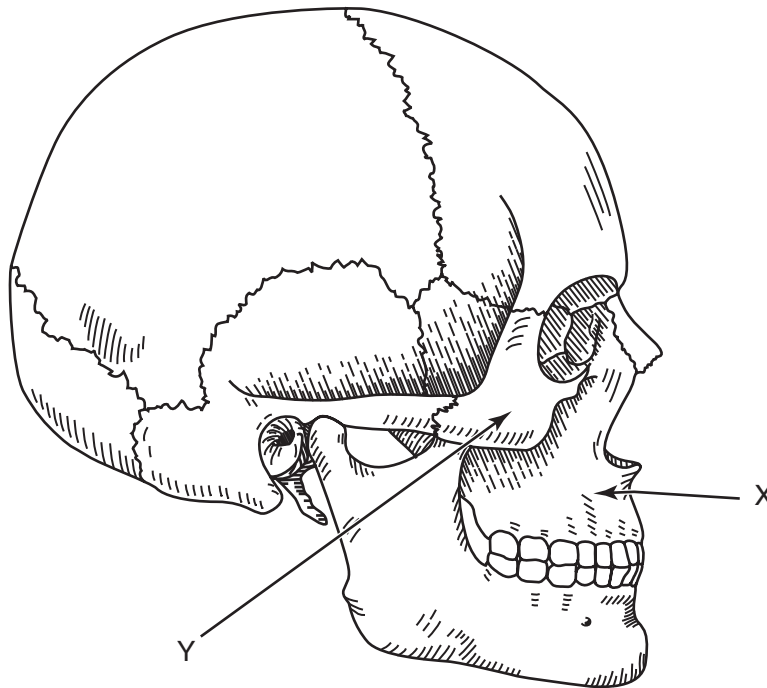
Assignment Sheet 6

Objective 6

7. The item indicated by the letter "Y" in the illustration above is the _____.
- a. patella
 - b. tibia
 - c. humerus
 - d. fibula

Objective 8

8. The item indicated by the letter "X" in the illustration below is the _____.
- a. mandible
 - b. maxilla
 - c. lacrimal bone
 - d. zygomatic bone



Objective 8

9. The item indicated by the letter "Y" in the illustration above is the _____.
- a. lacrimal bone
 - b. maxilla
 - c. mandible
 - d. zygomatic bone

Assignment Sheet 6

Objective 5

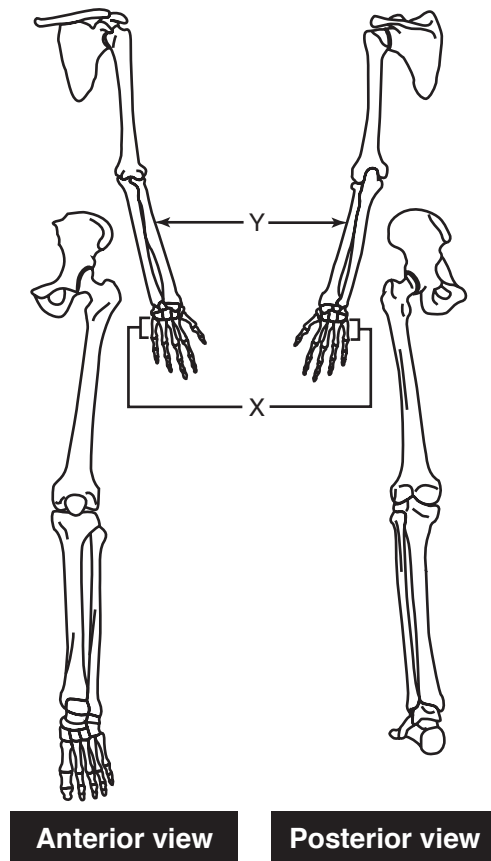
10. The two major divisions of the human skeleton are the _____ and the _____.
- vertical; horizontal
 - true; false
 - axial; appendicular
 - osteotic; cartilaginous

Objective 5

11. Which of the following is in the appendicular skeleton?
- the ribs
 - the bones of the shoulders
 - the sternum
 - the bones of the vertebral column

Objective 6

12. The items indicated by the letter "X" in the illustration below are the _____.
- phalanges
 - carpals
 - tarsals
 - metacarpals



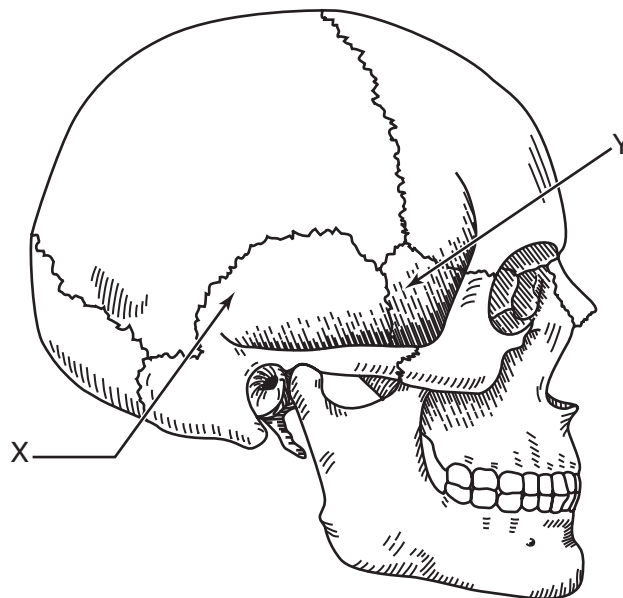
Assignment Sheet 6

Objective 6

13. The item indicated by the letter “Y” in the illustration above is the _____.
- a. ulna
 - b. radius
 - c. humerus
 - d. femur

Objective 8

14. The items indicated by the letter “X” in the illustration below are the _____.
- a. sphenoid bone
 - b. parietal bone
 - c. temporal bone
 - d. occipital bone



Objective 8

15. The item indicated by the letter “Y” in the illustration above is the _____.
- a. sphenoid bone
 - b. parietal bone
 - c. frontal bone
 - d. ethmoid bone

Objective 10

16. Which of the following statements is NOT true concerning the major bones and structures of the vertebral column?
- a. The axis is the second cervical vertebra.
 - b. The atlas is the second cervical vertebra.
 - c. The atlas articulates with the occipital bone and the axis.
 - d. The axis allows the head to be turned, extended, and flexed.

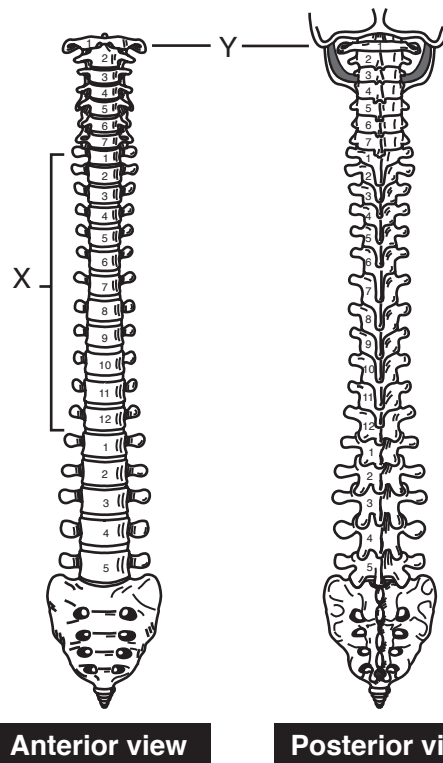
Assignment Sheet 6

Objective 4

17. The miniature long bones of the fingers and toes are called _____.
- carpals
 - metacarpals
 - tarsals
 - phalanges

Objective 11

18. The item indicated by the letter "X" in the illustration below is the _____ region of the vertebral column.
- coccygeal
 - lumbar
 - cervical
 - thoracic



Anterior view

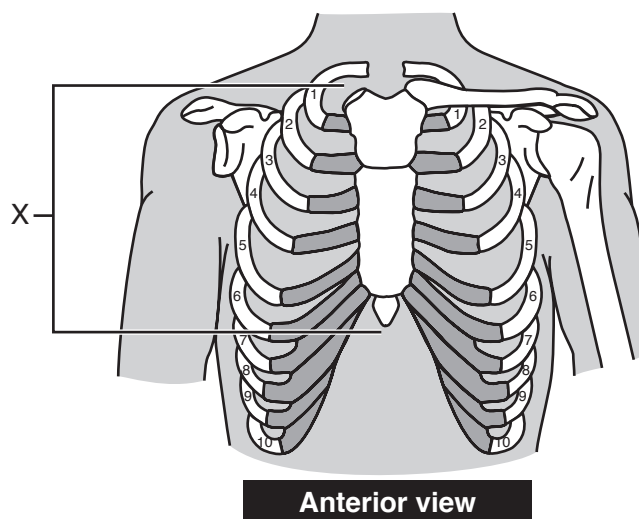
Posterior view

Objective 11

19. The item indicated by the letter "Y" in the illustration above is the _____ region of the vertebral column.
- coccyx
 - sacrum
 - atlas
 - axis

Assignment Sheet 6

- Objective 12 20. All ribs attach to the _____ region of the vertebral column.
- a. sacral
 - b. lumbar
 - c. thoracic
 - d. coccygeal
- Objective 3 21. An example of a sesamoid bone is the _____.
- a. elbow
 - b. trachea
 - c. nasal septum
 - d. patella
- Objective 4 22. The long bones forming the framework of the palm of the hand are called _____.
- a. carpals
 - b. metacarpals
 - c. tarsals
 - d. phalanges
- Objective 2 23. One function of the skeletal system is to store _____ and _____.
- a. calcium; phosphorus
 - b. calcium; carbonate
 - c. phosphorus; carbonate
 - d. none of the above; the skeletal system has no storage function
- Objective 13 24. The item indicated by the letter "X" in the illustration below is the _____.
- a. manubrium
 - b. gladiolus
 - c. xiphoid process
 - d. sternum



Assignment Sheet 6

- | | |
|-------------|---|
| Objective 1 | 25. The skeletal system consists of all the _____ and _____ of the body.

a. muscles; organs
b. bones; cartilage
c. muscles; ligaments
d. joints; blood |
| Objective 3 | 26. Short bones include the _____ .

a. facial bones
b. scapulae and ilium
c. carpals and tarsals
d. small bones in hands |
| Objective 4 | 27. Two of the long bones of the lower leg are the _____ and the _____ .

a. tibia; fibula
b. ulna; radius
c. femur; humerus
d. scapula; patella |
| Objective 2 | 28. Which of the following is NOT a function of the skeletal system?

a. provides support and shape for the body
b. protects delicate vital organs
c. assists with body movements
d. manufactures muscle cells |
| Objective 3 | 29. Flat bones include the ribs, scapulae, ilium, and _____ .

a. carpals
b. tarsals
c. vertebrae
d. cranial bones |
| Objective 3 | 30. _____ bones are found in the arms, legs, hands, and feet.

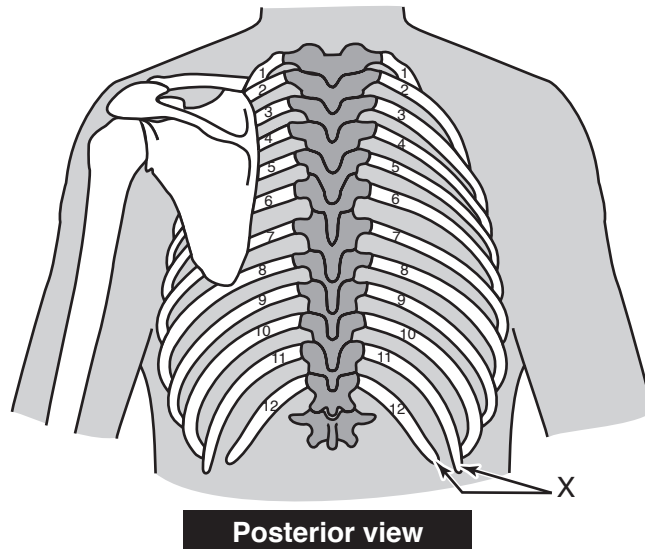
a. Short
b. Long
c. Flat
d. Irregular |

Assignment Sheet 6

Objective 13

31. The items indicated by the letter "X" in the illustration below are _____.

- a. the true ribs
- b. the false ribs
- c. the floating ribs
- d. the vertebral column



Objective 12

32. How many pairs of ribs attach directly to the sternum and are referred to as true ribs?

- a. 2
- b. 3
- c. 5
- d. 7

Objective 6

33. Another name for the collarbone is the _____.

- a. humerus
- b. clavicle
- c. ilium
- d. radius

Objective 3

34. _____ bones are made of spongy bone covered with compact bone.

- a. Long
- b. Short
- c. Irregular
- d. All of the above

Assignment Sheet 6

- | | |
|--------------|---|
| Objective 5 | 35. The axial skeleton centers around the vertebral column and includes the bones of the _____.

a. ribs and sternum
b. pelvis
c. arms
d. shoulders |
| Objective 7 | 36. Which of the following statements is NOT true of the cranium?

a. The cranium is the bony part of the skull that holds the brain.
b. The cranium is composed of eight bones.
c. The parietal bone of the cranium is located at the side of the skull and contains various cavities.
d. The occipital bone of the cranium is a cuplike bone at the back of the skull. |
| Objective 7 | 37. A single bone that forms the front of the skull is the _____ bone.

a. parietal
b. frontal
c. occipital
d. temporal |
| Objective 10 | 38. The first vertebra of the neck is called the _____.

a. <i>sphenoid bone</i>
b. <i>ethmoid bone</i>
c. <i>orbit</i>
d. <i>atlas</i> |
| Objective 12 | 39. Rib pairs _____ are not attached to the sternum and are called the floating ribs.

a. 8, 9, and 10
b. 11 and 12
c. 8 through 12
d. 1 through 7 |
| Objective 10 | 40. The region at the upper-back portion of the vertebral column that consists of 12 segments is the _____.

a. lumbar region
b. sacral region
c. coccygeal region
d. thoracic region |

Objective 19

Assignment Sheet 1 – Complete the Crossword Puzzle of Terms (Objectives 1–8)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

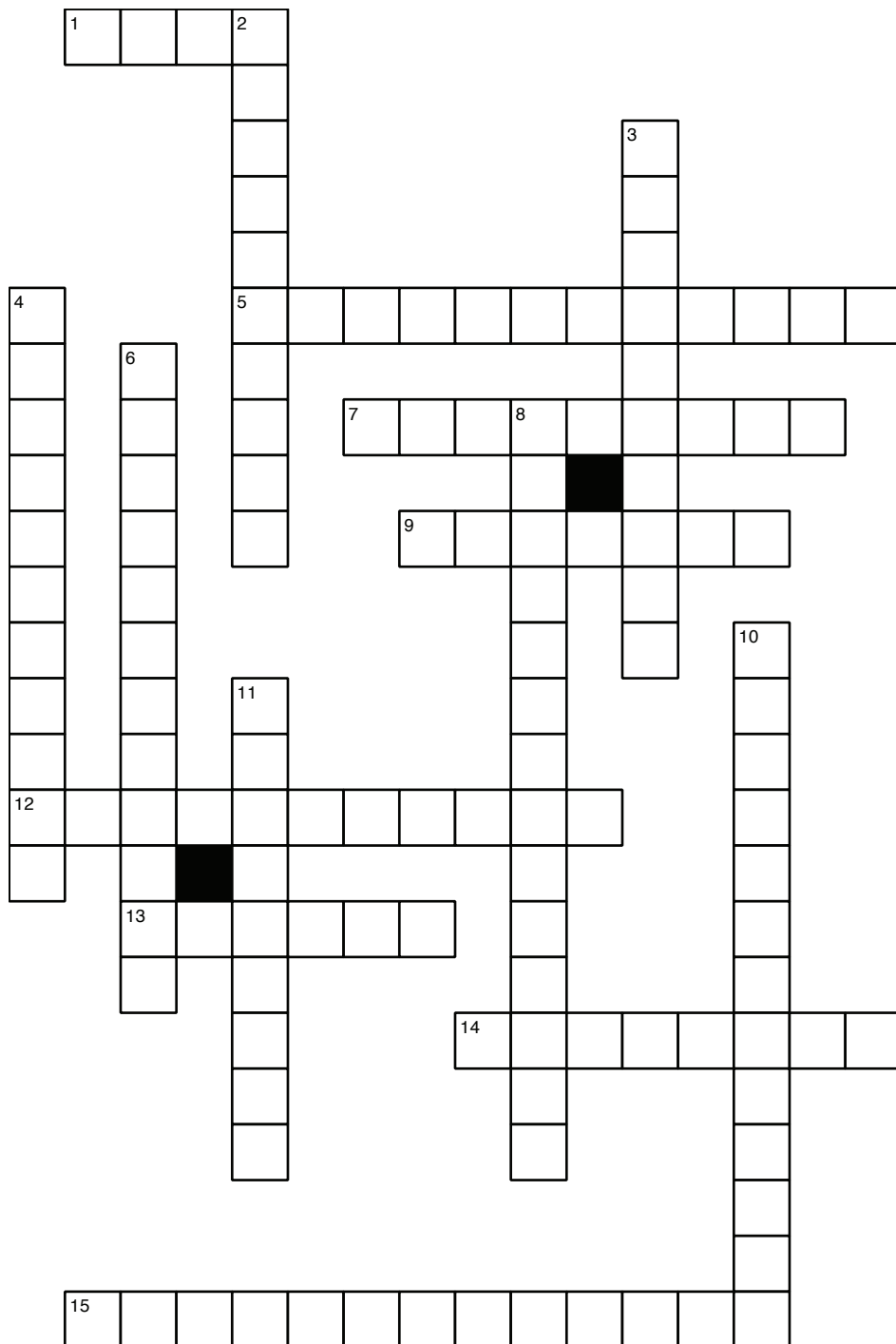
Across

1. The slight tension that is present in muscles even when they are at rest so that they can respond more easily and quickly when needed
5. The ability to respond to stimuli
7. A fibrous sheath that enfolds a skeletal muscle and extends over the origin and insertion and between bundles of muscle fibers
9. The internal organs in the abdominal cavity
12. Functioning without the conscious control of the organism
13. A structure in which the epimysium extends from the muscle as a broad, flat sheet of connective tissue that attaches to an adjacent structure; one of many white, glistening fibrous bands of tissue that attach muscle to bone
14. Consisting of narrow bands or rows
15. The ability to stretch (lengthen) and remain stretched (hold)

Down

2. The ability to return to a former length when the stretching force is removed
3. A fibrous, vascular membrane covering the bones, except at their extremities
4. A structure in which the epimysium extends from the muscle as a strong, tough cord of connective tissue that is continuous with the periosteum of the bone; a strong sheet of fibrous connective tissue that serves as a tendon to attach muscles to bone or as fascia to bind muscles together
6. The ability to transmit impulses
8. All of the muscles of the body considered as an interrelated structural group
10. The ability to contract or shorten
11. Functioning under the conscious control of the organism

Assignment Sheet 1



Objective 20

Assignment Sheet 2—Complete the Crossword Puzzle of Terms (Objective 9)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

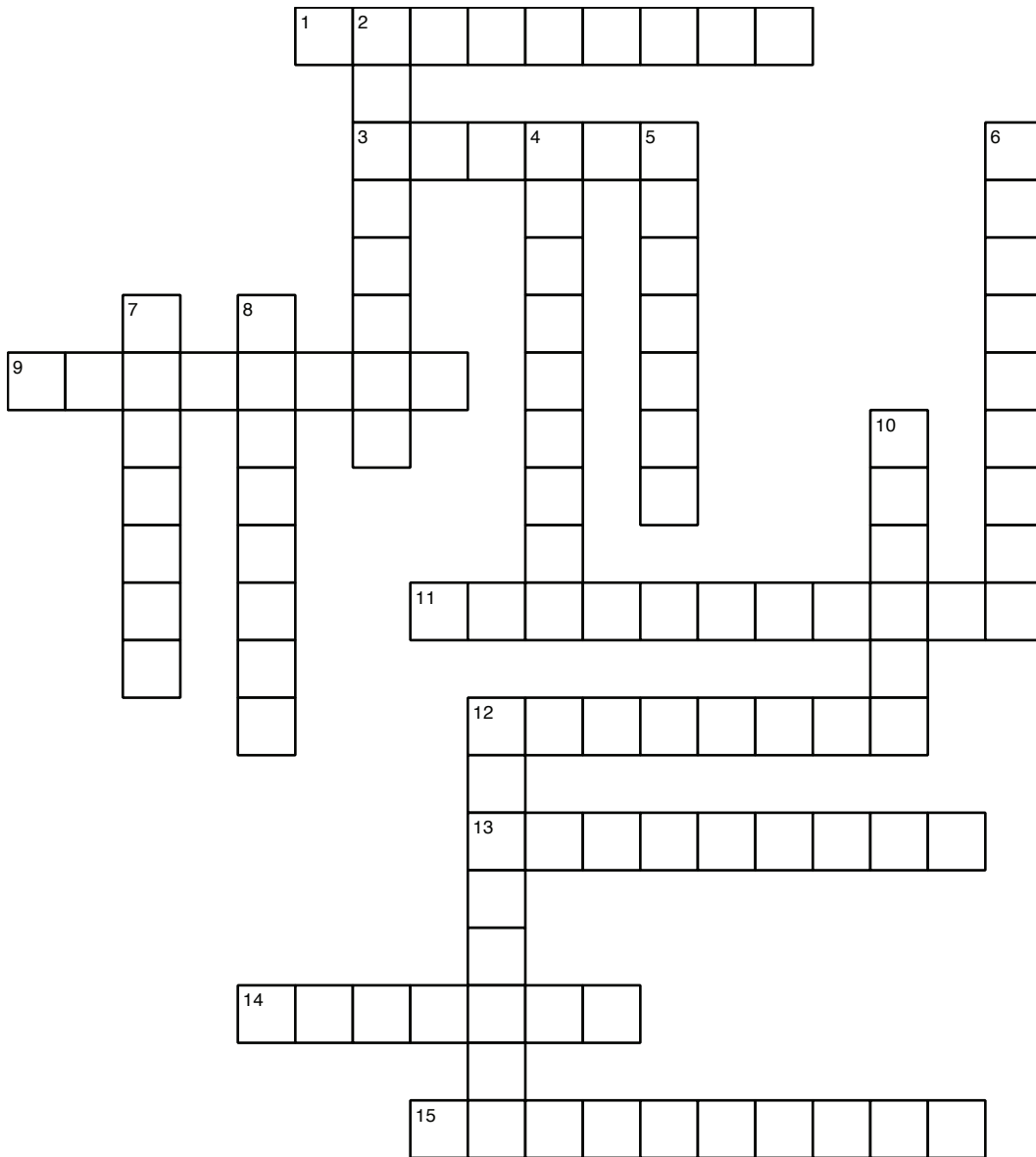
Across

1. Performs retraction, moving a part back
3. Performs tension, making a part more rigid
9. Performs inversion, turning a part upside down or inside out
11. Performs dorsiflexion, moving a part toward the back
12. Performs adduction, moving toward a part or toward a midline
13. Performs depression, lowering a part
14. Performs elevation, lifting a part
15. Performs protraction, moving a part forward

Down

2. Performs extension, straightening a part at a joint
4. Performs constriction, closing a body opening
5. Performs medial rotation—revolving a part on its axis—or lateral rotation—moving a part so that its distal point travels in a circle
6. Performs supination, turning a part upward
7. Performs eversion, turning or rotating a part outward
8. Performs pronation, turning a part downward
10. Performs flexion, bending a part at a joint
12. Performs abduction, moving away from a part or a midline

Assignment Sheet 2



Objective 21

**Assignment Sheet 3—Complete the Crossword
Puzzle of Terms (Objectives 10–12)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

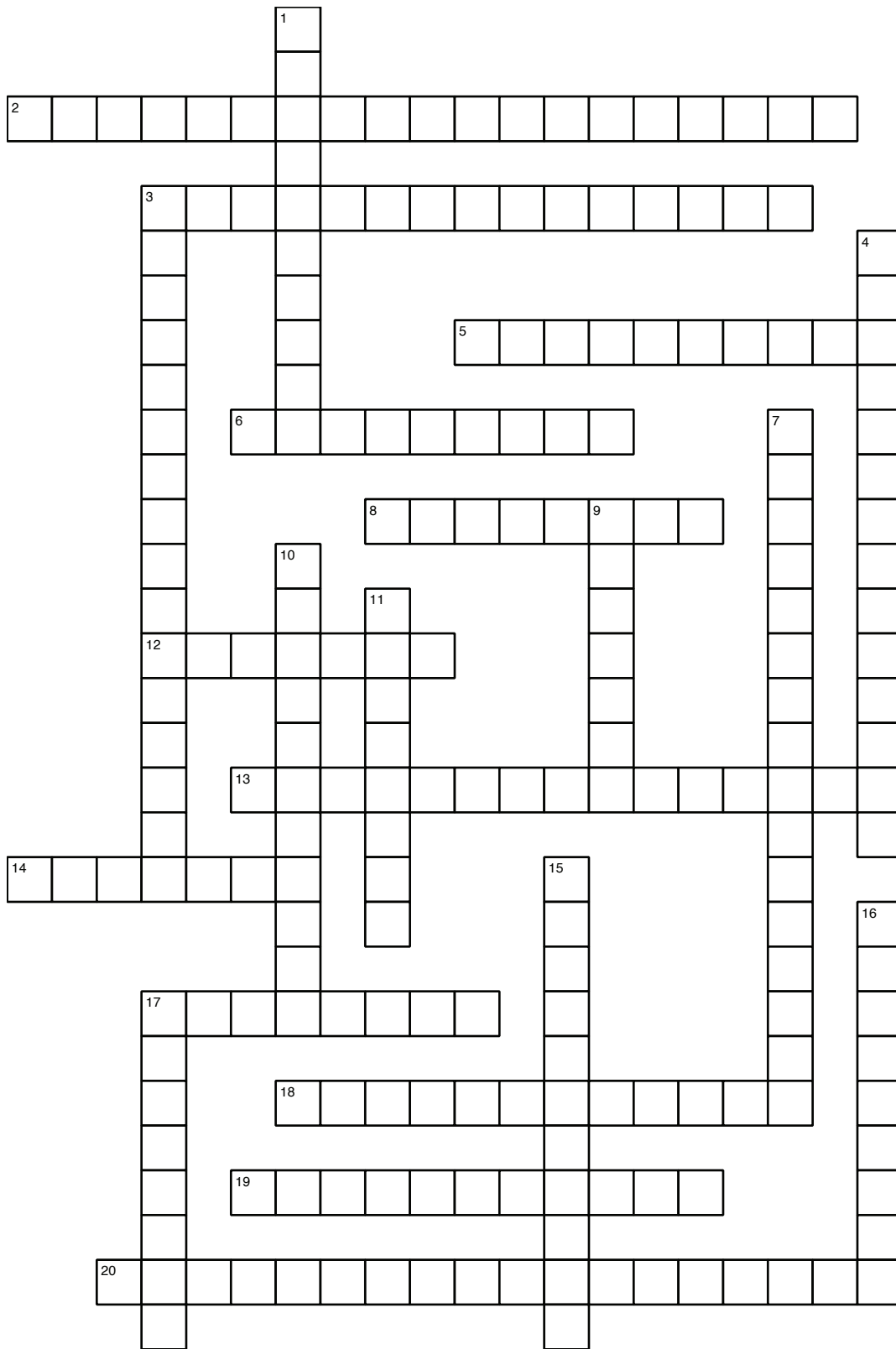
Across

2. Rotates the head from side to side, flexes the upper vertebral column and head as in bowing the head, and helps hold the head erect
3. Draws the lips together as in kissing
5. Closes the mandible
6. Moves the shoulders by raising, assists in moving the head to one side or the other, hyperextends the head when the occiput acts as insertion, and helps hold the head erect
8. Acts to wrinkle the skin in the neck and depresses the mandible
12. The shoulder blade
13. Assist in defecation and urination and form the floor of the pelvic cavity
14. The back of the head
17. The lower jawbone
18. Assist in respiration and movements of the neck, arms, and trunk
19. Allow the body to bend, turn, and stand erect
20. Control talking, chewing, swallowing, facial expressions, and blinking

Down

1. Moves the lips for blowing, whistling, and smiling
3. Closes the eyelids
4. The process of the temporal bone behind the ear
7. Support the internal organs, assist in respiration, and assist in eliminating waste from the large intestine and bladder
9. The breastbone
10. To extend to its fullest range of motion or beyond
11. The collarbone
15. Move the head from side to side, from front to back, and in rotation
16. Wrinkles the forehead horizontally
17. Closes the jaws as in chewing

Assignment Sheet 3



Objective 22

Assignment Sheet 4—Locate and Identify Major Muscles of the Head, Face, and Neck

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> • While performing a facial and neck massage: <ul style="list-style-type: none"> — Identified the major muscles of the face and stated their functions. _____ — Identified the major muscles of the neck and stated their functions. _____ 	
<ul style="list-style-type: none"> • Teamwork demonstrated throughout completion of assignment _____ 	

Basic Skills



Writing



Science



Oral Communication



Interpersonal



Employability

Directions Part 1

Work in teams of two with the purpose of using peer tutoring to assist each other in locating, identifying, and discussing the functions of the major muscles of the face and neck during a facial and neck massage. Work with your partner to develop keys to help you remember the names and locations of the major muscles of the face and neck. Write the location of the muscle in the space provided below and the key you developed to help you remember. This information will help you in preparing for the identification and location of the muscles of the face and neck during the facial and neck massage.

Frontalis
Key: Wrinkles the forehead horizontally
Front of head, forehead

Temporalis:
Key: _____

Orbicularis Oculi:
Key: _____

Orbicularis Oris:
Key: _____

Assignment Sheet 4

Buccinator:	_____
Key:	_____
Masseter:	_____
Key:	_____
Trapezius:	_____
Key:	_____
Sternocleidomastoid:	_____
Key:	_____
Platysma:	_____
Key:	_____
Mentalis:	_____
Key:	_____

Directions Part 2

Perform a facial and neck massage on your partner. Use the completed form to assist in identifying the muscles of the face and neck and the location and function of each. Each partner should receive a facial and neck massage. As you continue in your training each time you perform a facial and neck massage, visualize the muscles of the face and neck and the location and function of each. Review in your mind the name of the muscle and the function as you massage the face and neck. Use this as a review for the skeletal system and visualize the muscles over the bones of the head and the names of each.

Objective 23

**Assignment Sheet 5—Complete the Crossword
Puzzle of Terms (Objectives 13–16)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

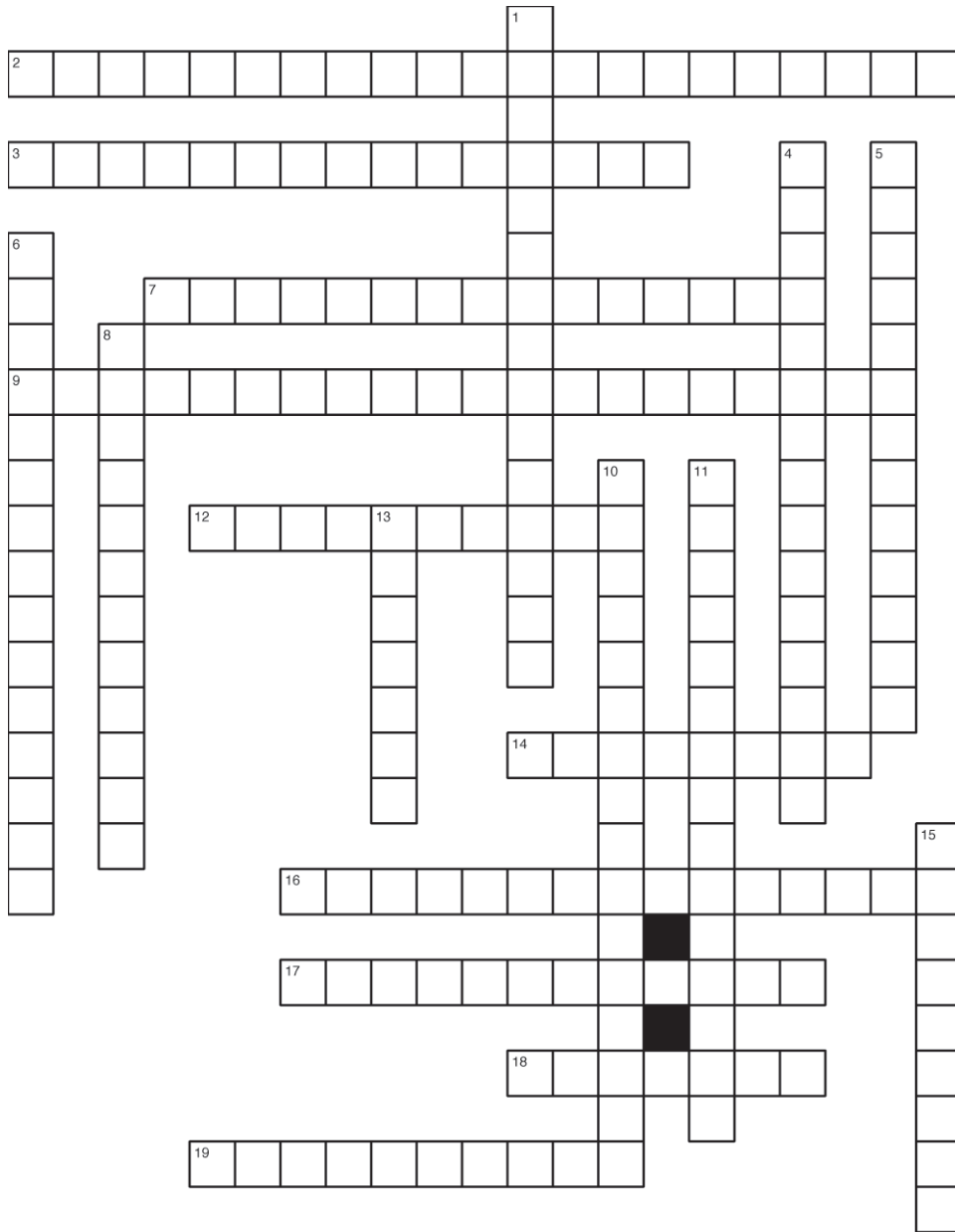
Across

2. Forms the floor of the pelvic cavity
3. Control thumb movements
7. Compresses the abdomen and rotates the trunk laterally (internal)
9. Compresses the abdomen and rotates the trunk laterally
12. Forms the floor of the pelvic cavity and supports the organs
14. Rotates the scapula and raises the shoulder, as in full flexion and abduction of the arm
16. Brings the arms down forcefully
17. Elevate and depress the ribs
18. Moves the upper arm at the point of the shoulder
19. Flexes the pronated forearm

Down

1. Flexes the forearm
4. Compresses the abdomen and rotates the trunk laterally (external)
5. Flexes the supinated forearm
6. Compresses the abdomen and rotates the trunk laterally and flexes the trunk
8. Control hand movements
10. Control finger movements
11. Flexes the upper arm, adducts the upper arm anteriorly, and draws the arm across the chest
13. Extends the lower arm
15. Contracts and relaxes to cause inhalation and exhalation

Assignment Sheet 5



Objective 24

**Assignment Sheet 6—Complete the Crossword
Puzzle of Terms (Objectives 17–18)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

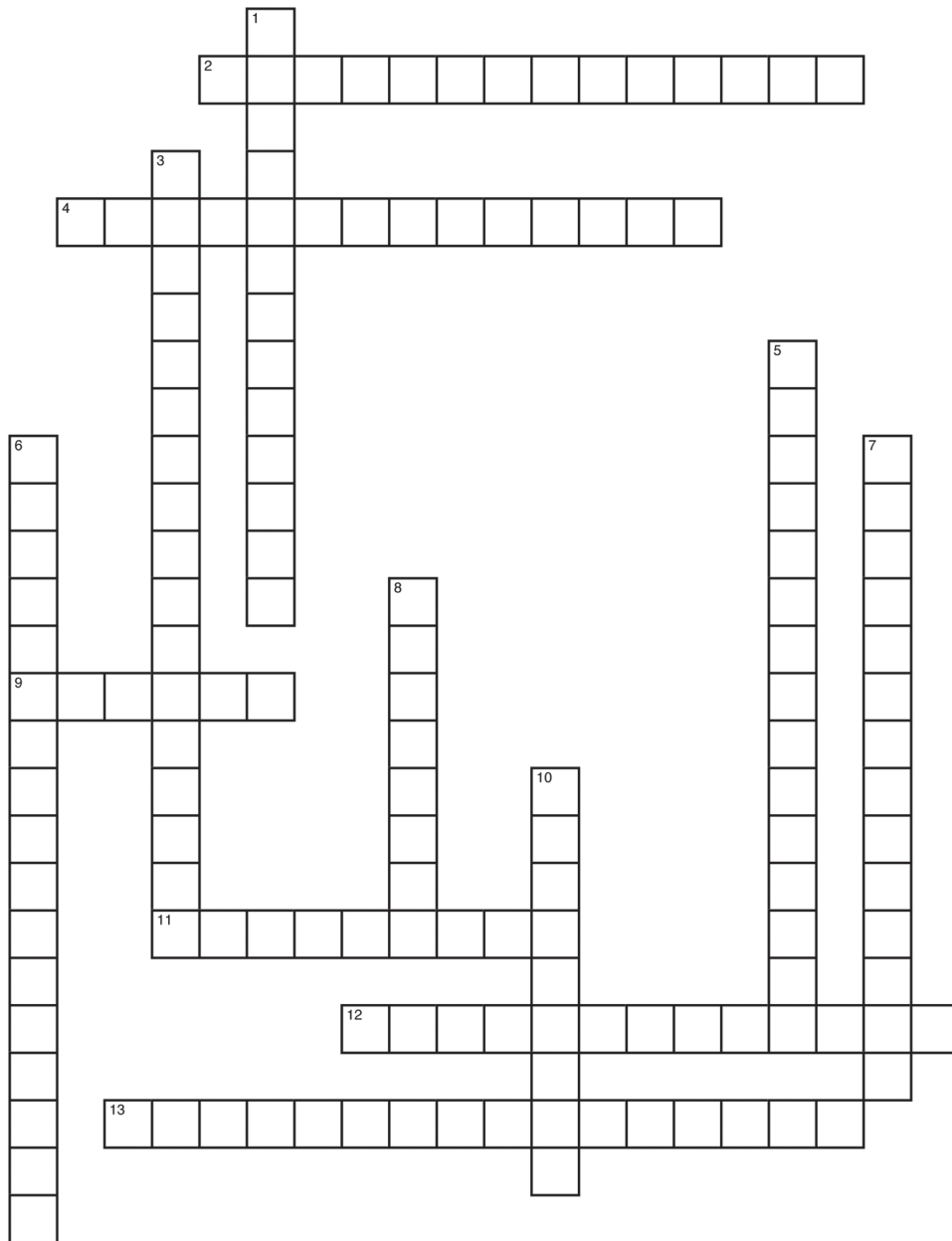
Across

2. Abducts the thigh, rotates the thigh outward, stabilizes the pelvis on the femur, and extends the thigh
4. Helps maintain an erect posture and extends and rotates the thigh
9. Inverts the ankle
11. Adducts and flexes the leg
12. Extends the foot
13. Flexes the foot and inverts the ankle

Down

1. Abducts the thigh, rotates the thigh outward, and stabilizes the pelvis on the femur
3. Extends the leg
5. Flexes the toes
6. Extends the toes
7. Everts the ankle
8. Presses the thighs together
10. Flexes the lower leg

Assignment Sheet 6



Objective 25 Assignment Sheet 7—Analyze Cosmetology Scenarios

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> Analysis demonstrates the ability to apply knowledge of the information presented in the Information Sheet to a given situation 	_____
<ul style="list-style-type: none"> Answers are clear and concise 	_____
<ul style="list-style-type: none"> Handwriting is neat and legible 	_____

Basic Skills



Directions

Read each scenario and answer the questions that follow.

Scenario 1

Ms. Kirkland comes to the salon for a manicure. She is working on her nursing degree and uses technical terms relating to anatomy and physiology. You know immediately that you need to remember the name of bones, muscles, and nerves that are associated with the forearm, wrist, and hand. She states that her pollicis in both arms seem to be tight and needs to be stretched. She states that her digitorum are sore in both arms and she is experiencing slight pain.

- Ms. Kirkland is speaking of which bones, muscles, or nerves and where are they located?

- What should you do?

Assignment Sheet 7

Scenario 2

Nalini comes into the salon regularly for a pedicure usually following a workout at the gym. You notice she is limping and it appears there is something wrong with her left leg or foot. As you begin to prepare and in conversation, you discover that Nalini has pulled a muscle in her leg during the workout.

What should you do?

Scenario 3

Mr. Santos comes into the salon regularly for a shampoo and haircut. He is a regular client and experiences headaches. Today he requests head, neck, and shoulder massage to help relieve his headache.

1. What do you do?

Mr. Santos expresses that his sinus have given him trouble this week.

2. What do you do?

Objective 26

Assignment Sheet 8—Complete Module 7 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 11

1. The back of the head is called the _____.

 - a. *clavicle*
 - b. *scapula*
 - c. *occiput*
 - d. *mastoid process*

Objective 17

2. The _____ muscle is the major muscle of the legs that inverts the ankle.

 - a. extensor digitorum
 - b. soleus
 - c. peroneous
 - d. tibialis

Objective 9

3. Moving a part so that its distal point travels in a circle is referred to as _____.

 - a. medial rotation
 - b. lateral rotation
 - c. inversion
 - d. eversion

Assignment Sheet 8

Objective 9

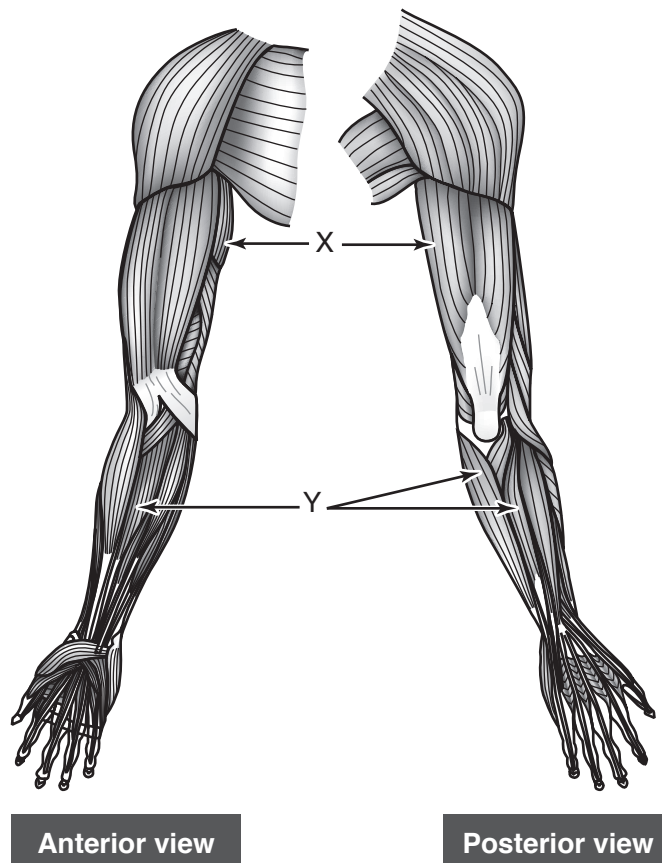
4. Bending a part at a joint is called _____.
- elevation*
 - depression*
 - extension*
 - flexion*

Objective 9

5. A muscle that performs a movement toward a part or toward a midline is called _____.
- an abductor*
 - an adductor*
 - an extensor*
 - a flexor*

Objective 16

6. What muscle is indicated by the letter "X" in the illustration below?
- biceps brachii
 - triceps brachii
 - brachialis
 - brachioradialis



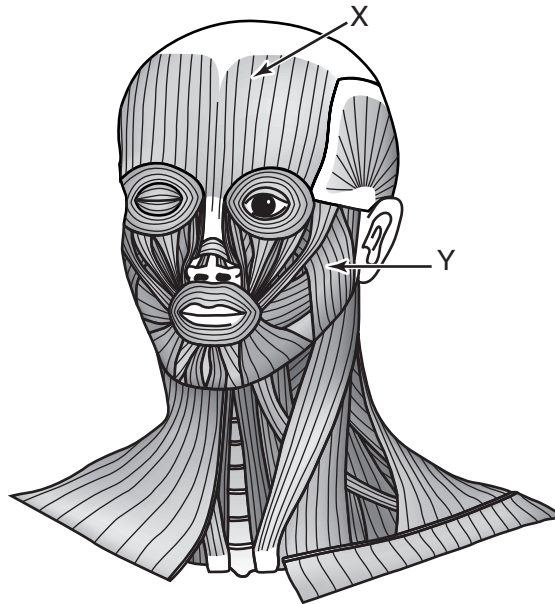
Assignment Sheet 8

Objective 16

7. What muscles are indicated by the letter "Y" in the illustration on page 130?
- carpi muscles
 - digitorum muscles
 - tarsi muscles
 - pollicis muscles

Objective 12

8. What muscle is indicated by the letter "X" in the illustration below?
- trapezius
 - sternocleidomastoid
 - platysma
 - frontalis



Objective 12

9. What muscle is indicated by the letter "Y" in the illustration above?
- orbicularis oculi
 - orbicularis oris
 - buccinator
 - masseter

Objective 1

10. "All of the muscles of the body considered as an interrelated structural group" is the definition of _____.
- visceral muscle tissue
 - the viscera
 - skeletal muscle tissue
 - the muscular system

Assignment Sheet 8

Objective 13

11. The _____ is the major muscle of the torso that contracts and relaxes to cause inhalation and exhalation.
- latissimus dorsi
 - diaphragm
 - external oblique
 - internal oblique

Objective 15

12. The _____ muscles are the major muscles of the arms that control thumb movements.
- carpi
 - digitorum
 - tarsi
 - pollicis

Objective 13

13. The _____ is the major muscle of the torso that forms the floor of the pelvic cavity and supports the organs.
- transversus abdominis
 - rectus abdominis
 - levator ani
 - internal oblique

Objective 18

14. What muscle is indicated by the letter "X" in the illustration below?
- gastrocnemius
 - hamstring
 - adductor
 - quadriceps femoris



Posterior view

Assignment Sheet 8

- | | |
|--------------|--|
| Objective 15 | 15. The _____ muscles of the arms control hand movements.
a. triceps
b. carpi
c. digitorum
d. pollicis |
| Objective 10 | 16. The primary function of the neck muscles is to _____.
a. control talking, chewing, swallowing, facial expressions, and blinking
b. move the head from side to side, from front to back, and in rotation
c. allow the body to bend, turn, and stand erect
d. assist in respiration and movements of the neck, arms, and trunk |
| Objective 7 | 17. The coordinated actions of a pair of muscles generally mean that one muscle contracts while the other _____.
a. contracts more
b. relaxes
c. holds its position
d. twists |
| Objective 15 | 18. The _____ flexes the supinated forearm.
a. biceps brachii
b. brachialis
c. brachioradialis
d. all of the above |
| Objective 7 | 19. Muscles that move a body part usually lie _____ to the part that they move.
a. medial
b. lateral
c. distal
d. proximal |
| Objective 9 | 20. An example of a supinator performing supination is _____.
a. turning the palm upward
b. turning the palm downward
c. pointing the toes downward
d. none of the above |

Assignment Sheet 8

Objective 10

21. The perineal muscles _____.
- support the internal organs, assist in respiration, and assist in eliminating waste from the large intestine and bladder
 - assist in defecation and urination and form the floor of the pelvic cavity
 - form the perineal cavity
 - support the skin throughout the body

Objective 6

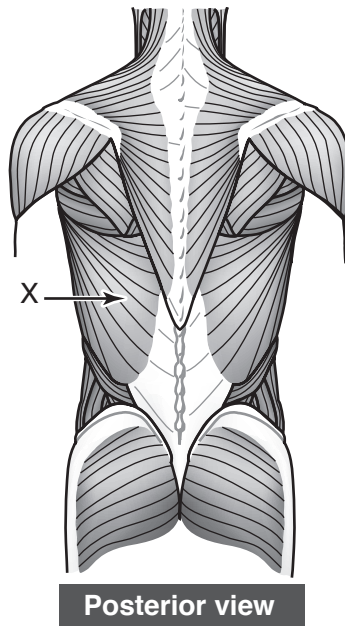
22. Skeletal muscles are enclosed in the _____.
- myleum
 - aponeurosis
 - epimysium
 - periosteum

Objective 3

23. _____ muscle tissue is involuntary, is partially striated, is found only in the heart, and contracts moderately fast in response to stimulation to nerve impulses.
- Skeletal
 - Smooth
 - Visceral
 - Cardiac

Objective 14

24. What muscle is indicated by the letter "X" in the illustration below?
- latissimus dorsi
 - diaphragm
 - external oblique
 - internal oblique



Assignment Sheet 8

- | | |
|-------------|--|
| Objective 7 | 25. Muscles contract in response to _____.
a. increased heat
b. chemical stimulus
c. electrical impulses
d. proton flow |
| Objective 2 | 26. Which of the following is NOT a major function of the muscular system?
a. assists in body movements and in maintaining posture and balance
b. assists in the movement of materials internal to the body
c. produces blood and hormones
d. helps to protect the internal organs |
| Objective 8 | 27. The ability of a muscle to respond to stimuli is called _____.
a. <i>irritability</i>
b. <i>elasticity</i>
c. <i>conductivity</i>
d. <i>extensibility</i> |
| Objective 6 | 28. Skeletal muscles are firmly attached to the structures on which they pull during _____.
a. contraction
b. extension
c. contusion
d. conduction |
| Objective 7 | 29. Locomotion of the body is caused by muscles pulling on _____.
a. bones
b. each other
c. nerves
d. all of the above |
| Objective 8 | 30. The slight tension that is present in muscles even when they are at rest so that they can respond more easily and quickly when needed is called _____.
a. contractility
b. durability
c. flexion
d. tone |

Assignment Sheet 8

Objective 13

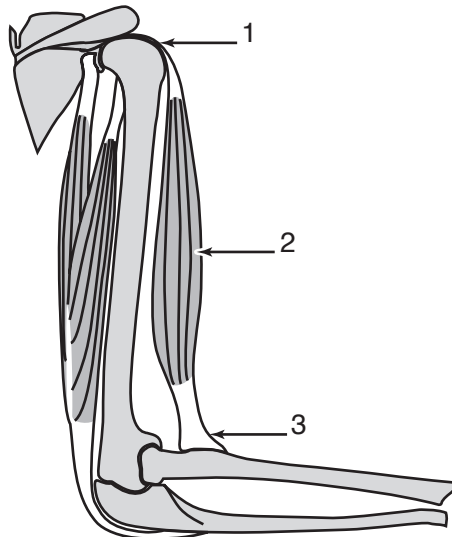
31. Which of the following muscles is primarily responsible for flexing the upper arm, adducting the upper arm anteriorly, and drawing the arm across the chest?
- deltoid
 - pectoralis major
 - serratus anterior
 - intercostals

Objective 6

32. Skeletal muscles may be attached directly to the periosteum of a bone or may be attached by _____.
- ligaments
 - tendons or aponeuroses
 - bone spurs
 - bone processes

Objective 5

33. In the illustration below, what is the correct association between major structures of skeletal muscles and the numbers in the illustration?
- (1) origin, (2) body, (3) insertion
 - (1) body, (2) insertion, (3) origin
 - (1) insertion, (2) origin, (3) body
 - (1) insertion, (2) body, (3) origin



Objective 11

34. The _____ is the major muscle of the neck, head, and face that moves the shoulders by raising, assists in moving the head to one side or the other, hyperextends the head when the occiput acts as insertion, and helps hold the head erect.
- masseter
 - trapezius
 - sternocleidomastoid
 - platysma

Assignment Sheet 8

- | | |
|--------------|---|
| Objective 4 | 35. The end of a skeletal-muscle attachment that is attached to the more-movable bone is the _____.

a. origin
b. body
c. insertion
d. voluntary tissue |
| Objective 3 | 36. Which of the following is NOT a characteristic of skeletal muscle tissue?

a. is voluntary
b. is striated, consisting of long, slender, striped cells
c. is attached to the skeleton and moves the skeleton's moving parts, acting in opposing groups with some muscles relaxing and some contracting
d. contracts slowly in response to stimulation of nerve impulses |
| Objective 11 | 37. The _____ is the major muscle of the neck, head, and face that wrinkles the forehead horizontally.

a. temporalis
b. frontalis
c. orbicularis oculi
d. orbicularis oris |
| Objective 7 | 38. The energy to produce movement in muscles is released from _____.

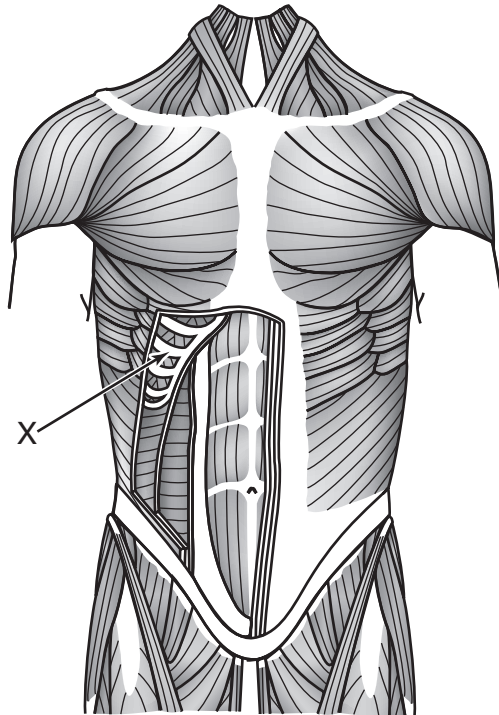
a. blood stored in the bone marrow
b. simple sugars through metabolism
c. proteins within the muscles
d. the movement of electrons between sodium and potassium |

Assignment Sheet 8

Objective 14

39. What muscle is indicated by the letter "X" in the illustration below?

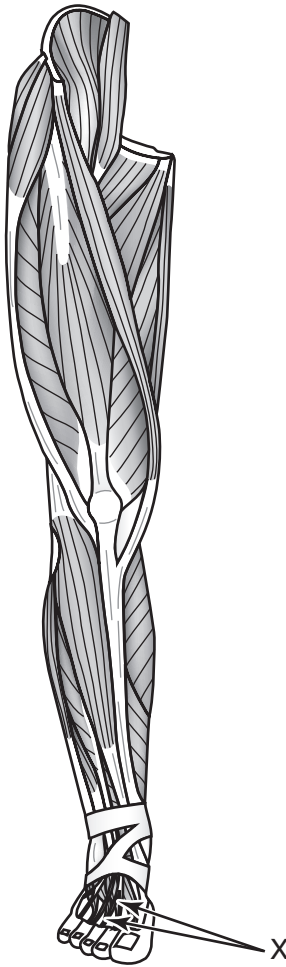
- a. transversus abdominis
- b. diaphragm
- c. internal oblique
- d. intercostals



Anterior view

Objective 18

40. What muscle is indicated by the letter "X" in the illustration below?
- a. extensor digitorum
 - b. soleus
 - c. sartorius
 - d. tibialis anterior



Anterior view

Objective 15

Assignment Sheet 1 – Complete the Crossword Puzzle of Terms (Objectives 1–5)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Reading



Science

Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

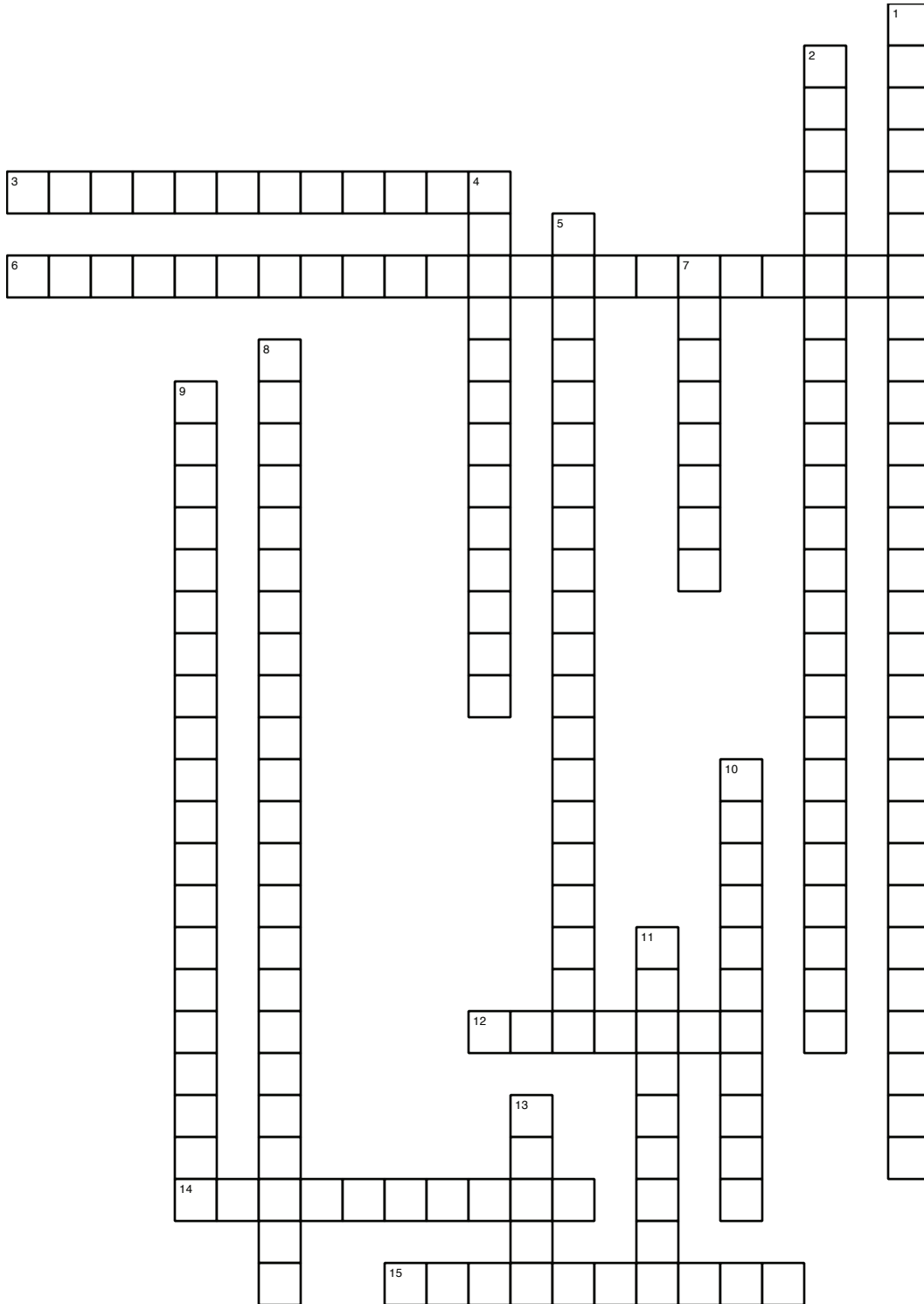
Across

- 3. An organ with the primary purpose of monitoring conditions in the environment and within the body in order to provide the brain with information that may require a response
- 6. The part of the peripheral nervous system that connects the central nervous system to the visceral organs via the cranial and spinal nerves and initiates involuntary responses
- 12. Of, relating to, or affecting the body
- 14. An organ with the primary function of moving materials within the body parts of the body itself
- 15. The cord of nerve tissue that extends from the brain lengthwise along the back in the spinal canal and gives off pairs of spinal nerves, carries impulses to and from the brain, and serves as a center for initiating and coordinating reflex acts
- 5. The part of the peripheral nervous system that connects the central nervous system to the skin and the skeletal muscles via the cranial and spinal nerves and initiates voluntary responses
- 7. A change in an organism’s external environment or internal conditions that cause a response in one or more of the organism’s systems
- 8. The part of the nervous system that is outside the central nervous system and consists of 12 pairs of cranial nerves and 31 pairs of spinal nerves that link the various parts of the body to the central nervous system
- 9. The part of the nervous system that consists of the brain and spinal cord, to which sensory impulses are transmitted and from which motor impulses pass out; the part of the nervous system that coordinates the activity of the entire nervous system

Down

- 1. The part of the autonomic nervous system that restores homeostatic balance and conserves energy
- 2. The part of the autonomic nervous system that prepares the body to deal with emergencies through the expenditures of energy
- 4. The extensive intricate network of structures that activates, coordinates, and controls all of the functions of the body
- 10. The row of aligned holes in the vertebrae through which the spinal cord passes
- 11. Acting or occurring involuntarily
- 13. The portion of the central nervous system contained within the cranium and containing specialized cells that coordinate and regulate the functions of the central nervous system

Assignment Sheet 1



Objective 16

**Assignment Sheet 2—Complete the Crossword
Puzzle of Terms (Objectives 6–13)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

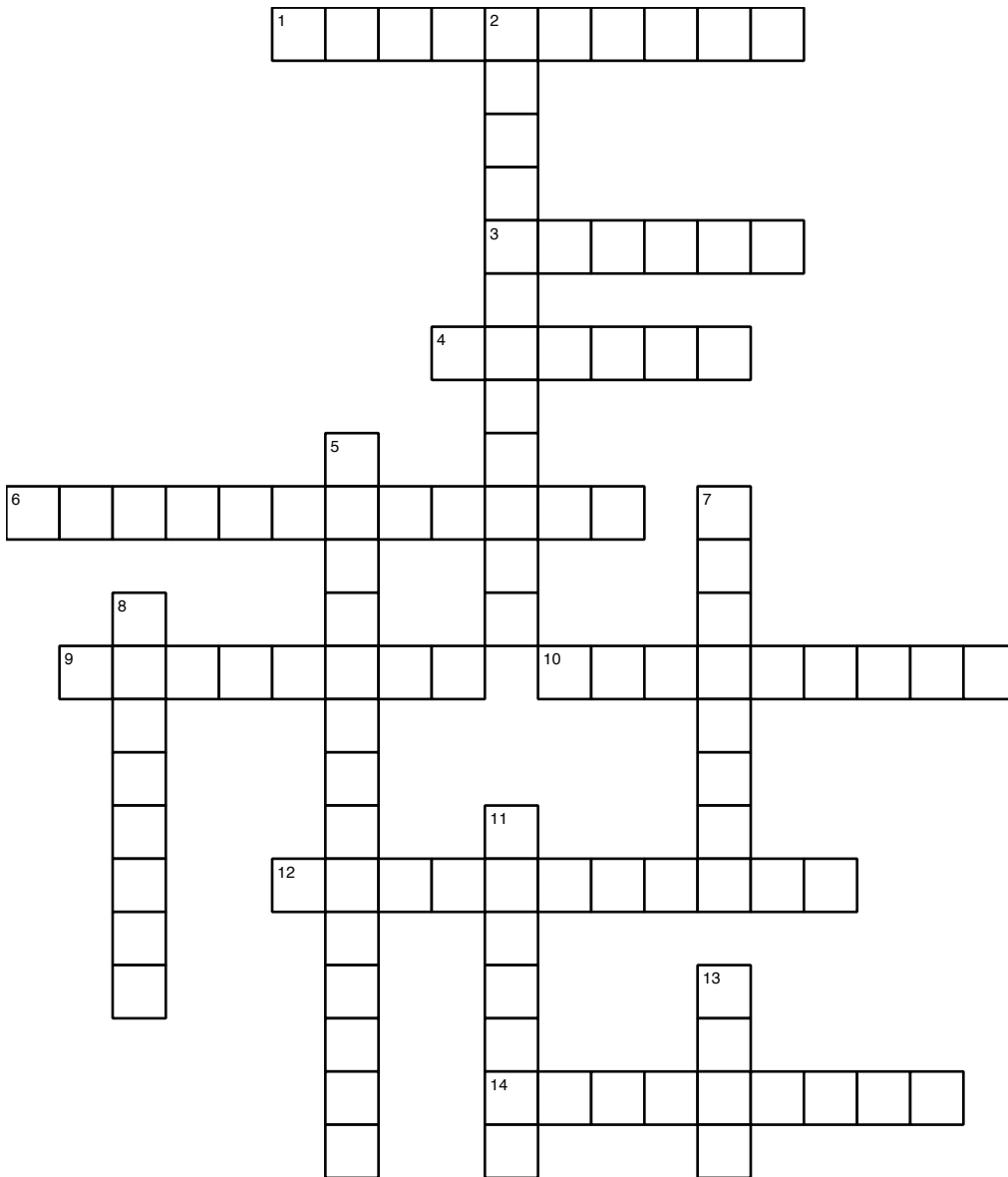
Across

1. Nerve tissue that consists of motor neurons and interneurons
3. An involuntary response to a stimulus, such as blinking the eyes when something approaches them, salivating at the sight of appetizing food, and jerking of the knee when a certain spot is tapped
4. Any one of the three membranes that envelop the brain and the spinal cord
6. Conduct messages or impulses from sensory to motor neurons
9. Acts as a sending and receiving center, performs metabolic and reproductive functions for the cell, and stores energy
10. Many reflexes do not involve action on part of the brain; instead, the effector/circuit is completed by a loop in the spinal cord
12. Tissue consisting of one or more bundles of impulse-carrying fibers that connect the brain and the spinal cord with other parts of the body
14. The basic nerve-tissue cells that support neurons and play a role when there is injury or infection in the nervous system

Down

2. Transmit messages from the central nervous system to all parts of the body
5. Receive messages from all parts of the body and transmit them to the central nervous system
7. One of a pair of large oval organs in the brain
8. Carries impulses to the cell body
11. The basic nerve-tissue cells that are capable of transmitting nerve impulses
13. Carries impulses from the cell body

Assignment Sheet 2



Objective 17

Assignment Sheet 3—Complete the Crossword Puzzle of Terms (Objective 14)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

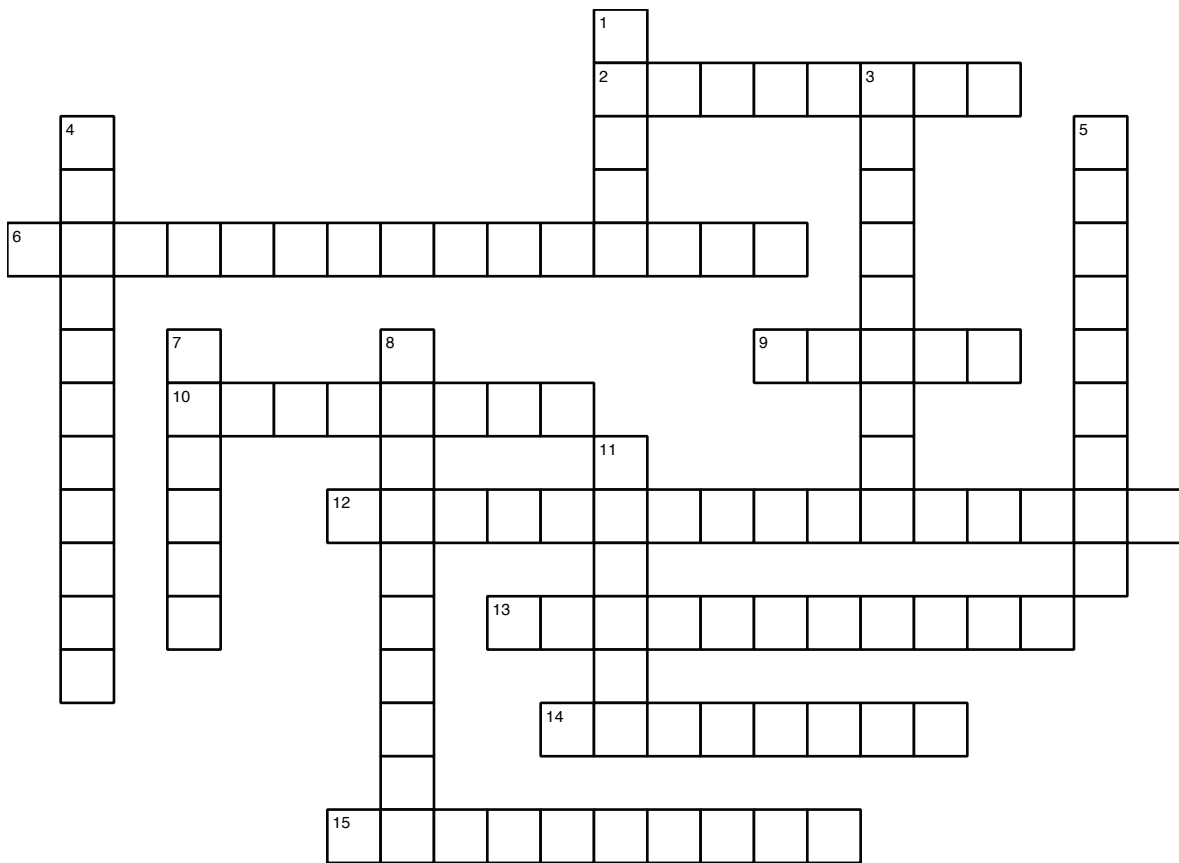
Across

2. Nerve pair VIII; support the sense of hearing and balance
6. Nerve pair XI; control the muscles of the neck and upper back; carry impulses to the neck and shoulder muscles
9. Nerve pair II; support the sense of sight
10. Nerve pair VI; control lateral eye movement
12. Nerve pair IX; support the sense of taste and control swallowing
13. The mucous membrane that lines the inner surface of the eyelids and continues over the forepart of the eyeball
14. A large gland that secretes digestive enzymes and the hormones insulin and glucagon
15. Nerve pair V; control the muscles of the cornea and conjunctiva, the upper portion of the face, the ear, the lower lip, the teeth, the gums, and the muscles for chewing

Down

1. Nerve pair X; control swallowing, hunger, speech, breathing, heart rate, and glands in the stomach and pancreas
3. Nerve pair I; support the sense of smell
4. Nerve pair XII; control the tongue muscles
5. Nerve pair IV; control some of the eye muscles
7. Nerve pair VII; supply the face muscles, the middle ear, and the taste sensors
8. Nerve pair III; control four muscles of the eye
11. The transparent part of the coat of the eyeball that covers the iris and pupil and admits light to the interior

Assignment Sheet 3



Objective 18

Assignment Sheet 4—Participate in a "Face Off"

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the nervous system	_____
• Explained how the nervous system affects the work of the cosmetologist	_____
• Demonstrated teamwork throughout participation in "Face Off"	_____

Basic Skills



Writing



Science



Oral Communication



Interpersonal

Directions Part 1

Work individually to answer the questions below. This is a timed exercise, therefore write everything you know about each question as quickly as possible. You may use additional paper if needed. Your paper will not be submitted for a grade. You may even use text messaging techniques to write answers more quickly. Your answers are to be used during the "Face Off". You have 5 minutes.

1. Define the nervous system.

2. State the functions of the nervous system.

Assignment Sheet 4

3. Describe a reflex arc and give an example of a reflex.

4. Describe major structures within the spinal canal.

5. Discuss the structure and function of the spinal cord.

6. Explain how the nervous system affects the work of the cosmetologist.

Assignment Sheet 4

Directions Part 2

Move to the location that has been prepared with two rows of chairs facing each other in two straight lines. There should be enough chairs for each member of the class. Take your answers to the questions with you. Take a seat facing a classmate. The teacher will assign each student a question to ask each student that faces them. As the teacher states "Start" the students on the right hand row of chairs read the question from your assignment sheet that has been assigned to them. The students on the left hand row of chairs begin giving their answer to the question asked. While the student is giving their answer, the student in the right hand row of chairs writes the other student's answers on the question sheet provided in the assignment. When the teacher states "Stop", all communication ceases and the responsibilities of the students change. The student on the left hand row asks the student opposite them the question they have been assigned.

The process continues with the same two students. When the teacher states "Stop" the second time, all communication ceases and the students on the left hand row of chairs rotate to the left one chair. The student on the end of the row rotates the opposite end of the row. These students ask the same question each time. The students on the right hand row of chairs remain in the same chair throughout the exercise and ask the same question each time. This process continues with asking the questions on the assignment sheet until every student has rotated through the line and every question has been asked to all students.

- ✓ **Note:** Thirty seconds per student is sufficient time to answer a question. While one student is speaking the student facing he/she should not speak. They should listen and write what they hear.

Directions Part 3

Following the "Face Off" students come together in a group. The teacher asks the student that was on the right hand row with question 1 to respond to what they received as answers. Once all answers to question 1 have been recorded from the student, other students may add what they heard or know. This process continues until all questions have been answered as a group.

- ✓ **Note:** The responses should be recorded on an area large enough for all students to view as answers are given for each question.

Assignment Sheet 4

"Face Off" – Question Sheet

1. Define the nervous system.

2. State the functions of the nervous system.

3. Describe a reflex arc and give an example of a reflex.

4. Describe major structures within the spinal canal.

Assignment Sheet 4

5. Discuss the structure and function of the spinal cord.

6. Explain how the nervous system affects the work of the cosmetologist.

Objective 19 Assignment Sheet 5—Analyze Cosmetology Scenarios

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
<ul style="list-style-type: none"> • Analysis demonstrates the ability to apply knowledge of the information presented in the Information Sheet to a given situation 	_____
<ul style="list-style-type: none"> • Answers are clear and concise 	_____
<ul style="list-style-type: none"> • Handwriting is neat and legible 	_____

Basic Skills



Directions

Read each scenario and answer the questions that follow.

Scenario 1

Ms. Ramirez comes into the salon for a haircut and style. She informs you that she has shampooed her hair earlier in the day and wants you to wet it with a spray bottle. In your analysis of her hair you detect that the hair feels as if it is coated with a foreign substance much like a polymer. You ask Ms. Ramirez if she would like a good relaxing shampoo. She responds that she has a nervous problem in her neck and she cannot lay back or bend over the shampoo bowl and that she always shampoos her hair in the shower. You ask Ms. Ramirez about the texture of her hair and she states that her hair has changed over the last few months as a result of the medication she has been taking.

1. What should you do?

2. Are there issues concerning the possible coating or feeling of the hair? What should you do?

Assignment Sheet 5

Scenario 2

Mr. Bunch has been a client for a long time. On his last visit you noticed that he had developed a jerk in his neck that happens unexpectedly and without cause or warning. As Mr. Bunch enters the salon you notice that the jerk has increased in degree and appears to happen much more frequently. Mr. Bunch requests a haircut.

1. What subsystem of the nervous system could be involved with the symptoms portrayed by Mr. Bunch?

2. What should you do?

3. What precautions should you take?

Objective 20

Assignment Sheet 6—Complete Module 8 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 10

1. Motor neurons are located in the _____ and _____.
 - a. central; peripheral nervous systems
 - b. white; gray matter
 - c. sympathetic; parasympathetic nervous systems
 - d. glands; muscles

Objective 3

2. Which of the following is NOT part of the peripheral nervous system?
 - a. cranial nerves
 - b. spinal cord
 - c. spinal nerves
 - d. autonomic nervous system

Objective 5

3. The part of the autonomic nervous system that prepares the body to deal with emergencies is the _____.
 - a. somatic nervous system
 - b. sympathetic nervous system
 - c. parasympathetic nervous system
 - d. peripheral nervous system

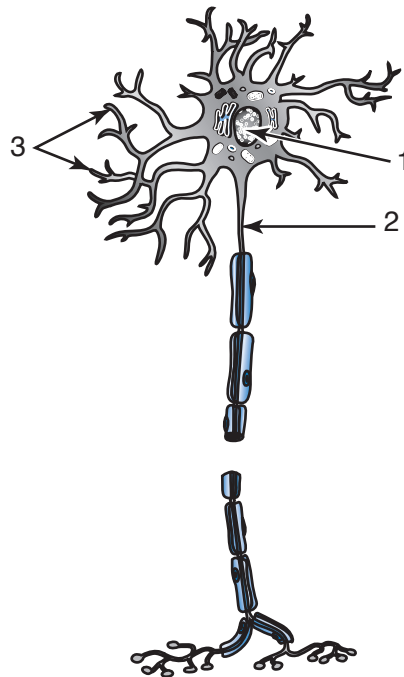
Assignment Sheet 6

Objectives 7 & 8

4. Which of the following statements is NOT true of a neuron?
- A neuron is a basic nerve-tissue cell capable of transmitting nerve impulses.
 - A neuron plays a role when there is injury or infection in the nervous system.
 - An axon is one of the major structures of a neuron that carries impulses from the cell body of the neuron.
 - A dendrite is one of the major structures of a neuron that carries impulses to the cell body of the neuron.

Objective 9

5. In the illustration below, which of the following shows the correct labeling for the structures of a neuron?
- (1) dendrite, (2) cell body, (3) axon
 - (1) cell body, (2) axon, (3) dendrites
 - (1) axon, (2) dendrite, (3) cell body
 - (1) axon, (2) cell body, (3) dendrites



Objective 3

6. The _____ is the part of the nervous system that consists of the brain and spinal cord.
- CNS
 - PNS
 - SNS
 - ANS

Assignment Sheet 6

Objective 14	7. The nerve that supports the sense of smell is the _____ nerve. a. trochlear b. glossopharyngeal c. olfactory d. hypoglossal
Objective 11	8. A reflex arc consists of _____ that provides a signal through a sensory neuron into a spinal nerve and into the spinal cord. a. an effector b. an affector c. an impulse d. a synapse
Objective 2	9. Which of the following is NOT a function of the nervous system? a. receives internal and external stimuli through the sensory organs b. stores any needed information c. generates external stimuli d. coordinates any required responses
Objective 10	10. Sensory neurons are also called _____ neurons. a. afferent b. efferent c. central d. internuncial
Objective 10	11. Which of the following statements is NOT true concerning interneurons? a. Interneurons are also called central neurons. b. Interneurons are found only in the central nervous system. c. Interneurons transmit messages from the central nervous system to all parts of the body. d. Interneurons conduct messages or impulses from sensory to motor neurons.
Objective 1	12. The extensive intricate network of structures that activates, coordinates, and controls all the functions of the body is the _____. a. sensory organs b. central nervous system c. peripheral nervous system d. nervous system

Assignment Sheet 6

- | | |
|--------------|---|
| Objective 4 | 13. The part of the peripheral nervous system that connects the central nervous system to the skin and skeletal muscles is the _____.

a. autonomic nervous system
b. sympathetic nervous system
c. somatic nervous system
d. parasympathetic nervous system |
| Objective 14 | 14. The _____ is the nerve that controls lateral eye movement.

a. abducens
b. optic
c. trochlear
d. trigeminal |
| Objective 12 | 15. Which of the following is NOT a major structure within the spinal canal?

a. spinal cord
b. cerebrospinal fluid
c. meninges
d. lymphatic vessels |
| Objective 13 | 16. The spinal cord acts as a conduction pathway for impulses between the _____ nerves to and from the brain.

a. peripheral
b. sensory
c. motor
d. connecting |
| Objective 2 | 17. The nervous system transmits messages to and from the _____.

a. sensory organs
b. motor organs
c. spinal cord
d. brain |
| Objective 6 | 18. Tissue consisting of one or more bundles of impulse-carrying fibers that connect the brain and the spinal cord with other parts of the body is _____.

a. white matter
b. myelin
c. sulcus
d. nerve tissue |

Assignment Sheet 6

- | | |
|--------------|--|
| Objective 10 | 19. Sensory neurons are controlled by the _____.
a. frontal lobe of the brain
b. pons
c. thalamus
d. meninges |
| Objective 13 | 20. The spinal cord is a small cord about _____ inches long in an adult.
a. 10
b. 12
c. 18
d. 24 |
| Objective 14 | 21. The _____ controls the muscles of the neck and upper back and carries impulses to the neck and shoulder muscles.
a. vagus
b. spinal accessory
c. abducens
d. hypoglossal |
| Objective 10 | 22. Motor neurons are controlled by the _____ lobe of the brain.
a. frontal
b. occipital
c. temporal
d. parietal |
| Objective 13 | 23. The spinal cord lies within the spinal canal surrounded by the _____.
a. medulla oblongata
b. myelin sheath
c. neurilemma tube
d. vertebrae |
| Objective 11 | 24. _____ is nerve tissue that consists of motor neurons and interneurons.
a. White matter
b. Gray matter
c. Myelin
d. Neurilemma |

Assignment Sheet 6

- | | |
|--------------|--|
| Objective 3 | 25. The row of aligned holes in the vertebrae through which the spinal cord passes is the _____.

a. CNS
b. PNS
c. spinal cord
d. spinal canal |
| Objective 4 | 26. The term somatic means _____.

a. preparing the body to deal with emergencies
b. occurring involuntarily
c. affecting the body
d. restoring homeostatic balance |
| Objective 5 | 27. The part of the autonomic nervous system that restores homeostatic balance and conserves energy is the _____.

a. parasympathetic nervous system
b. sympathetic nervous system
c. somatic nervous system
d. peripheral nervous system |
| Objective 14 | 28. Which of the following nerve pair supply the face muscles, the middle ear, and the taste sensors?

a. Oculomotor
b. Facial
c. Abducens
d. Vagus |

Objective 25

Assignment Sheet 1 – Complete the Crossword Puzzle of Terms (Objectives 1–7)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

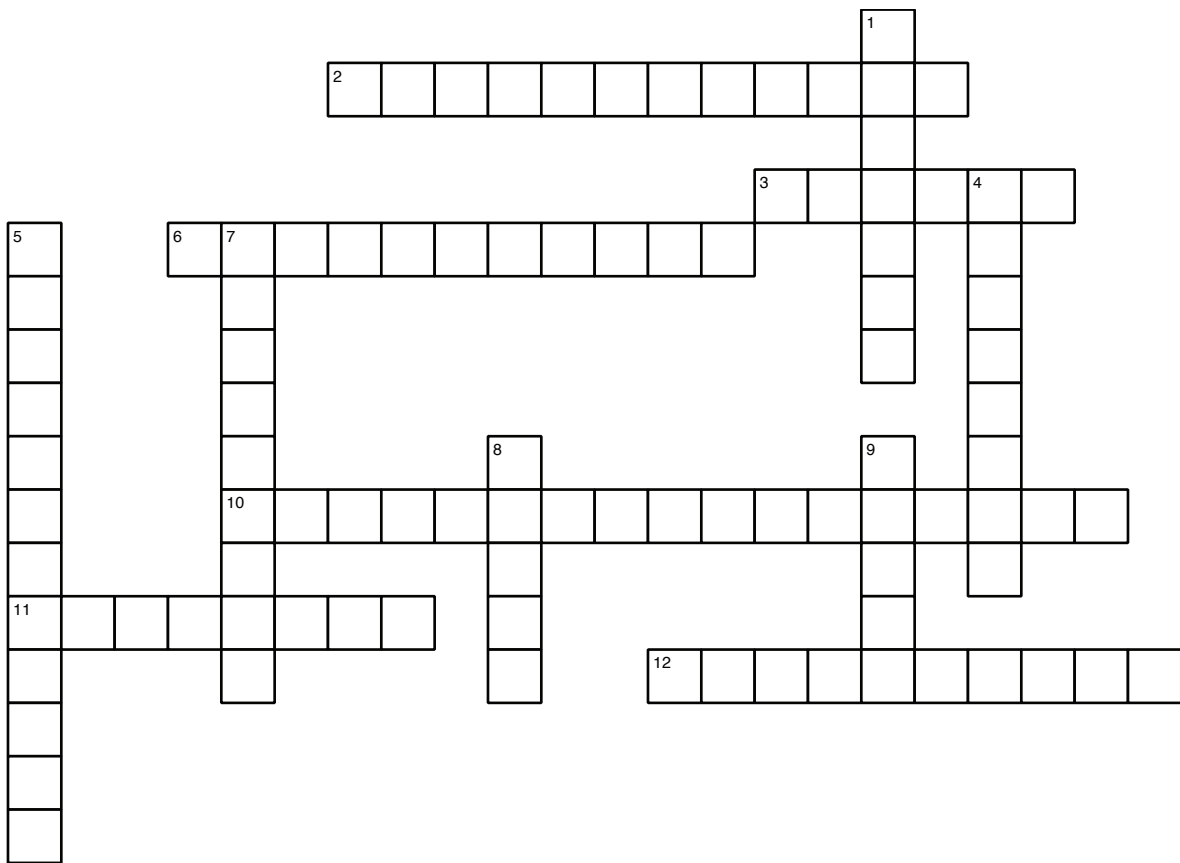
Across

2. Red blood cells (RBCs) that transport oxygen and carbon dioxide in support of respiration
3. The fluid part of blood and lymph
6. The liquid part of blood that serves as a source of nutrition and a means of removing waste products from the cells of the body
10. The network of channels through which the nutrient fluids of the body circulate
11. The process of blood becoming solid
12. One of two types of white blood cells—a T cell or a B cell—that performs various functions related to recognizing, marking, and remembering pathogens based on their antigens

Down

1. A chemical that prevents blood from clotting
4. A type of white blood cell that enlarges to form a macrophage in order to perform more-rapid phagocytosis
5. Blood platelets, the tiny protoplasmic discs of the blood that assist in blood clotting
7. Another term for white blood cell
8. The liquid pumped by the heart through the arteries, veins, and capillaries, carrying nourishment and oxygen to and bringing away waste products from all parts of the body
9. The pale fluid that bathes the tissues, passes into lymphatic vessels and ducts, and is discharged into the blood

Assignment Sheet 1



Objective 26

**Assignment Sheet 2—Complete the Crossword
Puzzle of Terms (Objectives 8–24)**

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

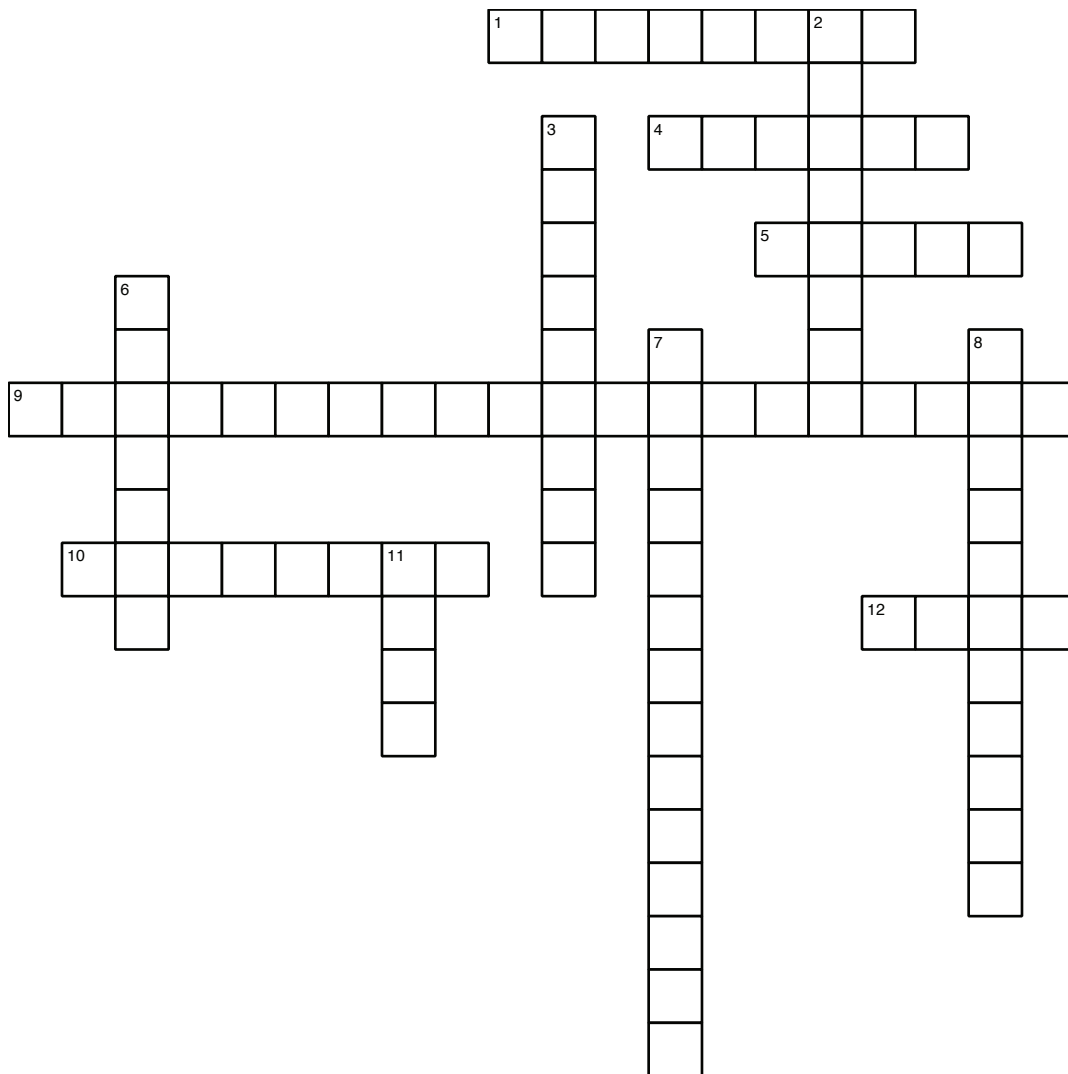
Across

1. Pertaining to the arm
4. Pertaining to the radius, the bone of the forearm
5. Pertaining to the ulna, the bone on the little-finger side of the forearm
9. The network of anatomical structures, including the heart and the blood vessels, that pump blood throughout the body
10. Of or pertaining to the blood vessels
12. The upper border of the heart

Down

2. Pertaining to the armpit
3. Half-moon shaped
6. Of or pertaining to the heart
7. The portion of the cardiovascular system that deals with the blood vessels that allow for the circulation of blood throughout the body
8. A portion of the thoracic cavity in the middle of the thorax, between the pleural sacs containing the two lungs
11. The lower border of the heart

Assignment Sheet 2



Objective 27

Assignment Sheet 3—Construct a Model of the Human Heart

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Model reflects research findings related to:	
— Major structures of the heart	_____
— Characteristics of the chambers of the heart	_____
— Characteristics of the major veins of the heart	_____
— Characteristics of the major arteries of the heart	_____
— Characteristics of the major valves of the heart	_____
• Presentation is clear and concise	_____
• Teamwork demonstrated throughout completion of assignment	_____
• Internet used to conduct research	_____
• Computer used to develop 3-D model (if available)	_____
• Bonus points—Discuss observations a cosmetologist may make during services for a client that has heart problems.	_____

Basic Skills



Reading



Writing



Science



Oral Communication



Interpersonal



Technology

Directions Part 1

Research the human heart using resources available on the Internet or provided by your instructor. Work with another student and write your findings below. This information will help you in constructing your model and preparing your presentation.

Major structures _____

Assignment Sheet 3

Chambers of the heart and characteristics of each

Major veins of the heart _____

Major arteries of the heart _____

Major valves of the heart _____

Assignment Sheet 3

Directions Part 2

Draw a rough sketch of the human heart, noting any structural features that should be included on the model. Work with your partner on the sketch.

Directions Part 3

Construct a model of the human heart using the findings collected through your research. You may use paper, clay, or other materials as directed by your instructor. You may use a 3-D modeling computer program if available.

Present your model of the human heart to class members. Expound on the points listed in the evaluation criteria. Provide time for classmates to ask questions.

Objective 28

Assignment Sheet 4—Research the Route of a Blood Cell Through the Circulatory System

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Used the Internet to conduct research	_____
• Organizer is clear and concise and includes:	_____
— Selection of a blood cell	_____
— Description of blood cell traveling from the heart	_____
— Description of blood cell traveling through the body	_____
— Description of blood cell returning to the heart	_____
• Used the completed graphic organizer to develop paper on a blood cell's trip through the circulatory system	_____
• Followed instructor's directions pertaining to the style and length of paper to the written	_____
• Used computer to write the paper	_____

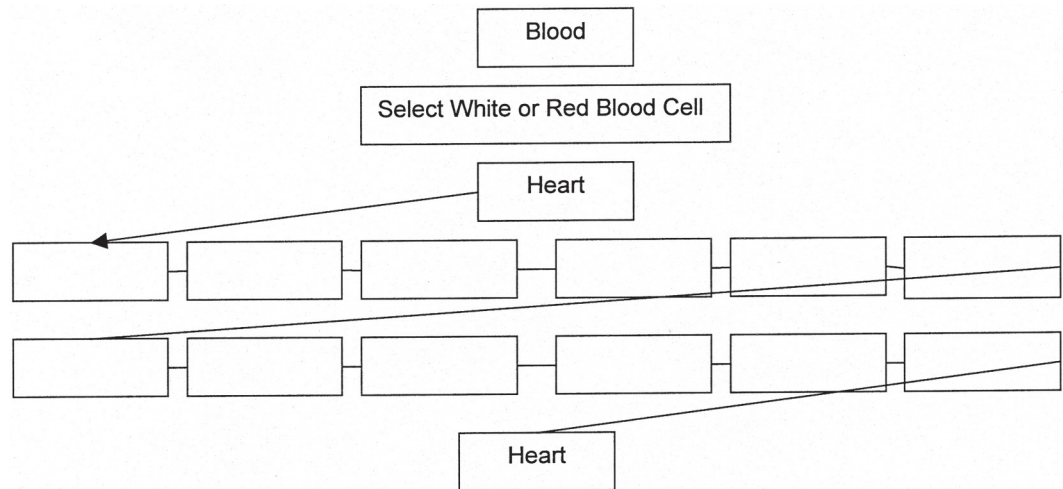
Basic Skills



Directions

Research the circulatory system, the direction and path the blood takes through the body, and the function of the blood cell and what it accomplishes during the travel and return to the heart. Organize your research using the graphic organizer included in this assignment sheet, or one provided by your instructor. After organizing your research and thoughts, write a paper as if you are a white blood cell or a red blood cell. Describe your trip through the circulatory system. Follow your instructor's directions pertaining to length and style, and use a computer, if available, to write your paper.

Assignment Sheet 4



Use as many blocks for your graphic organizer as needed. You are not limited to the area and space provided.

Objective 29 Assignment Sheet 5—Analyze Cosmetology Scenarios

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Analysis demonstrates the ability to apply knowledge of the information presented in the Information Sheet to a given situation	_____
• Answers are clear and concise	_____
• Handwriting is neat and legible	_____

Basic Skills



Directions

Read each scenario and answer the questions that follow.

Scenario 1

Mr. Turner brings his daughter, Apple, to the salon for a manicure. In your examination of the hands, you notice Apple's skin appears thin and there is a blue color at the base of each fingernail.

1. What could cause the blue color?

2. What should you do?

Assignment Sheet 5

Scenario 2

Ms. Buckingham comes into the salon for a pedicure. In your examination you discover a large burse on her right leg that extends the circumference of the leg that reaches from just below the knee to above the ankle. Ms. Buckingham explains that she is diabetic and that it is just a diabetic leg. Her left leg appears to be free of burses.

What should you do?

Scenario 3

Mr. Santos comes into the salon again with a terrible headache. You notice a hard ridge across his forehead. He requests a head, neck, shoulder, and face massage.

1. What could cause the ridge across the forehead?

2. What should you do?

Objective 30

Assignment Sheet 6—Complete Module 9 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 5

1. _____ ingest and digest foreign particles in blood, form antibodies, and release _____.
 - a. Leukocytes; heparin
 - b. Leukocytes; carbon dioxide
 - c. Erythrocytes; heparin
 - d. Erythrocytes; carbon dioxide

Objective 4

2. Pumping blood to maintain the circulation of the blood is the function of the _____.
 - a. heart
 - b. vessels
 - c. spleen
 - d. lymph nodes

Objective 7

3. Blood plasma contains _____.
 - a. electrolytes and respiratory gases
 - b. nutrients, metabolic wastes, and water
 - c. antibodies
 - d. all of the above

Assignment Sheet 6

- | | |
|-------------|--|
| Objective 6 | 4. Oxygenated blood in the arteries is _____.
a. purple
b. blue
c. dark red
d. bright red |
| Objective 6 | 5. Which of the following represents the correct proportions of blood constituents?
a. 78 percent water and 22 percent solids
b. 45 percent plasma and 55 percent cells
c. both "a" and "b"
d. neither "a" nor "b" |
| Objective 6 | 6. The normal pH of blood is approximately _____.
a. 6.95 to 7.05
b. 7.15 to 7.25
c. 7.35 to 7.45
d. 7.55 to 7.65 |
| Objective 5 | 7. _____ is the liquid part of blood that serves as a source of nutrition and a means of removing waste products from the body cells.
a. Blood serum
b. Glucose
c. Fibrin
d. Blood plasma |
| Objective 4 | 8. _____ are the many blood vessels that convey blood from the capillaries to the heart.
a. Arteries
b. Veins
c. Arterioles
d. Venules |
| Objective 2 | 9. Which of the following is NOT a function of the circulatory system?
a. protects the body against invading organisms
b. helps regulate body temperature
c. prevents homeostasis
d. transports waste products to excretory organs |

Assignment Sheet 6

Objective 3	10. The major subsystems of the circulatory system are the _____ and _____ systems. a. blood; lymphatic b. arteries; veins c. lymphatic vessels; nodes d. lymphocytes; monocytes
Objective 1	11. The circulatory system is the network of channels through which the _____ fluids of the body circulate. a. excretory b. lymphatic c. plasma d. nutrient
Objective 5	12. Thrombocytes assist in blood _____. a. circulation b. clotting c. pressure d. cell division
Objective 6	13. The normal adult human body contains approximately _____ cubic centimeters of blood. a. 2000 to 2500 b. 3000 to 3500 c. 4000 to 4500 d. 5000 to 5500
Objective 5	14. _____ are red blood cells (RBCs) that transport oxygen and carbon dioxide in support of respiration. a. Leukocytes b. Erythrocytes c. Electrolytes d. Lymphocytes
Objective 6	15. Blood tastes slightly _____. a. metallic and salty b. sweet and sugary c. sour and stale d. bitter and tangy
Objective 4	16. _____ are the smallest blood vessels forming networks throughout the body. a. Veins b. Venules c. Arterioles d. Capillaries

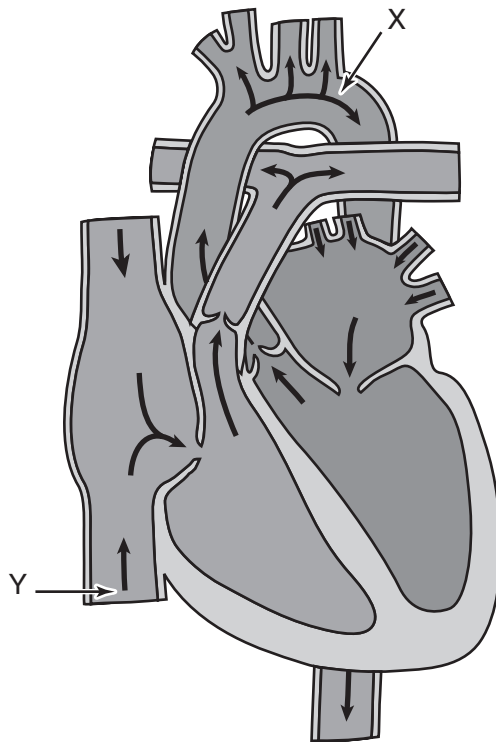
Assignment Sheet 6

Objective 2

17. Which of the following are transported to and from the cells by the circulatory system?
- oxygen and carbon dioxide
 - food and water
 - both "a" and "b"
 - neither "a" nor "b"

Objective 15

18. What major structure of the heart is indicated by the letter "X" in the illustration below?
- aorta
 - left pulmonary artery
 - superior vena cava
 - inferior vena cava



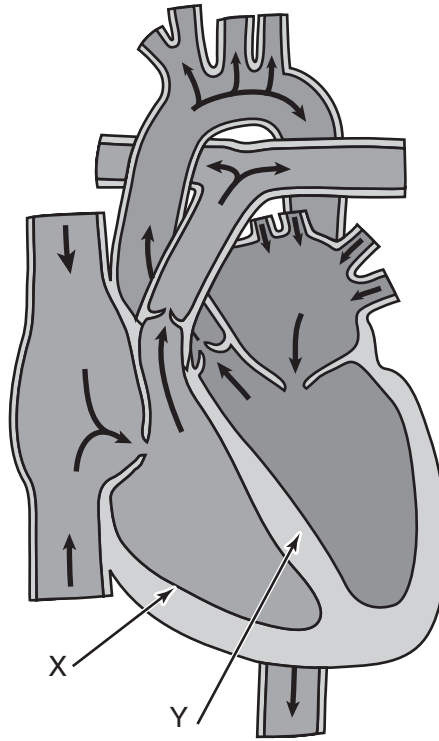
Objective 15

19. What major structure of the heart is indicated by the letter "Y" in the illustration above?
- aorta
 - left pulmonary artery
 - superior vena cava
 - inferior vena cava

Assignment Sheet 6

Objective 15

20. What tissue layer of the heart is indicated by the letter "X" in the illustration below?
- endocardium
 - myocardium
 - epicardium
 - right ventricle



Objective 15

21. What major structure of the heart is indicated by the letter "Y" in the illustration above?
- endocardium
 - myocardium
 - septum
 - right ventricle

Objective 14

22. The _____ valve consists of three flaps or cusps.
- aortic semilunar valve
 - pulmonary semilunar valve
 - bicuspid valve
 - tricuspid valve

Assignment Sheet 6

Objective 12

23. The superior vena cava _____.
- carries blood from the lower part of the body
 - carries blood from the upper part of the body
 - carries oxygenated blood back to the heart from the lungs
 - deposits oxygenated blood in the left ventricle

Objective 14

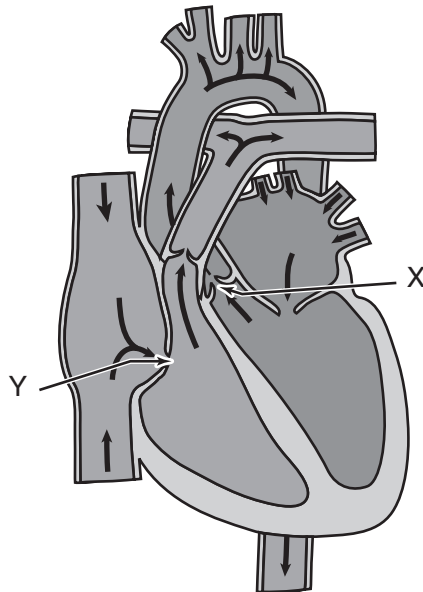
24. The semilunar valves are shaped like a _____.
- square
 - triangle
 - circle
 - half-moon

Objective 9

25. Which of the following statements is NOT true about the positioning of the heart?
- It lies in the mediastinum with approximately two-thirds of its mass to the left of the midline of the body.
 - It rests obliquely in the body with the right side anterior to the left side.
 - It rests on the liver with the apex pointing left.
 - It is positioned with the base below the second rib.

Objective 15

26. What major structure of the heart is indicated by the letter "X" in the illustration below?
- aortic valve
 - bicuspid valve
 - tricuspid valve
 - pulmonary valve



Assignment Sheet 6

- | | |
|--------------|---|
| Objective 15 | 27. What major structure of the heart is indicated by the letter “Y” in the illustration on the previous page?

a. aortic valve
b. bicuspid valve
c. tricuspid valve
d. pulmonary valve |
| Objective 10 | 28. The heart is divided into left and right halves by the _____.

a. endocardium
b. myocardium
c. pericardium
d. septum |
| Objective 11 | 29. The left ventricle _____.

a. receives deoxygenated blood
b. receives oxygenated blood
c. pumps deoxygenated blood to the lungs
d. pumps oxygenated blood to the body |
| Objective 11 | 30. The right atrium _____.

a. receives deoxygenated blood
b. receives oxygenated blood
c. pumps deoxygenated blood to the lungs
d. pumps oxygenated blood to the body |
| Objective 8 | 31. The network of anatomical structures, including the heart and the blood vessels, that pump blood throughout the body is the _____.

a. cardiac system
b. vascular system
c. cardiovascular system
d. mediastinum |
| Objective 9 | 32. The heart weighs approximately _____ grams.

a. 100 to 200
b. 250 to 350
c. 400 to 500
d. 550 to 650 |

Assignment Sheet 6

- | | |
|--------------|---|
| Objective 13 | 33. When the heart contracts, blood leaves the right ventricle of the heart through the _____ and the _____ and travels to the lungs.

a. superior vena cava; inferior vena cava
b. right atrium; left atrium
c. left pulmonary artery; right pulmonary artery
d. left ventricle; aorta |
| Objective 14 | 34. Which of the following statements is NOT true about the bicuspid valve?

a. It is located between the two left chambers.
b. It consists of two flaps or cusps.
c. It has valve flaps that prevent blood from flowing back into the right ventricle.
d. It is located between the left atrium and the left ventricle. |
| Objective 9 | 35. The heart is suspended in the thoracic cavity by _____.

a. vessels
b. ligaments
c. tendons
d. pericardium |
| Objective 9 | 36. The heart lies in a fibrous, loose-fitting sac called the _____.

a. <i>pericardium</i>
b. <i>parietal pericardium</i>
c. <i>pericardial space</i>
d. none of the above |
| Objective 12 | 37. The right pulmonary vein _____.

a. carries blood from the lower part of the body
b. carries blood from the upper part of the body
c. carries oxygenated blood back to the heart from the lungs
d. deposits deoxygenated blood in the left ventricle |
| Objective 17 | 38. Which of the following is NOT a major structure of the vascular system?

a. arteries and arterioles
b. capillaries and venules
c. venules and veins
d. visceral organs and tissues |

Assignment Sheet 6

- | | |
|--------------|--|
| Objective 16 | 39. The portion of the cardiovascular system that deals with the blood vessels that allow for circulation throughout the body is the _____.

a. vascular system
b. systemic circulation system
c. circulatory system
d. portal circulation system |
| Objective 18 | 40. The main artery from the aortic arch that supplies the right arm and the surrounding area is the right _____ artery.

a. carotid
b. brachial
c. radial
d. subclavian |
| Objective 18 | 41. The _____ artery has nine branches: four in the forearm; two in the wrist; and three in the hand.

a. axillary
b. radial
c. ulnar
d. brachial |
| Objective 18 | 42. _____ means “pertaining to the arm.”

a. Brachial
b. Radial
c. Axillary
d. Ulnar |
| Objective 20 | 43. Capillaries _____ arterioles and venules.

a. separate
b. grow into
c. connect
d. provide nervous-system inputs to |
| Objective 20 | 44. Nutrients, oxygen, and cell metabolic wastes pass through the capillary walls by _____.

a. hydrophilic pressure
b. hydrophobic pressure
c. osmosis
d. stenosis |

Assignment Sheet 6

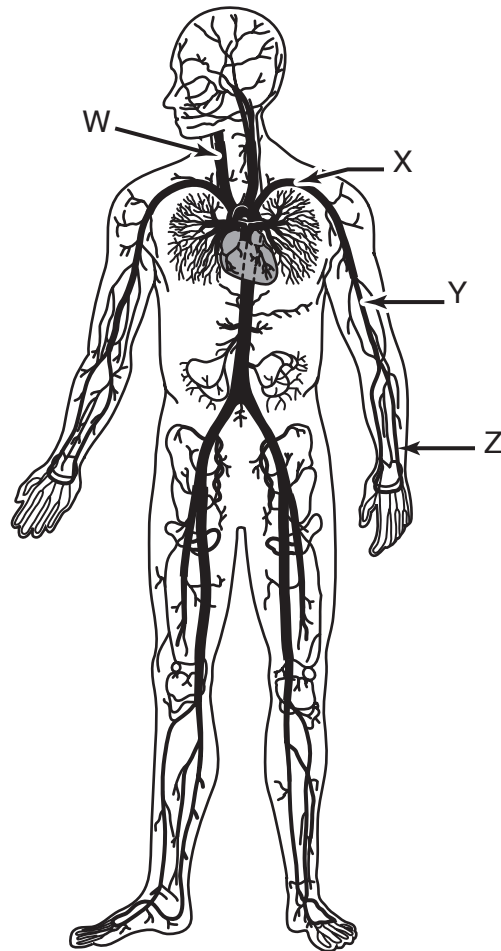
- | | |
|--------------|--|
| Objective 19 | 45. The artery indicated by the letter “W” in the illustration on the next page is the _____.

a. aortic arch
b. innominate artery
c. right subclavian artery
d. right carotid artery |
| Objective 19 | 46. The artery indicated by the letter “X” in the illustration on the next page is the _____ artery.

a. axillary
b. brachial
c. left subclavian
d. radial |
| Objective 19 | 47. The artery indicated by the letter “Y” in the illustration on the next page is the _____ artery.

a. axillary
b. brachial
c. radial
d. ulnar |
| Objective 19 | 48. The artery indicated by the letter “Z” in the illustration on the next page is the _____ artery.

a. radial
b. ulnar
c. brachial
d. subclavian |



Objective 21

49. The _____ carry oxygenated blood from the lungs to the heart.
- vena cava and vena superior
 - aorta and descending aorta
 - pulmonary arteries
 - pulmonary veins

Objective 21

50. Veins branch into _____ and these branch into _____.
- arterioles, capillaries
 - venules, capillaries
 - arterioles, venules
 - venules, arterioles

Objective 20

51. Capillary walls are _____ thick.
- one cell layer
 - two cell layers
 - three cell layers
 - four cell layers

Assignment Sheet 6

- | | |
|--------------|---|
| Objective 23 | 52. Which of the following statements is NOT true concerning blood pressure? <ol style="list-style-type: none">Blood pressure is the pressure exerted by the circulating volume of blood on the walls of the arteries, the veins, and the chambers of the heart.Blood pressure is created by the contraction of the ventricles in the heart.Blood pressure measurement is always given stating the diastole first and the systole second.A blood pressure reading for a typically healthy young adult is 120/70. |
| Objective 22 | 53. Which of the following statements is NOT correct with regard to the pulse and pulse points? <ol style="list-style-type: none">The pulse points are the sites on the surface of the body where vein pulsations can be easily felt.The pulse points are the sites on the surface of the body where arterial pulsations can be easily felt.Normal pulse rate is between 60 to 80 beats per minute.At the pulse points, vibrations can be felt where arteries are near the surface of the body. |
| Objective 18 | 54. The left and right sides of the head, neck, and brain are supplied by the _____ arteries. <ol style="list-style-type: none">carotidsubclaviansuperior phrenicinferior phrenic |
| Objective 21 | 55. Which of the following is NOT a true statement about veins? <ol style="list-style-type: none">The middle layer of muscle tissue in a vein is not well developed or very flexible.The wall of a vein is relatively thick so that the vein does not collapse when cut.Many veins contain valves that prevent the backflow of blood.Many veins share their names with the corresponding arteries. |
| Objective 24 | 56. What is the function of the lymphatic system? <ol style="list-style-type: none">maintenance of the internal fluid environment of the bodyfiltering lymphboth "a" and "b"neither "a" nor "b" |

Module 10

Objective 12

Assignment Sheet 1—Complete the Crossword Puzzle of Terms (Objectives 1–11)

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Terms were identified correctly	_____

Basic Skills



Directions

Read the definition given for each term in the puzzle and write the term in the correct blocks to complete the crossword puzzle.

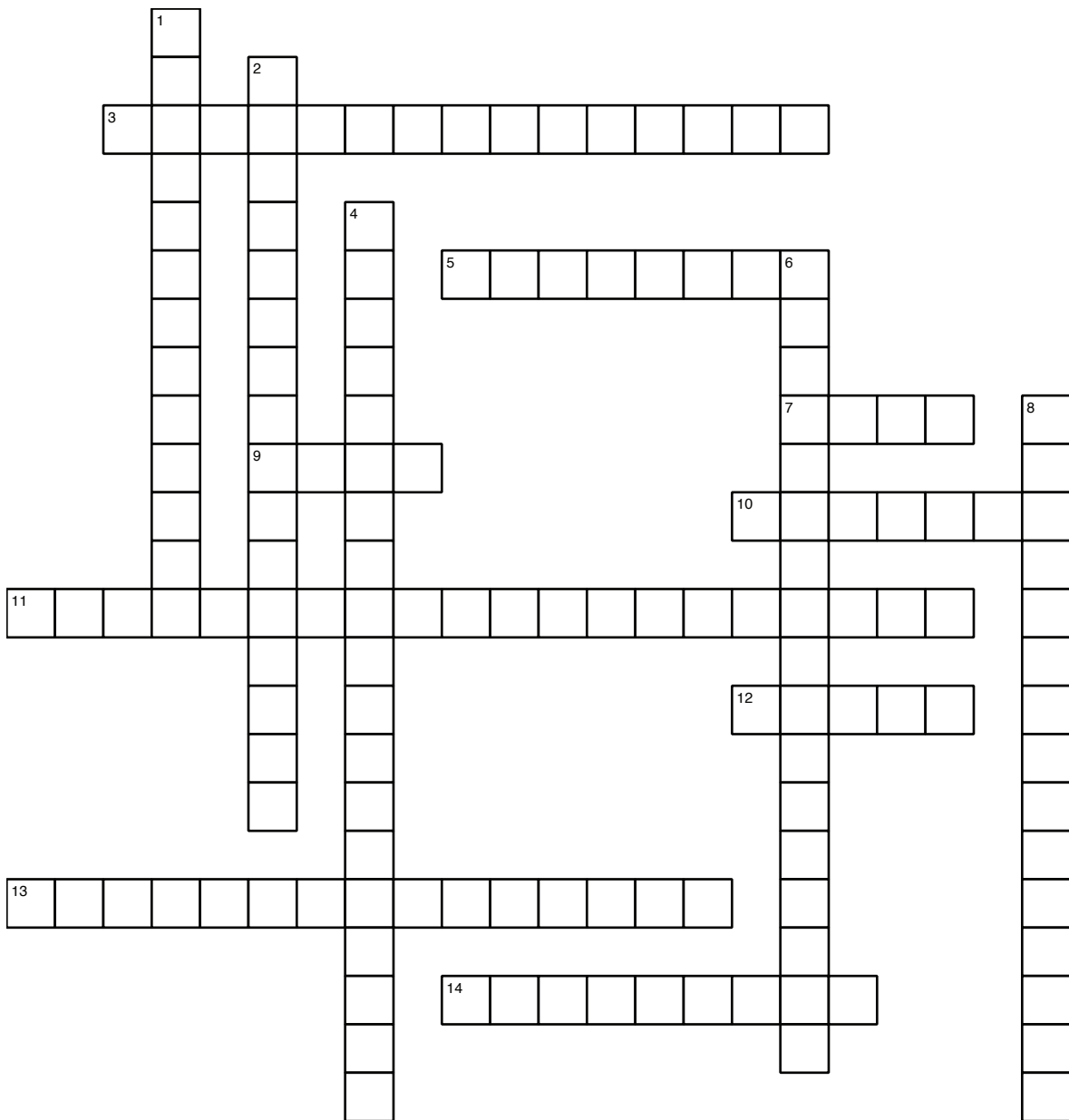
Across

3. The organs, structures, and accessory glands of the digestive tube of the body through which food passes
5. Resembling a sac
7. A broad mass of nerve fibers conspicuous on the ventral surface of the brainstem
9. The bitter, yellow-green secretion of the liver that is stored in the gallbladder
10. Related to those chemicals that contain carbon and are commonly found as the building blocks of living things
11. The process of inhaling and exhaling air through the lungs; breathing
12. The waste material that is secreted by the kidneys
13. The digestive tube; the muscular tube that extends from the mouth to the anus
14. The part of the brain composed of the mesencephalon, pons, and medulla oblongata and connecting the spinal cord with the forebrain and cerebrum

Down

1. All of the organs involved in the secretion and elimination of urine
2. One of the three parts of the brainstem that contains the cardiac, vasomotor, and the respiratory centers of the brain
4. The process of oxygen carried by the blood passing into the cells and being used by the cells, which leads to the production of carbon dioxide that is then carried away by the blood
6. The complex of organs and structures that performs the pulmonary ventilation of the body and cellular respiration
8. The glands of the digestive system that secrete the digestive enzymes that are used by the digestive system to break down food substances in preparation for absorption into the bloodstream before carrying the waste to the intestines for excretion

Assignment Sheet 1



Module 10

Objective 13

Assignment Sheet 2—Participate in a "Face Off"

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the respiratory, digestive, and urinary systems	_____
• Demonstrated teamwork throughout participation in "Face Off"	_____

Basic Skills



Writing



Science



Oral
Communication



Interpersonal

Directions Part 1

Work individually to answer the questions below. This is a timed exercise, therefore write everything you know about each question as quickly as possible. You may use additional paper if needed. Your paper will not be submitted for a grade. You may even use text messaging techniques to write more quickly. Your answers are to be used during the "Face Off." You have 5 minutes.

1. Define the respiratory system.

2. Describe characteristics of pulmonary ventilation.

Assignment Sheet 2

3. Define the digestive system.

4. Discuss the functions of the digestive system.

5. Define the urinary system.

6. Discuss the functions of the urinary system.

Assignment Sheet 2

Directions Part 2

Move to the location that has been prepared with two rows of chairs facing each other in two straight lines. There should be enough chairs for each member of the class. Take your answers to the questions with you. Take a seat facing a classmate. The teacher will assign each student a question to ask each student that faces them. As the teacher states “Start” the students on the right hand row of chairs read the question from your assignment sheet that has been assigned to them. The students on the left hand row of chairs begin giving their answer to the question asked. While the student is giving their answer, the student in the right hand row of chairs writes the other student’s answers on a blank assignment sheet that has the questions already written. When the teacher states “Stop”, all communication ceases and the responsibilities of the students change. The student on the left hand row asks the student opposite them the question they have been assigned.

The process continues with the same two students. When the teacher states “Stop” the second time, all communication ceases and the students on the left hand row of chairs rotate to the left one chair. The student on the end of the row rotates to the opposite end of the row. These students ask the same question each time. The students on the right hand row of chairs remain in the same chair throughout the exercise and ask the same question each time. This process continues until every student has rotated through the line and every question has been asked to all students.

- ✓ **Note:** Thirty seconds per student is sufficient time to answer a question. While one student is speaking the student facing he/she should not speak. They should listen and write what they hear.

Directions Part 3

Following the “Face Off” students come together in a group. The teacher asks the student that was on the right hand row with question 1 to respond to what they received as answers. Once all answers to question 1 have been recorded from the student, other students may add what they heard or know. This process continues until all questions have been answered as a group.

- ✓ **Note:** The responses should be recorded on an area large enough for all students to view as answers are given for each question.

Assignment Sheet 2

Particpate In a "Face Off"

1. Define the respiratory system.

2. Describe characteristics of pulmonary ventilation.

3. Define the digestive system.

4. Discuss the functions of the digestive system.

Assignment Sheet 2

5. Define the urinary system.

6. Discuss the functions of the urinary system.

Module 10

Objective 14 Assignment Sheet 3—Analyze Cosmetology Senarios

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Analysis demonstrates the ability to apply knowledge of the information presented in the Information Sheet to a given situation	_____
• Answers are clear and concise	_____
• Handwriting is neat and legible	_____

Basic Skills



Directions

Read each scenario and answer the questions that follow.

Scenario 1

Ms. Naifeh comes into the salon for a shampoo, cut, and style. She has difficulty breathing and is using oxygen. She has difficulty walking and moves very slowly.

1. What body system may be involved in the difficulties Ms. Naifeh is experiencing?

2. What should you do?

Assignment Sheet 3

Scenario 2

Ms. Carr comes into the salon and immediately goes into the restroom. She returns and before you can complete a hair analysis on her, she has to return to the restroom. This situation continues to occur. Ms. Carr appears upset and frightened. She states that she continues to feel like she must urinate, but she hurts and cannot.

1. What body system is involved?

2. What should you do?

Scenario 3

Mr. Santelli comes into the salon for a chemical service. You notice that he has yellow color to his skin. You question him and he states that he has been having problems with his gallbladder and that he is scheduled for surgery to have it removed the following week.

1. What body system is the gallbladder a part?

2. What should you do?

Assignment Sheet 3

Scenario 4

Ms. Zarrabi comes into the salon for services. You notice that she has a yellow color to her skin and her eyes even look yellow. You question her and she states that she has not been feeling well. Ms. Zarrabi states that she is tired and just feels sick.

1. What body system may be involved?

2. What part of the system may be involved?

3. What do you think could be the condition Ms. Zarrabi is experiencing?

4. What do you do?

5. Why should you follow up on what the physician diagnosed as the problem?

Objective 15

Assignment Sheet 4—Complete Module 10 Review

Name _____

Date _____ Score _____

Evaluation Criteria	Rating
• Directions were followed	_____
• Answers demonstrated comprehensive knowledge of the information presented in the Information Sheet	_____

Basic Skills



Directions

Read each of the items below. From the choices given, select the response that most-correctly provides the required information. Circle the letter of the most-correct response.

Objective 2

1. The mechanical portion of external respiration is referred to as _____.

 - a. *venting*
 - b. *contracting*
 - c. *breathing*
 - d. *expiring*

Objective 2

2. The major regulator of respiration is the carbon-dioxide level in the _____.

 - a. lungs
 - b. blood
 - c. brain
 - d. heart

Objective 10

3. Which of the following statements is NOT a function of the urinary system?
 - a. The urinary system filters the urine by removing various toxins, metabolic waste products, and some water.
 - b. The urinary system manufactures and excretes urine.
 - c. The urinary system assists in regulation of water, electrolyte, and acid-base balance of the body.
 - d. The urinary system influences blood pressure.

Assignment Sheet 4

- | | |
|--------------|---|
| Objective 5 | 4. The digestive system converts nutrients into _____ at the cellular level.

a. proteins
b. fat
c. carbohydrates
d. energy |
| Objective 3 | 5. Another term used to describe the windpipe is the _____.

a. pharynx
b. larynx
c. trachea
d. nares |
| Objective 11 | 6. The _____ is the small, tubular structure that drains urine from the bladder.

a. kidney
b. right ureter
c. left ureter
d. urethra |
| Objective 6 | 7. The _____ secrete the digestive enzymes that are used by the digestive system to break down food substances for absorption into the bloodstream.

a. intestines
b. pharynx and esophagus
c. esophagus and stomach
d. accessory glands |
| Objective 9 | 8. The urinary system consists of all the organs involved in the _____ and _____ of urine.

a. secretion; filtering
b. secretion; elimination
c. filtering; elimination
d. filtering; calculi formation |
| Objective 3 | 9. The _____ is the muscular, tubular structure that extends from the base of the skull to the esophagus and serves as a passageway for both the respiratory and digestive tracts.

a. pharynx
b. larynx
c. trachea
d. nares |

Assignment Sheet 4

Objective 5	10. The digestive system converts excess nutrients into _____ for later use. a. proteins b. fat c. carbohydrates d. energy
Objective 2	11. High concentrations of carbon dioxide in the blood _____ the rate of respiration, while decreased concentrations of carbon dioxide will _____ the rate of respiration. a. increase; slow b. increase; speed c. decrease; speed d. decrease; slow
Objective 4	12. The _____ is the organs, structures, and accessory glands of the digestive tube of the body through which food passes from the mouth to the anus. a. urinary tract b. alimentary tract c. digestive system d. intestinal tract
Objective 11	13. A _____ is one of the bean-shaped urinary organs in the dorsal part of the abdomen, one on each side of the vertebral column. a. kidney b. ureter c. urinary bladder d. urethra
Objective 3	14. Which of the following is a correct statement about the diaphragm? a. The diaphragm is a dome-shaped partition of muscle and connective tissue. b. The diaphragm is the primary organ of breathing. c. On expiration, the diaphragm contracts, flattens, and moves downward to enlarge the thoracic cavity. d. On inspiration, the diaphragm relaxes and moves upward to decrease the size of the thoracic cavity.
Objective 7	15. The esophagus is a muscular, collapsible tube about _____. a. 10 inches long from the pharynx to the stomach b. 20 inches long from the pharynx to the stomach c. 10 inches long from the mouth to the stomach d. 20 inches long from the mouth to the stomach

Assignment Sheet 4

- | | |
|-------------|--|
| Objective 2 | 16. There are two stages to breathing: _____.
a. inspiration and respiration
b. inspiration and inhalation
c. exhalation and expiration
d. inhalation and exhalation |
| Objective 7 | 17. The _____ is the longest portion of the alimentary tract.
a. pharynx
b. larynx
c. large intestine
d. small intestine |
| Objective 1 | 18. Which of the following phrases is NOT a function of the respiratory system?
a. inhaling and exhaling air through the lungs; breathing
b. ensuring the blood circulates through the body so that oxygen can be carried to the cells
c. performing external respiration
d. performing internal respiration |
| Objective 8 | 19. Which of the following is NOT a function of the liver?
a. produces bile
b. regulates blood volume
c. converts excess water into urine
d. changes proteins into urea for elimination |
| Objective 3 | 20. The large air passages in the lungs through which pass inspired air and exhaled waste gases are the _____.
a. bronchi
b. intercostals
c. pleura
d. nares |
| Objective 7 | 21. The _____ is the tubular structure that extends from the base of the skull to the esophagus.
a. mouth
b. pharynx
c. larynx
d. alimentary tract |

Assignment Sheet 4

- | | |
|-------------|--|
| Objective 5 | 22. The digestive system eliminates _____. |
| | a. by-products of digestion that are not used by the cells or stored |
| | b. fat |
| | c. pathogens that enter the body through the mouth |
| | d. the need to eat continuously |
| Objective 8 | 23. Which of the following is NOT a function of the liver? |
| | a. manufactures antigens |
| | b. produces body heat |
| | c. detoxifies harmful substances, such as drugs and poisons, before they make their way to the heart |
| | d. manufactures cholesterol |
| Objective 5 | 24. One of the functions of the digestive system is to convert complex organic-compound molecules of ingested food into _____. |
| | a. carbohydrates |
| | b. simple organic and inorganic compounds |
| | c. proteins |
| | d. lipids and protolipids |

