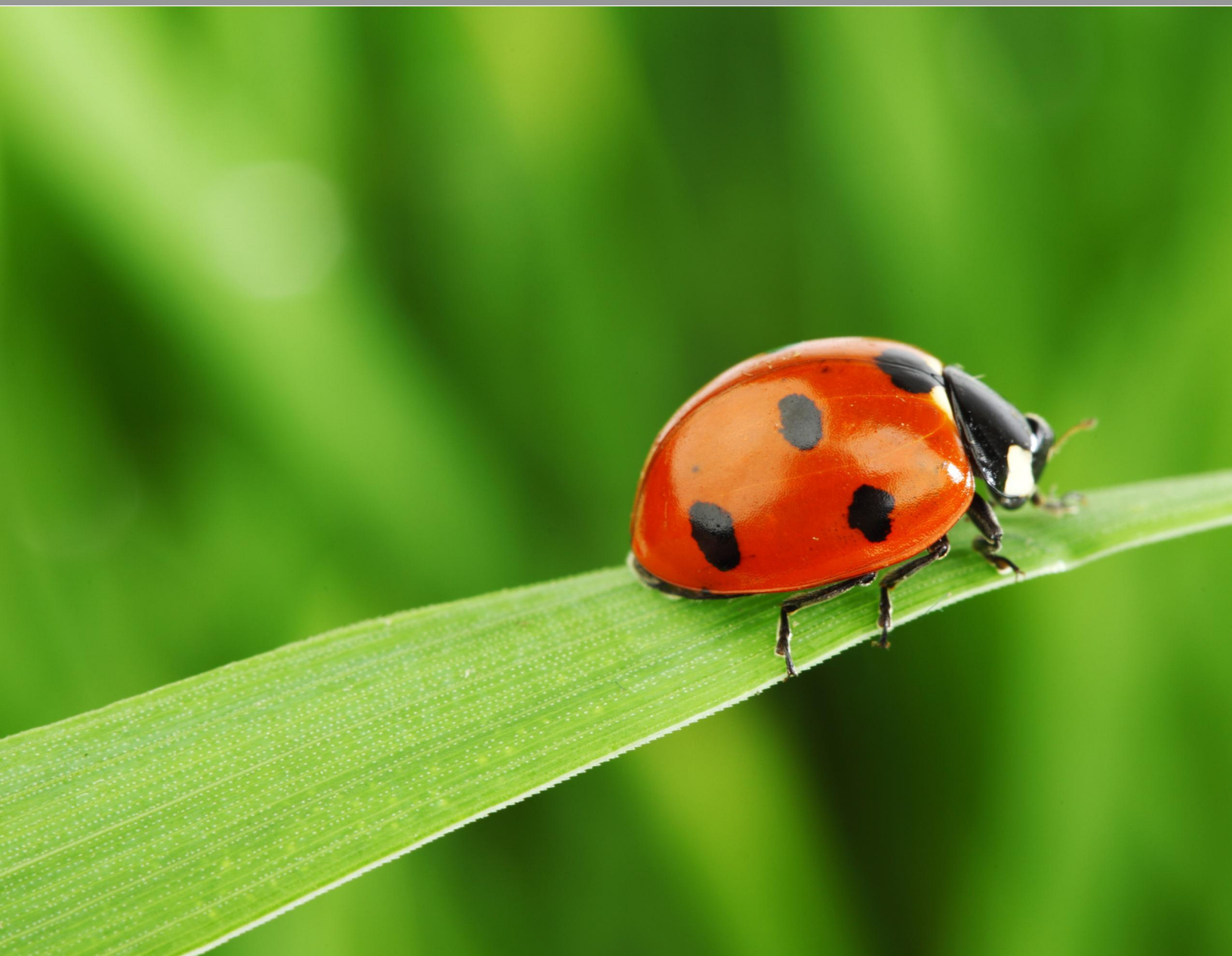


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CK-12 Life Science For Middle School Quizzes and Tests



CK-12 Life Science For Middle School Quizzes and Tests

Jean Brainard, Ph.D.

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AUTHOR

Jean Brainard, Ph.D.

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CHAPTER **1** Studying Life Assessments

Chapter Outline

- 1.1 SCIENTIFIC WAYS OF THINKING
 - 1.2 WHAT IS LIFE SCIENCE?
 - 1.3 THE SCIENTIFIC METHOD
 - 1.4 THE MICROSCOPE
 - 1.5 SAFETY IN LIFE SCIENCE RESEARCH
 - 1.6 STUDYING LIFE
-

1.1 Scientific Ways of Thinking

Lesson 1.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Evolution by natural selection is an example of a scientific
 - a. law.
 - b. theory.
 - c. hunch.
 - d. question.
2. To be a scientist, it is important for a person to be
 - a. logical.
 - b. observant.
 - c. curious.
 - d. all of the above
3. A scientific theory must be
 - a. more complex than any other explanation for the observations.
 - b. repeatedly tested and supported by the results.
 - c. accepted by all scientists in a given field.
 - d. all of the above
4. Scientists must have an open mind because scientific knowledge is always
 - a. hard to understand.
 - b. controversial.
 - c. theoretical.
 - d. evolving.
5. The best example of doing science is
 - a. wondering why fire flies produce light.
 - b. learning the scientific names of fire flies.
 - c. catching fire flies and putting them in a glass jar.
 - d. memorizing a list of different animals that produce light.

True or False

Write true if the statement is true or false if the statement is false.

6. _____ A new scientific idea is always accepted as true until it is proven false.
7. _____ A good definition of science is “a body of knowledge about nature.”
8. _____ Evolution by natural selection is well documented by a range of evidence.
9. _____ Mendel’s laws explain how living things adapt to their environment.

10. _____ A scientific law becomes a theory if more evidence is found to support it.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ is a way of learning about the natural world that depends on evidence, reasoning, and repeated testing.
12. A scientific _____ is a broad explanation that is widely accepted because it is supported by a great deal of evidence.
13. A description of what always occurs under certain conditions in nature is a scientific _____.
14. An attitude of doubt about ideas unless they are backed by adequate evidence is called _____.
15. A scientific theory explains why something occurs, whereas a scientific law describes _____ something occurs.

Short Answer

Answer the following question in complete sentences.

16. Explain how scientific knowledge changes.

1.2 What is Life Science?

Lesson 1.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Places where life scientists work include
 - laboratories.
 - natural settings.
 - schools and universities.
 - all of the above
- Physiology is the life science that focuses on
 - living cells.
 - tissues and organs.
 - genes and traits.
 - none of the above
- A life scientist who specializes in studying insects is called a(n)
 - entomologist.
 - paleontologist.
 - botanist.
 - biologist.
- The cell theory is an important theory in
 - cell biology.
 - zoology.
 - microbiology.
 - all of the above
- An example of applied life science research is
 - learning how to control cell division in cancer cells.
 - determining how yeast cells grow and divide.
 - discovering a new species of frog.
 - finding a new dinosaur fossil.

True or False

Write true if the statement is true or false if the statement is false.

- _____ There are millions of living species of organisms.
- _____ All organisms have multiple cells.
- _____ Life scientists who study fossils are called geologists.
- _____ All cells come only from pre-existing cells.

10. _____ A scientist who studies bacteria is called a microbiologist.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Science that is undertaken for the sake of gaining new knowledge is called _____ science.
12. _____ science is a general name for any science that studies life and living things.
13. The life science that focuses on the causes of diseases and how they spread is _____.
14. Ecology focuses on the interactions of organisms with each other and their _____.
15. A scientist who searches for solutions to practical problems is doing _____ science.

Short Answer

Answer the following question in complete sentences.

16. Compare and contrast basic and applied research in life science.

1.3 The Scientific Method

Lesson 1.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. A scientific investigation follows a general plan referred to as the scientific
 - a. rule.
 - b. method.
 - c. regulation.
 - d. flow chart.
2. A scientific hypothesis must be
 - a. true.
 - b. false.
 - c. tested.
 - d. testable.
3. Steps of a scientific investigation always include
 - a. proving a hypothesis is true.
 - b. testing a hypothesis with evidence.
 - c. communicating results of the research.
 - d. two of the above
4. In a scientific experiment, a prediction is made based on the
 - a. hypothesis.
 - b. conclusion.
 - c. evidence.
 - d. none of the above
5. A scientific investigation generally begins with
 - a. observations.
 - b. experiments.
 - c. theories.
 - d. hypotheses.

True or False

Write true if the statement is true or false if the statement is false.

6. _____ The scientific method is a rigid sequence of steps.
7. _____ If the results of an experiment agree with predictions, they support the hypothesis.
8. _____ An experiment investigates the effects of an independent variable on a control variable.
9. _____ Scientists may use posters to communicate with each other about their research.

10. _____ Scientific investigations always take place in a laboratory.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A factor that is held constant in an experiment is called a(n) _____.
12. The process of repeating a scientific investigation and getting the same results is known as _____.
13. A(n) _____ is anything that is detected with the senses.
14. A(n) _____ is a controlled scientific test of a hypothesis.
15. A potential, testable answer to a scientific question is called a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. How are the independent and dependent variables in an experiment related?

1.4 The Microscope

Lesson 1.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Who invented the microscope?
 - Robert Hooke
 - Anton van Leeuwenhoek
 - Zacharias and Hans Jansen
 - none of the above
- What is Micrographia?
 - a book published by van Leeuwenhoek
 - the first book of microscopic studies
 - a method of drawing microscopic images
 - two of the above
- To be seen with a light microscope, an object must be wider than 550
 - micrometers.
 - nanometers.
 - millimeters.
 - centimeters.
- Electron microscopes can make clear images that are as much as two
 - hundred times bigger than the actual object.
 - thousand times bigger than the actual object.
 - million times bigger than the actual object.
 - billion times bigger than the actual object.
- The tiny building blocks of organisms are called
 - bacteria.
 - microorganisms.
 - animalcules.
 - cells.

True or False

Write true if the statement is true or false if the statement is false.

- _____ The cell theory depended on the discovery of the microscope.
- _____ Only light of certain wavelengths is visible to the human eye.
- _____ The Jansens' microscopes were stronger than van Leeuwenhoek's microscopes.
- _____ Electron microscopes are more powerful than light microscopes.

10. _____ Light microscopes are no longer used today.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A lab instrument that makes magnified images of very small objects is a(n) _____.
12. The first scientist to observe cells with a microscope was _____.
13. The first scientist to observe bacteria with a microscope was _____.
14. The type of microscope used by the scientist(s) in questions 12 and 13 was a(n) _____ microscope.
15. A light microscope uses _____ to refract light.

Short Answer

Answer the following question in complete sentences.

16. Both bacteria and viruses may cause human diseases. Bacteria generally have a diameter of about 1,000 nm, whereas viruses range from about 20 to 400 nm in diameter. Explain which type of microscope (light or electron) would allow you to observe both bacteria and viruses.

1.5 Safety in Life Science Research

Lesson 1.5 Quiz

Name _____ Class _____ Date _____

Multiple Choice Circle the letter of the correct choice.

1. While working in a lab, which of the following should you avoid doing?
 - a. eating
 - b. drinking
 - c. working alone
 - d. all of the above
2. All of the following are proper lab safety rules except
 - a. wear shoes that completely cover your feet.
 - b. leave any spills to clean up until after the lab is finished.
 - c. tie back long hair or cover it with a hair net.
 - d. wash glassware and counters when you finish your work.
3. When combining acid and water, you should always
 - a. add the water to the acid.
 - b. add the acid to the water.
 - c. add the acid very quickly.
 - d. two of the above

4. Which hazard does this safety symbol represent?



5.

- a. laser radiation
- b. animal hazard
- c. explosive substance
- d. high heat

6. Which safety symbol warns of a biohazard?



a.



b.



c.

d. none of the above

True or False

Write true if the statement is true or false if the statement is false.

6. _____ When using chemicals, you should fan vapors toward your nose rather than smelling them directly.
7. _____ You do not need to wear safety goggles in the lab if you wear contact lenses.
8. _____ Science research is hazardous only when it is done in the field.
9. _____ When using a Bunsen burner, you should wear short sleeves to prevent your clothes from catching on fire.
10. _____ You should never do experiments without your teacher's approval.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The lab safety symbol with a skull and crossbones represents a(n) _____ hazard.
12. A Bunsen burner is used in a lab to provide _____.
13. Fieldwork refers to research that is carried out in a(n) _____ setting.
14. You would wear an apron in science lab to protect your _____.
15. The safety symbol below represents a(n) _____ hazard.

**Short Answer**

Answer the following questions in complete sentences.

16. Assume you are going to do this lab project in science class: You will use a microscope to observe pond water and test the effects of heat on any microorganisms in the water. First, you will use a glass dropper to remove pond water from a glass beaker and place a drop of the water on a glass microscope slide. You will view the slide under the microscope to observe any microorganisms moving in the water. Then, you will boil a small sample of the pond water in a glass test tube over a Bunsen burner. After the water cools, you will observe a drop of the boiled water under the microscope to see if any microorganisms are still moving in the water. Identify potential hazards involved in this research. Which lab safety rules should you follow to stay safe while doing the research?

1.6 Studying Life

Chapter 1 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Traits of a good scientist include
 - open-mindedness.
 - skepticism.
 - a questioning attitude.
 - all of the above
- Ecology can be defined as the study of the
 - fossil record and evolution.
 - tissues and organs of living things.
 - interactions of organisms with each other and the environment.
 - causes of diseases and how they spread.
- The type of life scientist who studies the inheritance of traits is known as a(n)
 - microbiologist.
 - epidemiologist.
 - cell biologist.
 - geneticist.
- Repeating the same experiment and getting the same results is called
 - prediction.
 - plagiarism.
 - replication.
 - rejection.
- According to the cell theory
 - all organisms consist of two or more cells.
 - all new cells forms when existing cells divide.
 - all life processes take place outside cells.
 - all of the above
- Applying the scientific method should always involve
 - making a correct prediction.
 - proving a hypothesis.
 - sharing the research with others.
 - two of the above
- Which scientist discovered that cells are the tiny building blocks of life?
 - Anton van Leeuwenhoek

- b. Hans Jansen
- c. Robert Hooke
- d. Zacharias Jansen

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ A scientific theory is less likely to be true than a scientific hypothesis.
- 9. _____ Researching possible solutions to practical problems is called basic science.
- 10. _____ Paleontology is the study of pollen and pollination.
- 11. _____ Controls in an experiment are factors that might affect the dependent variable.
- 12. _____ The scientific method generally begins when a scientist makes observations.
- 13. _____ Anton van Leeuwenhoek used electrons to make stronger microscopes.
- 14. _____ Fieldwork is undertaken in a natural setting instead of in a lab.
- 15. _____ It is safe to drink but not to eat in a science lab.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Like all theories, the theory of evolution is supported by a great deal of _____.
- 17. A life scientist in the field of entomology focuses on the study of _____.
- 18. A scientific investigation is generally set up to test a scientific _____.
- 19. An object must be wider than 550 nm to be seen with a(n) _____ microscope.
- 20. When you see a safety symbol with an eye icon, you should wear _____ for protection.

Short Answer

Answer the following questions in complete sentences.

- 21. Which fields of life science might be involved in researching the problem of drinking water that has become contaminated with microorganisms? Identify at least two life science fields, and explain why a scientist in each field might be interested in the problem.
- 22. Compare and contrast light microscopes and electron microscopes.

CHAPTER **2** **What is a Living Organism?
Assessments**

Chapter Outline

2.1 CHARACTERISTICS OF LIVING ORGANISMS

2.2 CHEMISTRY OF LIVING THINGS

2.3 CLASSIFICATION OF LIVING THINGS

2.4 WHAT IS A LIVING ORGANISM?

2.1 Characteristics of Living Organisms

Lesson 2.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice *Circle the letter of the correct choice.*

- All living things can
 - use energy
 - reproduce
 - grow
 - all of the above
- An example of a consumer is a
 - duck
 - daisy
 - pine tree
 - bamboo plant
- Multicellular organisms include all of the following except
 - algae
 - mushrooms
 - animals
 - trees
- Which is the best model for a cell?
 - factory
 - highway
 - cell tower
 - car
- Asexual reproduction
 - involves two parents
 - produces identical offspring
 - requires mating
 - two of the above

True or False *Write true if the statement is true or false if the statement is false.*

- _____ All producers are plants.
- _____ Producers make their own energy.
- _____ All organisms can maintain homeostasis.
- _____ The adult human body consists of a few hundred cells.
- _____ The cell membrane controls what enters or leaves the cell.

Fill in the Blank *Fill in the blank with the appropriate term.*

11. Something in the environment that causes a response in an organism is called a(n) _____.
12. Any organism that uses energy to make its own food is a(n) _____.
13. _____ is the process of producing offspring.
14. _____ is the ability to change or move matter.
15. An organism that eats other organisms for food is referred to as a(n) _____.

Short Answer Answer the following question in complete sentences.

16. Why is it important that living things can respond to stimuli in their environment?

Lesson 2.1 Quiz Answer Key

1. d
2. a
3. a
4. a
5. b
6. false
7. false
8. true
9. false
10. true
11. stimulus
12. producer
13. Reproduction
14. Energy
15. consumer
16. Sample answer: It is important that living things can respond to stimuli in their environment because it helps them survive or reproduce. For example, plants need light to grow and make food by photosynthesis. They respond to light in their environment by turning toward it. This helps them get enough light for photosynthesis.

2.2 Chemistry of Living Things

Lesson 2.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice *Circle the letter of the correct choice.*

- Which biochemical compounds store energy and make up cell membranes?
 - carbohydrates
 - nucleic acids
 - proteins
 - lipids
- In a catabolic reaction
 - bonds form
 - energy is released
 - smaller molecules combine to form larger ones
 - two of the above
- Which element makes up 65 percent of human body mass?
 - carbon
 - hydrogen
 - oxygen
 - none of the above
- Matter is defined as anything that
 - has mass and takes up space
 - consists of elements combined in a certain ratio
 - cannot be broken down into other substances
 - none of the above
- Which molecule consists of nucleotides?
 - glucose
 - hemoglobin
 - DNA
 - glycogen

True or False *Write true if the statement is true or false if the statement is false.*

- _____ Substances produced in chemical reactions are called reactants.
- _____ Photosynthesis involves anabolic reactions.
- _____ Saturated fatty acids are saturated with hydrogen.
- _____ Proteins store the genetic code in cells.
- _____ Simple carbohydrates are called starches.

Fill in the Blank *Fill in the blank with the appropriate term.*

11. A(n) _____ is the smallest particle of an element that still has the properties of that element.
12. The cell walls of plants consist mainly of a carbohydrate called _____.
13. A biochemical molecule that is a polymer of amino acids is a(n) _____.
14. A molecule is the smallest particle of a _____.
15. A protein that speeds up biochemical reactions is called a(n) _____.

Short Answer *Answer the following question in complete sentences.*

16. Explain how biochemical compounds are classified.

2.3 Classification of Living Things

Lesson 2.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice *Circle the letter of the correct choice.*

- Which of the following terms is the name of both a domain and a kingdom?
 - Archaea
 - Bacteria
 - Eukarya
 - two of the above
- Which of the following statements about Archaea is false?
 - They consist of a single cell
 - They have a cell membrane
 - They have a cell nucleus
 - They have a cell wall
- The taxon between the class and the family is the
 - genus
 - species
 - phylum
 - none of the above
- An organism with cell walls could be in any of the following taxa except the
 - Plant Kingdom
 - Fungus Kingdom
 - Bacteria Kingdom
 - Animal Kingdom
- A sponge and a fungus are classified in the same
 - class
 - phylum
 - kingdom
 - domain

True or False *Write true if the statement is true or false if the statement is false.*

- All single-celled organisms are placed in the Archaea or Bacteria Domain.
- Bacteria and Archaea differ in the composition of their cell walls.
- The taxon that includes one or more phyla is the order.
- Linnaeus is called the “father of genetics.”
- Molecular similarities between organisms show that they have a common ancestor.

Fill in the Blank *Fill in the blank with the appropriate term.*

11. The first word in an organism's two-word Latin name is the name of its _____.
12. The broadest taxon in the Linnaean classification system is the _____.
13. The only domain that includes both single-celled and multicellular organisms is the _____ Domain.
14. A genus consists of one or more _____.
15. The class in which the human species is placed is the _____.

Short Answer *Answer the following question in complete sentences.*

16. Explain why viruses are not generally considered to be living things.

2.4 What is a Living Organism?

Chapter 2 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Which of the following statements applies to all organisms?

a. They consist of one or more cell(s). b. Their cells have cell membranes. c. Their cells contain organelles. d. two of the above

1. Which of the following organisms is not a producer?

a. raccoon b. grass c. algae d. tree

1. All living things have the ability to

a. reproduce sexually. b. use energy to stay alive. c. grow by increasing their number of cells. d. two of the above

1. All biochemical compounds contain

a. carbon. b. oxygen. c. hydrogen. d. all of the above

1. Which statement about anabolic reactions is true?

a. They require energy. b. They include cellular respiration. c. They break down larger molecules to smaller ones. d. all of the above

1. Which two organisms belong in the same kingdom?

a. tree and mushroom b. fish and frog c. bacterium and protist d. cow and grass

1. Both Archaea and Bacteria have

a. a cell wall. b. a cell nucleus. c. multiple cells. d. cell organelles.

True or False

Write true if the statement is true or false if the statement is false.

_____ 8. An organism that obtains food from other organisms is called a consumer.

_____ 9. The cells of all organisms are enclosed by a cell wall.

_____ 10. Only animals respond to their environment.

- _____ 11. Enzymes are reactants in biochemical reactions.
- _____ 12. Molecules of DNA contain nitrogen and phosphorus.
- _____ 13. One function of proteins is helping the body fight infections.
- _____ 14. The Bacteria Domain contains four kingdoms.
- _____ 15. The taxon between the phylum and the order is the family.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. The reaction produced by a stimulus is referred to as a(n) _____.
- 17. The condition in which an organism has a stable internal environment is called _____.
- 18. Lipids are composed of long chains of _____ acids.
- 19. _____ is a complex carbohydrate used to store energy in animals.
- 20. In modern taxonomy, the broadest taxon is the _____.

Short Answer

Answer the following questions in complete sentences.

- 21. Compare and contrast carbohydrates and proteins.
- 22. Explain why modern systems of classification show how organisms are related.

CHAPTER

3

Cells and Their Structures Assessments

Chapter Outline

- 3.1** LIFE'S BUILDING BLOCKS
 - 3.2** CELL STRUCTURES
 - 3.3** CELLS AND THEIR STRUCTURES
-

3.1 Life's Building Blocks

Lesson 3.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The scientist who discovered that all living cells arise from other cells was
 - a. Hooke.
 - b. Schwann.
 - c. Schleiden.
 - d. Virchow.
2. The cells of all living things have
 - a. a cell membrane.
 - b. cytoplasm.
 - c. ribosomes.
 - d. all of the above
3. Which statement about prokaryotes is false?
 - a. They were the first type of organisms to evolve.
 - b. They are the least numerous organisms today.
 - c. They have cells that lack a nucleus.
 - d. They are all single-celled organisms.
4. A group of cells of the same kind that perform the same function make up a(n)
 - a. organ.
 - b. tissue.
 - c. organelle.
 - d. organ system.
5. Which level of organization is found in eukaryotes but not in prokaryotes?
 - a. atoms
 - b. molecules
 - c. cells
 - d. none of the above

True or False

Write true if the statement is true or false if the statement is false.

6. _____ All living cells can use energy.
7. _____ Some cells lack DNA.
8. _____ The nucleus of a cell is an example of an organelle.
9. _____ As a cell gets bigger, its surface area increases more quickly than its volume.

10. _____ Some single-celled organisms have eukaryotic cells.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any membrane-bound structure inside a cell is known as a(n) _____.
12. A(n) _____ consists of two or more types of tissues that work together to do a specific task.
13. The cell structure where proteins are made is the _____.
14. Any cell that contains a nucleus is referred to as a(n) _____ cell.
15. Cell structures that provide energy to the cell are called _____.

Short Answer

Answer the following question in complete sentences.

16. Outline the development of the cell theory.

3.2 Cell Structures

Lesson 3.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. A cell membrane consists mainly of
 - a. carbohydrates.
 - b. cellulose.
 - c. phospholipids.
 - d. DNA.
2. What helps a cell keeps its shape?
 - a. cytoplasm
 - b. cytoskeleton
 - c. ribosomes
 - d. two of the above
3. Organelles found only in plant cells include
 - a. vacuoles.
 - b. leucoplasts.
 - c. centrioles.
 - d. two of the above
4. The largest organelle in a eukaryotic cell is the
 - a. Golgi apparatus.
 - b. endoplasmic reticulum.
 - c. mitochondrion.
 - d. nucleus.
5. What is the function of the nucleolus?
 - a. making lipids
 - b. organizing DNA
 - c. forming ribosomes
 - d. none of the above

True or False

Write true if the statement is true or false if the statement is false.

6. _____ All eukaryotic cells have all of the same organelles.
7. _____ The RER provides a framework where nucleic acids are made.
8. _____ The tails of phospholipid molecules are hydrophilic.
9. _____ Ribosomes assemble and join together fatty acids.

10. _____ Cytosol is a watery, gel-like substance in the cytoplasm.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The _____ consists of threadlike filaments and tubules that crisscross the cytoplasm.
12. A sac-like organelle that is used for storage, transport, or biochemical reactions is called a(n) _____.
13. An organelle that functions to recycle unneeded molecules in cells is a(n) _____.
14. A cell _____ is a rigid layer that surrounds the cell membrane of some cells.
15. Plastids that contain chlorophyll are called _____.

Short Answer

Answer the following question in complete sentences.

16. Explain the role of mitochondria.

3.3 Cells and Their Structures

Chapter 3 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The cell membrane

a. consists mainly of phospholipids. b. allows nothing to leave the cell. c. is unique to plant cells. d. two of the above

1. The cell theory was completed around

a. 1650. b. 1750. c. 1850. d. 1950.

1. The cell theory states that

a. cells are alive. b. cells come from pre-existing cells. c. all living things are made of cells. d. all of the above

1. In prokaryotic organisms, the highest level of organization is the

a. tissue. b. organelle. c. organ. d. cell.

1. Which structure is not found in animal cells?

a. cell wall b. vacuole c. lysosome d. SER

1. The organelle that sends proteins and lipids where they are needed is the

a. centriole. b. mitochondrion. c. Golgi apparatus. d. rough endoplasmic reticulum.

1. Functions of a central vacuole may include

a. storing water. b. stiffening stems. c. holding pigments. d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

_____ 8. Eukaryotic cells are larger than prokaryotic cells.

_____ 9. All eukaryotes have more than one cell.

_____ 10. Animal cells contain a large central vacuole.

- _____ 11. Plant cells contain organelles called centrioles.
- _____ 12. Only eukaryotes have specialized cells.
- _____ 13. The cell membrane allows hydrophobic molecules to pass through.
- _____ 14. The function of a lysosome is to make proteins from amino acids.
- _____ 15. Some chemical reactions in cells take place inside vesicles.

Fill in the Blank

Fill in the blank with the appropriate term.

16. The smallest units that can carry out the biochemical reactions of life are _____.
17. Any cell that has DNA in the cytoplasm rather than in a nucleus is a(n) _____ cell.
18. The cell organelle that uses glucose to make ATP is the _____.
19. Pigments that give color to fruits and flowers are stored in plastids called _____.
20. An organelle that organizes DNA so it divides correctly during cell division is a(n) _____.

Short Answer

Answer the following questions in complete sentences.

21. How are all cells similar? How did all known organisms come to have such similar cells?
22. Explain how a eukaryotic cell is like a bag of Jell-O with mixed fruit.

CHAPTER **4**

Cell Functions Assessments

Chapter Outline

- 4.1 TRANSPORT
 - 4.2 PHOTOSYNTHESIS
 - 4.3 CELLULAR RESPIRATION
 - 4.4 CELL FUNCTIONS
-

4.1 Transport

Lesson 4.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Types of passive transport include
 - sodium-potassium pump
 - facilitated diffusion
 - vesicle transport
 - endocytosis
- The energy needed for active transport comes from
 - channel proteins
 - ATP molecules
 - carrier proteins
 - sodium ions
- Which statement about exocytosis is true?
 - It is a type of passive transport
 - It is an example of facilitated diffusion
 - It moves a substances into a cell
 - none of the above
- Which substance can cross a cell membrane only with added energy?
 - carbon dioxide molecule
 - oxygen molecule
 - water molecule
 - potassium ion
- In simple diffusion, a substances crosses a cell membrane by
 - passing through tiny spaces in the membrane
 - moving through a channel created by a protein
 - first binding with a carrier protein
 - moving up a concentration gradient

True or False

Write true if the statement is true or false if the statement is false.

- _____ The main difference between active and passive transport is the need for transport proteins.
- _____ The surface of a cell membrane that faces the interior of the cell is hydrophobic.
- _____ Carbon dioxide passes from your blood to the air in your lungs by simple diffusion.
- _____ Small molecules can pass through a cell membrane by simple diffusion if they are hydrophobic.

10. _____ Water can pass more quickly through a cell membrane with the help of a carrier protein.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Passage of a substance through a cell membrane without the need for energy is called _____-transport.
12. A protein that forms a tiny hole in a cell membrane so another substance can pass through is known as a(n) _____ protein.
13. A(n) _____ protein binds with a diffusing substance to transport it across a cell membrane.
14. Substances diffuse naturally from an area of higher to lower _____.
15. Osmosis refers to the diffusion of _____.

Short Answer

Answer the following question in complete sentences.

16. Explain why active and passive transport are like rolling a ball up and down a hill.

4.2 Photosynthesis

Lesson 4.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Raw materials needed for photosynthesis include
 - water
 - sugar
 - carbon dioxide
 - two of the above
- In plants, most chloroplasts are found in the
 - fruits
 - stems
 - roots
 - leaves
- The first stage of photosynthesis takes place inside structures called
 - stroma
 - stomata
 - thylakoids
 - none of the above
- During the Calvin cycle
 - chlorophyll absorbs light
 - energy is stored in NADPH
 - ATP forms from ADP
 - none of the above
- The light reactions of photosynthesis produce
 - glucose
 - oxygen
 - water
 - NADP+

True or False

Write true if the statement is true or false if the statement is false.

- _____ All living things need chemical energy for life processes.
- _____ The chemical formula for glucose is $C_6H_{12}O_6$.
- _____ Organisms that make food for themselves and other living things are called heterotrophs.
- _____ The role of chlorophyll in photosynthesis is providing carbon for glucose.

10. _____ The second stage of photosynthesis takes place in the cytoplasm.

Fill in the Blank

Fill in the blank with the appropriate term.

11. In plants and algae, photosynthesis takes place in an organelle called a(n) _____.
12. _____ molecules of water are needed to make one molecule of glucose.
13. Organisms that carry out photosynthesis include plants, algae, and some _____.
14. The light reactions occur in the _____ stage of photosynthesis.
15. During photosynthesis, light energy is changed to _____ energy.

Short Answer

Answer the following question in complete sentences.

16. Summarize the process of photosynthesis, including the molecules and sites involved in the two stages of the process.

4.3 Cellular Respiration

Lesson 4.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Products of cellular respiration include
 - a. oxygen
 - b. water
 - c. ADP
 - d. two of the above
2. In the first stage of cellular respiration, enzymes split a glucose molecule into two smaller molecules of
 - a. ADP
 - b. oxygen
 - c. pyruvate
 - d. carbon dioxide
3. Cellular respiration occurs in
 - a. plants
 - b. protists
 - c. animals
 - d. all of the above
4. How many molecules of ATP are produced during the Krebs cycle?
 - a. one
 - b. two
 - c. three
 - d. four
5. The matrix of a mitochondrion is the site of
 - a. glycolysis
 - b. the Krebs cycle
 - c. alcoholic fermentation
 - d. lactic acid fermentation

True or False

Write true if the statement is true or false if the statement is false.

6. _____ An ATP molecule forms when a phosphate is added to ADP.
7. _____ Cells without mitochondria cannot break down glucose for energy.
8. _____ All three stages of cellular respiration are aerobic.
9. _____ Water forms as a waste product during the second stage of cellular respiration.

10. _____ The final stage of cellular respiration is called electron transport.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The stage of cellular respiration that also occurs in fermentation is named _____.
12. In alcoholic fermentation, yeasts produce ATP from _____.
13. An aerobic process is any process that requires _____.
14. _____ are organelles where the last two stages of cellular respiration take place.
15. The maximum number of ATP molecules that can be produced from one glucose molecule is _____ - _____.

Short Answer

Answer the following question in complete sentences.

16. Explain the relationship between glucose and ATP in living things.

4.4 Cell Functions

Chapter 4 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Endocytosis is an example of
 - facilitated diffusion
 - passive transport
 - simple diffusion
 - none of the above
- Small hydrophilic molecules are transported through a cell membrane by
 - channel proteins
 - carrier proteins
 - active transport
 - vesicle transport
- Which substance can cross a cell membrane without added energy?
 - sodium ions
 - potassium ions
 - water molecules
 - none of the above
- What is the first stage of photosynthesis?
 - Krebs cycle
 - Calvin cycle
 - light reactions
 - electron transport
- Plants exchange gases with the air through their
 - chloroplasts
 - stroma
 - stomata
 - mitochondria
- What is the maximum number of ATP molecules produced during the final stage of cellular respiration?
 - 38
 - 36
 - 34
 - 32
- Cellular respiration takes place in
 - mitochondria

- b. chloroplasts
- c. the cytoplasm
- d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Transport with the help of transport proteins always requires energy.
- 9. _____ A channel protein binds with a diffusing substance to transport it across a cell membrane.
- 10. _____ The surface of a cell membrane is water “loving.”
- 11. _____ Facilitated diffusion is like a ball rolling up a hill.
- 12. _____ It takes many molecules of glucose to store as much energy as a single molecule of ATP.
- 13. _____ During the Calvin cycle, carbon dioxide is used to produce glucose.
- 14. _____ Lactic acid fermentation takes place only in anaerobic bacteria.
- 15. _____ A waste product of the Krebs cycle is water.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Whenever the transport of a substance through a cell membrane requires energy, it is called _____ - transport.
- 17. The sodium-potassium pump transports _____ ions into the cell.
- 18. The waste product of photosynthesis is _____.
- 19. During photosynthesis, _____ energy is changed to chemical energy.
- 20. The only anaerobic stage of cellular respiration is called _____.

Short Answer

Answer the following questions in complete sentences.

- 21. Explain how plants change energy from one form to another.
- 22. Relate the processes of cellular respiration and photosynthesis.

CHAPTER **5** Cell Division, Reproduction, and Protein Synthesis Assessments

Chapter Outline

- 5.1 CELL DIVISION
 - 5.2 REPRODUCTION
 - 5.3 PROTEIN SYNTHESIS
 - 5.4 CELL DIVISION, REPRODUCTION, AND PROTEIN SYNTHESIS
-

5.1 Cell Division

Lesson 5.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The sugar in DNA is called
 - a. ribose
 - b. deoxyribose
 - c. glucose
 - d. none of the above
2. Which nitrogen base binds with cytosine?
 - a. adenine
 - b. thymine
 - c. guanine
 - d. uracil
3. Which organisms have rodlike chromosomes?
 - a. bacteria
 - b. archaea
 - c. protists
 - d. all of the above
4. Which statement about sister chromatids is false?
 - a. They are attached at a point called a centromere
 - b. They are found in all cells during cell division
 - c. They form when the DNA in a cell replicates
 - d. They separate from each other during anaphase
5. The two main stages of the cell cycle in a eukaryotic cell are interphase and
 - a. prophase
 - b. synthesis phase
 - c. growth phase
 - d. mitotic phase

True or False

Write true if the statement is true or false if the statement is false.

6. _____ The last phase of mitosis is telophase.
7. _____ Interphase is divided into four phases.
8. _____ The cell cycle of a prokaryotic cell includes mitotic phase.
9. _____ Sister chromatids line up at the center of a cell during metaphase.

10. _____ DNA replication occurs during the second phase of mitosis.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The phase of the cell cycle in which the cytoplasm splits apart and the cell pinches in two is called _____ - _____.
12. The stage of mitosis in which the nuclear membrane breaks down is known as _____.
13. During the stage called _____, a eukaryotic cell grows and prepares to divide.
14. A nucleotide consists of a sugar, a phosphate, and a nitrogen _____.
15. A chromosome is a coiled structure that consists of DNA and _____ molecules.

Short Answer

Answer the following question in complete sentences.

16. Describe how the nucleus divides in a eukaryotic cell.

5.2 Reproduction

Lesson 5.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The last phase of meiosis is
 - prophase II
 - anaphase II
 - metaphase II
 - none of the above
- The number of different types of chromosomes in the human species is
 - 23
 - 44
 - 46
 - 32
- During which phase of meiosis does independent assortment occur?
 - prophase I
 - prophase II
 - anaphase I
 - anaphase II
- Which of the following types of cells is a diploid cell?
 - sperm
 - gamete
 - zygote
 - egg
- The two copies of a given chromosome in a diploid cell are called
 - sister chromosomes
 - homologous chromosomes
 - haploid chromosomes
 - crossover chromosomes

True or False

Write true if the statement is true or false if the statement is false.

- _____ Meiosis I is just like mitosis.
- _____ Some organisms can produce both sexually and asexually.
- _____ Yeast cells can reproduce by budding.
- _____ Binary fission results in four daughter cells.

10. _____ Sexual reproduction is simpler than asexual reproduction.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The type of cell division that results in four haploid cells is _____.
12. _____ is the process in which two gametes unite to form a single cell.
13. Reproduction that involves two parents is called _____ reproduction.
14. The number of chromosomes in a normal human skin cell is _____.
15. Methods of _____ reproduction include fragmentation and binary fission.

Short Answer

Answer the following question in complete sentences.

16. Explain how genetic variation arises during sexual reproduction.

5.3 Protein Synthesis

Lesson 5.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Types of mutagens include
 - radiation
 - viruses
 - bacteria
 - all of the above
- When a mutated codon codes for a different amino acid, the mutation is called a
 - silent mutation
 - nonsense mutation
 - missense mutation
 - chromosomal mutation
- Each gene codes for one
 - codon
 - nucleotide
 - amino acid
 - protein
- Which type of RNA carries genetic information from the nucleus to a ribosome?
 - rRNA
 - tRNA
 - mRNA
 - none of the above
- The “backbone” of the DNA molecule consists of
 - sugars
 - phosphates
 - nitrogen bases
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Some mutations occur when errors are made in copying DNA.
- _____ The genetic code is the same in all living things.
- _____ The translation step of protein synthesis takes place in the nucleus.
- _____ RNA is a double-stranded nucleic acid.

10. _____ Uracil is a nitrogen base found only in RNA.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ is the nucleic acid that stores genetic information.
12. The process in which proteins are made is called protein _____.
13. Deleting or inserting a nitrogen base in DNA causes a(n) _____ mutation.
14. The type of RNA that brings amino acids to a ribosome is called _____.
15. The point mutation CAA (glutamine) → UAA (stop) is an example of a(n) _____ mutation.

Short Answer

Answer the following question in complete sentences.

16. Name and summarize the two steps of protein synthesis.

5.4 Cell Division, Reproduction, and Protein Synthesis

Chapter 5 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The nitrogen base that is complementary to thymine is
 - guanine
 - uracil
 - cytosine
 - adenine
- What happens during anaphase of mitosis?
 - Spindle fibers attach to centromeres
 - Spindle fibers shorten
 - Spindle fibers break down
 - Spindle fibers form new cell membranes
- Interphase includes
 - growth phase 1
 - growth phase 2
 - synthesis phase
 - all of the above
- Which phase follows metaphase II?
 - interphase II
 - anaphase II
 - prophase II
 - telophase II
- Compared with sexual reproduction, asexual reproduction
 - occurs more slowly
 - produces more genetic variation
 - is more complex
 - none of the above
- Molecules involved in the transcription step of protein synthesis include
 - rRNA
 - mRNA
 - tRNA
 - all of the above
- Which of the following point mutations is a silent mutation?
 - CAA (glutamine) → CAG (glutamine)

- b. CAA (glutamine) → CCA (proline)
- c. CAA (glutamine) → CAC (histidine)
- d. CAA (glutamine) → UAA (stop)

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ DNA replication occurs only in eukaryotic cells.
- 9. _____ Telophase is followed by cytokinesis.
- 10. _____ DNA always exists as chromosomes.
- 11. _____ Meiosis II is just like meiosis I.
- 12. _____ Each human couple has the potential to produce trillions of unique offspring.
- 13. _____ A sea star can reproduce asexually by fragmentation.
- 14. _____ There are a maximum of 20 possible codons in the genetic code.
- 15. _____ The translation step of photosynthesis takes place at a ribosome.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. The only nitrogen base found in RNA but not in DNA is _____.
- 17. The second phase of mitosis is called _____.
- 18. The number of chromosomes in a normal human sperm cell is _____.
- 19. The phase of meiosis in which crossing over occurs is _____.
- 20. _____ is the nucleic acid that helps make proteins.

Short Answer

Answer the following questions in complete sentences.

- 21. Compare and contrast mitosis and meiosis.
- 22. Explain how a frameshift mutation occurs and why it is likely to be disastrous.

CHAPTER

6

Genetics Assessments

Chapter Outline

- 6.1 MENDEL'S DISCOVERIES
 - 6.2 INTRODUCTION TO GENETICS
 - 6.3 ADVANCES IN GENETICS
 - 6.4 GENETICS
-

6.1 Mendel's Discoveries

Lesson 6.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which trait(s) did Mendel study in pea plants?
 - pod form
 - pod placement
 - pod color
 - all of the above
- In Mendel's first set of experiments, he
 - studied two traits at a time
 - let the P generation self-pollinate
 - experimented with just two generations
 - none of the above
- Mendel's law of independent assortment
 - was based on the results of his first set of experiments
 - describes how factors controlling different traits go to gametes independently
 - explains why one form of a trait always disappears in the first generation of offspring
 - none of the above
- All of the traits that Mendel studied in pea plants
 - are easy to observe
 - exist in three different forms
 - are needed for sexual reproduction
 - two of the above
- An example of a recessive trait in pea plants is
 - green seed color
 - violet flower color
 - round seed form
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Mendel's laws apply only to pea plants.
- _____ Mendel's work was largely ignored until 1900.
- _____ Pea plants were a good choice for Mendel's research because they grow quickly.
- _____ In Mendel's second set of experiments, all of the F1 plants had wrinkled, green seeds.

10. _____ In sexually reproducing plants, female gametes are released by tiny grains of pollen.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Mendel's law of _____ states that factors for the same trait always go to different gametes.
12. The first generation of offspring in a genetics experiment is called _____ .
13. Mendel used the term _____ to describe a factor controlling a trait that always shows up in offspring.
14. In Mendel's experiments, he cross-pollinated plants in the _____ generation.
15. Mendel discovered that the factor controlling wrinkled seeds in peas is _____ to the factor controlling round seeds.

Short Answer

Answer the following question in complete sentences.

16. If Mendel had studied plants that reproduce asexually, he would not have been able to develop his laws of inheritance. Explain why.

6.2 Introduction to Genetics

Lesson 6.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The traits of an individual make up the individual's
 - genotype
 - phenotype
 - genome
 - DNA
- The position of a gene on a chromosome is its
 - autosome
 - genotype
 - allele
 - locus
- Which of the following represents a homozygous genotype?
 - AA
 - Aa
 - aa
 - two of the above
- Which genotype is possible for a person with type O blood?
 - AO
 - BO
 - OO
 - any of the above
- Red-green color blindness is an example of a(n)
 - sex-linked trait
 - autosomal trait
 - recessive trait
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Different genotypes always produce different phenotypes.
- _____ All of the traits Mendel studied were polygenic traits.
- _____ A Punnett square shows exactly how many children of each genotype a given set of parents will actually produce.

9. _____ An example of non-Mendelian inheritance is incomplete dominance.
10. _____ For many traits, your phenotype is influenced by your environment as well as your genotype.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A(n) _____ is the section of a chromosome that contains the genetic code for a particular protein.
12. An alternate version of a gene is referred to as a(n) _____ .
13. An individual with two different alleles for the same gene is called a(n) _____ .
14. The alleles that an individual inherits for a given gene make up the individual's _____ .
15. If two alleles for a gene are _____ , they are expressed equally in heterozygotes.

Short Answer

Answer the following question in complete sentences.

16. Explain why an X-linked recessive trait is expressed more commonly in males than in females.

6.3 Advances in Genetics

Lesson 6.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The Human Genome Project was launched in
 - a. 1900
 - b. 1990
 - c. 2000
 - d. 2003
2. Which type of trait is cystic fibrosis?
 - a. autosomal dominant
 - b. sex-linked dominant
 - c. autosomal recessive
 - d. sex-linked recessive
3. An example of a chromosomal disorder is
 - a. Marfan syndrome
 - b. Down syndrome
 - c. sickle cell anemia
 - d. hemophilia A
4. Biotechnology may be used to
 - a. cure genetic disorders
 - b. produce human proteins
 - c. create genetically modified organisms
 - d. all of the above
5. Recessive genetic disorders
 - a. are usually less common than dominant disorders
 - b. are expressed only in homozygotes
 - c. always involve entire chromosomes
 - d. none of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ There are fewer than 10,000 human genes.
7. ____ The Human Genome Project was accomplished entirely by U.S. scientists.
8. ____ Few genetic disorders are caused by mutations in a single gene.
9. ____ The genotype of a person with Turner's syndrome is XO.

10. _____ The polymerase chain reaction is a technique for making many copies of a gene.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any disease caused by mutations is called a(n) _____ disorder.
12. _____ is the use of technology to change the genetic makeup of living things for human purposes.
13. Using bacteria to rapidly produce many copies of a desired gene is the technique of gene _____ .
14. The human _____ consists of the complete set of human genes.
15. Klinefelter's syndrome is caused by one or more extra copies of the _____ chromosome.

Short Answer

Answer the following question in complete sentences.

16. In a given family, the mother is a carrier for red-green color blindness, and the father has normal vision. The couple has one son and one daughter. What are the chances that the son has the red-green color blindness disorder? What are the chances that the daughter has the disorder? Explain your answers.

6.4 Genetics

Chapter 6 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- In Mendel's experiments with pea plants, which generation(s) of plants did he cross-pollinate?
 - P
 - F1
 - F2
 - two of the above
- In Mendel's first set of experiments, what percent of the F1 generation expressed the dominant factor?
 - 25 percent
 - 50 percent
 - 75 percent
 - 100 percent
- What color(s) of flowers does a pea plant have if it inherits one factor for violet flowers and one factor for white flowers?
 - pink
 - violet
 - white
 - two of the above
- A gene's locus is
 - the type of protein it encodes
 - an alternate form it may take
 - its position on a chromosome
 - the way it is expressed as a trait
- ABO blood type is an example of a(n)
 - polygenic trait
 - multiple-allele trait
 - incompletely dominant trait
 - sex-linked trait
- An example of a genetic disorder caused by an extra chromosome is
 - Marfan syndrome
 - Turner's syndrome
 - Down syndrome
 - all of the above
- In gene cloning, DNA ligase is used to

- a. separate two strands of recombinant DNA
- b. join together a desired gene and plasmid DNA
- c. kill bacteria before they are used to clone genes
- d. insert genes into the DNA of plants such as food crops

True or False

Write true if the statement is true or false if the statement is false.

8. ____ In Mendel's experiments, the F₂ generation was identical to the F₁ generation.
9. ____ In pea plants, yellow seed color is a dominant trait.
10. ____ Mendel demonstrated that the two factors controlling a trait always go to the same gamete.
11. ____ For ABO blood type, each individual can have a maximum of three alleles.
12. ____ All the traits Mendel studied were controlled by genes on different chromosomes.
13. ____ Dominant genetic disorders are expressed only in homozygotes.
14. ____ GMOs have been given traits that make them more useful for human purposes.
15. ____ Hemophilia A is an autosomal recessive genetic disorder.

Fill in the Blank

Fill in the blank with the appropriate term.

16. Gregor Mendel is known as the father of _____.
17. Mendel's laws were rediscovered in the year _____.
18. The expression of an individual's genotype is referred to as his or her _____.
19. An individual with the genotype BB for a given gene is called a(n) _____.
20. Klinefelter's syndrome is a type of genetic disorder known as a(n) _____ disorder.

Short Answer

Answer the following questions in complete sentences.

21. In Mendel's day, many people thought that offspring inherited a blend of their parents' traits. For example, they thought that an animal with white fur and an animal with black fur would produce offspring with grey fur. This is called the blending theory of inheritance. How did Mendel show that the blending theory was incorrect?
22. Describe and explain human variation in skin color.

CHAPTER

7

Evolution Assessments

Chapter Outline

- 7.1 DARWIN'S THEORY OF EVOLUTION
 - 7.2 EVIDENCE FOR EVOLUTION
 - 7.3 THE SCALE OF EVOLUTION
 - 7.4 HISTORY OF LIFE ON EARTH
 - 7.5 EVOLUTION
-

7.1 Darwin's Theory of Evolution

Lesson 7.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Darwin's theory of evolution includes the idea(s) that
 - inherited traits of living things change over time
 - acquired characteristics can be passed on to offspring
 - artificial selection explains how evolution occurs
 - two of the above
- The development of Darwin's theory was influenced by his
 - observations on the voyage of the Beagle
 - understanding of plant and animal breeding
 - knowledge of the writings of other scientists
 - all of the above
- Darwin's book *On the Origin of Species* was first published
 - more than 20 years after Darwin returned from his 5-year voyage
 - as soon as Darwin returned from his voyage on the Beagle
 - when Darwin was only 30 years of age
 - after Darwin died
- Which statement about the Galápagos Islands is true?
 - There are a total of sixteen Galápagos Islands
 - The Galápagos Islands are located in the Atlantic Ocean
 - The Galápagos Islands were the last stop on Darwin's voyage
 - The Galápagos Islands are inhabited only by giant tortoises
- Galápagos Islanders could tell which island a giant tortoise came from based on the
 - size of its feet
 - color of its skin
 - shape of its shell
 - number of its toes

True or False

Write true if the statement is true or false if the statement is false.

- _____ Darwin's job on the Beagle was to observe and collect specimens wherever the ship went ashore.
- _____ Darwin never observed fossils, so they had no influence on his theory of evolution.
- _____ Darwin found that the different beaks of Galápagos finches seemed to suit them for different types of food.

9. _____ Lamarck's ideas about evolution were influenced by Darwin's theory of evolution by natural selection.
10. _____ Darwin's ideas about natural selection were influenced directly by a book written by Charles Lyell.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The scientist who proposed the theory of evolution by natural selection was _____.
12. The scientist who argued that human populations have the potential to grow faster than their resources was _____.
13. A change over time in the inherited traits of living things is called _____.
14. The scientist who introduced the idea of evolution by the inheritance of acquired characteristics was _____.
15. Darwin observed that the shells of Galápagos _____ were suited to particular environmental conditions.

Short Answer

Answer the following question in complete sentences.

16. How did Darwin's knowledge of artificial selection influence his theory of evolution by natural selection?

7.2 Evidence for Evolution

Lesson 7.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Remains of organisms become fossils when their organic matter is replaced by
 - traces
 - bones
 - amber
 - minerals
- The relative ages of fossils are based on their
 - similarities in DNA
 - amounts of carbon-14
 - positions in rock layers
 - approximate age in years
- Which statement about the evolution of mammals is true?
 - Mammals first evolved in the ocean
 - The earliest mammals evolved about 2 million years ago
 - All modern mammals have the same bones in their front limbs
 - all of the above
- Which organism has DNA that is least like human DNA?
 - honeybee
 - chicken
 - grape
 - cow
- The best evidence for evolution is the
 - fossil record
 - comparison of embryos
 - data from radioactive elements
 - observation of traits changing through time

True or False

Write true if the statement is true or false if the statement is false.

- _____ The footprints of animals are sometimes preserved as fossils.
- _____ Carbon-14 dating is a method of relative dating.
- _____ Some fossils form when organisms are preserved in amber.
- _____ Whales evolved from a four-legged ancestor.

10. _____ Closely related animals generally look more similar as they grow older.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ dating determines about how long ago a fossil organism lived.
12. _____ dating determines only which of two fossils is older or younger than the other.
13. The set of human tail bones is an example of a(n) _____ structure.
14. Molecular clocks are molecules of DNA or _____.
15. Peter and Rosemary Grant observed evolution occurring in Galápagos Island _____.

Short Answer

Answer the following question in complete sentences.

16. Explain how comparisons of living organisms can reveal information about their evolution.

7.3 The Scale of Evolution

Lesson 7.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Darwin thought that evolution occurs
 - very slowly
 - very rarely
 - at a varying rate
 - only on islands
- A gene pool consists of
 - all the alleles for a given gene in an individual
 - all the alleles for all the genes in a given species
 - all the alleles for a given gene in a population
 - none of the above
- All of the following are considered to be forces of evolution except
 - mutation
 - natural selection
 - genetic flow
 - climate change
- In a population of 200 people, 20 people have the genotype BB and 180 people have the genotype bb. What is the frequency of the B allele in this population?
 - 0.0
 - 0.1
 - 0.2
 - 0.5
- The ultimate source of new genetic variation is
 - mutation
 - artificial selection
 - evolution
 - genetic drift

True or False

Write true if the statement is true or false if the statement is false.

- _____ Darwin knew Mendel's laws, so he understood how traits are inherited.
- _____ Horses became smaller as they evolved over the past 50 million years.
- _____ Microevolution can be measured by changes in allele frequencies.

9. _____ A total of 300 fossils have been discovered since Darwin's time.
10. _____ Once a new species forms, it stops evolving.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Microevolution occurs at the level of the _____.
12. The evolution of a new species is called _____.
13. A _____ is a group of organisms of the same species that live in the same area.
14. Evolution above the level of the species is called _____.
15. _____ evolution occurs when two species evolve similar traits because they live in similar habitats.

Short Answer

Answer the following question in complete sentences.

16. Compare and contrast genetic drift and natural selection.

7.4 History of Life on Earth

Lesson 7.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Earth's second mass extinction occurred at the end of the
 - a. Cambrian Period
 - b. Triassic Period
 - c. Permian Period
 - d. Tertiary Period
2. If Earth's history is represented by a 24-hour day, then life first appears at about
 - a. 3:00 am
 - b. 8:00 am
 - c. 1:00 pm
 - d. 3:00 pm
3. Which of the following divisions of the geologic time scale is longest?
 - a. epoch
 - b. era
 - c. period
 - d. eon
4. The earliest cells
 - a. had a nucleus
 - b. made their own food
 - c. got energy from organic molecules
 - d. two of the above
5. Organisms that evolved at the beginning of the Paleozoic Era included
 - a. trilobites
 - b. sponges
 - c. reptiles
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. _____ The Jurassic Period is called the golden age of dinosaurs.
7. _____ Mammals became the dominant land animals during the Mesozoic Era.
8. _____ The last ice age ended about 12 million years ago.
9. _____ The current geological era is the Cenozoic Era.

10. _____ When Earth first formed, it had oceans but no atmosphere.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Planet Earth formed about _____ years ago.
12. The single cell that gave rise to all subsequent life on Earth is named _____.
13. The first eukaryotic cells evolved about _____ years ago.
14. A total of _____ mass extinctions have occurred on Earth since life first began.
15. The earliest fish evolved during the _____ Era.

Short Answer

Answer the following question in complete sentences.

16. Explain how life evolved during the Paleozoic Era.

7.5 Evolution

Chapter 7 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which statement about Darwin's voyage on the Beagle is true?
 - It included stops in North America
 - It completely circled the globe
 - It lasted 22 years
 - It began in 1931
- Darwin used the term fitness to refer to an organism's ability to
 - pass its traits to the next generation
 - exercise for long periods of time
 - build strong muscles
 - avoid getting sick
- Evidence for evolution from living organisms comes from comparisons of their
 - molecules
 - bone structures
 - embryos
 - all of the above
- For a given gene, a population of 100 people has 20 AA genotypes, 20 Aa genotypes, and 60 aa genotypes. What is the frequency of the a allele in this population?
 - 0.3
 - 0.5
 - 0.6
 - 0.7
- The only force of evolution that Darwin identified was
 - gene flow
 - speciation
 - natural selection
 - macroevolution
- Which era is called the age of dinosaurs?
 - Paleozoic Era
 - Mesozoic Era
 - Cenozoic Era
 - none of the above
- Homo sapiens evolved during the

- a. Cretaceous Period
- b. Tertiary Period
- c. Devonian Period
- d. Quaternary Period

True or False

Write true if the statement is true or false if the statement is false.

8. ____ Darwin published his theory of evolution in a book titled *On the Origin of Species*.
9. ____ Malthus' ideas about human populations helped Darwin develop his idea of "survival of the fittest."
10. ____ Lamarck influenced Darwin by introducing the concept of artificial selection.
11. ____ Relative dating is based on the amounts of radioactive elements in fossils.
12. ____ Genetic drift changes allele frequencies only in small populations.
13. ____ Plants and the animals that pollinate them may influence each other's evolution.
14. ____ It is possible to observe evolution occurring over just a couple of generations.
15. ____ Animals colonized the land before plants did.

Fill in the Blank

Fill in the blank with the appropriate term.

16. The scientist who influenced Darwin by arguing that Earth is very old was _____.
17. The two basic ways of dating fossils are relative dating and _____ dating.
18. _____ structures are body parts that are no longer used but still present in modern organisms.
19. The gene pool of a population can be described by its allele _____.
20. Random forces of evolution include genetic drift and _____.

Short Answer

Answer the following questions in complete sentences.

21. Relate microevolution and macroevolution.
22. Summarize the evolution of life during the Precambrian Supereon.

CHAPTER **8** Prokaryotes Assessments

Chapter Outline

- 8.1 INTRODUCTION TO PROKARYOTES
 - 8.2 BACTERIA
 - 8.3 ARCHAEA
 - 8.4 PROKARYOTES
-

8.1 Introduction to Prokaryotes

Lesson 8.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Genetic transfer refers to the way that prokaryotes
 - reproduce
 - pass traits to daughter cells
 - increase genetic variation
 - undergo binary fission
- Which statement about prokaryotes is false?
 - All prokaryotes consist of a single cell
 - You need a microscope to see prokaryotic cells
 - Prokaryotes evolved more than 3 billion years ago
 - Most prokaryotic cells are larger than eukaryotic cells
- A prokaryotic cell
 - always has a cell membrane
 - usually has a cell wall
 - may have a capsule
 - all of the above
- Which structures are lacking in prokaryotic cells?
 - pili
 - ribosomes
 - mitochondria
 - cytoplasm and cytoskeleton
- Most prokaryotes have one or more small loops of DNA called
 - chromosomes
 - spirals
 - helices
 - plasmids

True or False

Write true if the statement is true or false if the statement is false.

- _____ The sticky plaque that collects on your teeth between brushings consists of prokaryotes.
- _____ Unlike other living things, prokaryotes do not need carbon.
- _____ Thermophiles are prokaryotes that prefer a temperature below 20 °C.
- _____ Prokaryotes are the most numerous living things on Earth.

10. _____ Archaea share several traits with Eukarya that Bacteria do not share.

Fill in the Blank

Fill in the blank with the appropriate term.

11. All organisms in the Archaea and Bacteria Domains are known as _____.
12. Most prokaryotes have one or more long, thin “whips” referred to as _____.
13. Cellular respiration in prokaryotes takes place in the cell _____.
14. Prokaryotes that carry out photosynthesis are called _____.
15. All prokaryotes produce offspring by _____ reproduction.

Short Answer

Answer the following question in complete sentences.

16. Outline the variation in prokaryotic metabolism.

8.2 Bacteria

Lesson 8.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which statement about the diversity of bacteria is false?
 - Bacteria are the most diverse organisms on Earth
 - Thousands of species of bacteria have been discovered
 - Few if any bacterial species remain to be discovered
 - Bacteria increase diversity by genetic transfer
- Bacteria that are classified as gram-negative
 - stain purple with gram stain
 - have an outer membrane
 - lack a cell wall
 - two of the above
- Bacteria can help people by
 - making fuels
 - cleaning up oil spills
 - making vaccines
 - all of the above
- All bacteria
 - die at temperatures higher than 37 °C
 - can be killed with chlorine bleach
 - are resistant to antibiotics
 - are poisoned by oxygen
- How many bacterial cells normally live in and on the human body?
 - a few hundred
 - about a thousand
 - several million
 - trillions

True or False

Write true if the statement is true or false if the statement is false.

- _____ A spiral-shaped bacterium is classified as a spirillum.
- _____ Bacteria that form biofilms are multicellular prokaryotes.
- _____ Bacteria cover Earth's surface but are not found far below it.
- _____ There are more bacteria than any other organisms on Earth.

10. _____ Yogurt is made with the help of bacteria.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A rod-shaped bacterium is classified as a(n) _____.
12. A(n) _____ is any organism that causes disease in other living things.
13. Drugs that have been developed to kill bacteria are called _____.
14. A bacteria called a(n) _____ is shaped like a sphere.
15. The _____ of Lyme disease is a deer tick.

Short Answer

Answer the following question in complete sentences.

16. Explain how ancient cyanobacteria changed Earth's atmosphere and shaped the evolution of life on the planet.

8.3 Archaea

Lesson 8.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Archaeans
 - a. are prokaryotes
 - b. were first placed in the Eukarya Domain
 - c. are now classified in the Bacteria Domain
 - d. two of the above
2. Water with extremes of heat and acidity is found
 - a. in Mono Lake
 - b. in drainage from an acid mine
 - c. around a hydrothermal vent
 - d. in the Dead Sea
3. The type of archaean you would find in the environment in question 2 is a(n)
 - a. hyperthermoacidophile
 - b. alkalithermophile
 - c. acidophile
 - d. halophile
4. Most archaeans are
 - a. producers
 - b. autotrophs
 - c. decomposers
 - d. two of the above
5. Acidophiles live
 - a. in acid mine drainage
 - b. around volcano vents
 - c. in Mono Lake, California
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ All archaeans live in extreme environments.
7. ____ Prokaryotes now called archaeans were first discovered in the late 1970s.
8. ____ Archaeans called halogens have been found in Utah's Great Salt Lake.
9. ____ Some archaeans can survive and reproduce in boiling water.

10. _____ Archaeans make up about 20 percent of the total mass of organisms on Earth.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A(n) _____ is any organism that lives in extreme conditions.
12. An organism that lives in a very salty environment is called a(n) _____.
13. A(n) alkaliphile can tolerate a very _____ environment.
14. Archaeans called _____ live inside the gut of cows and produce methane gas.
15. An archaean classified as a(n) _____ can tolerate very high temperatures.

Short Answer

Answer the following question in complete sentences.

16. Summarize the relationship between archaeans and humans.

8.4 Prokaryotes

Chapter 8 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Hair-like projections from the surface of a prokaryotic cell are
 - filled with cytoplasm
 - called flagella
 - used to hold onto surfaces
 - two of the above
- All prokaryotic cells contain
 - DNA
 - a nucleus
 - a cell membrane
 - two of the above
- A colony of prokaryotes is known as a
 - nucleoid
 - biofilm
 - plasmid
 - coccus
- Diseases caused by bacteria include
 - Lyme disease
 - food poisoning
 - strep throat
 - all of the above
- The ratio of bacterial to human cells in your body is about
 - 10 to 1
 - 100 to 1
 - 1,000 to 1
 - 1,000,000 to 1
- If an organism has been placed in the Archaea Domain, then it must be a(n)
 - extremophile
 - eukaryote
 - human pathogen
 - microorganism
- Which type of extremophile would you expect to find in a hot geyser?
 - halophile

- b. alkaliphile
- c. hyperthermophile
- d. none of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Some prokaryotes have rod-shaped chromosomes.
- 9. _____ Eukaryotes evolved from prokaryotes about 2 billion years ago.
- 10. _____ Cellular respiration takes place in the mitochondria of prokaryotic cells.
- 11. _____ All bacterial pathogens are spread to people by vectors.
- 12. _____ All bacteria can be killed with common antibiotic drugs.
- 13. _____ Archaeans live only in water.
- 14. _____ Archaeans that live in the Dead Sea must be adapted to very salty water.
- 15. _____ Archaeans recycle carbon and nitrogen through ecosystems.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. All prokaryotes belong to the Bacteria Domain or _____ Domain.
- 17. Many prokaryotes have a layer called a(n) _____ outside the cell wall.
- 18. A(n) _____ is an organism that can thrive in very acidic conditions.
- 19. A spiral-shaped bacterium is called a(n) _____.
- 20. A(n) _____ bacterium stains red with gram stain.

Short Answer

Answer the following questions in complete sentences.

- 21. Explain what you would look for under a microscope to identify whether a cell came from a prokaryote or eukaryote.
- 22. Compare and contrast bacteria and archaeans.

CHAPTER **9**

Protists and Fungi Assessments

Chapter Outline

- 9.1 PROTISTS
 - 9.2 FUNGI
 - 9.3 PROTISTS AND FUNGI
-

9.1 Protists

Lesson 9.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Most protists
 - can move on their own
 - have a complex life cycle
 - live in a wet environment
 - all of the above
- The three main groups of protists differ in
 - the presence or absence of a nucleus in their cells
 - whether or not they have specialized cells
 - how they get carbon and energy
 - all of the above
- How do plant-like protists resemble plants?
 - Their cells contain chloroplasts
 - They have leaves, stems, and roots.
 - None of them have the ability to move
 - two of the above
- Which statement about fungus-like protists is false?
 - They may form colonies of many cells
 - Many of them are decomposers
 - They include seaweeds and kelp
 - Some of them are plant parasites
- Malaria is a human disease that
 - is caused by animal-like protists
 - is spread by deer ticks
 - causes pain, fever, and fatigue
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Protists are thought to be the oldest eukaryotes.
- _____ Protists can reproduce only by budding or binary fission.
- _____ Most protozoa are producers.
- _____ Some algae are multicellular organisms.

10. _____ Slime molds are commonly found on rotting organic matter.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Animal-like protists are commonly called _____.
12. A fungus-like protist that lives in water is called a(n) _____ mold.
13. Plant-like protists are commonly called _____.
14. A(n) _____ is a temporary extension of the cytoplasm a protozoan uses to move.
15. A(n) _____ is an appendage for movement found in protozoa and most prokaryotes.

Short Answer

Answer the following question in complete sentences.

16. How do scientists think protists first evolved?

9.2 Fungi

Lesson 9.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All of the following are fungi except
 - algae
 - mushrooms
 - puffballs
 - bread molds
- Fungi were originally classified as
 - plants
 - protists
 - animals
 - prokaryotes
- All fungi are
 - multicellular organisms
 - heterotrophs
 - parasites
 - decomposers
- When fungi reproduce sexually
 - two diploid hyphae mate
 - each parent produces haploid gametes
 - the parents create a diploid spore
 - a mycelium releases haploid spores into water
- Mycorrhiza is a relationship between a fungus and a
 - cyanobacterium
 - green alga
 - plant
 - wasp

True or False

Write true if the statement is true or false if the statement is false.

- _____ The earliest fungi evolved about 250 million years ago.
- _____ Some fungi cause human diseases.
- _____ People have used fungi to produce antibiotics.
- _____ There are only about 10,000 species in the Fungus Kingdom.

10. _____ Fungi have special enzymes for decomposing cellulose.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A thread-like, multicellular structure produced by a fungus is called a(n) _____.
12. The main body of a multicellular fungus is known as a(n) _____.
13. Fungi produce special reproductive cells called _____.
14. The cell walls of fungi consist of a carbohydrate named _____.
15. Yeasts are fungi that reproduce asexually by _____.

Short Answer

Answer the following question in complete sentences.

16. Summarize human relationships with fungi.

9.3 Protists and Fungi

Chapter 9 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Protists may be found in
 - oceans
 - lakes
 - swamps
 - all of the above
- Appendages for movement in protists include
 - cilia
 - hyphae
 - protozoa
 - two of the above
- All protists are
 - single-celled organisms
 - heterotrophic organisms
 - aquatic organisms
 - eukaryotic organisms
- A paramecium
 - is a protozoan
 - has flagella
 - makes its own food
 - is a type of slime mold
- When fungi reproduce asexually, their spores
 - are produced by the process of meiosis
 - are genetically identical to the parent
 - form from the parent cell by budding
 - are spread by pollinators such as bees
- Lichen is a relationship that may exist between a fungus and
 - cyanobacteria
 - plants
 - animals
 - none of the above
- People can use fungi to
 - ferment foods

- b. produce insulin
- c. kill plant pests
- d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Protists commonly called molds are thought to be ancestors of fungi.
- 9. _____ Giardiasis is a protist disease that is spread to humans by a vector.
- 10. _____ The protists that cause malaria live inside the intestines of their human hosts.
- 11. _____ All fungal spores are diploid cells.
- 12. _____ Ringworm is a disease caused by a parasitic worm that is spread by fungi.
- 13. _____ Some fungi are edible by people.
- 14. _____ Most fungi obtain organic compounds from dead organisms.
- 15. _____ The largest living thing on Earth is a fungus.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. The earliest eukaryotes to evolve are now placed in the _____ Kingdom.
- 17. A(n) _____ forest consists of multicellular algae rather than trees.
- 18. Most human protist diseases are caused by protists known as _____.
- 19. _____ are fungi that exist as single cells.
- 20. Fungi form structures called _____ that look like plant roots and can penetrate soil.

Short Answer

Answer the following questions in complete sentences.

- 21. Compare and contrast protists and prokaryotes.
- 22. Why were fungi formerly placed in the Plant Kingdom? Why were they eventually placed in their own kingdom?

CHAPTER

10

Plants Assessments

Chapter Outline

- 10.1 INTRODUCTION TO PLANTS
 - 10.2 EVOLUTION AND CLASSIFICATION OF PLANTS
 - 10.3 PLANT RESPONSES AND SPECIAL ADAPTATIONS
 - 10.4 PLANTS
-

10.1 Introduction to Plants

Lesson 10.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. What do plants need?
 - a. oxygen
 - b. carbon dioxide
 - c. minerals
 - d. all of the above
2. Secondary growth in a tree
 - a. allows the tree to grow taller
 - b. happens only when the tree is mature
 - c. occurs because of meristem at the tips of the roots
 - d. produces rings inside the trunk of the tree
3. Gametophytes
 - a. are plants in the diploid generation
 - b. reproduce asexually by budding
 - c. form from haploid spores
 - d. none of the above
4. Phloem in plants is a type of
 - a. meristem
 - b. vascular tissue
 - c. root system
 - d. reproductive organ
5. Products that come from plants include
 - a. medicines
 - b. rubber
 - c. dyes
 - d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ The earliest plants lacked leaves, roots, and stems.
7. ____ Some plants consist of a single cell.
8. ____ Dermal tissue is like the skin of a plant.
9. ____ A taproot is a very long root that grows out to the side of a plant.

10. _____ Most photosynthesis in plants takes place in roots.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The type of plant tissue that transports fluids is called _____ tissue.
12. A(n) _____ is a plant organelle where photosynthesis takes place.
13. Gas exchange in plants takes place through tiny leaf pores called _____.
14. A waxy substance called _____ is secreted by plant cells and reduces loss of water.
15. _____ tissue in plants is where most biochemical reactions take place.

Short Answer

Answer the following question in complete sentences.

16. Explain how plants grow.

10.2 Evolution and Classification of Plants

Lesson 10.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The first plants were probably similar to
 - stoneworts
 - cacti
 - ferns
 - conifers
- Which plant structures evolved first?
 - vascular tissues
 - seeds
 - flowers
 - fruits
- The early growth and development of a plant inside a seed is called
 - transpiration
 - pollination
 - germination
 - none of the above
- Which flower structure develops into a fruit?
 - stamen
 - anther
 - stigma
 - ovary
- Modern nonvascular plants include
 - ferns
 - mosses
 - algae
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ The first plants lived in water.
- _____ Plants first colonized the land around 5 million years ago.
- _____ Vascular plants are no longer the dominant land plants on Earth.
- _____ The female gametophyte of a seed plant is contained within an ovule.

10. _____ Modern seed plants are called spermatophytes.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A plant that produces seeds in the ovaries of flowers is classified as a(n) _____.
12. A plant that produces naked seeds in cones is classified as a(n) _____.
13. The name given to any modern plant that lacks vascular tissues is _____.
14. The name given to any modern plant that has vascular tissues is _____.
15. A(n) _____ is a reproductive structure produced by many plants that contains an embryo and a food supply.

Short Answer

Answer the following question in complete sentences.

16. The vast majority of modern plants are angiosperms. Why do you think angiosperms have been so successful?

10.3 Plant Responses and Special Adaptations

Lesson 10.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which is the best definition of tropism?
 - turning toward the light
 - growing toward gravity
 - turning toward or away from a stimulus
 - bending to the left or right
- Willow trees produce salicylic acid to
 - stimulate growth
 - stimulate dormancy
 - kill bacteria
 - warn other plants
- Modern aquatic plants
 - have special adaptations
 - evolved from ocean plants
 - cannot survive in moving water
 - two of the above
- Adaptations of xerophytes include ways to
 - increase water intake
 - climb up rainforest trees
 - dissolve insects for extra nutrients
 - none of the above
- Advantages of plants that can rise high above the ground include
 - better access to sunlight
 - less risk of being eaten by herbivores
 - greater chance of being pollinated by the wind
 - all of the above

True or False

Write true if the statement is true or false if the statement is false.

- ____ Primary plant roots always grow down toward the center of Earth.
- ____ Aquatic plants must have thick layer of cuticle to waterproof their stems and leaves.
- ____ Epiphytes obtain water from the air rather than from soil.
- ____ Carnivorous plants do not need sunlight.

10. _____ A saguaro cactus has no leaves to transpire water.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A plant that is adapted to very dry conditions is called a(n) _____.
12. The way a plant responds to gravity is referred to as _____.
13. The way a plant responds to light, is referred to as _____.
14. Plants that consume insects or other small organisms are known as _____ plants.
15. A plant that grows on other plants, rather than in soil, is called a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Explain the pros and cons of living in water for aquatic plants.

10.4 Plants

Chapter 10 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which statement about xylem is true?
 - It is a type of ground tissue
 - It carries water from roots to leaves
 - It transports sugar away from leaves
 - It is secreted by dermal cells
- Major organs of most plants include
 - chloroplasts
 - stems
 - veins
 - nodes
- The purpose of root hairs is to
 - absorb water and minerals
 - keep roots warm in winter
 - make roots ropelike and tough
 - store food from photosynthesis
- The female reproductive organ in a flower is the
 - stamen
 - anther
 - pollen tube
 - pistil
- What are bryophytes?
 - vascular plants
 - seed plants
 - flowering plants
 - none of the above
- Which structure would be found only on an angiosperm?
 - fruit
 - leaf
 - ovule
 - cone
- The shape of water lily leaves helps them
 - float on top of the water

- b. swim to the bottom of the water
- c. resist currents in the water
- d. lose less water

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ All plants are eukaryotes.
- 9. _____ Plants alternate between haploid and diploid generations.
- 10. _____ The biggest problem the earliest land plants faced was predators.
- 11. _____ Vascular tissue forms a plant's "plumbing system."
- 12. _____ The main way a plant responds to its environment is to change how it is growing.
- 13. _____ Specialized cells in the tips of plant roots detect and respond to light.
- 14. _____ Dormancy allows plants to keep growing and producing seeds in the winter.
- 15. _____ Epiphytes have special adaptations for storing water and reducing water loss.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. _____ tissue is the type of plant tissue that is like the plant's skin.
- 17. _____ tissue is the type of plant tissue that carries out metabolism.
- 18. Two basic types of root systems are fibrous root systems and _____ systems.
- 19. The stamen of a flower consists of a filament and a(n) _____ where pollen forms.
- 20. The type of plant roots that grow sideways rather than down are _____ roots.

Short Answer

Answer the following questions in complete sentences.

- 21. How did the evolution of vascular tissues help plants colonize the land?
- 22. When researchers look for new medicines in nature, they usually look in plants. Explain why.

CHAPTER

11

Introduction to Animals Assessments

Chapter Outline

- 11.1 WHAT ARE ANIMALS?
 - 11.2 HOW ANIMALS EVOLVED
 - 11.3 INTRODUCTION TO ANIMALS
-

11.1 What Are Animals?

Lesson 11.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- To be classified as an animal, an organism must have
 - specialized cells
 - cells organized into tissues
 - organs consisting of more than one tissue type
 - all of the above
- All animals are
 - eukaryotes
 - multicellular
 - heterotrophs
 - all of the above
- A caterpillar is a(n)
 - insect embryo
 - insect larva
 - adult worm
 - juvenile worm
- Which of the following animals are placed in the same phylum as human beings?
 - earthworms
 - sea stars
 - spiders
 - snakes
- Animal cells can take on a variety of shapes because they lack
 - a cell membrane
 - a cell wall
 - cytoplasm
 - a cytoskeleton

True or False

Write true if the statement is true or false if the statement is false.

- _____ Some animals can use sunlight to make their own food.
- _____ All animals are able to move at some stage of their life cycle.
- _____ Most animals absorb nutrients directly from their environment.
- _____ The typical animal life cycle includes a diploid zygote stage.

10. _____ The majority of modern animals are vertebrates.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any animal that has a vertebral column is called a(n) _____.
12. A(n) _____ is a distinct juvenile form that many animals go through before adulthood.
13. The process in which two gametes fuse into one cell is known as _____.
14. All vertebrates are placed in Phylum _____.
15. All animals are classified as eukaryotes because each of their cells contains a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Summarize a general animal life cycle.

11.2 How Animals Evolved

Lesson 11.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- When did animals first colonize the land?
 - at least 550 million years ago
 - between 450 and 400 million years ago
 - less than 350 million years ago
 - about 50 million years ago
- Which choice shows the correct sequence in which three animal traits evolved?
 - cell specialization → body symmetry → body segmentation
 - tissues → body segmentation → digestive system
 - coelom → body symmetry → mesoderm
 - none of the above
- Which of the following animal traits first evolved in invertebrates?
 - organs
 - mesoderm
 - notochord
 - all of the above
- Which animal lacks body symmetry?
 - sponge
 - insect
 - jellyfish
 - flatworm
- What function(s) does a coelom serve?
 - It cushions internal organs
 - It gives the body internal support
 - It provides a place for muscles to attach
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ The first animal trait to evolve was multicellularity.
- _____ Some animals lack specialized cells.
- _____ The first type of symmetry to evolve was bilateral symmetry.
- _____ Early land vertebrates evolved an exoskeleton to support the body and help retain water.

10. _____ Amphibians were the first animals to have true lungs and limbs for life on land.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any animal with a notochord is called a(n) _____.
12. A(n) _____ egg is covered with waterproof membranes.
13. An animal has _____ if its body can be divided into two identical halves.
14. An animal has _____ if its body has multiple parts.
15. A(n) _____ is a fluid-filled body cavity that is completely enclosed by mesoderm.

Short Answer

Answer the following question in complete sentences.

16. Summarize invertebrate evolution.

11.3 Introduction to Animals

Chapter 11 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- How do animals differ from fungi?
 - Animals have eukaryotic cells
 - Animals are heterotrophs
 - Animal cells lack a cell wall
 - two of the above
- Which trait characterizes most but not all animals?
 - membrane-bound cell organelles
 - multiple cells
 - specialized cells
 - tissues
- What percent of all modern animal species are vertebrates?
 - 5 percent
 - 15 percent
 - 55 percent
 - 95 percent
- Most modern animal phyla had appeared by about
 - 750 million years ago
 - 700 million years ago
 - 630 million years ago
 - 500 million years ago
- Which of the following animal traits evolved last?
 - segmented body
 - digestive system
 - notochord
 - coelom
- Which of these animals has radial symmetry?
 - flatworm
 - earthworm
 - millipede
 - none of the above
- Modern invertebrates with a coelom include
 - sponges

- b. mollusks
- c. jellyfish
- d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ All heterotrophs are classified in the Animal Kingdom.
- 9. _____ The life cycle of many animals is relatively simple.
- 10. _____ Most animals spend the majority of their life as haploid organisms.
- 11. _____ All animals have at least one larval stage in their life cycle.
- 12. _____ Body symmetry evolved in animals before body segmentation evolved.
- 13. _____ Animals that are classified as vertebrates include tunicates and amphibians.
- 14. _____ Modern animals that have tissues but not organs include jellyfish.
- 15. _____ The evolution of mesoderm allowed animals to develop muscle tissue.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Most animals have a(n) _____ system that directs the body how to respond to stimuli.
- 17. The process of _____ occurs when a sperm and an egg unite to form a single cell.
- 18. The animal phylum that includes insects and spiders is Phylum _____.
- 19. A(n) _____ is a partial, fluid-filled body cavity that is found in modern roundworms.
- 20. The final embryonic cell layer to evolve in animals was _____.

Short Answer

Answer the following questions in complete sentences.

- 21. Identify basic animal traits.
- 22. Summarize how body symmetry evolved in animals, and explain why it was adaptive.

CHAPTER **12** Invertebrates Assessments

Chapter Outline

- 12.1 SPONGES AND CNIDARIANS
 - 12.2 FLATWORMS AND ROUNDWORMS
 - 12.3 MOLLUSKS AND ANNELIDS
 - 12.4 INSECTS AND OTHER ARTHROPODS
 - 12.5 ECHINODERMS AND INVERTEBRATE CHORDATES
 - 12.6 INVERTEBRATES
-

12.1 Sponges and Cnidarians

Lesson 12.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Adult sponges
 - are able to swim
 - have specialized tissues
 - are all predators
 - may produce toxins for defense
- Which statement about reproduction in sponges is false?
 - Sponges reproduce both asexually and sexually
 - Sponges reproduce asexually by budding
 - Male sponges release sperm through amoebocytes
 - Sperm may enter a female sponge through a pore
- What is the function of collar cells in a sponge?
 - They hold the head upright
 - They trap and digest food
 - They expel wastes
 - They produce gametes
- All cnidarians
 - are aquatic
 - are less complex than sponges
 - have bilateral symmetry
 - have a complete digestive system
- The polyp form of a cnidarian
 - has a tubular body
 - can swim freely
 - reproduces sexually
 - always changes into a medusa

True or False

Write true if the statement is true or false if the statement is false.

- _____ There are more species of sponges than cnidarians.
- _____ Most sponges live on coral reefs or the ocean floor.
- _____ Sponge larvae are just like adult sponges except smaller.
- _____ Many cnidarians have the ability to produce light.

10. _____ Corals are found at all levels of the ocean, from very deep to shallow water.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Sponges are placed in Phylum _____.
12. Corals are placed in Phylum _____.
13. Water enters a sponge through special cells called _____.
14. Cells that carry nutrients from digested food to other cells of a sponge are called _____.
15. A(n) _____ is an opening through which water flows out of a sponge.

Short Answer

Answer the following question in complete sentences.

16. Relate the structure and function of the cnidarian nematocyst.

12.2 Flatworms and Roundworms

Lesson 12.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which statement is true about both flatworms and roundworms?
 - They lack body symmetry
 - They may be parasites
 - They have a complete digestive system
 - all of the above
- All flatworms
 - are less than a meter long
 - live in water or moist soil
 - reproduce asexually by budding
 - have a concentration of nerve tissue in the head end
- Which of the following organisms is a flatworm?
 - hookworm
 - ascaris
 - tapeworm
 - all of the above
- The body of a roundworm is covered with
 - slime
 - hooks
 - suckers
 - cuticle
- A roundworm's body is stiff because of
 - the endoskeleton
 - the exoskeleton
 - fluid pressure
 - a notochord

True or False

Write true if the statement is true or false if the statement is false.

- _____ Most flatworm species have separate sexes.
- _____ When flatworms reproduce, eggs are fertilized outside the body.
- _____ Flatworms can eat, digest food, and eliminate wastes all at the same time.
- _____ Free-living roundworms may feed on bacteria, fungi, or protozoa.

10. _____ Roundworms play an important role in the carbon cycle.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Flatworms belong to Phylum _____.
12. Roundworms belong to Phylum _____.
13. Flatworms can develop muscle tissues because they have an embryonic cell layer called _____.
14. The most common parasitic worm in humans is named _____.
15. Roundworms have a round body because they have a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Summarize the life cycle of a tapeworm that includes invertebrates, fish, and mammals.

12.3 Mollusks and Annelids

Lesson 12.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All of the following are annelids except
 - slugs
 - earthworms
 - polychaete worms
 - leeches
- Organ systems found in mollusks include a(n)
 - circulatory system
 - excretory system
 - incomplete digestive system
 - two of the above
- Mollusks generally have all of the following except for
 - a head region
 - a muscular foot
 - a layer called the mantle
 - repeating body segments
- Which of the following is not an annelid structure?
 - brain
 - sensory organs
 - large coelom
 - shell
- What are leeches?
 - segmented worms
 - mollusks
 - shelled invertebrates
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Some mollusks are so small that they are nearly microscopic.
- _____ The head of a mollusk may have tentacles for sensing the environment.
- _____ All mollusks are free-living heterotrophs.
- _____ There are more than a million known species of annelids.

10. _____ Annelids can reproduce only sexually.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Snails and slugs belong to Phylum _____.
12. Earthworms belong to Phylum _____.
13. The shell of a mollusk is secreted by tissue called _____.
14. Mollusks have a specialized feeding organ called a(n) _____.
15. Annelids differ from roundworms in having body _____.

Short Answer

Answer the following question in complete sentences.

16. Contrast reproduction in mollusks and annelids.

12.4 Insects and Other Arthropods

Lesson 12.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All insects have six
 - appendages
 - wings
 - legs
 - tentacles
- Which animals are classified in Phylum Arthropoda?
 - spiders
 - butterflies
 - grasshoppers
 - all of the above
- Arthropods have all of the following except
 - a segmented body
 - a flexible endoskeleton
 - sensory organs
 - breathing organs
- Incomplete metamorphosis occurs when
 - some larvae do not change into adults
 - some eggs do not hatch into larvae
 - there is no distinct larva stage
 - there is no distinct adult stage
- The abdomen of an insect is where most of the
 - legs are attached
 - wings are attached
 - internal organs are located
 - sensory organs are located

True or False

Write true if the statement is true or false if the statement is false.

- _____ More than half of all known organisms are insects.
- _____ Some arthropods have no appendages.
- _____ The arthropod exoskeleton reduces water loss.
- _____ Insects are the only invertebrates that can fly.

10. _____ Molting occurs when an adult insect breaks out of its cocoon.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The largest animal phylum is Phylum _____.
12. The exoskeleton of an arthropod is made of _____.
13. Arthropods change from a larva to an adult in the process of _____.
14. The body segments of arthropods are the head, _____, and abdomen.
15. _____ is the process in which an arthropod sheds an outgrown exoskeleton.

Short Answer

Answer the following question in complete sentences.

16. How do human beings and insects interact?

12.5 Echinoderms and Invertebrate Chordates

Lesson 12.5 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All of the following animals are echinoderms except
 - sea stars
 - tunicates
 - sand dollars
 - feather stars
- Organisms in Phylum Echinodermata have
 - bilateral symmetry as adults
 - radial symmetry as adults
 - radial symmetry as larvae
 - no symmetry as larvae
- Echinoderms lack
 - a central nervous system
 - the ability to move
 - a well-developed coelom
 - a complete digestive system
- The larvae of echinoderms
 - are able to swim
 - have radial symmetry
 - undergo metamorphosis
 - two of the above
- Phylum Chordata includes
 - only about 600 species
 - the human species
 - just vertebrates
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Sea squirts are classified in Phylum Echinodermata.
- _____ Some echinoderms live in moist soil.
- _____ The spines of echinoderms are made entirely of skin.
- _____ The nerve cord of a chordate runs along the top side of the animal.

10. _____ There are only about 25 species of living lancelets.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Sea urchins and sea cucumbers are organisms in Phylum_____.
12. The only animal phylum that contains both invertebrates and vertebrates is Phylum _____.
13. Some echinoderms can reproduce asexually by _____.
14. Chordates are animals with a rigid rod, called a(n) _____, running down their back.
15. Lancelets are invertebrates placed in Phylum _____.

Short Answer

Answer the following question in complete sentences.

16. Explain why animals as different as tunicates and mammals are placed together in Phylum Chordata.

12.6 Invertebrates

Chapter 12 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Adult sponges have root-like projections that they use to
 - anchor themselves to surfaces
 - absorb nutrients from soil
 - trap and kill their prey
 - swim from place to place
- Cnidarians may use bioluminescence to
 - startle predators
 - attract mates
 - attract prey
 - any of the above
- Hookworms are parasites that
 - live in their host's skin
 - enter their host as larvae
 - shed eggs through their host's skin
 - leave their host as larvae
- Flatworms have
 - three embryonic cell layers
 - radial symmetry
 - a complete digestive system
 - a segmented body
- Which statement about annelid reproduction is false?
 - Most annelids can reproduce both asexually and sexually
 - Some annelids reproduce by budding or fission
 - Some annelids lack a larval stage
 - none of the above
- Traits of most arthropods include
 - a hard, cuticle exoskeleton
 - more than three body segments
 - a pair of wings
 - all of the above
- Internal canals and tube feet are distinctive traits of
 - chordates

- b. annelids
- c. echinoderms
- d. cnidarians

True or False

Write true if the statement is true or false if the statement is false.

8. ____ Sponges have specialized cells that contain poison stingers.
9. ____ The medusa form of a cnidarian is typically unable to move.
10. ____ Flatworms have a pseudocoelom.
11. ____ Roundworms have a complete digestive system.
12. ____ Some mollusks are internal parasites.
13. ____ Annelids have a brain but no sensory organs.
14. ____ All insects have distinctive larval stages and metamorphosis.
15. ____ Tunicates and lancelets are placed in the same phylum as vertebrates.

Fill in the Blank

Fill in the blank with the appropriate term.

16. Jellyfish are placed in Phylum _____.
17. A parasitic worm called a tapeworm is placed in Phylum _____.
18. Shelled invertebrates called scallops are placed in Phylum _____.
19. All insects are placed in Phylum _____.
20. Invertebrates with “spiny skin” are placed in Phylum _____.

Short Answer

Answer the following questions in complete sentences.

21. List five of the nine animal phyla described in the chapter, and identify at least one major evolutionary advance that characterizes each phylum.
22. Explain why insects can be considered the dominant animals in the world.

CHAPTER

13

Fishes, Amphibians, and Reptiles Assessments

Chapter Outline

- 13.1 INTRODUCTION TO VERTEBRATES
 - 13.2 FISH
 - 13.3 AMPHIBIANS
 - 13.4 REPTILES
 - 13.5 FISHES, AMPHIBIANS AND REPTILES
-

13.1 Introduction to Vertebrates

Lesson 13.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Vertebrate classes include
 - a. birds
 - b. amphibians
 - c. reptiles
 - d. all of the above
2. Which statement about the vertebral column of vertebrates is false?
 - a. It runs along the top side of the body
 - b. It consists of a single rigid rod of bone
 - c. It protects the spinal cord that runs through it
 - d. It develops from the notochord after the embryonic stage
3. Most vertebrates have four
 - a. limbs
 - b. limb girdles
 - c. kidneys
 - d. two of the above
4. Which reproductive strategy is used by most mammals?
 - a. ovipary
 - b. ovovivipary
 - c. vivipary
 - d. none of the above
5. The first vertebrates were
 - a. amphibians
 - b. reptiles
 - c. fish
 - d. birds

True or False

Write true if the statement is true or false if the statement is false.

6. ____ The function of vertebrate kidneys is filtering wastes out of the blood.
7. ____ The adaptive immune system of vertebrates learns to recognize and attack specific pathogens.
8. ____ Birds evolved before the first mammals appeared.
9. ____ Living species of vertebrates are placed in five different classes.

10. _____ Most vertebrates have separate male and female sexes.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The use of behavior to control body temperature from the outside is called _____.
12. _____ is the reproductive strategy in which an embryo develops in an egg outside the mother's body.
13. The reproductive strategy in which an embryo develops in an egg inside the mother's body is _____ - _____.
14. _____ is a tough but flexible tissue containing collagen that is part of the vertebrate endoskeleton.
15. The use of biology to control body temperature from the inside is called _____.

Short Answer

Answer the following question in complete sentences.

16. Explain how vertebrates are classified.

13.2 Fish

Lesson 13.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Fish are all of the following except
 - a. aquatic animals
 - b. chordate animals
 - c. invertebrate animals
 - d. ectothermic animals
2. What happens when a fish deflates its swim bladder?
 - a. It sinks in the water
 - b. It floats on its back
 - c. It shoots out toxins
 - d. It excretes urine
3. Fish with jaws
 - a. can eat larger prey
 - b. evolved before jawless fish
 - c. have smaller brains than other fish
 - d. two of the above
4. Spawning occurs when many fish group together and
 - a. fight for mates
 - b. release gametes
 - c. defend territory
 - d. change to adults
5. All of the following classes of fish have fins except for
 - a. lampreys
 - b. hagfish
 - c. cartilaginous fish
 - d. bony fish

True or False

Write true if the statement is true or false if the statement is false.

6. _____ Fish have a nervous system with a brain.
7. _____ Almost all fish have internal fertilization of gametes.
8. _____ Most fish parents provide care to their offspring.
9. _____ Fish larvae look like miniature versions of the adults.

10. _____ Ray-finned fish make up the majority of living fish species.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ are organs in fish that absorb oxygen from water.
12. The class of fish in which sharks are classified is the _____ fish.
13. The most primitive class of fish is the _____.
14. Bony fish include ray-finned and _____ fish.
15. _____ are organs in fish that help them swim by acting like a paddle or rudder.

Short Answer

Answer the following question in complete sentences.

16. Give an overview of variation in fish ecology.

13.3 Amphibians

Lesson 13.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Amphibians were the first vertebrates to evolve
 - scaly skin
 - four legs
 - lobe fins
 - two of the above
- What organ(s) do amphibians use to obtain oxygen?
 - gills
 - lungs
 - skin
 - all of the above
- Tadpoles are the larval form of
 - newts
 - fish
 - salamanders
 - frogs
- Adult amphibians eat all of the following except
 - algae
 - snails
 - worms
 - insects
- What is the ecological status of amphibians?
 - Amphibians are more numerous than ever before
 - Many amphibian species are at risk of extinction
 - Amphibians are very sensitive to environmental changes
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Modern amphibians are endotherms.
- _____ The ancestor of amphibians was probably a lobe-finned fish.
- _____ Amphibians can smell, taste, hear, and see.
- _____ Caecilians are the only amphibians without legs.

10. _____ Amphibians produce amniotic eggs that do not dry out.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The amphibian order that includes newts is the _____ order.
12. The amphibian order that includes toads is the _____ order.
13. The amphibian order with the fewest species is the _____ order.
14. The _____ is an amphibian body cavity used for excretion and reproduction.
15. Amphibian skin stays moist because it is covered with _____.

Short Answer

Answer the following question in complete sentences.

16. Explain how metamorphosis changes a tadpole from a water-adapted larva to an adult frog adapted to land.

13.4 Reptiles

Lesson 13.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Reptiles use their scales to
 - a. absorb oxygen
 - b. release gametes
 - c. reduce water loss
 - d. two of the above
2. Which statement about reptile classification is false?
 - a. There are over 8,200 living species of reptiles
 - b. Modern reptiles are classified in four orders
 - c. All reptiles are vertebrate chordates
 - d. The Testudines Order includes turtles and lizards
3. On which continent(s) do reptiles live?
 - a. North America
 - b. Australia
 - c. Europe
 - d. all of the above
4. All of the following reptiles may live in water except
 - a. snakes
 - b. turtles
 - c. lizards
 - d. alligators
5. Which choice correctly matches a reptile with a food it would eat?
 - a. snake - grasses
 - b. turtle - leaves
 - c. alligator - algae
 - d. tuatara - fruit

True or False

Write true if the statement is true or false if the statement is false.

6. _____ Reptiles have a circulatory system with a heart that pumps blood.
7. _____ A lizard uses its nose to smell scents in the air.
8. _____ Most reptiles have internal fertilization of gametes.
9. _____ Reptiles have one or more larval stages.

10. _____ Tuataras are the least specialized of all living reptiles.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The _____ Order of reptiles includes lizards and snakes.
12. The _____ Order of reptiles includes turtles and tortoises.
13. An animal that eats only other animals is called a(n) _____.
14. Reptiles have a large breathing muscle below the lungs called a(n) _____.
15. Alligators and caimans are placed in the _____ Order of reptiles.

Short Answer

Answer the following question in complete sentences.

16. Compare and contrast the Squamata and Testudines Orders of modern reptiles.

13.5 Fishes, Amphibians and Reptiles

Chapter 13 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The first vertebrates
 - evolved about 550 million years ago
 - had an endoskeleton made of bone
 - were similar to modern bony fish
 - had a complete vertebral column and jaws
- An ectotherm could change its body temperature by
 - increasing its metabolic rate
 - decreasing blood flow to the skin
 - staying in a shady place
 - two of the above
- Coelacanth and lungfish are classified as
 - ray-finned fish
 - cartilaginous fish
 - hagfish
 - lobe-finned fish
- How do hagfish feed?
 - They eat their prey from the inside out
 - They suck the blood of larger fish
 - They prey on fish and aquatic mammals
 - They eat algae, smaller fish, or dead organisms
- Amphibians most likely evolved from
 - reptiles
 - dinosaurs
 - lobe-finned fish
 - hagfish
- Reptile scales are made of very tough
 - cartilage
 - cuticle
 - keratin
 - skin
- What is one way that reptiles differ from amphibians?
 - Reptiles are ectotherms

- b. Reptiles are vertebrates
- c. Reptiles have four legs
- d. Reptiles produce amniotic eggs

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Phylum Chordata includes both invertebrate and vertebrate animals.
- 9. _____ Ovipary is the reproductive strategy that occurs in almost all mammals.
- 10. _____ Fish use their fins to absorb oxygen from water.
- 11. _____ Fish that have jaws can eat larger prey than fish that lack jaws.
- 12. _____ Amphibians have dry, scaly skin.
- 13. _____ Amphibian fertilization may occur inside or outside the body.
- 14. _____ Reptiles include snakes and salamanders.
- 15. _____ All lizards are terrestrial.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. _____ is the hard, mineralized tissue that makes up most of the vertebrate endoskeleton.
- 17. The function of the vertebrate organs called _____ is to filter wastes out of the blood.
- 18. _____ occurs when many adult fish group together and release gametes at the same time.
- 19. During the larval stage, amphibians obtain oxygen with organs called _____.
- 20. Reptiles in the _____ Order are often the top predators in their ecosystems.

Short Answer

Answer the following questions in complete sentences.

- 21. Explain how fish are adapted for life in the water.
- 22. Compare and contrast reproduction in amphibians and reptiles.

CHAPTER **14**

Birds and Mammals Assessments

Chapter Outline

- 14.1 BIRDS
 - 14.2 MAMMALS
 - 14.3 PRIMATES
 - 14.4 BIRDS AND MAMMALS
-

14.1 Birds

Lesson 14.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The part of the brain that is most developed in birds is the part that controls
 - mating
 - flying
 - singing
 - seeing
- Why do peacocks fan out their large tail feathers?
 - to slow down when flying
 - to create lift
 - to attract mates
 - to cool off in hot weather
- Which birds would you expect to provide the longest period of parental care to their hatchlings?
 - robins
 - ducks
 - killdeers
 - turkeys
- Flightless birds include all of the following except
 - penguins
 - kiwis
 - rheas
 - honeyeaters
- A red-winged blackbird is a(n)
 - specialist
 - omnivore
 - raptor
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Birds are four-limbed, ectothermic vertebrates.
- _____ Birds produce amniotic eggs.
- _____ The vertebrate class with the fewest species is birds.
- _____ Feathers help keep birds warm by providing insulation.

10. _____ Birds have a relatively large heart and a rapid heart rate.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A(n) _____ animal walks on two legs.
12. A special animal behavior that is performed to attract mates is called _____.
13. An organism that eats just one type of food is referred to as a(n) _____.
14. The process of keeping eggs warm until they hatch is called _____.
15. The order of birds with the greatest number of species is the _____ birds.

Short Answer

Answer the following question in complete sentences.

16. Summarize reproduction and parental care in birds.

14.2 Mammals

Lesson 14.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Traits that are unique to animals in the mammal class include
 - a. hair or fur
 - b. endothermy
 - c. mammary glands
 - d. two of the above
2. Monotreme mammals include
 - a. koalas
 - b. kangaroos
 - c. echidnas
 - d. two of the above
3. Mammals can generate body heat by
 - a. producing sweat
 - b. increasing their metabolic rate
 - c. increasing blood flow to the body surface
 - d. all of the above
4. Which mammal is a herbivore?
 - a. whale
 - b. hyena
 - c. manatee
 - d. bat
5. Which order of placental mammals includes mice?
 - a. Carnivora
 - b. Insectivora
 - c. Rodentia
 - d. Lagomorpha

True or False

Write true if the statement is true or false if the statement is false.

6. ____ You would expect a frugivorous mammal to eat wood.
7. ____ There are very few living species of monotreme mammals.
8. ____ The placenta consists only of maternal tissues.
9. ____ A female platypus has a cloaca instead of a uterus.

10. _____ Ideas about mammal classification are constantly changing.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The subclass of mammals that give birth to tiny embryos is the _____ mammals.
12. A(n) _____ mammal is any mammal that lays eggs.
13. Most living species of mammals belong to the subclass of mammals called the _____ mammals.
14. _____ is the process in which a female mammal produces milk for offspring.
15. The lungs of mammals have tiny air sacs called _____.

Short Answer

Answer the following question in complete sentences.

16. Explain how mammals are classified.

14.3 Primates

Lesson 14.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Which animal is not a primate?
 - a. vervet
 - b. squirrel monkey
 - c. flying squirrel
 - d. lemur
2. The largest primate is the
 - a. orangutan
 - b. chimpanzee
 - c. gorilla
 - d. tarsier
3. For the majority of primates, the most important sense is
 - a. hearing
 - b. vision
 - c. smelling
 - d. tasting
4. Relative to other mammals, primates have
 - a. rapid rates of development
 - b. high levels of intelligence
 - c. very specialized hands
 - d. two of the above
5. The preferred food for almost all primates is
 - a. leaves
 - b. meat
 - c. fruit
 - d. insects

True or False

Write true if the statement is true or false if the statement is false.

6. _____ Tarsiers are classified as non-prosimian primates.
7. _____ Primates have five digits on each extremity.
8. _____ Except for human beings, most modern primates live in tropical climates.
9. _____ Primates tend to have small brains for their body size.

10. _____ Prosimians are generally larger than non-prosimian primates.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The group of primates that includes lemurs and lorises is called _____.
12. An animal that lives in trees is described as _____.
13. Swinging from branch to branch to move through trees is called _____.
14. A(n) _____ thumb can be brought into opposition to the other fingers on the same hand.
15. Primates have _____ vision, which allows them to see in three dimensions.

Short Answer

Answer the following question in complete sentences.

16. Identify several traits that humans share with other primates.

14.4 Birds and Mammals

Chapter 14 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which vertebrate class evolved most recently?
 - amphibians
 - reptiles
 - mammals
 - birds
- Like reptiles, birds
 - produce amniotic eggs.
 - are oviparous.
 - are ectothermic.
 - two of the above
- All mammals have
 - alveoli in their lungs.
 - a relatively large brain.
 - four types of teeth.
 - all of the above
- How do mammals stay cool in warm weather?
 - They secrete sweat.
 - They increase their rate of metabolism.
 - They decrease blood flow to the skin.
 - all of the above
- Carnivorous mammals include
 - anteaters.
 - mice.
 - bats.
 - two of the above
- Which statement about non-prosimian primates is true?
 - They are generally larger than prosimian primates.
 - They are similar to the earliest primates.
 - They include lemurs and lorises.
 - all of the above
- Most modern primates, other than humans, live in the
 - trees.

- b. tropics.
- c. rainforest.
- d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Adaptations for flight in birds include special air sacs that pump air into the lungs.
- 9. _____ No birds are as intelligent as mammals.
- 10. _____ All modern birds are capable of flight.
- 11. _____ The cells of mammals have extra mitochondria to generate energy.
- 12. _____ The placenta transfers carbon dioxide from the mother to the fetus.
- 13. _____ Marsupial mammals secrete milk from sweat glands in the mother's pouch.
- 14. _____ Gibbons have specialized limbs for brachiation.
- 15. _____ Most primates are carnivorous.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. An organism that eats a variety of different foods is called a(n) _____.
- 17. Of all vertebrate classes, the _____ class has the most species.
- 18. A mother in the subclass of _____ mammals gives birth to a large and well-developed fetus.
- 19. All mammal mothers have _____ glands that produce milk for offspring.
- 20. Monkeys, apes, and humans are all _____ primates.

Short Answer

Answer the following questions in complete sentences.

- 21. Compare and contrast birds and mammals.
- 22. Explain what sets primates apart from other mammals.

CHAPTER **15**

Animal Behavior Assessments

Chapter Outline

- 15.1 UNDERSTANDING ANIMAL BEHAVIOR
 - 15.2 TYPES OF ANIMAL BEHAVIOR
 - 15.3 ANIMAL BEHAVIOR
-

15.1 Understanding Animal Behavior

Lesson 15.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All of the following are innate behaviors except
 - putting on a courtship display to attract a mate.
 - calling out to warn other animals to stay away.
 - fighting other animals to defend territory.
 - learning to avoid eating certain foods because they taste bad.
- Chimpanzees have been observed using sticks to “fish” for termites in a termite mound. This behavior came about as a result of
 - instinct.
 - conditioning.
 - habituation.
 - insight learning.
- The big advantage of learned behaviors over innate behaviors is that learned behaviors are
 - longer lasting.
 - more flexible.
 - less complex.
 - two of the above
- All of the following are ways of learning new behaviors except
 - observational learning.
 - insight learning.
 - habituation.
 - reflex learning.
- Gaping behavior in baby birds is an example of
 - learned behavior.
 - innate behavior.
 - habituation.
 - conditioning.

True or False

Write true if the statement is true or false if the statement is false.

- _____ Innate behaviors occur in all animals except human beings.
- _____ Behaviors that increase fitness become more common by natural selection.
- _____ The waggle dance in honeybees is an example of learned behavior.

9. _____ The more intelligent a species is, the fewer innate behaviors it generally has.
10. _____ When young animals play, they may be learning important skills they will need as adults.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Learning to get used to something after being exposed to it repeatedly is known as _____.
12. Any behavior that occurs naturally in all the animals of a given species is called a(n) _____ behavior.
13. A way of learning that involves a reward or punishment is referred to as _____.
14. Learning from past experiences and reasoning is called _____ learning.
15. A(n) _____ behavior is a simple response that always occurs when a certain stimulus is present.

Short Answer

Answer the following question in complete sentences.

16. Apply lesson concepts to explain why a scarecrow is likely to become less effective the longer it remains in the garden.

15.2 Types of Animal Behavior

Lesson 15.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Animals that make and hear sounds to communicate include
 - frogs.
 - dogs.
 - birds.
 - all of the above
- Ants mark a trail to a food source with chemicals so other
 - ants will stay away from it.
 - ants will be able to find it.
 - insects will avoid it.
 - insects will leave it alone.
- What is a cat communicating by raising its fur and arching its back?
 - Stay away.
 - Mate with me.
 - Let's play.
 - I'm hungry.
- Humans communicate with each other using
 - symbols.
 - facial expressions.
 - gestures.
 - all of the above
- Most of the adult bees in a honeybee colony are
 - queens.
 - drones.
 - workers.
 - larvae.

True or False

Write true if the statement is true or false if the statement is false.

- _____ Some birds communicate by dancing.
- _____ In most species of birds and mammals, parents care for their young.
- _____ Most species of bees and ants are highly social animals.
- _____ Only social insects work together with other members of their group.

10. _____ Bears are the only animals that hibernate during the winter.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Animals that live in a group with other members of their species are called _____ animals.
12. The use of symbols to communicate is referred to as _____.
13. Animals that sleep at night and are active during the day are called _____ animals.
14. Animals that sleep during the day and are active at night are called _____ animals.
15. _____ refers to any way that animals share information.

Short Answer

Answer the following question in complete sentences.

16. Define circadian rhythm and biological clock and explain how they are related.

15.3 Animal Behavior

Chapter 15 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which of the following is a reflex behavior?
 - A crow gets used to a scarecrow and no longer fears it.
 - A monkey cracks open a shell by dropping a rock on it.
 - A human infant grasps a finger placed in its palm.
 - A bird avoids eating a monarch butterfly because it tastes bad.
- Innate behaviors
 - have to be practiced to be done correctly.
 - may be performed differently by some members of a species.
 - occur naturally in all the animals of a given species.
 - all of the above
- Which behavior is a learned behavior?
 - a honeybee doing the waggle dance
 - a wasp building a nest
 - a caterpillar making a cocoon
 - a crow making a wire hook to get food from a tube
- Animals that migrate include many species of
 - birds.
 - fish.
 - insects.
 - all of the above
- Animals that are nocturnal
 - are active at night.
 - lack circadian rhythms.
 - migrate south each winter.
 - do not need to sleep.
- Ants can detect chemical “messages” left by other ants using their
 - nose.
 - tongue.
 - antennae.
 - feet.
- Which statement about honeybees in a colony is true?
 - Each worker bee has a specific task to perform.

- b. All worker bees leave the hive to find food.
- c. The only job of drones is to guard the hive.
- d. The oldest worker bees are cared for by younger worker bees.

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Animal behavior always involves two or more animals interacting.
- 9. _____ Animals with greater fitness have a better chance of passing their genes to the next generation.
- 10. _____ Only very simple animal behaviors do not have to be learned and practiced.
- 11. _____ Human reflex behaviors occur mainly in babies.
- 12. _____ Animals that live in social groups are the only animals that communicate.
- 13. _____ The only way human beings communicate is with language.
- 14. _____ Territorial behaviors generally involve physical fights between animals.
- 15. _____ Migrating animals generally follow the same route each year.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Any behavior that does not need to be learned is called a(n) _____ behavior.
- 17. Behaviors that help an animal survive or reproduce increase the animal's _____.
- 18. The gaping behavior of baby birds is an example of a(n) _____ behavior.
- 19. The biological _____ is a structure in the brain of many animals that controls circadian rhythms.
- 20. Animals that are _____ defend an area that has enough food for themselves and their offspring.

Short Answer

Answer the following questions in complete sentences.

- 21. Compare and contrast two different ways that animals learn new behaviors.
- 22. Explain how innate animal behaviors evolve.

CHAPTER **16** **Skin, Bones, and Muscles Assessments**

Chapter Outline

- 16.1 INTRODUCTION TO THE HUMAN BODY
 - 16.2 THE INTEGUMENTARY SYSTEM
 - 16.3 THE SKELETAL SYSTEM
 - 16.4 THE MUSCULAR SYSTEM
 - 16.5 SKIN, BONES, AND MUSCLES
-

16.1 Introduction to the Human Body

Lesson 16.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Functions of epithelial tissue include
 - a. secreting hormones.
 - b. absorbing substances.
 - c. protecting internal organs.
 - d. all of the above
2. The brain and spinal cord consist mainly of
 - a. connective tissue.
 - b. muscle tissue.
 - c. nervous tissue.
 - d. epithelial tissue.
3. Which human organ system carries wastes away from cells?
 - a. respiratory system
 - b. nervous system
 - c. digestive system
 - d. circulatory system
4. The human organ system that controls virtually all body activities is the
 - a. skeletal system.
 - b. muscular system.
 - c. nervous system.
 - d. none of the above
5. The condition in which the body's internal environment is kept stable is called
 - a. organization.
 - b. specialization.
 - c. homeostasis.
 - d. maintenance.

True or False

Write true if the statement is true or false if the statement is false.

6. _____ The basic units of structure and function of the human body are organs.
7. _____ Most human cells are specialized for specific functions.
8. _____ A tissue consists of four basic types of cells.
9. _____ The heart is an organ in the circulatory system.

10. _____ The average human adult consists of about a billion cells.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Bone is an example of _____ tissue.
12. _____ tissue includes the skin and lining of internal organs.
13. _____ tissue consists of cells that can send and receive electrical messages.
14. The type of tissue that consists of cells that can contract is _____ tissue.
15. A structure composed of two or more types of tissues that work together to do the same task is a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Compare and contrast connective tissue and nervous tissue.

16.2 The Integumentary System

Lesson 16.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The integumentary system includes the
 - skin.
 - nails.
 - hair.
 - all of the above
- Structures in the epidermis include
 - sebaceous glands.
 - hair follicles.
 - melanocytes.
 - all of the above
- How does melanin protect the dermis from ultraviolet light?
 - It reflects ultraviolet light.
 - It absorbs ultraviolet light.
 - It changes ultraviolet light to visible light.
 - It changes ultraviolet light to vitamin D.
- The dermis consists mainly of
 - epithelial tissue.
 - muscle tissue.
 - nervous tissue.
 - connective tissue.
- Which structures are found in the lower layer of skin?
 - nerve endings
 - blood vessels
 - sweat glands
 - all of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ The function of sebum is to waterproof the hair and skin.
- _____ The skin helps maintain homeostasis by regulating body temperature.
- _____ The main cause of acne is eating greasy foods.
- _____ Hair grows longer because it is made up of living cells.

10. _____ Sweat reaches the surface of the skin by traveling through hair follicles.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The outer layer of the skin is the _____.
12. The inner layer of the skin is the _____.
13. Sebaceous glands in the skin secrete _____.
14. The brown pigment in skin is _____.
15. Hair and nails consist mainly of the tough protein called _____.

Short Answer

Answer the following question in complete sentences.

16. Identify two functions of the skin, and explain how structures in the skin carry out these functions.

16.3 The Skeletal System

Lesson 16.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Components of the skeletal system include
 - bones.
 - cartilage.
 - ligaments.
 - all of the above
- Cartilage is a tough, flexible tissue that contains the protein
 - keratin.
 - cuticle.
 - collagen.
 - periosteum.
- Blood cells are produced by
 - bone marrow.
 - compact bone.
 - spongy bone.
 - cartilage.
- Why do the ends of long bones ossify later than other parts of the skeleton?
 - to cushion the ends of the bones
 - to prevent growing pains in the bones
 - to allow the bones to grow in width
 - to allow the bones to grow in length
- Which bones are connected by partly movable joints?
 - bones of the skull
 - bones of the ribcage
 - bones of the arms
 - bones of the legs

True or False

Write true if the statement is true or false if the statement is false.

- _____ An example of a ball-and-socket joint is the elbow.
- _____ Calcium and vitamin D are needed to keep bones strong.
- _____ People with osteoporosis have an increased risk of bone fractures.
- _____ A sprain occurs when a bone bends but doesn't break.

10. _____ The adult skeletal system contains 206 bones.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Bands of fibrous tissue that hold together bones of the skeleton are called _____.
12. Bone _____ is a soft tissue inside spongy bone that makes blood cells.
13. The process in which cartilage changes to bone is known as _____.
14. The type of bone tissue that is very dense and hard is _____ bone.
15. The type of bone tissue that contains many tiny pores is _____ bone.

Short Answer

Answer the following question in complete sentences.

16. Bones grow longer and change in other ways as a person gets older. The largest bone in the human body is the long bone in the upper leg, called the femur. Describe the life history of the femur, from the fetal stage to the adult.

16.4 The Muscular System

Lesson 16.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- To straighten your arm at the elbow, you would contract the
 - quadriceps muscle.
 - biceps muscle.
 - triceps muscle.
 - elbow muscle.
- Smooth muscle is
 - arranged in bundles.
 - striped.
 - involuntary.
 - two of the above
- The energy for a muscle contraction comes from
 - actin.
 - myosin.
 - ATP.
 - myofibrils.
- Which statement about cardiac muscle is false?
 - It causes the heart to beat.
 - It is under conscious control.
 - It is striated muscle.
 - none of the above
- Skeletal muscles are attached to bones by
 - ligaments.
 - cartilage.
 - muscle fibers.
 - tendons.

True or False

Write true if the statement is true or false if the statement is false.

- _____ The human heart is composed almost completely of muscle.
- _____ When a muscle contracts, it gets longer.
- _____ Actin filaments slide over myosin filaments when a muscle contracts.
- _____ Contractions of skeletal muscles are involuntary.

10. _____ Weight-bearing exercises increase muscle strength.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A muscle consists of long, thin cells called muscle _____.
12. Organelles that allow muscles to contract are called _____.
13. The type of muscle tissue in the walls of the heart is _____ muscle.
14. The type of muscle tissue in the walls of most internal organs is _____ muscle.
15. The most common type of muscle tissue in the body is _____ muscle.

Short Answer

Answer the following question in complete sentences.

16. Explain how you could use exercise to increase the strength of your cardiac muscle.

16.5 Skin, Bones, and Muscles

Chapter 16 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Functions of human connective tissue include
 - supporting the body.
 - making the heart beat.
 - absorbing nutrients.
 - digesting food.
- Which statement about melanocytes is false?
 - They are located in the epidermis.
 - They produce a brown pigment.
 - They are affected by ultraviolet light.
 - They secrete sweat.
- The human organ system that controls sensation is the
 - sensory system.
 - respiratory system.
 - nervous system.
 - muscular system.
- The dermis contains
 - sebaceous glands.
 - hair follicles.
 - blood vessels.
 - all of the above
- Bones at movable joints are held together by
 - tendons.
 - ligaments.
 - cartilage.
 - collagen.
- The mass of calcium in bones of the skeleton generally peaks around age
 - 1.
 - 12.
 - 15.
 - 30.
- Which of the following structures is smallest?
 - myofibril

- b. muscle fiber
- c. myosin filament
- d. muscle

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ The excretory system helps maintain homeostasis by keeping blood sugar at normal levels.
- 9. _____ A tissue consists of several types of specialized cells that perform the same function.
- 10. _____ Hair is a fiber that is made mainly of the tough protein keratin.
- 11. _____ The dermis is attached to the epidermis by collagen fibers.
- 12. _____ Compact bone contains bone marrow.
- 13. _____ Bones of the rib cage are held together by immovable joints.
- 14. _____ Types of striated muscle include skeletal muscle and cardiac muscle.
- 15. _____ Types of muscle under voluntary control include skeletal muscle and smooth muscle.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Blood is an example of _____ tissue.
- 17. The upper layer of skin consists mainly of _____ tissue.
- 18. The skin is the major organ of the _____ system.
- 19. The ends of two bones where they meet are covered with _____.
- 20. The outer layer of bone is a tough, fibrous membrane called _____.

Short Answer

Answer the following questions in complete sentences.

- 21. Explain how the body's largest organ helps to maintain homeostasis.
- 22. Explain how the skeletal and muscular systems work together to move the body.

CHAPTER **17**

Food and the Digestive System Assessments

Chapter Outline

- 17.1 FOOD AND NUTRIENTS
 - 17.2 CHOOSING HEALTHY FOODS
 - 17.3 THE DIGESTIVE SYSTEM
 - 17.4 FOOD AND DIGESTIVE SYSTEM
-

17.1 Food and Nutrients

Lesson 17.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The six major types of nutrients include
 - starches.
 - amino acids.
 - lipids.
 - all of the above
- Macronutrients include all of the following except
 - carbohydrates.
 - water.
 - proteins.
 - vitamins.
- The food we eat provides our body with
 - building materials.
 - energy.
 - nutrients.
 - all of the above
- Which type of food is a good source of sugar?
 - milk
 - fish
 - beans
 - meat
- The body needs lipids for
 - cell membranes.
 - muscles.
 - enzymes.
 - all of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ All nutrients provide the body with energy.
- _____ Your body cannot produce any of the vitamins it needs.
- _____ The mineral sodium is needed for normal muscle function.
- _____ Vitamin K is needed for normal nerve function.

10. _____ Proteins can provide the body with energy.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The state in which the body does not contain enough water is called _____.
12. Any nutrient the body needs in relatively small amounts is known as a(n) _____.
13. Carbohydrates include sugar, starch, and _____.
14. _____ are nutrients that consist of amino acids.
15. Any nutrient the body needs in relatively great amounts is known as a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Explain the roles of proteins in the body, and identify good food sources of these nutrients.

17.2 Choosing Healthy Foods

Lesson 17.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The five food groups represented by MyPlate include
 - water.
 - fruits.
 - fiber.
 - two of the above
- Which of the following is a proper guideline for using MyPlate?
 - Fill half of your plate fruits and vegetables.
 - Eat only one meal a day.
 - Make a third of your grains whole grains.
 - Put potato chips in the vegetables group.
- What information is found on a nutrition facts label?
 - serving size
 - main ingredient
 - amounts of all nutrients
 - all of the above
- A food is considered high in a given nutrient if its percent daily value for that nutrient is at least
 - 5 percent.
 - 10 percent.
 - 15 percent.
 - 20 percent.
- People who are obese are more likely to
 - have high blood pressure.
 - develop diabetes.
 - die at a younger age.
 - all of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Cheese is placed in the protein food group.
- _____ Guidelines for using MyPlate include avoiding oversized portions.
- _____ You can tell whether a food contains whole grains by reading the nutrition facts label.
- _____ Physical activity is an important part of balanced eating.

10. _____ Obesity is diagnosed on the basis of body mass index.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ is a diagram showing how to choose foods in five food groups for balanced eating at each meal.
12. The item listed first on a food's ingredient list is the _____ ingredient.
13. _____ is a disorder characterized by a high percentage of body fat.
14. The _____ food group includes foods such as pasta and cereal.
15. The _____ food group includes foods such as carrots and broccoli.

Short Answer

Answer the following question in complete sentences.

16. Explain how to use MyPlate for balanced eating.

17.3 The Digestive System

Lesson 17.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Food passes through all of these digestive organs except the
 - mouth.
 - stomach.
 - small intestine.
 - pancreas.
- In which organ(s) does chemical digestion take place?
 - mouth
 - stomach
 - small intestine
 - all of the above
- Which type of molecule does pepsin help digest?
 - protein
 - carbohydrate
 - lipid
 - RNA
- Which statement about bacteria in the large intestine is false?
 - Trillions of bacteria normally live in the large intestine.
 - Most of the bacteria in the large intestine are beneficial.
 - Some of the bacteria in the large intestine make vitamins.
 - none of the above
- Which structures increase the ability of the small intestine to absorb nutrients?
 - villi
 - glands
 - sphincters
 - ducts

True or False

Write true if the statement is true or false if the statement is false.

- _____ The gall bladder stores bile acids from the liver.
- _____ Food moves through the digestive tract by gravity.
- _____ Digestive enzymes speed up mechanical digestion.
- _____ Lipase is an enzyme that helps digest fat.

10. _____ Absorption takes place only in the small intestine.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Solid food waste that passes out of the body through the anus is called _____.
12. The _____ is the digestive organ that carries food from the pharynx to the stomach.
13. The organ that secretes the digestive enzyme lipase is the _____.
14. The organ that secretes the digestive enzyme pepsin is the _____.
15. The part of the small intestine where most chemical digestion takes place is the _____.

Short Answer

Answer the following question in complete sentences.

16. Relate the structure and functions of the small intestine.

17.4 Food and Digestive System

Chapter 17 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The macronutrient that makes up muscles and carries substances in the blood is
 - a. carbohydrates.
 - b. proteins.
 - c. lipids.
 - d. water.
2. Good food sources of lipids include
 - a. fish.
 - b. fruits.
 - c. vegetables.
 - d. all of the above
3. Vitamin E is needed for
 - a. normal nerve function.
 - b. strong bones and teeth.
 - c. healthy cell membranes.
 - d. normal blood clotting.
4. A food is low in a specific nutrient if its percent daily value for that nutrient is
 - a. less than 20 percent.
 - b. no more than 15 percent.
 - c. about 10 percent.
 - d. 5 percent or less.
5. Which statement about obesity is false?
 - a. It is diagnosed on the basis of percent body fat.
 - b. It is associated with many health problems.
 - c. It may lead to the development of diabetes.
 - d. It is less common in young people today than in the past.
6. What is the role of sphincters in the GI tract?
 - a. They keep food moving in just one direction.
 - b. They release digestive enzymes.
 - c. They absorb nutrients from the small intestine.
 - d. none of the above
7. Foodborne illness
 - a. is commonly called food poisoning.

- b. is caused by eating contaminated food.
- c. may cause cramping and vomiting.
- d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Scurvy is a disease caused by a deficiency of vitamin C.
- 9. _____ A gram of sugar provides more energy than a gram of protein.
- 10. _____ Beans are placed in the vegetables food group.
- 11. _____ The item listed first on a nutrition facts label is the size of a single serving.
- 12. _____ If you eat less than 2000 Calories a day, the percent daily values on a nutrition facts label are too high.
- 13. _____ Foods that commonly cause food allergies include milk, shellfish, and eggs.
- 14. _____ The liver secretes the digestive enzyme called lipase.
- 15. _____ The duodenum is the part of the small intestine where most absorption takes place.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Micronutrients include vitamins and _____.
- 17. _____ in the diet helps keep food waste moist so it can pass easily out of the body.
- 18. Food groups represented by MyPlate include grains, fruits, vegetables, protein, and _____.
- 19. _____ is a digestive enzyme produced in the mouth that helps digest carbohydrates.
- 20. The digestive organ that completes mechanical digestion is the _____.

Short Answer

Answer the following questions in complete sentences.

- 21. Explain why balanced eating depends on both what you eat and how much you eat.
- 22. Summarize what happens to food as it moves through the gastrointestinal tract, from the mouth to the anus.

CHAPTER

18

Cardiovascular System Assessments

Chapter Outline

- 18.1 OVERVIEW OF THE CARDIOVASCULAR SYSTEM
 - 18.2 HEART AND BLOOD VESSELS
 - 18.3 BLOOD
 - 18.4 CARDIOVASCULAR SYSTEM
-

18.1 Overview of the Cardiovascular System

Lesson 18.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Substances carried in the blood include
 - carbon dioxide.
 - glucose.
 - oxygen.
 - all of the above
- The systemic circulation
 - is the shorter loop of the cardiovascular system.
 - carries oxygen-rich blood from the lungs to the heart.
 - delivers oxygen to cells throughout the body.
 - two of the above
- Carbon dioxide and other cellular wastes are picked up by the blood from cells throughout the body and carried to the
 - kidneys.
 - heart.
 - lungs.
 - all of the above
- The cardiovascular system can cool the body by
 - increasing blood flow to the body's surface.
 - decreasing the metabolic rate of body cells.
 - pumping less blood to the skin.
 - slowing down the heart rate.
- Both the pulmonary and the systemic circulations carry blood
 - to cells throughout the body.
 - through the lungs.
 - through the heart.
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Organs of the cardiovascular system include the heart, blood vessels, and lungs.
- _____ The cardiovascular system helps maintain homeostasis by regulating body temperature.
- _____ Oxygen-rich blood flows from the heart to the lungs.

9. _____ Blood that flows through the systemic circulation never flows through the pulmonary circulation.
10. _____ Substances transported by the blood include hormones and nutrients.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The longer of the two loops that make up the cardiovascular system is called the _____ circulation.
12. Blood is a liquid _____ tissue.
13. The major function of the cardiovascular system is _____.
14. The function of the _____ is to pump blood.
15. In the _____ circulation, blood moves back and forth between cells of the body and the heart.

Short Answer

Answer the following question in complete sentences.

16. Identify three substances that are transported by the cardiovascular system. Explain where the substances are picked up by the blood and where they are taken.

18.2 Heart and Blood Vessels

Lesson 18.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Which blood vessels carry blood away from the heart?
 - a. arteries
 - b. veins
 - c. venules
 - d. two of the above

1. The left atrium of the heart receives blood from the
 - a. right ventricle.
 - b. right atrium.
 - c. left ventricle.
 - d. lungs.

1. The right ventricle pumps blood to the
 - a. left ventricle.
 - b. right atrium.
 - c. right ventricle.
 - d. lungs.

1. Which blood vessels contain valves?
 - a. veins
 - b. arteries
 - c. arterioles
 - d. capillaries

1. Which factors are associated with an increased risk of cardiovascular diseases?
 - a. older age
 - b. female gender
 - c. low blood pressure
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. _____ Blood in the pulmonary circulation passes through the right and left atria.
7. _____ Each time the heart beats, the ventricles contract first, followed by the atria.
8. _____ Veins must have muscular walls to withstand the pressure of blood pumped by the heart.
9. _____ Arteries generally carry oxygen-rich blood.
10. _____ When blood vessels dilate, it increases the amount of blood they can carry.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The part of the heart that controls contractions of cardiac muscles is the _____.
12. Both ventricles of the heart receive blood from the _____.
13. Blood vessels that connect arterioles and venules are called _____.
14. The heart contains _____ that prevent the backflow of blood from ventricles to atria.
15. The largest artery in the body is named the _____.

Short Answer

Answer the following question in complete sentences.

16. Define atherosclerosis, and explain its connection to cardiovascular disease.

18.3 Blood

Lesson 18.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Blood plasma is a
 - chemical that helps blood clot.
 - golden-yellow liquid in blood.
 - disorder in which the blood lacks oxygen.
 - protein carried by red blood cells.
- Which statement about red blood cells is false?
 - They are spherical in shape.
 - There are trillions of them in normal blood.
 - They contain iron.
 - none of the above
- What are phagocytes?
 - cell fragments that form blood clots
 - white blood cells that engulf microorganisms
 - proteins that bind with oxygen in the blood
 - molecules that determine blood type
- All of the following are normal functions of blood except
 - controlling the body's pH.
 - repairing body tissues.
 - helping regulate body temperature.
 - causing agglutination.
- Which disease of the blood is a form of cancer?
 - hemophilia
 - anemia
 - leukemia
 - sickle-cell disease

True or False

Write true if the statement is true or false if the statement is false.

- _____ The cardiovascular system normally contains about 2.5 liters of blood.
- _____ Antigens on your red blood cells determine your blood type.
- _____ Dissolved substances in blood include red and white blood cells.
- _____ One cause of anemia is excessive loss of blood due to injury or surgery.

10. _____ Blood in veins carries oxygen and nutrients to all the cells of the body.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ is a genetic disorder in which blood lacks a normal clotting factor.
12. _____ is a condition in which blood cannot carry adequate oxygen to cells.
13. Small, sticky cell fragments that help blood clot are called _____.
14. Red blood cells can carry oxygen because they contain the protein called _____.
15. If your red blood cells carry both antigen A and antigen B, you have blood type _____.

Short Answer

Answer the following question in complete sentences.

16. Relate the components of blood to blood's functions.

18.4 Cardiovascular System

Chapter 18 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The pulmonary circulation carries blood between the heart and
 - small intestine.
 - body cells.
 - kidneys.
 - lungs.
- Which statement about blood is false?
 - Blood is a liquid connective tissue.
 - Blood must keep circulating to sustain life.
 - Blood is an organ of the cardiovascular system.
 - Blood carries substances needed for homeostasis.
- The smallest blood vessels are
 - arteries.
 - arterioles.
 - capillaries.
 - venules.
- Chambers of the heart that are part of the systemic circulation include the
 - right atrium.
 - left atrium.
 - right ventricle.
 - two of the above
- The leading cause of death in U.S. adults is
 - atherosclerosis.
 - sickle-cell disease.
 - cancer of the heart.
 - coronary heart disease.
- Possible causes of anemia include too
 - much bleeding from injury or surgery.
 - many red blood cells in the blood.
 - much iron in the diet.
 - all of the above
- Disorders of the blood caused partly or totally by genes are thought to include
 - hemophilia.

- b. sickle-cell disease.
- c. leukemia.
- d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Substances transported in the blood include hormones and nutrients.
- 9. _____ The cardiovascular system helps regulate body temperature.
- 10. _____ The pulmonary circulation carries only oxygen-rich blood.
- 11. _____ Smoking increases the risk of developing cardiovascular diseases.
- 12. _____ The top two chambers of the heart are called the right and left ventricles.
- 13. _____ Leukemia is the most common cancer in children.
- 14. _____ Agglutination occurs when platelets fail to form a blood clot.
- 15. _____ Rhesus blood type is an inherited trait.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. The shorter of the two loops of the cardiovascular system is the _____ circulation.
- 17. When less blood flows to the body's surface, it helps the body conserve _____.
- 18. The heart consists mainly of _____ muscle tissue.
- 19. Muscular blood vessels that carry mainly oxygen-rich blood are called _____.
- 20. Each _____ blood cell contains millions of molecules of hemoglobin.

Short Answer

Answer the following questions in complete sentences.

- 21. Explain how the cardiovascular system is like a transportation system.
- 22. Explain the role of the heart in the two loops of the cardiovascular system.

CHAPTER **19** Respiratory and Excretory Systems Assessments

Chapter Outline

- 19.1 THE RESPIRATORY SYSTEM
 - 19.2 THE EXCRETORY SYSTEM
 - 19.3 RESPIRATORY AND EXCRETORY SYSTEMS
-

19.1 The Respiratory System

Lesson 19.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- When you inhale, air passes from your pharynx to your
 - bronchioles.
 - trachea.
 - larynx.
 - bronchi.
- When you exhale, why does carbon dioxide diffuse from the blood into the air in the lungs?
 - Carbon dioxide is more concentrated in the blood than in the air.
 - Carbon dioxide is forced out of the blood by blood pressure.
 - Carbon dioxide is pushed out of the blood by the diaphragm.
 - none of the above
- Smoking causes or makes you more susceptible to
 - asthma.
 - emphysema.
 - lung cancer.
 - all of the above
- Cellular respiration depends on respiration because cellular respiration
 - produces oxygen.
 - requires glucose.
 - requires carbon dioxide.
 - none of the above
- Inhaling occurs when the
 - size of the chest increases.
 - diaphragm relaxes.
 - air pressure in the lungs increases.
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ The lungs are the main organs of the respiratory system.
- _____ When the diaphragm contracts, air flows out of the lungs.
- _____ Pneumonia may be caused by an infection or an injury to the lungs.
- _____ Particles in air are trapped by hairs in the nose and cilia in the bronchi.

10. _____ During an asthma attack, the bronchioles widen and produce less mucus.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The trachea divides as it enters the lungs to form the right and left _____.
12. The tiny air sacs where gas exchange takes place in the lungs are called _____.
13. The _____ is a large, sheet-like muscle below the lungs that is needed for breathing.
14. The process of moving air into and out of the lungs is called _____.
15. When you inhale, oxygen is _____ concentrated in the blood than it is in the air.

Short Answer

Answer the following question in complete sentences.

16. Explain how gas exchange occurs between the blood and body cells.

19.2 The Excretory System

Lesson 19.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The lungs are part of the respiratory system and the
 - a. digestive system.
 - b. urinary system.
 - c. excretory system.
 - d. muscular system.
2. The part of a nephron that filters blood is the
 - a. urethra.
 - b. tubule.
 - c. glomerulus.
 - d. urinary bladder.
3. Blood containing wastes enters the kidneys through
 - a. ureters.
 - b. veins.
 - c. arteries.
 - d. sphincters.
4. Hormones secreted by the kidneys help regulate
 - a. blood pressure.
 - b. the production of white blood cells.
 - c. blood clotting.
 - d. two of the above
5. What does a hemodialysis machine do?
 - a. It controls blood sugar in people with diabetes.
 - b. It treats urinary tract infections.
 - c. It filters wastes out of the blood.
 - d. It removes stones from the kidneys.

True or False

Write true if the statement is true or false if the statement is false.

6. _____ The liver removes excess water and salts from the blood.
7. _____ Each kidney contains more than a million nephrons.
8. _____ Some of the water filtered out of the blood by nephrons is reabsorbed.
9. _____ The bladder is the urinary system organ where urine forms.

10. _____ The only cure for kidney failure is a kidney transplant.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The _____ are the main organs of the urinary system.
12. The tube that carries urine out of the body is the _____.
13. _____ are tiny structures in the kidneys that filter blood and form urine.
14. Urine travels from the kidneys to the urinary bladder via the _____.
15. The kidneys, large intestine, and skin are all organs of _____.

Short Answer

Answer the following question in complete sentences.

16. Explain what urine is, how it forms, and how it is excreted from the body.

19.3 Respiratory and Excretory Systems

Chapter 19 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which organ is part of both the respiratory and the excretory systems?
 - kidney
 - heart
 - lung
 - liver
- When you exhale, air passes from your trachea to your
 - pharynx.
 - larynx.
 - bronchi.
 - nose.
- Gas exchange between the blood and the air takes place in the
 - tubules.
 - alveoli.
 - bronchioles.
 - ureters.
- Any process in which excess water or waste is removed from the body is called
 - elimination.
 - urination.
 - excretion.
 - exhalation.
- The tiny functional units of the kidneys are the
 - cilia.
 - capillaries.
 - nephrons.
 - urethras.
- Urine leaves the body when a
 - sphincter opens.
 - ureter dilates.
 - tubule relaxes.
 - glomerulus fills.
- A kidney structure that collects excess water and wastes is a(n)
 - ureter.

- b. bladder.
- c. tubule.
- d. glomerulus.

True or False

Write true if the statement is true or false if the statement is false.

- 8. ____ Gas exchange between the blood and cells occurs by active transport.
- 9. ____ Air moves into or out of the lungs because of differences in air pressure.
- 10. ____ Carbon dioxide from cellular respiration is excreted in urine.
- 11. ____ Diseases of the respiratory system include the common cold and emphysema.
- 12. ____ The main way to keep your respiratory system healthy is to avoid smoking.
- 13. ____ A person can live a normal, healthy life with just one kidney.
- 14. ____ One function of the kidneys is to stimulate the production of blood platelets.
- 15. ____ Hemodialysis is used to treat kidney failure.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Each bronchiole in the lungs ends in a cluster of ____.
- 17. Breathing out occurs when the diaphragm ____.
- 18. The main function of the urinary system is to filter wastes and excess ____ from the blood.
- 19. Blood containing wastes enters each kidney through a(n) ____.
- 20. The kidneys help maintain homeostasis by excreting urine and secreting ____.

Short Answer

Answer the following questions in complete sentences.

- 21. The lungs are the main organs of the respiratory system, and the kidneys are the main organs of the urinary system. Explain why both organs are also part of the excretory system.
- 22. Explain why a person with untreated diabetes may eventually need a kidney transplant.

CHAPTER **20**

Controlling the Body Assessments

Chapter Outline

- 20.1 THE NERVOUS SYSTEM
 - 20.2 THE SENSES
 - 20.3 THE ENDOCRINE SYSTEM
 - 20.4 CONTROLLING THE BODY
-

20.1 The Nervous System

Lesson 20.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. A bundle of nerve cells make up a(n)
 - a. neuron.
 - b. nerve.
 - c. axon.
 - d. lobe.
2. The type of neuron that carries messages from the brain to internal organs and glands is a(n)
 - a. motor neuron.
 - b. sensory neuron.
 - c. organ neuron.
 - d. endocrine neuron.
3. The brain stem
 - a. is the smallest of the three main part of the brain.
 - b. carries nerve impulses between the brain and spinal cord.
 - c. controls involuntary body functions such as digestion.
 - d. all of the above
4. The part of the cerebrum that controls hearing is the
 - a. frontal lobe.
 - b. parietal lobe.
 - c. temporal lobe.
 - d. occipital lobe.
5. Which part of the peripheral nervous system controls muscles that are under voluntary control?
 - a. sympathetic division
 - b. parasympathetic division
 - c. somatic nervous system
 - d. autonomic nervous system

True or False

Write true if the statement is true or false if the statement is false.

6. ____ A stroke occurs when a blood clot blocks blood flow to part of the brain.
7. ____ Psychoactive drugs include antidepressants and caffeine.
8. ____ The cerebellum is divided down the middle to form right and left hemispheres.
9. ____ The spinal cord is part of the peripheral nervous system.

10. _____ The sensory division of the peripheral nervous system carries messages away from the brain.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The largest part of the human brain is the _____.
12. The part of the human brain that controls body position and balance is the _____.
13. A(n) _____ of a neuron receives nerve impulses from other cells.
14. The _____ of a neuron passes on nerve impulses to other cells.
15. The type of nerve cell that carries nerve impulses between sensory and motor neurons is a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Explain how nerve impulses travel within and between neurons.

20.2 The Senses

Lesson 20.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- In the eye, light is focused by the
 - retina.
 - cornea.
 - lens.
 - two of the above
- Which statement about hyperopia is true?
 - It can be corrected with convex lenses.
 - It happens because the eyeball is too long.
 - It occurs when images focus in front of the retina.
 - two of the above
- Nerve impulses travel from the ears to the brain through the
 - optic nerve.
 - spinal cord.
 - auditory nerve.
 - Eustachian tube.
- How many different tastes can taste buds detect?
 - 5
 - 10
 - 15
 - 1,000
- What happens when sound waves strike the eardrum?
 - It vibrates.
 - It sounds like a drum.
 - It sends nerve impulses to the brain.
 - none of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ If you lost vision in one eye, you could still see in three dimensions.
- _____ When light reaches the eye, it passes first through the iris.
- _____ The middle ear contains the cochlea and semicircular canals.
- _____ Nerve cells that sense touch are most numerous in the skin.

10. _____ Rods are light-sensing cells in the eye that can sense dim light.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The _____ is an opening in the center of the eye that lets light enter the eye.
12. If you have _____, you can see nearby objects clearly but distant objects appear blurry.
13. Functions of the ear include hearing and maintaining _____.
14. Images normally form in the eye on a layer of cells called the _____.
15. _____ are light-sensing cells in the eye that detect different colors of light.

Short Answer

Answer the following question in complete sentences.

16. Explain the roles of the ears and brain in hearing.

20.3 The Endocrine System

Lesson 20.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All endocrine glands secrete hormones into
 - the bloodstream.
 - local tissues.
 - the digestive system.
 - target cells.
- The feedback loop that controls the production of thyroxin includes the
 - pituitary gland.
 - thyroid gland.
 - hypothalamus.
 - all of the above
- Which endocrine gland secretes luteinizing hormone?
 - pituitary gland
 - ovary
 - testis
 - two of the above
- The hormone called ACTH
 - acts on the thyroid gland.
 - is secreted by pituitary gland.
 - stimulates the secretion of sex hormones.
 - causes cells to make proteins and grow.
- Which statement about gigantism is true?
 - It is characterized by excessive growth during childhood.
 - It occurs when blood levels of thyroxin are too high.
 - It may be caused by a tumor in the thyroid gland.
 - all of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Follicle-stimulating hormone is secreted by the gonads.
- _____ The thymus gland is part of the endocrine system.
- _____ The output of most endocrine hormones is controlled by positive feedback loops.
- _____ Type 1 diabetes occurs when the immune system attacks cells of the adrenal glands.

10. _____ The hormone adrenaline prepares the body for emergencies.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The master gland of the endocrine system is the _____ gland.
12. The _____ links the brain and the endocrine system.
13. The gonads include testes in males and _____ in females.
14. The pancreatic hormone that helps cells absorb glucose from the blood is _____.
15. _____ is a pituitary hormone that stimulates the mammary glands to produce milk.

Short Answer

Answer the following question in complete sentences.

16. A home heating system is controlled by a thermostat. It turns the furnace off or on, depending on air temperature in the home. How is this similar to the way the endocrine system is controlled?

20.4 Controlling the Body

Chapter 20 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The two main divisions of the peripheral nervous system are the motor division and the
 - somatic division.
 - sensory division.
 - sympathetic division.
 - parasympathetic division.
- The function of the autonomic nervous system is to carry messages from
 - sense organs and internal organs to the brain.
 - the brain to muscles under voluntary control.
 - the brain to internal organs and glands.
 - none of the above
- Common causes of paralysis include
 - strokes.
 - epilepsy.
 - spinal cord injuries.
 - two of the above
- The colored part of the eye is the
 - pupil.
 - cornea.
 - retina.
 - iris.
- If you have a problem with the rods in your eyes, you might have trouble seeing
 - different colors.
 - in bright light.
 - at night.
 - two of the above
- The part of the ear where vibrations are changed to nerve impulses is the
 - eardrum.
 - ossicles.
 - cochlea.
 - middle ear.
- Pituitary gland hormones include all of the following except
 - growth hormone.

- b. prolactin.
- c. luteinizing hormone.
- d. adrenaline.

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ The cell body of a neuron contains the nucleus and other organelles.
- 9. _____ Interneurons transmit nerve impulses across the synapse between two neurons.
- 10. _____ The right and left hemispheres of the cerebrum are connected by a thick bundle of axons.
- 11. _____ The lens is a clear, protective covering on the outside of the eye.
- 12. _____ Myopia can be corrected with convex lenses.
- 13. _____ The parts of the ears that help you maintain your balance are the semicircular canals.
- 14. _____ Follicle-stimulating hormone stimulates the ovaries to develop mature eggs.
- 15. _____ Diseases of the endocrine system are extremely rare.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. The _____ is the part of the human brain that controls speaking and hearing.
- 17. A nerve cell that carries messages is called a(n) _____.
- 18. The _____ nerve carries messages about images from the eyes to the brain.
- 19. The vision problem in which distant objects can be seen clearly but nearby objects appear blurry is called _____.
- 20. Any gland that secretes its hormones into the bloodstream is a(n) _____ gland.

Short Answer

Answer the following questions in complete sentences.

- 21. A person with normal, functioning eyes can no longer see after suffering a brain injury. The eyes and optic nerves were not affected by the injury. Explain why the person can no longer see and which part of the brain was most likely injured.
- 22. Compare and contrast how the nervous and endocrine systems transmit messages through the body.

CHAPTER

21

Diseases and the Body's Defenses Assessments

Chapter Outline

- 21.1 INFECTIOUS DISEASES
 - 21.2 NONINFECTIOUS DISEASES
 - 21.3 FIRST TWO LINES OF DEFENSE
 - 21.4 IMMUNE SYSTEM DEFENSES
 - 21.5 DISEASE AND THE BODY'S DEFENSES
-

21.1 Infectious Diseases

Lesson 21.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The disease called genital warts is
 - a. an infectious disease.
 - b. caused by the virus HPV.
 - c. spread through sexual contact.
 - d. all of the above
2. Diseases caused by bacteria include
 - a. malaria.
 - b. syphilis.
 - c. measles.
 - d. two of the above
3. Diseases that can spread by airborne droplets include
 - a. ringworm.
 - b. influenza.
 - c. tinea.
 - d. giardiasis.
4. The vector that spreads malaria is a
 - a. tick.
 - b. spider.
 - c. mosquito.
 - d. none of the above
5. All of the following diseases can be prevented with vaccines except
 - a. whooping cough.
 - b. mumps.
 - c. chicken pox.
 - d. the common cold.

True or False

Write true if the statement is true or false if the statement is false.

6. ____ When you cough or sneeze, you should cover your mouth and nose with your hand.
7. ____ The best way to prevent diseases spread by vectors is to avoid contact with the vectors.
8. ____ Infectious diseases are contagious because they are caused by pathogens.
9. ____ A disease that can potentially be cured with antibiotics is strep throat.

10. _____ Athlete's foot is a common infectious disease caused by protozoa.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A(n) _____ is any organism or virus that causes disease in another living thing.
12. The type of drug that is used to cure a bacterial disease is a(n) _____.
13. The type of pathogen that causes chicken pox and smallpox is a(n) _____.
14. Any organism that carries pathogens from one organism to another is called a(n) _____.
15. Some infectious diseases, including measles, can be prevented by receiving one or more doses of a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Choose a common human infectious disease. Identify the type of pathogen that causes it, how it spreads, and what you can do to reduce your risk of getting it.

21.2 Noninfectious Diseases

Lesson 21.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Smoking increases the risk of cancer of the
 - lung.
 - throat.
 - urinary bladder.
 - all of the above
- The most common type of cancer in adult females is cancer of the
 - lung.
 - breast.
 - uterus.
 - ovary.
- Which statement about leukemia is false?
 - It is the most common cancer in children.
 - It is a cancer of white blood cells.
 - It makes up about two thirds of all childhood cancers.
 - none of the above
- Type 1 diabetes
 - is an autoimmune disease.
 - usually develops in adulthood.
 - is more likely in people who are overweight.
- can be prevented with a vaccination.
- Diseases caused by the immune system attacking normal cells or harmless substances include
 - allergies.
 - multiple sclerosis.
 - rheumatoid arthritis.
 - all of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Most cancers are caused by mutations in genes that control the cell cycle.
- _____ The most common type of cancer in adult males is cancer of the penis.
- _____ Most cases of lung cancer develop in people who smoke tobacco.
- _____ One of the warning signs of cancer is a sore that doesn't heal.

10. _____ In type 2 diabetes, the pancreas can no longer make insulin.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any disease that is not contagious is called a(n) _____ disease.
12. Untreated diabetes leads to high levels of _____ in the blood.
13. _____ is any disease in which cells divide out of control.
14. Any disease caused by the immune system attacking normal body cells is called a(n) _____ disease.
15. Anything in the environment that causes cancer is known as a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Identify two autoimmune diseases, describe their symptoms, and explain what causes them.

21.3 First Two Lines of Defense

Lesson 21.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Biological barriers to pathogens are
 - a. responses such as inflammation.
 - b. the skin and mucous membranes.
 - c. chemicals such as hydrochloric acid.
 - d. bacteria that live in or on the human body.
2. Your body's first line of defense against pathogens includes
 - a. three types of barriers.
 - b. white blood cells called phagocytes.
 - c. a higher-than-normal body temperature.
 - d. all of the above
3. Few pathogens are able to grow in urine because it is too
 - a. basic.
 - b. warm.
 - c. acidic.
 - d. two of the above
4. What causes inflammation in damaged tissue?
 - a. chemicals released when tissue is damaged
 - b. constriction of blood vessels near damaged tissue
 - c. development of a fever in damaged tissue
 - d. phagocytosis of damaged tissue
5. How do phagocytes help fight an infection?
 - a. They engulf and destroy pathogens.
 - b. They release chemicals that cause a fever.
 - c. They are a physical barrier to pathogens.
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ The body's second line of defense includes the production of mucus.
7. ____ Saliva and tears contain enzymes that can kill bacteria.
8. ____ Damaged tissue becomes red and warm because of increased blood flow to the area.
9. ____ Phagocytes kill pathogens only if the pathogens are circulating in the blood.

10. _____ A fever is a sign that your body is losing its fight against an infection.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Sweat contains the enzyme _____, which breaks down the cell walls of bacteria.
12. The process in which white blood cells engulf and destroy pathogens is called _____.
13. The organ that is the body's most important barrier to pathogens is the _____.
14. _____ are tiny, hair-like projections that cover mucous membranes and sweep pathogens toward body openings.
15. _____ is a reaction to infection or injury that causes redness, warmth, and pain.

Short Answer

Answer the following question in complete sentences.

16. Compare and contrast your body's first and second lines of defense against pathogens.

21.4 Immune System Defenses

Lesson 21.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. What is the function of the thymus gland?
 - a. It stores T cells while they mature.
 - b. It produces white blood cells.
 - c. It filters pathogens from lymph.
 - d. two of the above
2. How does lymph circulate through lymphatic vessels?
 - a. The heart pumps lymph through the vessels.
 - b. Gravity moves lymph through the vessels.
 - c. Muscle contractions move lymph through the vessels.
 - d. none of the above
3. All lymphocytes
 - a. are produced in bone marrow.
 - b. mature in bone marrow.
 - c. destroy damaged cells.
 - d. become memory cells.
4. Any protein that the body recognizes as either self or nonself is called a(n)
 - a. antibody.
 - b. allergen.
 - c. antigen.
 - d. carcinogen.
5. The immune response launched by killer T cells against pathogens involves the
 - a. release of toxins.
 - b. destruction of infected cells.
 - c. production of antibodies.
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ The majority of lymphocytes are in the lymphatic system
7. ____ B cells respond to pathogens that are inside infected cells.
8. ____ Helper T cells release chemicals that switch on B cells and killer T cells.
9. ____ The only way to develop immunity to an infectious disease is by vaccination.

10. _____ Vaccines have been developed to prevent measles, mumps, and chicken pox.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ is a liquid that normally leaks out of tiny blood vessels into tissues.
12. The general term for the type of white blood cell involved in an immune response is _____.
13. The abdominal organ that filters pathogens out of the blood is the _____.
14. _____ are immune system structures that trap pathogens in the throat.
15. B cells respond to pathogens by producing molecules called _____.

Short Answer

Answer the following question in complete sentences.

16. Explain how B cells and phagocytes work together to fight an infection.

21.5 Disease and the Body's Defenses

Chapter 21 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The flu is
 - a noninfectious disease
 - caused by a virus.
 - spread by a vector.
 - two of the above
- Which disease can you get by drinking contaminated water?
 - tetanus
 - small pox
 - giardiasis
 - ringworm
- The most common type of cancer in children is
 - lung cancer.
 - skin cancer.
 - leukemia.
 - brain cancer.
- Which disease is caused by the immune system attacking normal cells of the pancreas?
 - multiple sclerosis
 - pancreatic cancer
 - type 1 diabetes
 - type 2 diabetes
- The body's second line of defense against pathogens includes
 - inflammation.
 - fever.
 - phagocytosis.
 - all of the above
- What is the function of the spleen?
 - It stores B cells while they mature.
 - It produces killer and helper T cells.
 - It filters lymphocytes out of lymph.
 - none of the above
- The immune response of B cells includes
 - making holes in the membranes of infected cells.

- b. producing large molecules called antibodies.
- c. releasing chemicals that switch on T cells.
- d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Human papilloma virus is a pathogen that spreads through sexual contact.
- 9. _____ Some types of cancer are caused by viruses.
- 10. _____ Rheumatoid arthritis is a disease in which the immune system attacks nerve cells.
- 11. _____ The symptoms of allergies are caused by allergens such as plant pollens.
- 12. _____ Lysozyme is a toxin produced by lymphocytes to kill infected cells.
- 13. _____ Inflammation occurs due to chemicals released when tissue is damaged.
- 14. _____ Most B and T cells die after an infection has been brought under control.
- 15. _____ Lymph nodes are small structures that produce the fluid called lymph.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Types of pathogens that cause human diseases include bacteria, viruses, protozoa, and _____.
- 17. A mass of abnormal tissue formed by cancer cells is called a(n) _____.
- 18. A(n) _____ is caused by the immune system reacting to a harmless substance as though it was a pathogen.
- 19. The body's largest organ and most important defense against disease is the _____.
- 20. Vaccinations are given so that people will develop _____ to particular pathogens.

Short Answer

Answer the following questions in complete sentences.

- 21. Compare and contrast infectious and noninfectious diseases, and identify three examples of each type of disease.
- 22. Explain how immune responses differ from the first two lines of defense of the body against pathogens.

CHAPTER **22** **Reproductive Systems and
Life Stages Assessments**

Chapter Outline

- 22.1 MALE REPRODUCTIVE SYSTEM**
 - 22.2 FEMALE REPRODUCTIVE SYSTEM**
 - 22.3 REPRODUCTION AND LIFE STAGES**
 - 22.4 REPRODUCTIVE SYSTEM HEALTH**
 - 22.5 REPRODUCTIVE SYSTEMS AND LIFE STAGES**
-

22.1 Male Reproductive System

Lesson 22.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All of the following are needed for reproduction in males except the
 - testes.
 - penis.
 - epididymis.
 - ureters.
- Which of the following structures is part of two different organ systems in males?
 - vas deferens
 - prostate gland
 - urethra
 - none of the above
- Which statement about sperm is false?
 - Sperm are produced in the testes.
 - Maturation of sperm takes place in the vas deferens.
 - It takes up to 2 months for sperm to form and mature.
 - Sperm are stored in the epididymis until they leave the body.
- The nucleus of a human sperm cell
 - is located in the connecting piece.
 - contains 23 chromosomes.
 - is packed with mitochondria.
 - lacks a nuclear membrane.
- A spermatid is a(n)
 - immature sperm cell.
 - diploid sex cell in a male.
 - cell that will divide to form a sperm.
 - sperm cell after it leaves the epididymis.

True or False

Write true if the statement is true or false if the statement is false.

- _____ Sperm mix with secretions as they pass through the vas deferens.
- _____ An adult male normally produces about 100 sperm each day.
- _____ Testosterone is needed for the production of sperm.
- _____ Sperm are the smallest of all human cells.

10. _____ Sperm swim at a speed of about 3 inches per hour.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The male organ that contains the urethra is the _____.
12. _____ is the major male sex hormone.
13. The whitish fluid that contains sperm is called _____.
14. The coiled tube where sperm mature is the _____.
15. The testes and epididymis are contained within a sac called the _____.

Short Answer

Answer the following question in complete sentences.

16. Identify all of the male reproductive structures through which sperm pass, from the time they first form until they leave the body. Explain the role of each structure in male reproduction.

22.2 Female Reproductive System

Lesson 22.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Fertilization of an egg normally takes place while the egg is in the
 - vagina.
 - uterus.
 - cervix.
 - fallopian tube.
- Which statement about human eggs is false?
 - Eggs are haploid gametes.
 - Eggs are the largest human cells.
 - There are billions of eggs in each ovary at birth.
 - none of the above
- Which statement about the human uterus is false?
 - It is a hollow organ.
 - It has thick, muscular walls.
 - It has just one opening, called the cervix.
 - It can stretch to accommodate a growing baby.
- Which of the following organs opens directly to the surface of the body?
 - ovary
 - fallopian tube
 - vagina
 - uterus
- The structure in which an egg develops inside an ovary is called a
 - fimbria.
 - follicle.
 - fallopian tube.
 - none of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Estrogen causes the changes of puberty in females.
- _____ Following puberty, an egg is released by each ovary about once a week.
- _____ Estrogen is secreted by female gonads.
- _____ To fertilize an egg, sperm must swim from the vagina to an ovary.

10. _____ The menstrual cycle is also called a menstrual period.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The main female sex hormone is _____.
12. The organ that produces eggs is the _____.
13. The organ where a baby grows until birth is the _____.
14. The _____ is a cylinder-shaped organ through which a baby passes during birth.
15. The _____ is a small opening between the uterus and vagina.

Short Answer

Answer the following question in complete sentences.

16. Outline the changes that take place in the ovaries and uterus during a menstrual cycle in which fertilization does not occur.

22.3 Reproduction and Life Stages

Lesson 22.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The layer of a blastocyst that develops into the placenta is the
 - a. embryoblast.
 - b. blastoblast.
 - c. trophoblast.
 - d. photoblast.
2. By the end of the embryonic stage, the embryo is about
 - a. 1 inch long.
 - b. 6 inches long.
 - c. 1 foot long.
 - d. 1.5 feet long.
3. During which stage of development do most organs start to form?
 - a. blastocyst
 - b. embryo
 - c. fetus
 - d. infancy
4. About how much does a 38-week fetus weigh?
 - a. 1–2 pounds
 - b. 3–5 pounds
 - c. 6–10 pounds
 - d. 11–16 pounds
5. The placenta allows the maternal and fetal blood to
 - a. mix together.
 - b. come close together.
 - c. exchange substances.
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ A baby's first teeth start coming in at about 12 months of age.
7. ____ Toddlers grow more rapidly than infants.
8. ____ Puberty occurs at the same age in all children.
9. ____ A boy's voice deepens at puberty as his larynx grows bigger.

10. _____ People generally start showing signs of aging in middle adulthood.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A(n) _____ is a fluid-filled ball of cells that forms soon after fertilization.
12. When a sperm fertilizes an egg, it forms a single cell called a(n) _____.
13. The _____ is a temporary organ consisting of blood vessels from the mother and fetus.
14. The process in which a blastocyst embeds in the uterus is called _____.
15. Between birth and the first birthday, a baby is called a(n) _____.

Short Answer

Answer the following question in complete sentences.

16. Summarize what happens from the implantation of the blastocyst until birth.

22.4 Reproductive System Health

Lesson 22.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Which STI cannot be cured with antibiotics?
 - a. gonorrhea
 - b. genital herpes
 - c. syphilis
 - d. chlamydia
2. Most females should start regular breast cancer screening at about age
 - a. 10 years.
 - b. 20 years.
 - c. 30 years.
 - d. 40 years.
3. Which age group has the greatest risk of cancer of the testes?
 - a. below age 15 years
 - b. between ages 15 and 35 years
 - c. between ages 35 and 50 years
 - d. older than age 50 years
4. Ways STIs may spread include
 - a. exposure to contaminated blood.
 - b. childbirth.
 - c. sexual contact.
 - d. all of the above
5. Which STI can be prevented with a vaccine?
 - a. genital herpes
 - b. AIDS
 - c. syphilis
 - d. genital warts

True or False

Write true if the statement is true or false if the statement is false.

6. ____ An STI is any medical problem that affects the reproductive organs.
7. ____ STIs always cause symptoms.
8. ____ STIs are most common in teens and young adults.
9. ____ HIV destroys lymphocytes that normally fight infections.

10. _____ It is normal to have abdominal cramps during menstruation.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The most common bacterial STI in the U.S. is _____.
12. The bacterial STI that starts with a small sore on the genitals is _____.
13. HIV is the virus that may cause the disease known as _____.
14. Genital warts are caused by a virus referred to as _____.
15. Irritation of the vagina due to soap, bubble bath, or a yeast infection is called _____.

Short Answer

Answer the following question in complete sentences.

16. Explain what you can do as a teen to keep your reproductive system healthy.

22.5 Reproductive Systems and Life Stages

Chapter 22 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The head of a mature sperm contains
 - a. the nucleus.
 - b. a lot of cytoplasm.
 - c. the acrosome.
 - d. two of the above
2. Sperm undergo maturation in the
 - a. testes.
 - b. vas deferens.
 - c. prostate gland.
 - d. epididymis.
3. What normally happens in a fallopian tube?
 - a. ovulation
 - b. fertilization
 - c. implantation
 - d. menstruation
4. When a baby is born, which event usually happens first?
 - a. The umbilical cord is cut.
 - b. The baby starts breathing on its own.
 - c. The amniotic sac breaks.
 - d. Muscle contractions push the baby out of the uterus.
5. Babies that are one year old can generally
 - a. sit without help.
 - b. crawl over the floor.
 - c. grab toys and other objects.
 - d. all of the above
6. Causes of STIs include
 - a. viruses.
 - b. bacteria.
 - c. radiation.
 - d. two of the above
7. Human papilloma virus
 - a. causes genital herpes.

- b. can be killed with antibiotics.
- c. is a potential cause of cancer.
- d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ The scrotum contains the testes and prostate gland.
- 9. _____ The average man produces millions of sperm each day.
- 10. _____ The uterus is connected to both fallopian tubes.
- 11. _____ An egg develops inside an ovary in a nest of cells called a blastocyst.
- 12. _____ Human sperm cells are much smaller than human egg cells.
- 13. _____ Children normally start losing their baby teeth by their first birthday.
- 14. _____ If found early, cancer of the testes usually can be cured with surgery.
- 15. _____ Prescription medicine may be needed to relieve severe menstrual cramps.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Testosterone stimulates the testes to produce _____.
- 17. Mature sperm are stored in the _____ until they leave the body.
- 18. The hormone _____ causes a girl to go through the physical changes of puberty.
- 19. The walls of the _____ help push out the baby during birth.
- 20. _____ is the carrying of one or more offspring from implantation until birth.

Short Answer

Answer the following questions in complete sentences.

- 21. Compare and contrast the female and male reproductive systems.
- 22. Define adolescence, and describe some of the most important changes that occur during this stage of life.

CHAPTER **23**

Introduction to Ecology Assessments

Chapter Outline

- 23.1** WHAT IS ECOLOGY
 - 23.2** POPULATIONS
 - 23.3** COMMUNITIES
 - 23.4** ECOSYSTEMS
 - 23.5** BIOMES
 - 23.6** INTRODUCTION TO ECOLOGY
-

23.1 What is Ecology

Lesson 23.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Ecology is best defined as the science of
 - a. the environment.
 - b. environmental conservation.
 - c. resources and species in nature.
 - d. the interactions of living things with each other and their environment.
2. All of the following are abiotic factors in the environment except for
 - a. moisture.
 - b. sunlight.
 - c. fossils.
 - d. rocks.
3. From more to less inclusive, levels of organization in ecology include
 - a. biome → ecosystem → community.
 - b. population → community → ecosystem.
 - c. community → ecosystem → population.
 - d. biome → community → ecosystem.
4. Members of a given population
 - a. live in the same area.
 - b. belong to the same species.
 - c. are part of the same community.
 - d. all of the above
5. All of Earth's biomes together make up
 - a. an ecosystem.
 - b. a species.
 - c. the biosphere.
 - d. none of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ Only species that live in extreme conditions must adapt to their environment.
7. ____ Ecology is a major branch of life science.
8. ____ All organisms need sunlight and matter from their environment.
9. ____ All ecologists study organisms and environments at the level of the biome.

10. _____ A given population generally interacts with other populations in the same community.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any living or once-living aspect of the environment is called a(n) _____ factor.
12. A(n) _____ is a group of similar ecosystems.
13. Individuals of the same species that live in the same area make up a(n) _____.
14. All the populations of all the species that live in the same area make up a(n) _____.
15. Any aspect of the environment that has never been alive is called a(n) _____ factor.

Short Answer

Answer the following question in complete sentences.

16. Explain how the ecosystem is related to the biome.

23.2 Populations

Lesson 23.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The total human population reached 7 billion people by the year
 - a. 1000.
 - b. 1700.
 - c. 1914.
 - d. 2014.
2. The demographic transition is a model based on what actually occurred in
 - a. the poorest nations of the world.
 - b. Western Europe and North America.
 - c. all human populations worldwide.
 - d. none of the above
3. The human species evolved in Africa. Human beings first left Africa about
 - a. 200,000 years ago.
 - b. 100,000 years ago.
 - c. 40,000 years ago.
 - d. 10,000 years ago.
4. At its current rate of growth, the human population will surpass 9 billion by the year
 - a. 2020.
 - b. 2030.
 - c. 2040.
 - d. 2050.
5. Factors that influence the rate of growth of a population include
 - a. births.
 - b. deaths.
 - c. migration.
 - d. all of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ The size and growth rate of its populations influences the chances of a species surviving.
7. ____ A random pattern of population distribution is typical of species in which individuals compete for scarce resources.
8. ____ A population pyramid is a graphic representation of the age-sex structure of a population.

9. _____ Overall, the human population has had a pattern of exponential growth.
10. _____ Major changes in human population growth rates first began in the 1700s.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Population _____ is the average number of individuals in a population for a given area.
12. A population with a(n) _____ pattern of growth grows more slowly as it approaches the carrying capacity.
13. A population with a(n) _____ pattern of growth grows more quickly as it gets larger.
14. The pattern of population distribution in which individuals are evenly spaced is a(n) _____ distribution.
15. A population with a(n) _____ growth rate is increasing in size over time.

Short Answer

Answer the following question in complete sentences.

16. The human species has been called the most successful weed species on Earth. Explain why.

23.3 Communities

Lesson 23.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. A community is the biotic component of a(n)
 - a. ecosystem.
 - b. biome.
 - c. species.
 - d. population.
2. An organism that captures and consumes organisms in another species is a
 - a. parasite.
 - b. predator.
 - c. host.
 - d. prey.
3. Males in the same population may fight each other for mates. This is an example of
 - a. commensalism.
 - b. interspecific competition.
 - c. intraspecific competition.
 - d. none of the above
4. Which of the following organisms have a mutualistic relationship?
 - a. wolves and moose
 - b. cattle and cattle egrets
 - c. sea anemones and clownfish
 - d. prairie dogs and plants
5. Which statement about parasitism is false?
 - a. Parasitism is a symbiotic relationship.
 - b. A parasite generally lives in or on its host.
 - c. The host is not harmed by the relationship.
 - d. Most species of animals are hosts to one or more parasites.

True or False

Write true if the statement is true or false if the statement is false.

6. ____ An increase in a predator population is likely to lead to a decrease in the population of its prey.
7. ____ Most keystone species are producers such as plants.
8. ____ A symbiotic relationship may be harmful to both of the species involved in the relationship.
9. ____ Intraspecific competition is a type of symbiotic relationship.

10. _____ Predator organisms are always larger than the organisms they prey upon.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any close relationship between two species in which at least one species benefits is termed _____.
12. The population size of a(n) _____ species affects the populations of many other species in the same community.
13. In a(n) _____ relationship, one species benefits while the other species is harmed.
14. A close relationship between two species in which both species benefit is referred to as _____.
15. A close relationship between two species in which one species benefits but the other species is unaffected is called _____.

Short Answer

Answer the following question in complete sentences.

16. Explain how predation might lead to an evolutionary “arms race” between predator and prey species.

23.4 Ecosystems

Lesson 23.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Matter that is recycled through ecosystems includes
 - carbon.
 - nitrogen.
 - water.
 - all of the above
- The competitive exclusion principle applies to two different
 - niches.
 - species.
 - habitats.
 - communities.
- Which statement about ecosystems is false?
 - Most ecosystems get energy from the sun.
 - Ecosystems are units of nature.
 - Ecosystems are closed systems.
 - none of the above
- A species' niche includes how the species
 - gets energy.
 - obtains matter.
 - interacts with other species.
 - all of the above
- Which organisms have the most similar niches?
 - grasses and deer
 - wolves and moose
 - moose and deer
 - frogs and trees

True or False

Write true if the statement is true or false if the statement is false.

- _____ The focus of study in ecology is often the ecosystem.
- _____ A dead log in a forest could be considered an ecosystem.
- _____ Features of a habitat depend mainly on biotic factors.
- _____ Each ecosystem can have at most just one niche.

10. _____ The biotic component of an ecosystem is the population.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The role that a species plays in its ecosystem is its _____.
12. The physical environment in which a species lives is called its _____.
13. All ecosystems need a constant input of _____.
14. A(n) _____ consists of all the biotic and abiotic factors in an area and all the ways they interact.
15. Each species living in the same habitat at the same time must have a different _____.

Short Answer

Answer the following question in complete sentences.

16. Assume that a new species moves into a habitat. The new species has the same niche as a species that already lives in the habitat. Explain what may happen to the two species.

23.5 Biomes

Lesson 24.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which statement is always true of ecosystems in the same biome?
 - They have the same type of primary producers.
 - They are located on the same continent.
 - They have similar abiotic factors.
 - two of the above
- Which of the following is not a type of tropical biome?
 - tundra
 - rainforest
 - dry forest
 - desert
- A temperate grassland has
 - a wet climate.
 - many deciduous trees.
 - excellent soil quality.
 - two of the above
- The primary producers in most aquatic biomes are
 - plants.
 - zooplankton.
 - phytoplankton.
 - none of the above
- The most important factors that determine the nature of aquatic biomes include
 - sunlight.
 - latitude.
 - temperature.
 - precipitation.

True or False

Write true if the statement is true or false if the statement is false.

- _____ The littoral zone of a lake is the deep water near the bottom.
- _____ In aquatic biomes, water closer to shore usually contains more dissolved nutrients than water farther from shore.
- _____ All the water in the open ocean far from shore is called the pelagic zone.

9. _____ There is not enough sunlight for photosynthesis in the aphotic zone of a body of water.
10. _____ The benthic zone of the ocean includes the sediments at the bottom of the water.

Fill in the Blank

Fill in the blank with the appropriate term.

11. The top 200 meters of a body of water is called the _____ zone.
12. Shallow water near the shore of a lake makes up the _____ zone.
13. A(n) _____ consists of a group of similar ecosystems.
14. _____ refers to the average weather in a place over a long period of time.
15. The primary producers in terrestrial ecosystems are _____.

Short Answer

Answer the following question in complete sentences.

16. Relate the zones in a lake to the amount of sunlight and dissolved substances they receive.

23.6 Introduction to Ecology

Chapter 23 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Which of the following statements about ecology is false?
 - It is a major branch of life science.
 - It overlaps with many other fields.
 - It is defined as the study of natural resources.
 - none of the above
- The demographic transition was characterized by changes in
 - death rates.
 - birth rates.
 - population growth rates.
 - all of the above
- The unit of natural selection and microevolution is the
 - biome.
 - community.
 - individual.
 - population.
- Which of the following organisms is a parasite?
 - cattle egret
 - prairie dog
 - sea anemone
 - hookworm
- Which of the following community relationships is not a type of symbiosis?
 - predation
 - parasitism
 - mutualism
 - commensalism
- The role that a species plays in its ecosystem is its
 - habitat.
 - biome.
 - zone.
 - niche.
- Which statement about the aphotic zone in a body of water is false?
 - It refers to water deeper than 200 meters below the surface.

- b. There is not enough sunlight in this zone for photosynthesis.
- c. No organisms can live in this zone because of the lack of food.
- d. none of the above

True or False

Write true if the statement is true or false if the statement is false.

- 8. ____ Only consumers need to get energy and matter from their environment.
- 9. ____ The highest level of organization in ecology is the biome.
- 10. ____ Carrying capacity is the largest population size that can be supported in an area without harming the environment.
- 11. ____ Competition occurs only between members of different species.
- 12. ____ All ecosystems need a constant input of matter.
- 13. ____ Two species living in the same habitat at the same time must have the same niche.
- 14. ____ Phytoplankton consists of photosynthetic bacteria and algae.
- 15. ____ Ecosystems are grouped together in the same biome if they have the same latitude.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Temperature and moisture are examples of ____ factors in the environment.
- 17. The most common pattern of population distribution is a(n) ____ pattern.
- 18. ____ is a relationship in which members of one species consume members of another species.
- 19. Most ecosystems get energy from ____.
- 20. Alpine tundra is a biome that is found only at high ____.

Short Answer

Answer the following questions in complete sentences.

- 21. Summarize how the human population has grown since the species first evolved, and explain why the human species is growing so rapidly today.
- 22. Use examples to explain how community relationships shape the evolution of species.

CHAPTER **24**

Ecosystem Dynamics Assessments

Chapter Outline

- 24.1 FLOW OF ENERGY
 - 24.2 CYCLES OF MATTER
 - 24.3 ECOSYSTEM CHANGE
 - 24.4 ECOSYSTEM DYNAMICS
-

24.1 Flow of Energy

Lesson 24.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Organisms that are chemoautotrophs include some
 - archaeans.
 - bacteria.
 - plants and algae.
 - two of the above
- Which of the following organisms are herbivores?
 - snails
 - frogs
 - crows
 - bears
- Decomposers that eat the soft tissues of animals that are already dead are called
 - detritivores.
 - scavengers.
 - saprotrophs.
 - autotrophs.
- Most food chains and food webs have a maximum of
 - 2 trophic levels.
 - 4 trophic levels.
 - 6 trophic levels.
 - 8 trophic levels.
- A human being who is eating an apple is feeding at
 - trophic level 1.
 - trophic level 2.
 - trophic level 3.
 - trophic level 4.

True or False

Write true if the statement is true or false if the statement is false.

- _____ Higher trophic levels have less biomass than lower trophic levels.
- _____ About 90 percent of the energy at a given trophic level is passed up to the next trophic level.
- _____ An example of a saprotroph is a hyena.
- _____ A food web shows who eats whom in an ecosystem.

10. _____ Consumers always feed at just one trophic level.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any organism that breaks down organic wastes or remains is called a(n) _____.
12. A producer is also referred to as a(n) _____.
13. An organism that consumes both plants and animals is known as a(n) _____.
14. Any organism that gets energy from other organisms, either living or dead, is called a(n) _____.
15. _____ is the ability to change or move matter.

Short Answer

Answer the following question in complete sentences.

16. Explain what an ecological pyramid represents.

24.2 Cycles of Matter

Lesson 24.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Reservoirs for water in the water cycle include
 - glaciers.
 - the ocean.
 - organisms.
 - two of the above
- Precipitation may include
 - fog.
 - dew.
 - sleet.
 - all of the above
- How can groundwater continue through the water cycle?
 - It may seep out of the ground at a spring.
 - It may seep into a body of water such as the ocean.
 - It may be pumped out of the ground through a well.
 - all of the above
- Exchange pools for carbon include
 - living things.
 - sedimentary rocks.
 - the ocean.
 - two of the above
- What percent of Earth's atmosphere is nitrogen?
 - 22 percent
 - 28 percent
 - 52 percent
 - 78 percent

True or False

Write true if the statement is true or false if the statement is false.

- _____ The only form of nitrogen that plants can use is nitrogen gas.
- _____ Nitrogen-fixing bacteria change ammonium ions into nitrogen gas.
- _____ The atmosphere is an exchange pool for water.
- _____ Water keeps changing state as it moves through the water cycle.

10. _____ Plants release water vapor to the atmosphere through their leaves.

Fill in the Blank

Fill in the blank with the appropriate term.

11. _____ is the process in which ice or snow changes to water vapor without first changing to liquid water.
12. The part of a biogeochemical cycle that holds a substance for a long period of time is called a(n) _____.
13. Clouds form when water vapor _____ in the atmosphere.
14. Fossil fuels are reservoirs in the _____ cycle.
15. The nitrogen cycle involves mainly living things and the _____.

Short Answer

Answer the following question in complete sentences.

16. Summarize the processes that keep nitrogen moving through the nitrogen cycle.

24.3 Ecosystem Change

Lesson 24.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Primary succession occurs in an area where
 - a. there is nothing but bare rock.
 - b. thin soil is already present.
 - c. a climax community is located.
 - d. nothing has been disturbed.
2. Examples of pioneer species in primary succession include
 - a. grasses.
 - b. trees.
 - c. bacteria.
 - d. two of the above
3. Secondary succession may occur following
 - a. a forest fire.
 - b. a flood.
 - c. farming activities.
 - d. any of the above
4. In secondary succession, pioneer species may include
 - a. fireweed.
 - b. shrubs.
 - c. trees.
 - d. none of the above
5. Which statement about climax communities is false?
 - a. They are stable.
 - b. They rarely occur.
 - c. They are the same for all ecosystems.
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. ____ Most ecosystems change continuously.
7. ____ Two types of ecological succession are primary succession and climax succession.
8. ____ Primary succession may occur following a landslide or the retreat of a glacier.
9. ____ As plants grow and die, they improve the soil by adding organic matter.

10. _____ Primary succession occurs more quickly than secondary succession.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Any change over time in the numbers and types of species in an ecosystem is called ecological _____.
12. The first few species to colonize a disturbed area are called _____ species.
13. A possible final state attained by an ecosystem is called a(n) _____ community.
14. _____ succession occurs in an area where soil is already in place.
15. _____ succession occurs in an area that has never before been colonized.

Short Answer

Answer the following question in complete sentences.

16. Explain how and why the scientific view of climax communities has changed.

24.4 Ecosystem Dynamics

Chapter 24 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The first trophic level of any food chain consists of
 - herbivores.
 - consumers.
 - decomposers.
 - autotrophs.
- At higher trophic levels, there is (are) generally
 - less energy.
 - less biomass.
 - fewer organisms.
 - all of the above
- All of the following may be producers except for
 - archaeans.
 - algae.
 - fungi.
 - bacteria.
- Plants exchange gases with the atmosphere through their
 - vascular tissues.
 - root hairs.
 - stomata.
 - flowers.
- Processes by which water vapor enters the atmosphere include
 - sublimation.
 - condensation.
 - precipitation.
 - two of the above
- Major reservoirs for carbon include
 - living things.
 - the atmosphere.
 - the ocean.
 - none of the above
- Which statement explains why secondary succession is generally more rapid than primary succession?
 - An area of secondary succession has never been colonized.

- b. There are no competing organisms in secondary succession.
- c. The soil is already present at the start of secondary succession.
- d. Pioneer species in secondary succession include bacteria.

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ A food chain is generally simpler than what really happens in nature.
- 9. _____ All heterotrophs are animals.
- 10. _____ Decomposers are essential to every ecosystem.
- 11. _____ An exchange pool holds a substance for a long period of time.
- 12. _____ Photosynthesis and cellular respiration are major processes in the nitrogen cycle.
- 13. _____ Climax communities are possible but unlikely.
- 14. _____ An old forest is always a static ecosystem.
- 15. _____ Secondary succession may occur after a flood.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. Energy enters most ecosystems in the form of _____.
- 17. _____ are decomposers that consume the soft tissues of dead animals.
- 18. The _____ cycle includes the assimilation of nitrates by plant roots.
- 19. Most evaporation occurs from the surface of the _____.
- 20. Plants may be pioneer species only in the type of ecological succession called _____ succession.

Short Answer

Answer the following questions in complete sentences.

- 21. Explain why decomposers are important in the carbon and nitrogen cycles.
- 22. Explain why energy but not matter must constantly be added to ecosystems.

CHAPTER

25

Environmental Problems Assessments

Chapter Outline

- 25.1 AIR POLLUTION
 - 25.2 WATER POLLUTION
 - 25.3 NATURAL RESOURCES
 - 25.4 BIODIVERSITY AND EXTINCTION
 - 25.5 ENVIRONMENTAL PROBLEMS
-

25.1 Air Pollution

Lesson 25.1 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Air pollution is due mainly to
 - natural processes.
 - human actions.
 - climatic changes.
 - weather patterns.
- Which of the following is both an indoor and an outdoor air pollutant?
 - mold
 - VOCs
 - carbon monoxide
 - all of the above
- Consequences of global climate change include
 - more extreme weather.
 - species extinctions.
 - rising sea levels.
 - all of the above
- Exposure to radon gas may cause cancer of the
 - skin.
 - lung.
 - kidney.
 - colon.
- Volatile organic compounds are found in some
 - furniture.
 - flooring.
 - paints.
 - all of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Earth's atmosphere is too vast to become seriously polluted.
- _____ Cardiovascular diseases may be worsened by air pollution.
- _____ Erosion of soil adds dust particles to the atmosphere.
- _____ Fewer people die each year from air pollution than automobile accidents.

10. _____ Earth had no greenhouse gases until about 200 years ago.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Carbon _____ is an outdoor air pollutant that is a major contributor to global climate change.
12. Carbon _____ is a potential indoor air pollutant that is deadly to human beings.
13. The radioactive gas that may seep into buildings from underground rocks is called _____.
14. Air pollutants that form acid rain are nitrogen and _____ oxides.
15. Mercury is a nerve poison that is produced mainly by burning _____.

Short Answer

Answer the following question in complete sentences.

16. Explain the causes and consequences of acid rain.

25.2 Water Pollution

Lesson 25.2 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Most of Earth's liquid water is in
 - lakes.
 - rivers.
 - wetlands.
 - the ocean.
- Runoff dissolves fertilizer when it flows over
 - farm fields.
 - golf courses.
 - lawns and gardens.
 - all of the above
- The most effective way to prevent dead zones in bodies of water is to
 - add nutrients to the water.
 - reduce the use of fertilizers.
 - promote the growth of algae.
 - allow algal blooms to decompose.
- Thermal pollution of water is generally caused by
 - nonpoint-source pollution.
 - home heating systems.
 - power plants and factories.
 - global warming.
- The dissolved oxygen content of water may be reduced by
 - thermal pollution.
 - decomposition of algae.
 - unusually cold weather.
 - two of the above

True or False

Write true if the statement is true or false if the statement is false.

- _____ Trash that pollutes the ocean is made mainly of plastic.
- _____ Ocean acidification can kill corals and some shellfish.
- _____ An example of nonpoint-source pollution is the release of pollution into water through a pipe from a factory.

9. _____ Symptoms of waterborne diseases usually include diarrhea.
10. _____ The total number of people on Earth who lack adequate clean, fresh water is about a million.

Fill in the Blank

Fill in the blank with the appropriate term.

11. Habitats such as swamps and bogs are known as _____.
12. Nonpoint-source pollution enters bodies of water mainly in _____.
13. Adding hot water to a body of water may cause _____ pollution.
14. Ocean _____ occurs when ocean water dissolves too much carbon dioxide.
15. Algal blooms are caused by dissolved _____ polluting the water.

Short Answer

Answer the following question in complete sentences.

16. Explain the role of wetlands in the control of water pollution.

25.3 Natural Resources

Lesson 25.3 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- All of the following are considered to be renewable resources except
 - sunlight.
 - plants.
 - iron.
 - soil.
- Nonrenewable resources include
 - uranium.
 - aluminum.
 - organisms.
 - two of the above
- If natural gas continues to be used at current rates, it will be used up in a few
 - months.
 - years.
 - decades.
 - centuries.
- How long does it usually take soil to form?
 - about a year
 - a few hundred years
 - a couple of thousand years
 - millions of years
- About what percent of energy used worldwide comes from nonrenewable resources?
 - 20–25 percent
 - 40–45 percent
 - 60–65 percent
 - 80–85 percent

True or False

Write true if the statement is true or false if the statement is false.

- _____ The use of biomass energy does not contribute to air pollution.
- _____ Fossil fuels form from organic remains that become buried under the ground.
- _____ Recycling is the best way to conserve natural resources.
- _____ Kitchen and garden wastes can be recycled by composting them.

10. _____ Methane gas produced by decomposing garbage is a fossil fuel.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A nonrenewable resource that plants need to grow is _____.
12. Energy provided by burning or decomposing organic matter is called _____ energy.
13. A resource is _____ if it cannot be remade or it is used up more quickly than it forms.
14. _____ use is the use of resources in a way that meets the needs of both current and future generations.
15. Fossil fuels include oil, natural gas, and _____.

Short Answer

Answer the following question in complete sentences.

16. Discuss pros and cons of using solar energy and biomass energy.

25.4 Biodiversity and Extinction

Lesson 25.4 Quiz

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Which of the following types of ecosystems has the greatest biodiversity?
 - a. tropical dry forest
 - b. temperate rainforest
 - c. coral reef
 - d. savannah
2. Wild species of living things provide human beings with
 - a. drugs.
 - b. dyes.
 - c. food.
 - d. all of the above
3. Which statement about extinction is false?
 - a. Extinction is the ultimate fate of almost all species.
 - b. Dozens of species are currently going extinct every day.
 - c. A total of three mass extinctions occurred on Earth in the past.
 - d. Past mass extinctions were caused by geologic and climatic events.
4. Which animals have high rates of extinction today because they are particularly sensitive to environmental toxins?
 - a. fish
 - b. amphibians
 - c. reptiles
 - d. insects
5. Plants help protect the environment by
 - a. removing oxygen from the air.
 - b. reducing erosion of the soil.
 - c. fixing nitrogen in the soil.
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

6. _____ Scientists have identified about 7.9 million living species.
7. _____ Wild organisms maintain a valuable pool of genetic variation.
8. _____ Microorganisms purify water and decompose organic matter.

9. _____ Predatory birds and spiders increase the need for chemical pesticides.
10. _____ About half of the wetlands in the U.S. have already been destroyed.

Fill in the Blank

Fill in the blank with the appropriate term.

11. A species that is introduced to a new habitat where it never existed before is called a(n) _____ species.
12. The variety of life and its processes is termed _____.
13. The complete dying out of a species is referred to as _____.
14. Loss of _____ is the single greatest cause of the present mass extinction.
15. Scientists estimate that there are at least _____ million species currently in existence.

Short Answer

Answer the following question in complete sentences.

16. Explain some steps you could take to help protect biodiversity.

25.5 Environmental Problems

Chapter 25 Test

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. Toxic compounds released by some furniture, flooring, and paints are called
 - a. VOCs.
 - b. DDTs.
 - c. sulfur oxides.
 - d. nitrogen oxides.
2. The main cause of global climate change today is the
 - a. formation of acid rain.
 - b. burning of fossil fuels.
 - c. application of pesticides.
 - d. use of fertilizers.
3. The pollution of bodies of water by fertilizer in runoff may cause
 - a. algal blooms.
 - b. hypoxic water.
 - c. dead zones.
 - d. all of the above
4. Wetlands include
 - a. lakes.
 - b. ponds.
 - c. bogs.
 - d. two of the above
5. Types of energy that do not add carbon dioxide to the atmosphere when they are used include
 - a. nuclear energy.
 - b. natural gas.
 - c. biomass energy.
 - d. two of the above
6. Energy resources that will be used up in a couple of decades at current rates of use include
 - a. coal.
 - b. oil.
 - c. natural gas.
 - d. two of the above
7. The main cause of Earth's sixth mass extinction is
 - a. geological changes.

- b. exotic species.
- c. habitat loss.
- d. use of DDT.

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Radon gas is released by faulty or poorly vented furnaces.
- 9. _____ Motor vehicle exhaust is a major cause of ground-level ozone.
- 10. _____ Pathogens that may cause waterborne diseases include viruses, bacteria, and protozoa.
- 11. _____ A common cause of thermal pollution is the use of water as a coolant by power plants and factories.
- 12. _____ Soil is a nonrenewable resource because once it is lost it can never be remade.
- 13. _____ New species of organisms are rarely discovered anymore.
- 14. _____ More than half of Earth's land area has been disturbed or destroyed.
- 15. _____ Biodiversity is good for the environment but has no economic value.

Fill in the Blank

Fill in the blank with the appropriate term.

- 16. The pollutants that form acid rain are produced mainly by the burning of gasoline and _____.
- 17. Pollution that enters a body of water at many places is called _____ pollution.
- 18. The pH of ocean water is falling because of the process of ocean _____.
- 19. To _____ means to buy items with the least amount of wasted packaging.
- 20. Earth's _____ mass extinction occurred about 65 million years ago.

Short Answer

Answer the following questions in complete sentences.

- 21. Relate the human use of energy to global climate change.
- 22. Relate the human use of energy to global climate change.

CHAPTER **26**

Life Science Unit Assessments

Chapter Outline

- 26.1 UNIT 1: INTRODUCTION TO LIFE TEST
 - 26.2 UNIT 2: CELLS TEST
 - 26.3 UNIT 3: GENETICS AND EVOLUTION TEST
 - 26.4 UNIT 4: PROKARYOTES, PROTISTS AND FUNGI TEST
 - 26.5 UNIT 5: PLANTS TEST
 - 26.6 UNIT 6: ANIMALS TEST
 - 26.7 UNIT 7: THE HUMAN BODY TEST
 - 26.8 UNIT 8: ECOLOGY TEST
-

26.1 Unit 1: Introduction to Life Test

Unit 1 Chapters

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

1. The earliest microscope was invented in the late
 - a. 1500s.
 - b. 1600s.
 - c. 1700s.
 - d. 1800s.
2. If you see the following safety symbol, which potential danger should you be aware of?



- a. fire hazard
 - b. heat hazard
 - c. radioactive hazard
 - d. laser radiation hazard
3. The best definition of science is a
 - a. body of knowledge about nature.
 - b. way of learning about the natural world.
 - c. set of observations of things in nature.
 - d. collection of facts about natural processes.
 4. The life science that focuses on interactions of organisms with each other and their environment is
 - a. botany.
 - b. entomology.
 - c. epidemiology.
 - d. ecology.
 5. The aim of basic life science research is to
 - a. gain new knowledge for a better understanding of nature.
 - b. discover knowledge that can be applied to practical problems.
 - c. learn new ways of diagnosing and treating diseases.
 - d. find information that can be used to improve human lives.
 6. Monomers of RNA and DNA are
 - a. amino acids.
 - b. fatty acids.

- c. nucleic acids.
 - d. none of the above
7. The scientist who is called the father of taxonomy is
- a. Charles Darwin.
 - b. Gregor Mendel.
 - c. Carl Linnaeus.
 - d. Robert Hooke.

True or False

Write true if the statement is true or false if the statement is false.

- 8. _____ Any variable that is held constant in an experiment is called a dependent variable.
- 9. _____ To be useful in science, a hypothesis must be testable.
- 10. _____ Van Leeuwenhoek was the first scientist to observe cells with a microscope.
- 11. _____ It is safest to work alone in a lab so you will not be distracted by other people.
- 12. _____ The cells of all living things contain a cell membrane.
- 13. _____ Viruses lack DNA and RNA so they are unable to evolve.
- 14. _____ All living organisms have ways of maintaining a stable internal environment.
- 15. _____ Anabolic reactions involve breaking chemical bonds and releasing energy.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

- 16. The idea that all organisms are made up of one or more cells is part of the cell _____.
- 17. A life scientist who focuses on the study of animals is called a(n) _____.
- 18. _____ means repeating a scientific experiment and getting the same results.
- 19. All biochemical compounds are based on the element _____.
- 20. The class of biochemical compounds that includes sugars is called _____.

Short Answer

Answer each question in the space provided.

- 21. Summarize the scientific method, and explain its role in science.
- 22. Compare and contrast the Linnaean system of classification with the way living things are classified today.

26.2 Unit 2: Cells Test

Unit 2 Chapters

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- The only structure below that is not found in the cells of all organisms is the
 - cell wall.
 - ribosome.
 - cytoplasm.
 - cell membrane.
- The function of ribosomes is to
 - provide energy.
 - make proteins.
 - store enzymes.
 - transport lipids.
- When a substance is more concentrated inside a cell than outside the cell, it passes into the cell by
 - passive transport.
 - simple diffusion.
 - active transport.
 - facilitated diffusion.
- During the first stage of photosynthesis
 - carbon dioxide is produced.
 - ATP is used to make glucose.
 - chlorophyll absorbs light energy.
 - NADPH becomes NADP⁺.
- The first stage of cellular respiration is called
 - glycolysis.
 - the Krebs cycle.
 - electron transport.
 - the light reactions.
- Which statement about mitosis is false?
 - It takes place in four phases.
 - It includes a phase called synthesis.
 - It occurs only in eukaryotic cells.
 - It refers to division of the nucleus.
- The haploid number of the human species is
 - 2.
 - 23.
 - 26.
 - 46.

True or False

Write true if the statement is true or false if the statement is false.

8. _____ An organ is a group of cells of the same kind that perform the same function.
9. _____ Plastids are organelles that are found in plant cells but not animal cells.
10. _____ Fermentation produces more ATP per molecule of glucose than does cellular respiration.
11. _____ The process in which DNA is copied is called DNA replication.
12. _____ The second phase of mitosis is anaphase.
13. _____ Meiosis is a type of cell division that results in four diploid daughter cells.
14. _____ Transfer RNA transfers genetic instructions from DNA in the nucleus to a ribosome in the cytoplasm.
15. _____ Each amino acid is encoded by just one codon.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

16. All organisms whose cells lack a nucleus are called _____.
17. Organelles called _____ are like the power plants of cells.
18. The type of vesicle transport that moves a substance into a cell is called _____.
19. During the Calvin cycle, carbon dioxide is used to produce _____.
20. Cellular respiration is called an aerobic process because it requires _____.

Short Answer

Answer each question in the space provided.

21. Relate the structure of the cell membrane to the transport of substances through it.
22. Explain how proteins are synthesized in a cell.

26.3 Unit 3: Genetics and Evolution Test

Unit 3 Chapters

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Mendel's law of independent assortment applies only to the factors for
 - a single trait.
 - different traits.
 - dominant traits.
 - recessive traits.
- If two parents with the genotypes BB and a bb have offspring together, what percentage of the offspring will have the same genotype as one of the parents?
 - 0 percent
 - 25 percent
 - 50 percent
 - 100 percent
- The human genome refers to all the genetic information
 - in an individual human being.
 - in the entire human species.
 - on a single human chromosome.
 - in just one human population.
- What is evolution?
 - any change in the inherited traits of organisms over time
 - the process by which beneficial traits increase in a population
 - a theory about the origin of life
 - a theory about how to classify living things
- The limb bones of whales and bats show that the two groups of animals
 - evolved from a common ancestor.
 - are completely unrelated.
 - are becoming more similar.
 - are no longer evolving.
- The unit of evolution is the
 - individual.
 - population.
 - species.
 - genome.
- The first major division of Earth's history is the
 - Precambrian Supereon.
 - Phanerozoic Eon.
 - Paleozoic Era.

d. Cambrian Period.

True or False

Write true if the statement is true or false if the statement is false.

8. _____ In Mendel's experiments, the P generation plants were always cross-pollinated.
9. _____ Red-green color blindness is a sex-linked dominant trait.
10. _____ Darwin published his theory of evolution by natural selection in 1859.
11. _____ Evolution has never actually been observed by scientists.
12. _____ Fossils most often form from bones, teeth, or shells.
13. _____ Random forces of evolution include mutation and genetic drift.
14. _____ The earliest organisms were autotrophs.
15. _____ The Mesozoic Era is known as the age of dinosaurs.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

16. Mendel introduced the term _____ to refer to a factor that is hidden in the F1 generation.
17. Your _____ is how your genotype is expressed.
18. Down syndrome occurs in individuals who inherit an extra copy of chromosome _____.
19. Writings of the geologist named _____ convinced Darwin that Earth was old enough for evolution to have occurred.
20. _____ dating is based on the positions of fossils in rock layers.

Short Answer

Answer each question in the space provided.

21. Explain Mendel's two laws of inheritance in genetic terms.
22. Describe two different types of evidence for evolution. How does each type contribute to our understanding of evolution?

26.4 Unit 4: Prokaryotes, Protists and Fungi Test

Unit 4 Chapters

Name _____ Class _____ Date _____

Multiple Choice

- Cellular respiration in prokaryotes takes place in the
 - mitochondria.
 - ribosomes.
 - cell membrane.
 - cytoplasm.
- DNA in prokaryotic cells may form structures called
 - nucleoids.
 - plasmids.
 - chromosomes.
 - two of the above
- A biofilm is a
 - type of antibiotic patch applied to the skin.
 - coating that prevents bacterial infections.
 - colony of prokaryotes stuck to a surface.
 - none of the above
- A bacterium classified as a bacillus is shaped like a
 - spiral.
 - sphere.
 - rod.
 - screw.
- Archaeans that “love” salt are known as
 - alkaliphiles.
 - halophiles.
 - acidophiles.
 - thermophiles.
- Animal-like protists are called
 - algae.
 - molds.
 - diatoms.
 - protozoa.
- The cell walls of fungi are made of
 - cellulose.
 - chitin.
 - cilium.
 - lichen.

True or False

Write true if the statement is true or false if the statement is false.

8. _____ *Salmonella* is the name of an archaean that causes food poisoning.
9. _____ Thousands of species of bacteria have been identified.
10. _____ Archaeans called methanogens live inside the gut of cows.
11. _____ Archaeans are the least abundant organisms on Earth.
12. _____ Many human diseases are caused by protists.
13. _____ The first protists are thought to have evolved from prokaryotes.
14. _____ The main body of a fungus is a structure called a hypha.
15. _____ Most fungi reproduce asexually by producing gametes.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

16. Prokaryotes are single-celled organisms that lack a(n) _____.
17. All prokaryotes are placed in either the Archaea Domain or the _____ Domain.
18. An organism that spreads bacteria or other pathogens is known as a(n) _____.
19. The only protists that can carry out photosynthesis are commonly called _____.
20. Fungi were originally classified in the _____ Kingdom.

Short Answer

Answer each question in the space provided.

21. Compare and contrast the relationships of archaeans and bacteria with the human species.
22. Explain why the Protist Kingdom is sometimes called the “trash can” kingdom.

26.5 Unit 5: Plants Test

Unit 5 Chapters

Name _____ Class _____ Date _____

Multiple Choice

1. The type of plant tissue that consists of unspecialized cells that can continue to divide is
 - a. dermal tissue.
 - b. vascular tissue.
 - c. ground tissue.
 - d. meristem.
2. The earliest plants to evolve did not have
 - a. leaves.
 - b. flowers.
 - c. roots.
 - d. all of the above
3. Plant leaves exchange gases with the atmosphere through their
 - a. veins.
 - b. cuticle.
 - c. stomata.
 - d. chloroplasts.
4. All seed plants produce
 - a. cones.
 - b. pollen.
 - c. flowers.
 - d. fruits.
5. Pollinators include
 - a. bees.
 - b. bats.
 - c. butterflies.
 - d. all of the above
6. Which type of plant is adapted to soils that are very poor in nutrients?
 - a. epiphyte
 - b. xerophyte
 - c. aquatic plant
 - d. carnivorous plant
7. Which plant organs exhibit gravitropism?
 - a. roots
 - b. fruits
 - c. leaves
 - d. flowers

True or False

Write true if the statement is true or false if the statement is false.

8. _____ Sporophytes reproduce asexually by producing haploid spores.
9. _____ Each of the rings in a tree stump represents one year of primary growth.
10. _____ Modern seed plants include both vascular and nonvascular plants.
11. _____ Angiosperms are plants that produce seeds in the ovaries of flowers.
12. _____ The pistil of a flower consists of a filament and an anther.
13. _____ Plants lack an immune system so they have no defenses against pathogens.
14. _____ Many plants go dormant in winter to survive extreme cold and dryness.
15. _____ Phototropism is a plant response to light.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

16. The cell walls of plants are made of the carbohydrate called _____.
17. Two types of vascular tissues in plants are xylem and _____.
18. A plant in the haploid generation of its life cycle is called a(n) _____.
19. The male reproductive organ in a flower is the _____.
20. A(n) _____ is a turning toward, or away from, a stimulus in the environment.

Short Answer

Answer each question in the space provided.

21. What is alternation of generations? Why is it adaptive?
22. Most modern plants are angiosperms. What are they, and why do you think they have been so successful?

26.6 Unit 6: Animals Test

Unit 6 Chapters

Name _____ Class _____ Date _____

Multiple Choice

- Characteristics of all animals include all of the following except
 - specialized cells.
 - ability to move.
 - eukaryotic cells.
 - vertebral column.
- Which of the following animal traits evolved after the coelom?
 - body symmetry
 - mesoderm layer
 - digestive system
 - body segmentation
- Slugs are classified as
 - roundworms.
 - annelids.
 - mollusks.
 - flatworms.
- All of the following are unique traits of echinoderms except
 - radial symmetry.
 - internal canals.
 - tube feet.
 - “spiny skin.”
- The most primitive class of fish is
 - lampreys.
 - ray-finned fish.
 - hagfish.
 - cartilaginous fish.
- How does reproduction in birds differ from reproduction in reptiles?
 - Birds produce amniotic eggs.
 - Birds generally take care of their offspring.
 - Birds are oviparous.
 - two of the above
- The dance of a honey bee is an example of
 - conditioning.
 - learned behavior
 - habituation.
 - innate behavior.

True or False

Write true if the statement is true or false if the statement is false.

8. _____ All animals have tissues and organs.
9. _____ Roundworms are round because they have a pseudocoelom.
10. _____ Phylum Arthropoda is the largest phylum in the Animal Kingdom.
11. _____ Amphibians were the first animals to colonize the land.
12. _____ Birds and human beings are four-limbed, bipedal, endothermic vertebrates.
13. _____ Scientific ideas about how mammals should be classified keep changing.
14. _____ A reflex behavior is a behavior that is learned through observation.
15. _____ Only insects communicate with chemicals.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

16. A chordate is any animal with a(n) _____.
17. Animals placed in Phylum Porifera are commonly called _____.
18. _____ is the reproductive strategy in which the mother gives birth to live offspring rather than laying eggs.
19. _____ are ectothermic, four-legged vertebrates that produce amniotic eggs.
20. Monkeys and apes are placed in the _____ Order of mammals.

Short Answer

Answer each question in the space provided.

21. More than half of all known organisms are insects. Relate insect traits to their success.
22. Compare and contrast how mammals and reptiles regulate body temperature.

26.7 Unit 7: The Human Body Test

Unit 7 Chapters

Name _____ Class _____ Date _____

Multiple Choice

1. Sebaceous glands
 - a. are located in the epidermis.
 - b. secrete an oily substance called sebum.
 - c. are needed to regulate body temperature.
 - d. produce hormones involved in reproduction.
2. Voluntary muscles include
 - a. cardiac muscles.
 - b. skeletal muscles.
 - c. smooth muscles.
 - d. two of the above
3. All of the following are macronutrients except
 - a. vitamins.
 - b. proteins.
 - c. lipids.
 - d. water.
4. Types of cells or cell fragments in blood include
 - a. platelets.
 - b. red blood cells.
 - c. white blood cells.
 - d. all of the above
5. What happens when the diaphragm relaxes?
 - a. Inhalation takes place.
 - b. The chest increases in size.
 - c. Air pressure increases in the lungs.
 - d. Air rushes into the lungs.
6. Endocrine hormones
 - a. speed up the chemical digestion of food.
 - b. are released into nearby cells and tissues.
 - c. travel more quickly than nerve impulses.
 - d. are controlled mainly by negative feedback.
7. White blood cells involved in the body's second line of defense include
 - a. T cells.
 - b. B cells.
 - c. phagocytes.
 - d. two of the above

True or False

Write true if the statement is true or false if the statement is false.

8. _____ The elbow joint moves only back and forth like the hinge of a door.
9. _____ A food is low in a given nutrient if its percent daily value is between 10 and 20 percent.
10. _____ Oxygen-rich blood travels from the lungs to the heart in the pulmonary circulation.
11. _____ Diseases are infectious if they are caused by pathogens.
12. _____ The main male sex hormone is testosterone.
13. _____ The female gonads are the fallopian tubes.
14. _____ A baby's heart starts beating during the embryonic period.
15. _____ All sexually transmitted infections can be cured with antibiotic drugs.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

16. The organ system that controls sensation, thought, and movement is the _____ system.
17. The digestive organ where both chemical and mechanical digestion begin is the _____.
18. The smallest blood vessels are called _____.
19. The functional units of the kidneys are tiny structures known as _____.
20. The part of the cerebrum that controls sight is the _____ lobe.

Short Answer

Answer each question in the space provided.

21. Some human organs are part of more than one organ system. Give an example of such an organ, and explain its function in each organ system.
22. Explain how two different human organ systems work together to help maintain homeostasis in the human body.

26.8 Unit 8: Ecology Test

Unit 8 Chapters

Name _____ Class _____ Date _____

Multiple Choice

Circle the letter of the correct choice.

- Members of the same community always belong to the same
 - species.
 - population.
 - ecosystem.
 - biome.
- Two different species living in the same habitat at the same time cannot have the same
 - niche.
 - competitors.
 - parasites.
 - predators.
- Examples of marine biomes include the
 - littoral zone.
 - limnetic zone.
 - pelagic zone.
 - all of the above
- Reservoirs in the carbon cycle include
 - the ocean.
 - the atmosphere.
 - living organisms.
 - two of the above
- A landslide has left behind a large area of bare rock. The first organisms that colonize the area may include
 - grasses.
 - lichens.
 - rodents.
 - insects.
- Air pollutants that are released when coal is burned include
 - sulfur oxides.
 - particles.
 - mercury.
 - all of the above
- Which of the following energy resources is renewable and creates no air pollution when used?
 - biomass energy
 - nuclear energy
 - solar energy
 - two of above

True or False

Write true if the statement is true or false if the statement is false.

8. _____ The biosphere consists of all the world's biomes, both terrestrial and aquatic.
9. _____ A population with exponential growth stops growing when it reaches its carrying capacity.
10. _____ All producers use energy in sunlight to make organic compounds by photosynthesis.
11. _____ Processes in the water cycle include sublimation and transpiration.
12. _____ Pollution of ocean water by sewage is the main cause of ocean acidification.
13. _____ Soil is considered to be a renewable resource because new soil is always forming.
14. _____ Habitat loss is the main cause of species extinctions today.
15. _____ Biodiversity has many direct economic benefits for people.

Fill in the Blank

Fill in the blank with the term that best completes the sentence.

16. A community is the biotic component of a(n) _____.
17. Types of symbiosis include mutualism, parasitism, and _____.
18. Ecosystems with the same general abiotic factors and primary producers are classified in the same _____.
19. A decomposer that consumes the soft tissues of dead animals is called a(n) _____.
20. A naturally occurring indoor air pollutant that may cause lung cancer is the gas named _____.

Short Answer

Answer each question in the space provided.

21. Summarize the roles of living things in the carbon cycle.
22. Explain why biodiversity is an important natural resource.