

Name:

Date:

Introduction & Chapter 1: What Is an Organism?

Section 1 – CHARACTERISTICS

Use pages 3–6 of the student text to complete the worksheet.

Choose the Answer. *Circle the answer that correctly completes each sentence.*

1. (Metabolism, Digestion) is the total of all the chemical activities that an organism performs.
2. A (stimulus, cell) is a tiny unit that has all the materials needed for life.
3. (Adaptation, Homeostasis) happens when an organism makes a change that will increase its chances of survival in its natural habitat.
4. When a new organism is formed from one parent, it is called (asexual, sexual) reproduction.
5. Organisms are (living, nonliving) things that go through all the processes of life.

True/False. *Decide if each statement is true or false, and write **true** or **false** in the blank.*

- _____ 6. All living things are made of one or more cells.
- _____ 7. A human has about 100 cells.
- _____ 8. When a plant grows toward the sun, the sun's light is a stimulus.
- _____ 9. Organisms use energy to make and digest food.
- _____ 10. Heredity is the passing of characteristics from offspring to parents.

Chapter 5 Demonstration

FOSSILS FROM MOLDS

Background: The type of fossil made of a hollow space in the shape of an organism is called a mold. Sometimes a mold is filled with minerals. When these minerals harden, they form a cast. A cast is a copy of the shape of the organism that made the mold.

Materials:

- *a small tray with raised edges*
- *sand to cover the bottom of the tray*
- *a wooden spoon*
- *a spray bottle filled with water*
- *3 seashells*
- *plaster of Paris*

Note: You will need about two days to complete this demonstration, depending on drying time.

Directions:

1. Pour the sand into the bottom of the tray, and smooth it with the wooden spoon.
2. Use the spray bottle filled with water to dampen the sand.
3. Press the seashells into the damp sand.
4. Carefully mix the plaster of Paris, and pour it into the seashell impressions.
5. Let the plaster dry.
6. Carefully remove the hardened plaster forms, and compare them to the original seashells.
7. Discuss how fossils are made in nature.

Growing a Bean Plant

Chapter 8 – LAB ACTIVITY

Answer Key:

- 1–2. Answers will vary.
3. The roots grew first. They are important because they hold the plant in place and absorb water and nutrients to carry to the rest of the plant.
4. The roots, stems, and leaves can be seen.
5. A seed needs air, water, and sunlight in order to grow into a plant.
6. The kidney beans would not have grown into plants if the bag was sealed, if they did not get enough water, or if they did not receive direct sunlight.
7. Stems provide support and structure for leaves, move water and nutrients, and store food. Leaves make food through photosynthesis.
8. Answers will vary.

Name:

Date:

Growing a Bean Plant

Chapter 8 – LAB DATA SHEET

Problem: What does a seed need in order to grow into a plant?

Materials:

- *a large, resealable plastic bag*
 - *a permanent marker*
 - *3 paper towels*
 - *water*
 - *a piece of cardboard cut to fit inside the plastic bag*
 - *a rubber band*
 - *3 kidney beans*
 - *masking tape*
 - *a spray bottle filled with water*
-

Hypothesis: What will happen to the kidney beans, or seeds, if they get enough air, water, and sunlight?

Conduct an Experiment:

1. Write your name(s) and the date on the plastic bag.
2. Place the piece of cardboard inside the bag.
3. Fold three paper towels in half, and place them on top of the piece of cardboard inside the bag.
4. Fill the bottom fourth of the bag with water. Make sure the edges of the paper towels are in the water.
5. Put a rubber band around the middle of the bag.
6. Drop the kidney beans into the bag one at a time, spacing them out across the bag. Make sure the kidney beans are resting on the rubber band and are pressing against the paper towels.
7. Do not seal the bag. Tape it to a window that receives direct sunlight. Make sure the kidney beans face outside.
8. Every two days, go outside to look in the window and check the kidney beans, observing any changes. Once a week, draw a picture of the kidney beans and record your observations.
9. Use a spray bottle to add water through the top of the bag as necessary. Do not let the kidney beans get too dry or too wet.

Name: _____


Date: _____

Growing a Bean Plant

Chapter 8 – LAB DATA SHEET

Data Collection and Analysis:

1. What do the kidney beans look like?



Date: _____

Observations: _____



Date: _____

Observations: _____



Date: _____

Observations: _____



Date: _____

Observations: _____



Date: _____

Observations: _____



Date: _____

Observations: _____

Name:

Date:

Growing a Bean Plant

Chapter 8 – LAB DATA SHEET

2. What has happened to the kidney beans?

3. Which part of each plant grew first? Why is this part important?

4. After the bean plants have grown, what parts of the plants can be seen?

Conclusion:

5. What does a seed need in order to grow into a plant?

6. What things could have happened to keep the kidney beans from growing into plants?

7. How do stems and leaves help plants grow?

8. Was your hypothesis correct? Explain your answer.

Name:

Date:

Chapter 2: The Cell

REVIEW

Choose the Answer. Circle the answer that correctly completes each sentence.

1. (Phospholipids, Amino acids) are chains of small molecules that make up proteins in a cell.
2. (Cytoplasm, Chloroplast) is found in both animal cells and plant cells.
3. Water does not dissolve (proteins, lipids).
4. (Equilibrium, Osmosis) is reached when the molecules are spread out evenly throughout a system.
5. (Golgi bodies, Lysosomes) are organelles found in animal cells but not in plant cells.

Fill in the Blank. Use the words in the word bank to complete the sentences.

cell cycle osmosis ATP mitosis photosynthesis

6. _____ is the diffusion of water molecules across a cell membrane.
7. The process that plants go through to capture and use energy from the sun to make food is called _____.
8. There are four stages of _____.
9. The _____ starts when a cell is formed.
10. _____ is the main fuel that is used for cell activities.

Chapter 2: The Cell

REVIEW

Short Answer. Write the answer to each question in complete sentences.

1. Describe the difference between active transport and passive transport.

2. What is endocytosis?

3. What is exocytosis?

4. List two ways that cells can change sugar into ATP.

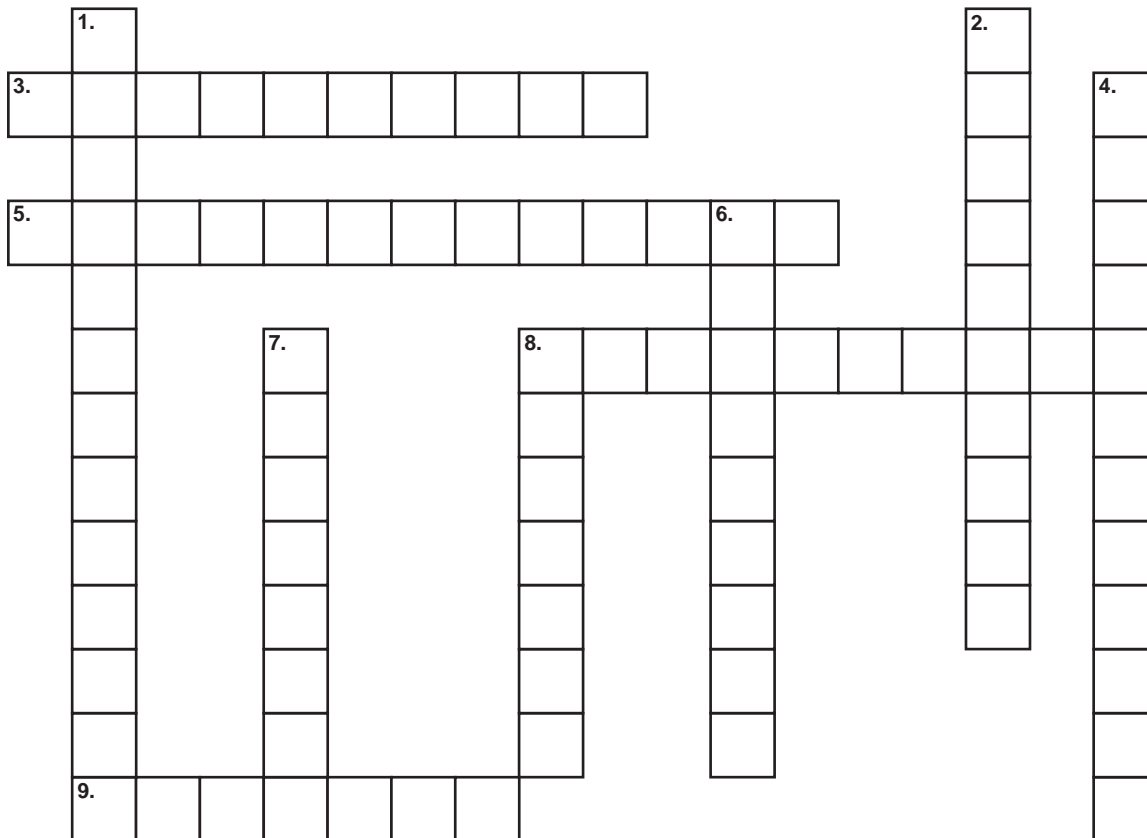
5. What is mitosis?

Name: _____

Date: _____

Chapter 2: The Cell **REVIEW**

Crossword Puzzle. Use the clues to complete the crossword puzzle.



ACROSS

- 3. During _____, molecules naturally move from crowded areas to less crowded areas.
- 5. _____ are molecules in a cell that are made out of sugar and that are used for energy and energy storage.
- 8. A/An _____ is a cell that does not have a nucleus.
- 9. The information center of a cell is the _____.

DOWN

- 1. Prokaryotes form new cells through _____.
- 2. A/An _____ is a tiny packet of DNA inside a eukaryote's nucleus.
- 4. _____ is the breakdown of sugar into energy without using oxygen.
- 6. An animal cell is a/an _____.
- 7. A/An _____ is found in a plant cell but not in an animal cell.
- 8. A/An _____ is a large molecule in a cell that carries out the functions of life.

Name: _____

Date: _____

Chapter 7: Protists & Fungi

TEST

Matching. Match each word to its definition, and write the letter in the blank.

- _____ 1. plantlike protists that produce food through photosynthesis
- _____ 2. an organism from the kingdom Protista, which includes protozoa, funguslike slime molds and water molds, and types of algae
- _____ 3. organisms from the kingdom Fungi, which includes yeasts, molds, and mushrooms
- _____ 4. an alga and a fungus that intertwine and live together in symbiosis
- _____ 5. animal-like protists that are consumers
- A. protist
B. algae
C. lichen
D. protozoa
E. fungi

Fill in the Blank. Use the words in the word bank to complete the sentences.

funguslike protists plants parasites protists hyphae

6. _____ are eukaryotes, which means that they each have a nucleus to enclose their DNA.
7. _____ are organisms that live off of hosts in order to get food, sometimes even killing the hosts.
8. Long strands of cells that make up fungi are called _____.
9. Fungi were once classified as _____ but are now in a separate kingdom.
10. The two types of _____ are slime molds and water molds.

Name: _____

Date: _____

Chapter 7: Protists & Fungi

TEST

Multiple Choice. Circle the best answer, and write the letter in the box.

11. The alga produces food for the lichen through _____.
- A. photosynthesis
 - B. symbiosis
 - C. reproduction
 - D. digestion
12. Amoebas are protists that move with _____.
- A. cilia
 - B. pseudopods
 - C. flagella
 - D. all of the above
13. Large groups of hyphae grow together in a mass called _____.
- A. protozoa
 - B. mold
 - C. mycelium
 - D. algae

Short Answer. Write the answer to each question in complete sentences.

14. What are three ways that fungi reproduce?

15. How does lichen form?
