

Science/Ciencia



Roanoke City
PUBLIC SCHOOLS

**Teacher Contact
Information:**
Información de
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profesor:

**Family Learning
Resources:
Remote Learning Edition
Recursos de
Aprendizaje Familiar:
Edición de Aprendizaje
Remoto**

Life Science/Ciencias de la vida





Family Learning Resources: Remote Learning Edition

Winter 2026 - 5 Days of Resources

Content Areas Included

- English Language Arts
- Mathematics
- Science
- Social Studies

Objective

This document will provide families with remote learning resources in the four core content areas for the anticipated extended closure of schools due to inclement weather.

Recommendations for Usage

- These necessary materials focus on reinforcing previously learned concepts - no new materials are covered.
- Students should be able to complete with minimal adult assistance. However, discussing the purpose and understandings from resources can help establish a deeper connection to the materials.
- Students are encouraged to write down questions that they might have about the materials so that they may be discussed with teachers.
- In addition to the completion of these materials, RCPS recommends that students take time to read - either independently or with others.

Questions & Follow Up Notes

Please do not hesitate to reach out to your student's teachers with any questions. These resources are designed to support remote learning during school closures and help minimize disruptions to instruction. **Students should bring this booklet with them when they return to school.**



Recursos de Aprendizaje Familiar: Aprendizaje Remoto



Invierno 2026 – 5 días de recursos

Áreas de contenido

- Lenguaje (Inglés)
- Matemáticas
- Ciencias
- Estudios Sociales

Objetivo

Este documento ofrece a las familias recursos de aprendizaje remoto en las cuatro áreas académicas principales, pensados para apoyar la continuidad educativa durante cierres escolares prolongados debido a las inclemencias del tiempo.

Recomendaciones de Uso

- Estos materiales necesarios se centran en reforzar conceptos aprendidos previamente - no se cubre material nuevo.
- Los estudiantes deberían poder completar las actividades con una asistencia mínima de un adulto. Sin embargo, conversar sobre el propósito y los aprendizajes de los recursos puede ayudar a establecer una conexión más profunda con el material.
- Se anima a los estudiantes a escribir las preguntas que puedan tener sobre los materiales para que puedan ser comentadas con los maestros.
- Además de completar estos materiales, RCPS recomienda que los estudiantes dediquen tiempo a la lectura, ya sea de manera independiente o con otras personas.

Preguntas y notas de seguimiento

Por favor, no dude en comunicarse con los maestros de su estudiante si tiene alguna pregunta. Estos recursos están diseñados para apoyar el aprendizaje remoto durante los cierres escolares y ayudar a minimizar las interrupciones en la instrucción. **Los estudiantes deben traer este folleto cuando regresen a la escuela.**



Life Science Day 1

1. Whenever using a microscope slide, you should always:

- A. check for cracks or chips in the glass.
 - B. make sure it is clean.
 - C. handle it with care.
 - D. all of these
-

2. Which of the following is a unit of volume?

- A. centimeter
 - B. pound
 - C. cubic meter
 - D. gram
-

3. Which of the following should be put in a lab journal?

- A. observations
 - B. conclusions
 - C. data
 - D. all of these
-

4. Emily sees the following tool in her science lab.



What is this tool used to measure?

- A. an object's volume
 - B. an object's length
 - C. an object's density
 - D. an object's mass
-

Day 2

5. Tamora is heating a liquid to find the temperature at which the liquid boils.

Which piece of laboratory equipment should Tamora use to measure the temperature of the liquid once the boiling has begun?

- A. balance
 - B. microscope
 - C. timer
 - D. thermometer
-
-

6. Which of these instruments sends its measurements directly to a computer?

- A. graduated cylinder
 - B. pH paper
 - C. temperature probe
 - D. stopwatch
-

7. Betty is studying vein patterns in leaves. Which of the following tools could help Betty examine the leaves' veins in greater detail?

- A. a graphing calculator
 - B. a hygrometer
 - C. a hand lens
 - D. a compass
-

8. A test tube is used to

- A. boil water on a hotplate.
 - B. hold liquids in a rack or stand
 - C. accurately measure an amount of liquid.
 - D. measure the pH of a liquid.
-

9. Which of the following would be the best tool for looking at cells in a scientific investigation?

- A. a microscope
- B. a pH meter
- C. a telescope
- D. a hand lens

Day 3

1. Aisha wonders whether wind or water causes the most erosion. She set up an experiment in which she used a watering can to pour water down a pile of dirt. She then used a fan to blow wind on a second pile of dirt that is the exact same shape and size as the first pile of dirt. Aisha then measured how the height of the dirt piles changed. She also drew pictures of how their shape changed. In this experiment, what was the dependent variable?

- A. the tools used to measure the dirt piles
 - B. the time the dirt piles were eroded away
 - C. the agent of erosion applied to the dirt piles
 - D. the height and shape of the dirt piles
-

2. Maria wants to determine which type of disinfectant kills the most bacteria.

Which of the following is the best way for Maria to determine this?

- A. Interview ten different people to determine which type of disinfectant they prefer.
 - B. Ask ten different companies that make disinfectants which type is best.
 - C. Put the same amount and species of bacteria on ten identical plates, and add ten different kinds of disinfectant to each plate.
 - D. Put the same amount and species of bacteria on ten identical plates, and add a different disinfectant to each plate.
-

3. Factors that are changed in controlled scientific experiments are known as _____.

- A. controls
 - B. variables
 - C. data
 - D. hypotheses
-

4. In which of the following experiments would the results be most reliable?

- A. an experiment in which the trials were repeated many times
- B. an experiment in which the trial was repeated a few times
- C. an experiment which contained several variables
- D. an experiment which contained no controls

5. A scientist wants to determine which fertilizer is more effective—Fertilizer X or Fertilizer Y. The best way for her to proceed would be to design an experiment with

- A. two groups of plants—a group fertilized by Y and a control group with no fertilizer.
 - B. three groups of plants—a group fertilized by X, a group fertilized by Y, and a control group with no fertilizer.
 - C. three groups of plants—a group fertilized by X, a group fertilized by both X and Y, and a control group with no fertilizer.
 - D. two groups of plants—a group fertilized by X and a control group with no fertilizer.
-

6. Dan wants to test the effects of different amounts of antibiotics on bacteria. While setting up his experiment, he makes sure to use the same type of antibiotic, the same type of bacteria, and the same type of incubator for each trial.

Which phrase below best describes this part of the experiment?

- A. analyzing results
 - B. collecting data
 - C. setting up constants
 - D. forming a hypothesis
-

7. Denise wants to find out how the steepness of a hill's slope affects the amount of soil that erodes from it. She will use soil, a long pan, and several 4-inch-tall wooden blocks to build a model hillside. She will use a watering can to simulate rainfall.

In her experiment, which factor should be Denise's variable?

- A. the number of blocks holding up the end of the pan
- B. the location she uses to test her model
- C. the type of soil with which she fills the pan
- D. the amount of water she pours on the model hillside

8. Jackie is designing an experiment for her school science fair. She decides to give different amounts of water to pepper plants and record their growth. She has enough seeds for four pots. She finds three pots that have holes for drainage and one that doesn't. She plants the seeds in the four pots, then gives each pot a different amount of water each day. Has Jackie designed a fair test?

- A.** No, Jackie should have used four identical pots.
 - B.** No, Jackie should have given each plant the same amount of water.
 - C.** Yes, but Jackie should have used more pepper plants.
 - D.** Yes, there are no problems with Jackie's experiment.
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9. Shawn is planning a scientific experiment. He wants to learn whether time of day has an effect on how far the roses in his mother's garden are open. He plans to measure the diameter of each flower on three rosebushes every hour during a week in the spring.

What is the independent variable in Shawn's experiment?

- A.** the time of day
 - B.** the number of flowers
 - C.** the diameter of the flowers
 - D.** the time of year
-

Day 4

1. All living organisms must be able to acquire and release energy in order to survive.

Plants take in energy from the Sun and use that energy to make sugar and oxygen from carbon dioxide and water. Euglena, a type of protist, can also take in energy from the Sun and make sugar and oxygen.

Which of the following statements is true given the above information?

- A.** All organisms carry out their life functions in different ways.
 - B.** Protists are not similar to plants in any way.
 - C.** Only plants and euglena can use light energy from the Sun.
 - D.** Different organisms can carry out their life functions in similar ways.
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2. The walls of the human heart are made of a specialized form of muscle tissue known as cardiac tissue. This cardiac, or heart, tissue contracts the chambers of the heart to cause rhythmic beating and blood circulation.

Tissues in the human body, such as cardiac tissue, are made up of

- A. cells.
 - B. nerves.
 - C. organs.
 - D. blood.
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3. Organ systems are composed of organs, organs are composed of tissues, and tissues are composed of cells.

This pattern is organized into levels. Organization based on levels can be found in

- A. single celled organisms.
 - B. both plants and animals.
 - C. plants, but not animals.
 - D. animals, but not plants.
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4. Cells in organisms need food, air, and waste removal. How are these needs met?

- A. Each cell must specialize in all of these functions.
 - B. Cells share their waste with other cells.
 - C. Cells get their food from the air and sunlight around them.
 - D. Organs and tissues perform these functions for the cells.
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5. Which of the following processes enables an organism to acquire nutrients from its environment?

- A. digestion
 - B. ingestion
 - C. exhalation
 - D. sensation
-

6. All living things use energy. This is why living things must eat to continue living. Which of the following demonstrates a way in which a living thing might use its energy?

- A. to grow
 - B. to respond to stimuli
 - C. to move
 - D. all of these
-

Day 5

7. A scientist is comparing two cells.

One cell, cell A, is from a unicellular organism, and the other cell, cell B, is from a multicellular organism.

What functional differences will the scientist most likely see when comparing the two cells?

- A. Cell A is very small and has only a few organelles, while cell B is very large and has many organelles.
 - B. Cell A is very large and has many organelles, while cell B is very small and has only a few organelles.
 - C. Cell A performs all of the organism's necessary functions, while cell B performs only one or a few functions.
 - D. Cell A performs only one or a few functions, while cell B performs all of the organism's necessary functions.
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8. Cells are the basic unit of life. Thus, cells are responsible for maintaining a stable internal environment within living organisms.

How do humans continue to maintain a stable internal environment if billions of cells die within their bodies each day?

- A. The cells must be able to reproduce.
 - B. Humans need fewer cells as they get older.
 - C. New cells are eaten in the form of food.
 - D. Exposure to the Sun stimulates cell growth.
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9. A system is a group of related parts with specific roles that work together to achieve an observed result.

If a body system, such as the digestive system, fails to work properly, what would happen to the organism?

- A.** The defective system would regenerate into a new, working system.
 - B.** The organism would immediately evolve so the defective system is no longer necessary.
 - C.** The other organ systems would compensate for the defective system.
 - D.** The organism would not be able to function properly.
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