

ROBERTSON COUNTY SCHOOLS

MASTERY GUIDE

FIFTH GRADE

FIRST NINE WEEKS

SCIENCE

Scientific Method

Continue to develop the students' use and understanding of the scientific method.

1. Problem
2. Hypothesis
3. Materials
4. Procedure
5. Data – use graphs, charts, tables
6. Results
7. Conclusion

Cell Structure and Function

- 5.1.1.a. Draw and label the basic structures of plant and animal cells (i.e., cell wall, cell membrane, cytoplasm, nucleus, chloroplasts).
- 5.1.1.b. Compare and contrast the basic structures of plant and animal cells (i.e., cell membrane, cytoplasm, and nucleus).
- 5.1.1.c. Differentiate among cells, tissues, organs, and systems.

Heredity and Reproduction

- 5.4.1.a. Explain the function of the flower in plant reproduction.
- 5.4.1.b. Observe specific plants and explain how they grow from and produce seeds (i.e., sunflowers, beans).
- 5.4.1.c. Compare and contrast how different plants reproduce (i.e., flowers, spores).
- 5.4.2.a. Recognize that new generations of living things arise through reproduction.
- 5.4.2.b. Explain that the continuation of a species is dependent upon the reproduction of its members.
- 5.4.3. Describe the life cycle of a fast growing plant.

Diversity and Adaptation Among Living Things

- 5.5.1. Classify plants according to their characteristics.
- 5.5.2. Compare how plants are adapted to different environments (e.g., palm tree, fir tree, cactus).

Interactions Between Living Things and Their Environment

- 5.2.1. Classify specific kinds of relationships among plants and animals within an ecosystem.
- 5.2.2. Predict the consequences of a human action on the environment.

Food Production and Energy for Life

- 5.3.1 Explain how plants produce their own food.
- 5.3.2 Describe how various plant structures are associated with food production (i.e., stems, leaves, stomata).

Atmospheric Cycles

- 5.8.3a. Demonstrate the components and processes of the water cycle.
- 5.8.3b. Analyze how temperature affects evaporation, condensation, and precipitation.

Earth and Its Place in the Universe

- 5.7.1 Compare and contrast characteristics of the planets.

SECOND NINE WEEKS

SCIENCE

Scientific Method

Continue to develop the students' use and understanding of the scientific method.

1. Problem
2. Hypothesis
3. Materials
4. Procedure
5. Data – use graphs, charts, tables
6. Results
7. Conclusion

Biological Change

- 5.6.1 Explain how fossils produce information about the past.

Earth and Space Science

Earth and Its Place in the Universe

- 5.7.2a. Demonstrate how moon phases occur.
- 5.7.2b. Explain why the moon appears to change shape.
- 5.7.2c. Explain the difference between rotation and revolution in the solar system.

Earth Features

- 5.9.1 Explain how certain forces cause changes in the earth's geological features (i.e., wind, water, plate tectonics).
- 5.9.2 Construct a model that depicts the layers of the earth.

Earth Resources

- 5.10.1 Choose the appropriate use for an earth material (e.g., fuel, monument, house foundation).
- 5.10.2a. Describe the process of soil formation.
- 5.10.2b. Identify soil characteristics that best support plant growth.
- 5.10.3 Explain the implications of society's dependence on non-renewable resources.

THIRD NINE WEEKS

SCIENCE

Scientific Method

Continue to develop the students' use and understanding of the scientific method.

1. Problem
2. Hypothesis
3. Materials
4. Procedure
5. Data – use graphs, charts, tables
6. Results
7. Conclusion

Structure and Properties of Matter

- 5.12.1 Explain the law of conservation of matter.
- 5.12.2a. Describe how evaporation and condensation occur as a result of temperature change.
- 5.12.2b. Explain why different types of matter freeze, melt, and/or evaporate at different rates.

Interactions of Matter

- 5.13.1a. Identify conditions associated with a chemical change.
- 5.13.1b. Distinguish between physical and chemical changes.

Energy

- 5.14.1a. Demonstrate and explain how energy can change form.
- 5.14.1b. Differentiate between potential and kinetic energy.
- 5.14.2 Observe and describe how lenses affect a beam of light.
- 5.14.3a. Explore and describe the uses of magnets.
- 5.14.3b. Demonstrate and describe a magnetic field.
- 5.14.4a. Construct and explain a parallel circuit.
- 5.14.4b. Compare series and parallel circuits.
- 5.14.4c. Explain the use of a specific type of electrical circuit.

Forces and Motion

- 5.11.2a. Explain the relationship among mass, force, and distance traveled.
- 5.11.2b. Explain how slope affects the amount of force.
- 5.11.2c. Explore and explain the use of simple machines.
- 5.11.3 Explore and explain how friction affects motion.

FOURTH NINE WEEKS

SCIENCE

Scientific Method

Continue to develop the students' use and understanding of the scientific method.

1. Problem
2. Hypothesis
3. Materials
4. Procedure
5. Data – use graphs, charts, tables
6. Results
7. Conclusion

Forces and Motion

5.11.1 Explain the effect that gravity has on objects found on earth.

Atmospheric Cycles

5.8.1 Analyze data obtained from studies of atmospheric conditions (i.e., air pressure, temperature, wind speed, precipitation).

5.8.2 Explain the effects of landforms on weather and climate.