

I/R/M

Religious
Values

SECOND GRADE

I. Life Science

A. Animals

1. Habitats and Needs of Organisms

- a. Identify the basic needs of animals, including shelter and living space.
- b. Describe the relationship between animals and their habitats.
- c. Group animals based on their habitats.

2. Life Cycles

- a. Observe and describe the growth and development of animals throughout their life cycles.
- b. Investigate and understand that animals go through a series of orderly changes in their life cycles.
- c. Observe growth in animals over time.
- d. Investigate that some animals go through distinct stages (metamorphosis) during their lives while others generally resemble their parents throughout their life cycle.
- e. Classify animals based on their similarities.

3. Classification of Vertebrates

- a. Identify the various body coverings of animals.
- b. Classify animals according to various characteristics.
- c. Define carnivore and herbivore.
- d. Classify animals as being carnivores or herbivores.

B. Plants

1. Organisms and their environment.

- a. Investigate and describe ways in which animals interact with each other, plants, and with the environment.

2. Structure and function.

- a. Observe and describe the changes that occur as plants grow and develop.
- b. Identify the parts of plants (stem, root, leaf, bud, flower, seed, seed pod).
- c. Explain the function of each plant part.
- d. Identify ways we use plants.

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Respect for life

Stewardship

God's
unfolding plan

Respect for
God's creation

Stewardship

Awe and
wonder

II. Physical Science

A. Properties of Objects and Materials

R.

1. Properties

- a. Examine and classify common physical properties of solids, liquids, and gases.

Awe and wonder

2. States

**M.
R.**

- a. Identify materials as solid, liquid, and gas.
- b. Demonstrate and describe how water and other materials change from one state to another.

R.

3. Measuring

- a. Measure length, mass, volume, and temperature of various materials in standard (U.S. Customary and Metric Systems) units.

B. Magnetism

I.

1. Poles

- a. Demonstrate and describe how the poles of magnets attract and repel each other.

Stewardship

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2. Attract and Repel

- b. Investigate and classify the results of magnetic forces on common objects (metals/nonmetals).

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3. Applications of magnetism.

- c. Give examples of useful applications of magnets (refrigerator magnet, can opener, magnetized screwdriver, magnetic compass, etc.)

C. Sound

I.

1. Vibrations

I.

- a. Observe that sound originates from vibrating sources.

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- b. Compare high, low, and medium pitched sounds.

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- c. Compare the pitch of a sound to the physical properties of the sound source.

Awe and wonder

2. Travel through states of matter.

I.

- a. Observe that the outer ear is designed to receive sounds.

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- b. Compare different ways to make sounds louder and travel farther.

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- c. Record observations of how sounds travel through different states of matter.

III. Earth Science

A. Weather

1. Factors

- I. a. Define components of weather, including temperature, wind, and precipitation (rain, sleet, snow, and hail).
- R. b. Observe and identify weather conditions and patterns.
- I. c. Create and use symbols to represent weather conditions.
- M. d. Describe and sequence the seasons.
- I. e. Identify safety precautions to use during severe weather conditions

2. Measurement

- I. a. Measure and record temperature in both degrees Fahrenheit and Celsius.
- I. b. Measure and record precipitation.
- I. c. Investigate and describe changes in wind direction and the motion of objects due to the wind.
- I. d. Make simple charts and graphs of observed weather data.
- I. e. Compare drought and flood conditions.
- I. f. Investigate and describe how weather affects water supply and water conservation.

B. Space

1. Sun

- I. a. Explain that the tilt of the Earth's axis and its orbit around the sun causes the seasons.
- I. b. Identify the sun as a star and observe that stars produce their own light.
- I. c. Observe that the sun appears to rise in the East and sets in the West.
- I. d. Demonstrate the principles of the sundial and observe that the length and direction of the shadow depends on the sun's position.

2. Moon

- I. a. Observe and record the location, shape, and surface features of the moon during the evening and morning hours.
- I. b. Predict, observe, and record the shadow cast by moonlight and infer that the shadow moves when the moon's position changes.
- I. c. Show that the shape of the moon changes over time and sequence drawings to illustrate moon phases.
- I. d. Identify that moonlight is reflected light.

C. Earth Long ago

1. Dinosaurs

- R. a. Observe, compare, and classify the characteristics (teeth, body covering, tails, live birth vs. eggs, and mammals vs. reptiles) of dinosaurs and prehistoric animals using models, pictures, and skeletons.
- I. b. Identify the age of dinosaurs and prehistoric animals on a timeline showing the age of the earth.
- I. c. Assemble a model dinosaur skeleton, compare skeletons of different dinosaurs using pictures and model bones, and infer the shapes of a dinosaur from the evidence of a skeleton.

Awe and wonder

God's unfolding plan

Respect for God's creation

Awe and wonder

God's unfolding plan

Awe and wonder

God's unfolding plan

- I. d. Predict the actual size of dinosaurs using models, pictures, and/or skeletons, compare the relative size of dinosaurs with modern objects and vertebrate animals.
- R. e. Identify that dinosaurs and prehistoric mammals are extinct and that dinosaurs have been extinct much longer than prehistoric mammals.
- I. f. Infer what animals of today are related to dinosaurs and prehistoric mammals using models, pictures, and skeletons.
- 2. Fossils
 - I. a. Conclude that the physical characteristics, habitats, and behaviors of dinosaurs and prehistoric mammals are based on inferences made from observations and studies of fossils.
 - I. b. Describe fossils as a record of organisms preserved in rock of a plant or animal and make handprint or footprint molds to simulate the fossil making process.

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God's unfolding plan

Grade 2

I. Inquiry

Process skills and inquiries are not an isolated unit of instruction and should be embedded throughout the content areas. Safety issues should be addressed as developmentally appropriate.

A. Process Skills

1. Observe
 - a. Use the senses to gather information about objects or events such as size, shape, color, texture, sound, position, and change (qualitative observations).
2. Classify
 - a. Compare, sort, and group concrete objects according to observable properties.
 - b. Arrange objects in sequential order.
3. Measure
 - a. Use standard (U.S. customary and metric) and nonstandard whole units to estimate and measure mass, length, volume, and temperature (quantitative observations).
4. Communicate
 - a. Use drawings, tables, graphs, written and oral language to describe objects and explain ideas and actions.

B. Inquiry

1. Plan and conduct a simple investigation.
 - a. Ask a question about objects, organisms, and events in the environment.
 - b. Plan and conduct a simple investigation.
 - c. Use simple equipment, such as hands lenses, thermometers, balances, rulers, etc., to gather data and extend the senses.
 - d. Communicate investigations and explanations.