

SCIENCE GRADE 3

PURPOSE

The third grade science program will continue to focus on using a broad range of science skills in understanding the natural world. The grade three curriculum integrates all the natural sciences so that the students can appreciate the ideas that unify the science and make the connections between these ideas and concepts.

Student will experience the richness and excitement of scientific discovery of the natural world through investigating phenomena and applying scientific concepts, skills and processes to everyday experiences. The aim of this program is to help students develop scientific dispositions and habits of mind including curiosity, demand for verification, respect for logic and rational thinking, attention to accuracy, precision and patience.

Making detailed observations, drawing conclusions and recognizing unusual or unexpected data are skills needed to be able to use and validate information. The science curriculum heightens critical thinking skills by providing opportunities for students to generalize, evaluate and apply information, and solve problems by asking appropriate questions. Utilizing scientific methodology is strongly reinforced.

I. Student Outcomes

A. Scientific Process

Students will:

1. Comprehend that most systems are components of larger systems.
2. Understand how components of a system influence and interact with one another.
3. Be able to communicate experimental findings using words, charts, graphs, pictures and diagrams.
4. Be able to collect and organize data to support the results of an experiment.
5. Determine that scientific theories emerge over time and depend on the contributions of many people.
6. Identify how people apply scientific knowledge using tools, technology, and other devices to solve problems.
7. Grasp how science uses mathematics as a tool to determine and support conclusions.

B. Life Science

Students will:

1. Determine the needs and characteristics of basic organisms.
2. Describe lifecycles of organisms.
3. Understand organisms and their environments.

C. Physical Science

Students will:

1. Describe and sort objects according to the materials from which they are made and their physical properties.
2. Recognize that matter can exist as a solid, liquid, or gas and can be transformed from one state to another by heating or cooling.
3. Demonstrate that motion of an object can vary in speed and direction.
4. Demonstrate that the position and motion of an object can be changed by pushing or pulling and that the change is related to the strength of the push or pull.

D. Earth Science

Students will:

1. Recognize and demonstrate the use of different kinds of maps.
2. Investigate materials that make up the earth including rocks, minerals, soil and fossils, and how they are formed.
3. Collect and record weather data and recognize how those conditions affect our daily lives.
4. Observe and identify objects and their apparent motion in the day and night sky.
5. Relate the motions of the earth-sun-moon system to units of time (day, months, seasons, years).

II. CONTENT

A. Scientific Process

1. Observing
 - a. Comparing and contrasting
 - b. Recognizing cause and effect
2. Organizing and Communicating Information
 - a. Classifying and sequencing
 - b. Using tables, graphs, charts and journals
3. Practicing Scientific Process
 - a. Forming a hypothesis
 - b. Testing a hypothesis through experiment
 - c. Representing and interpreting data

B. Life Science (Unit A Ch. 1, 2, 3)

1. How Plants Live and Grow
 - a. What do roots, stems and leaves do?
 - b. Flowers and Cones
 - c. How plants grow.
2. How Animals Grow and Change
 - a. How are babies like their parents?
 - b. How do spiders and insects grow?
 - c. Fish, frogs and mammals
 - d. How do babies learn?
3. Living Things and Their Environments
 - a. Where do organisms live?
 - b. Adaptations
 - c. The food chain
 - d. Populations

C. Physical Science (Unit B Ch. 1, 2)

1. Matter and How It Changes
 - a. What are objects made of?
 - b. Physical Changes

- c. Chemical Changes
 - 2. Force, Machines and Work
 - a. Identifying cause and effect
 - b. What makes things move?
 - c. Gravity and magnetism
 - d. Simple machines
- D. Earth Science (Unit C Ch. 2, 3)
 - 1. Materials of the Earth
 - a. Materials of the earth
 - b. What is soil?
 - c. How can we protect natural resources?
 - 2. The Sun, Planets, and Moon
 - a. The sun and the planets.
 - b. How the sun affects the earth.
 - c. How does the moon move?
 - d. How do scientists learn about the solar system?

III. Evaluation

Students will:

- A. Be prepared and ready for work.
- B. Prepare work neatly.
- C. Follow directions.
- D. Hand in completed class work and homework assignments.
- E. Participate in class discussions, activities and experiments.
- F. Prepare for and successfully complete all tests and quizzes.
- G. The final grade represents the teacher's professional judgment of the student's performance. All of the above areas are included in the evaluation process.

Recommended sequence for instruction:

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| 1. Earth Science, Unit C | Changes in the Earth's Surface, Chapter 1 |
| 2. Earth Science, Unit C | The Sun, Planets & Moon, Chapter 3 |
| 3. Physical Science, Unit B | Matter, Chapter 1 |
| 4. Physical Science, Unit B | Forces, Machines & Work, Chapter 2 |
| 5. Life Science, Unit A | How Plants Live/Grow, Chapter 1 |
| 6. Life Science, Unit A | How Animals Grow, Chapter 2 |
| 7. Life Science, Unit A | Living Things/Environment, Chapter 3 |

Health Science: "What is Wrong with the Johnson Family"
EOSHI Program instruction during the 3rd marking period
Fulfills 70 minutes Health Instruction

A. Text: Scott Foresman Science, 2000

B. Teacher Resources

1. Science Resource Kit
2. Teacher's Assessment Package
3. Interactive Transparency
4. Lab Manual
5. www.sfscience.com
6. Habitat (Magic School Bus)

**Include activity bank and quick quizzes

Integrate with reading and social studies when appropriate

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