

At the end of the school year, students will be able to...

GOAL 11 Inquiry

(Integrated into the whole year) Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.

STANDARD A

Know and apply the concepts, principles and processes of scientific inquiry.

- _____ Describe an observed event orally.
- _____ Ask questions on a variety of science topics.
- _____ *Collect and compare data from simple investigations.
- _____ Record and store data.
- _____ Arrange data into patterns.
- _____ Compare individual and group results.

STANDARD B

Know and apply the concepts, principles and processes of technological design.

- _____ State a given design problem in his/her own words and describe how to solve the problem.
- _____ Propose a way to build something or get something to work better.
- _____ Build the device using the materials and tools provided.
- _____ Test the design using simple instruments, techniques and measurement methods, with teacher guidance.
- _____ Report the design of the device, the test process and the results orally.

GOAL 12 Concepts

Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

STANDARD A

Know and apply concepts that explain how living things function, adapt and change.

STANDARD B

Know and apply concepts that describe how living things interact with each other and with their environment.

UNIT A1 PLANTS

- _____ *Identify roots, stems and leaves and describe what they do.
- _____ Describe what a seed needs to grow into a plant.
- _____ Identify plant parts used for food and other uses of plants.

UNIT A2 ANIMALS

- _____ *Compare and contrast animals by characteristics such as size, shape, body covering and movement.
- _____ Identify basic needs of animals.
- _____ Compare animal babies and their parents and identify their life cycles.

UNIT A3 WHERE PLANTS and ANIMALS LIVE

- _____ *Define habitat and tell what it provides.
- _____ Identify characteristics of living and nonliving things and that they are part of an ecosystem.

STANDARD C

Know and apply concepts that describe properties of matter and energy and the interactions between them.

UNIT B1 GROUPING OBJECTS

- _____ Classify objects according to observable properties.
- _____ *Describe properties of solids, liquids and gases.
- _____ Identify what happens when water changes phase.

UNIT B2 SOUND, LIGHT and HEAT

- _____ Describe characteristics of sound (e.g., loud, soft, high, low) and explain how sound is made from vibrations.
- _____ *Identify what is needed for a shadow to form and how they change.
- _____ Identify sources of heat and which materials conduct and insulate.

STANDARD D

Know and apply concepts that describe force and motion and the principles that explain them.

UNIT B3 MOVING and WORKING

____ Identify objects attracted by magnets and when magnets attract and repel other magnets.

____ *Describe what machines do and how to make a simple lever.

STANDARD E

Know and apply concepts that describe the features and processes of the Earth and its resources.

STANDARD F

Know and apply concepts that explain the composition and structure of the universe and the Earth's place in it.

UNIT C1 THE EARTH

____ Describe properties of rocks and how they can change.

____ Compare types of soil and identify uses.

____ *Identify ways to use and conserve resources.

UNIT C2 WEATHER

____ Describe types of weather and instruments to measure weather conditions.

____ Identify how clouds are formed and be able to distinguish between types of clouds.

____ *Compare weather changes season to season.

UNIT C3 THE SKY

____ *Compare and contrast day and night skies.

____ Describe how the moon changes phase.

____ Describe stars and pictures formed by groups of stars.

GOAL 23 Human Body

Understand human body systems and factors that influence growth and development.

STANDARD A

Describe and explain the structure and functions of the human body systems and how they interrelate.

STANDARD B

Explain the effects of health-related actions on the body system.

STANDARD C

Describe factors that affect growth and development.

UNIT D1 THE SENSES

____ Identify the five senses and what they can do.

____ *Make observations using all the senses.

UNIT D2 GROWING and CHANGING

____ *Identify ways people change as they grow.

____ Describe how teeth change and how to take care of them.

____ Identify the function of bones and muscles.

UNIT D3 TAKING CARE OF YOUR HEALTH

____ *Identify food groups on the Food Guide Pyramid.

____ Identify ways to stay safe.

GOAL 13 Connections

Understand the relationship among science, technology and society in historical and contemporary contexts.

STANDARD A

Know and apply the accepted practices of science.

____ *Follow teacher directions regarding safety when doing activities.

____ Predict what should happen when a procedure is completed the same way.

____ Explain how things can be learned by careful observation.

STANDARD B

Know and apply concepts that describe the interaction between science, technology and society.

____ Use simple equipment in scientific investigations (e.g., rulers, tape measures, balance).

____ Describe why scientists use measuring instruments.

____ Relate anecdotes about scientists and inventors from various ethnic and gender groups.

____ *Identify ways that science and technology affect each person's life.

____ Demonstrate ways to reduce, reuse and recycle materials.