

Curriculum Guide for Parents

First Grade Science

STANDARD 1: ANALYSIS, INQUIRY AND DESIGN

Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

Scientific Inquiry:

The Scientific Method is the process scientists use to go from asking a question to finding an answer. Students should:

- ask questions through observations
- make predictions
- follow procedures
- observe experiments
- draw conclusions using graphs, pictures, written and/or verbal responses

For a more detailed list of process skills refer to pages 10 and 15 of the New York State Elementary Science Core Curriculum at <http://www.emsc.nysed.gov/ciai/mst/pub/elecoresci.pdf>.

STANDARD 4: LIVING ENVIRONMENT

Life Sciences - Plants and Animals

- Knows that animals and plants sometimes cause changes in their surroundings
- Observe animals have different structures that serve different functions in growth, survival and reproduction
- Observe plants have different structures that serve different functions in growth, survival and reproduction
- Observe plants and animals closely resemble their parents and other individuals in their species
- Plants and animals can transfer specific traits to their offspring when they reproduce
- Observe that there is variation among individuals within a population
- Animals require air, water and food (essential nutrients) in order to live and thrive
- Plants require air, water, essential nutrients and light in order to live and thrive
- Nonliving things do not live and thrive
- Nonliving things can be human created or normally occurring
- All animals depend on plants. Some animals eat other animals
- Each kind of plant goes through its own stages of growth and development that may include seed, young plant, and mature plant
- Living things grow, take in nutrients, breathe, reproduce, eliminate waste and die
- The length of time from beginning of development to death of the plant is called its life span
- Life cycles of some plants include changes from seed to mature plant

STANDARD 4: LIVING ENVIRONMENT

Health and Nutrition

- Humans need a variety of healthy foods, exercise and rest in order to grow and maintain good health
- Good health habits include hand washing and personal cleanliness, avoiding harmful substances, eating a balanced diet, engaging in regular exercise

Human decisions and activities have had a profound impact on the physical and living environments.

- Humans depend on their natural and constructed environments
- Over time humans have changed their environment by cultivating crops and raising animals, creating shelter, using energy, manufacturing goods, developing means of transportation, changing populations, and carrying out other activities
- Humans, as individuals or communities, change environments in ways that can be either helpful or harmful for themselves and other organisms

STANDARD 4: PHYSICAL SETTING

Earth Science - Weather

- Observe that weather can change from day to day and through the seasons
- Understands that the sun's energy provides the light and heat that warms the air and water
- Weather is the condition of the outside air at a particular moment
- Weather can be described and measured by temperature, form and amount of precipitation and general sky conditions (sunny, cloudy, partly cloudy, stormy, fair)

Physical Science - Solids and Liquids

- (Discover) Earth's materials consist of rocks, soils, liquid water and the gases of the atmospheres- properties of solids, liquids and gases
- (Observe) water is recycled by natural process on Earth. Evaporation: changing of water (liquid) into water vapor (gas); Condensation: changing of water vapor (gas) into water (liquid); Precipitation: rain, sleet, snow, hail
- The materials an object is made up of determine some specific properties of the object (sink/float). Properties can be observed or measured with tools such as hand lenses, metric rulers, thermometers, and balances
- Describes and classifies matter (objects) by their composition (i.e., wood, metal, plastic, cloth...) and their physical properties (i.e., color, size, shape, texture, magnetism, hardness, odor, sound...) that can be observed through the senses
- The position of an object can be described by locating it relative to another object or the background (i.e., on top of, next to, over, under...)