



Elementary Science

The ISK Science program is designed to engage students' natural curiosity. Teachers begin by laying a foundation of knowledge, and then students' own interests and curiosity help guide the learning. Many units integrate social studies and science concepts as well as library skills, art, music and technology.

Science units are designed to provide opportunities for students to learn through inquiry and hands-on activities. Units are centered around five general strands:

1. *Nature of Science and Scientific Inquiry (integrated into all units)*
2. *Life Sciences*
3. *Physical Sciences*
4. *Earth and Beyond*
5. *Environmental Sciences (integrated into all units)*



Kindergarten

1. NATURE OF SCIENCE

Standard 1.1: Understand the nature of scientific inquiry (*Understand and use the scientific method*)

- 1.1.1 Understand what a prediction/hypothesis is
- 1.1.2 Use the senses to make observations
- 1.1.3 Conduct a simple experiment
- 1.1.4 Draw conclusions

Standard 1.2: Communicate scientific ideas and activities clearly

- 1.2.1 Ask questions about the world around them and exhibit willingness to seek answers by observing, experimenting and predicting the outcome of an investigations
- 1.2.2 Record observations and data with pictures, numbers or written statements using a variety of methods

Standard 1.3: Investigate using appropriate tools and instruments to conduct scientific activities

- 1.3.1 Know that tools can be used to gather information and extend the senses
- 1.3.2 Understand that models are used to represent something real

Standard 1.4: Understand the nature of scientific knowledge and enterprise (*Understand why science is important*)

- 1.4.1 Learn to see themselves as scientists

2. LIFE SCIENCES

Standard 2.1: Understand biological evolution and diversity (scientific comparisons)

- 2.1.1 Use classification for grouping living/non-living things
- 2.1.2 Know that living/non-living objects are different

Standard 2.2: Understand the structure and function of cells and organisms

- 2.2.1 Know that plants and animals need certain resources for energy and growth
- 2.2.2 Know that living things go through a process of growth and change

Standard 2.3: Understand the relationship among organisms and their environment

- 2.3.1 Understand what is necessary for plants and animals to live and survive

3. PHYSICAL SCIENCES

Standard 3.1: Understand the structure and properties of matter

- 3.1.1 Use appropriate vocabulary to describe some observable properties (e.g., color, shape, size) of objects
- 3.1.2 Sort objects based on observable properties
- 3.1.3 Know that the physical properties of things can change

Standard 3.3: Understand forces and motion

- 3.3.1 Know that the position and motion of an object can be changed by pushing, pulling, sinking and floating by levers and inclines

4. EARTH AND BEYOND

Standard 4.1: Understand the composition, structure and features of the geosphere, hydrosphere and atmosphere (*Earth, Water and Air*)

- 4.1.1 Observe weather conditions (wet/dry) and how weather patterns change over the months
- 4.1.2 Know that the Earth materials made up of rock, soil, water, and gas (air) of the atmosphere
- 4.1.3 Examine the properties of rocks (e.g., boulders, pebbles, sand)

Standard 4.2: Understand the composition and structure of the universe and the Earth's place in it

- 4.2.1 Examine basic movements of the sun, moon and earth (over the course of a year)



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5. ENVIRONMENTAL SCIENCES

Standard 5.1: Understand atmospheric processes and cycles

5.1.1 Understand how energy is used in daily lives

Standard 4: Develop an understanding and commitment to environmental responsibility

PASSION | CREATIVITY | AMBITION

