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)*

Grade 2

1. NATURE OF SCIENCE

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

1.1.1 Know that learning can come from careful observations and simple experiments
1.1.2 Make predictions based on observed patterns
1.1.3 Conduct experiments using the scientific method

Standard 1.2: Communicate scientific ideas and activities clearly

1.2.1 Write or draw descriptions of a sequence of steps, events, and observations based on use of appropriate tools
1.2.2 Use a variety of methods to record, interpret and analyze data
1.2.3 Introduce lab reports

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

1.3.1 Use appropriate tools and simple equipment to gather scientific data

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

1.4.1 Understand that scientists ask questions about the world that lead to investigations
1.4.2 Understand that each of us is a scientist

2. LIFE SCIENCES

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

2.1.1 Understand that some kinds of organisms that once lived on Earth have completely disappeared
2.1.2 Explain that groups of living things must adapt in order to survive

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

2.2.1 Know that plants and animals have features that help them adapt to environments

Standard 2.5: Understand the principles of heredity and related concepts

2.5.1 Explain that differences exist among individuals of the same kind of plant or animals

3. PHYSICAL SCIENCES

Standard 3.2: Understand the sources and properties of energy

3.2.1 Explain different forms of natural energy (e.g. wind, solar, water)
3.2.2 Explain how each form (wind, solar, water) generates energy

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 Know that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time

5. ENVIRONMENTAL SCIENCES

Standard 5.2: Understand how society uses and conserves resources and energy

5.2.1 Distinguish between renewable and non-renewable resources (See Social Studies)
5.2.2 Describe how natural resources are used in daily lives (See Social Studies)

Standard 5.3: Identify, investigate and evaluate environmental problems and issues

5.3.1 Understand human impact on living things (e.g. extinction)

Standard 4: Develop an understanding and commitment to environmental responsibility

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