

## Science: Grade 4

### Scientific Inquiry

- Proposes questions about scientific phenomena, objects, and organisms
- Uses observations and experiences to make predictions
- Plans and conducts a “fair test”
- Compares data, identifies patterns, and forms conclusions based on investigations
- Compares and groups objects based on observable and measurable characteristics
- Analyzes and makes statements about models and data displayed
- Communicates scientific explorations through discussions
- Demonstrates safe practices in science

### History and Nature of Science

- Realizes how difficult it can be for scientific innovators to break through ideas
- Understands that scientists value peer review
- Understands that doing science requires varying human abilities

### Science in Personal and Social Perspectives

- Identifies natural and human-made changes in the environment
- Recognizes that science and technology contribute solutions to social problems

### Science and Technology

- Identifies a problem, implements a proposed solution for the problem
- Identifies some of the technological solutions that make life easier
- Gives examples of ways technology is essential for advancement of science

### Physical Science

- Demonstrates an understanding of many observable properties of materials
- Explains that water can change from one state to another by heating or cooling
- Recognizes that heat can spread from one place to another

### Life Science

Builds awareness that reproduction is essential to the continuation of a species

- Builds an awareness of variations and similarities in organisms
- Differentiates between inherited physical traits not inherited in animals
- Explains that variations in organisms can determine survival and reproduction
- Illustrates the interdependence of organisms in an ecosystem

### Earth and Space Sciences

- Develops an understanding of the importance of water as an earth material
- Explains that water on earth can exist in different states
- Examines components and relationships in the solar system