

# Manning Curriculum Science Standards / Benchmarks / Indicators April 2007

## **Standards:**

Students will demonstrate an understanding of unifying concepts and processes of science  
Students will use the process of science inquiry  
Students will demonstrate an understanding of the basic concepts and principles of physical science  
Students will demonstrate an understanding of the basic concepts and principles of life science  
Students will demonstrate an understanding of the basic concepts and principles of earth and space science  
Students will demonstrate an understanding of connections and relationships between science and technology  
Students will demonstrate an understanding of the relationship of science to personal, social, & environmental issues  
Students will demonstrate an understanding of the history and nature of science

## **Course Benchmarks:**

- 3.2.1 Demonstrate abilities necessary to do scientific inquiries
- 3.3.1 Demonstrate an understanding of the different forms of energy (light, heat, sound, magnetism, electricity)
- 3.3.2 Demonstrate an understanding of position and motion of objects
- 3.4.1 Demonstrate an understanding of structure and function in living things
- 3.4.2 Demonstrate an understanding of the life cycles of organisms
- 3.4.3 Demonstrate a knowledge of organisms and environments
- 3.5.1 Demonstrate an understanding of properties of Earth materials
- 3.5.2 Demonstrate an understanding of objects in the sky
- 3.5.3 Demonstrate an understanding of changes in Earth and sky
- 3.6.1 Demonstrate ability to use technology
- 3.6.2 Demonstrate an understanding of the relationship between science and technology
- 3.7.1 Demonstrate an understanding of personal health
- 3.7.2 Demonstrate an understanding of science and technology in local challenges
- 3.8.1 Demonstrate an understanding of science as a human endeavor

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## **3<sup>rd</sup> Grade**

### **3.1 Unifying Concepts and Processes**

*This standard can be the focus of instruction at any grade level and taught in the context of the other Content Standards. The Unifying Concepts and Processes are:*

*Systems, order, and organization  
Evidence, models, and explanation  
Constancy, change, and measurement  
Evolution and equilibrium  
Form and function*

### **3.2 Science as Inquiry**

**3.2.1 Demonstrate abilities necessary to do scientific inquiries**

- 3.2.1.A Ask questions that can be answered by investigating
- 3.2.1.B Employ appropriate equipment and tools to gather and organize data
- 3.2.1.C Use data or evidence to construct explanations
- 3.2.1.D Analyze and communicate the results of their own investigations and interpret the work of others

### **3.3 Physical Science Concepts**

*3.3.1 Demonstrate an understanding of the different forms of energy (light, heat, sound, magnetism, electricity)*

- 3.3.1.A Identify sound and light as a forms of energy and describe ways they are produced
- 3.3.1.B Compare ways sound and light travel through different mediums
- 3.3.1.C Describe ways sound can vary

*3.3.2 Demonstrate an understanding of position and motion of objects*

### **3.4 Life Science Concepts**

*3.4.1 Demonstrate an understanding of structure and function in living things*

- 3.4.1.A Identify the major parts of the skeletal and muscular systems and explain each system's function in the body
- 3.4.1.B Explain and demonstrate the relationship between muscles, bones, and movement
- 3.4.1.C Describe the nervous system and its function in the body

*3.4.2 Demonstrate an understanding of the life cycles of organisms*

*3.4.3 Demonstrate a knowledge of organisms and environments*

### **3.5 Earth and Space Science Concepts**

*3.5.1 Demonstrate an understanding of properties of Earth materials*

- 3.5.1.A Investigate how rocks are alike and different and how they are formed
- 3.5.1.B Identify soil as a natural resource, describe how it is formed, and explain ways to prevent erosion

*3.5.2 Demonstrate an understanding of objects in the sky*

- 3.5.2.A Observe, compare, and describe components of the solar system
- 3.5.2.B Recognize the earth's unique position in the solar system and relate this to its ability to support life
- 3.5.2.C Demonstrate the relative motions of the sun, Earth and moon and relate these motions to changes on Earth

*3.5.3 Demonstrate an understanding of changes in Earth and sky*

- 3.5.3.A Describe and compare slow and rapid changes on Earth's surface
- 3.5.3.B Explore how weathering and erosion change rocks

### **3.6 Science and Technology**

*3.6.1 Demonstrate ability to use technology*

- 3.6.1.A Use technology to learn about the world

*3.6.2 Demonstrate an understanding of the relationship between science and technology*

- 3.6.2.A Describe how people use science and technology in their professions
- 3.6.2.B Investigate how scientists use technology
- 3.6.2.C Identify various careers that use science and technology

**3.7 Science Through Personal and Social Perspectives**

*3.7.1 Demonstrate an understanding of personal health*

- 3.7.1.A Give examples of how personal decisions can affect the health of the body's skeletal, muscular, and nervous systems
- 3.7.1.B Exhibit some responsibility for his/her own personal health
- 3.7.1.C Discuss that various foods contribute to health

*3.7.2 Demonstrate an understanding of science and technology in local challenges*

**3.8 History and Nature of Science**

*3.8.1 Demonstrate an understanding of science as a human endeavor*

- 3.8.1.A Identify and discuss the contributions individuals have made to science

\*Coding for Infusion Topics covered in curriculum:

Higher Order Thinking Skills (H), Vocational/Career Education (V), Global Education (G), Multi-Cultural/Gender Fair (MCGF), Learning Skills (L), Communication Skills (C), Technology (T)