

# **Scope and Sequence**

## ***Interactive Science* grades 6-8**

### **Science and Technology**

#### **Chapter 1. What Is Science?**

1. Science and the Natural World
2. Thinking Like a Scientist
3. Scientific Inquiry

#### **Chapter 2. Science, Society, and You**

1. Why Study Science?
2. Scientific Literacy
3. Scientists and Society
4. Careers in Science

#### **Chapter 3. The Tools of Science**

1. Measurement—A Common Language
2. Mathematics and Science
3. Graphs in Science
4. Models as Tools in Science
5. Safety in the Science Laboratory

#### **Chapter 4. Technology and Engineering**

1. Understanding Technology
2. Technological Design
3. Technology and Society
4. Engineering

### **Earth's Structure**

#### **Chapter 1. Introducing Earth**

1. The Earth System
2. Earth's Interior
3. Convection and the Mantle

#### **Chapter 2. Minerals and Rocks**

1. Properties of Minerals
2. Classifying Rocks
3. Igneous Rocks
4. Sedimentary Rocks
5. Metamorphic Rocks
6. The Rock Cycle

### **Chapter 3. Plate Tectonics**

1. Drifting Continents
2. Sea-Floor Spreading
3. The Theory of Plate Tectonics

### **Chapter 4. Earthquakes**

1. Forces in Earth's Crust
2. Earthquakes and Seismic Waves
3. Monitoring Earthquakes

### **Chapter 5. Volcanoes**

1. Volcanoes and Plate Tectonics
2. Volcanic Eruptions
3. Volcanic Landforms

## **Earth's Surface**

### **Chapter 1. Mapping Earth's Surface**

1. Exploring Earth's Surface
2. Models of Earth
3. Mapping Technology
4. Topographic Maps

### **Chapter 2. Weathering and Soil**

1. Rocks and Weathering
2. How Soil Forms
3. Soil Conservation

### **Chapter 3. Erosion and Deposition**

1. Mass Movement
2. Water Erosion
3. Glacial Erosion
4. Wave Erosion
5. Wind Erosion

### **Chapter 4. A Trip Through Geologic Time**

1. Fossils
2. The Relative Age of Rocks
3. Radioactive Dating
4. The Geologic Time Scale
5. Early Earth
6. Eras of Earth's History

# **Water and the Atmosphere**

## **Chapter 1. Fresh Water**

1. Water on Earth
2. Surface Water
3. Water Underground
4. Wetland Environments

## **Chapter 2. The Oceans**

1. Exploring the Ocean
2. Wave Action
3. Currents and Climate
4. Ocean Habitats

## **Chapter 3. The Atmosphere**

1. The Air Around You
2. Air Pressure
3. Layers of the Atmosphere
4. Energy in Earth's Atmosphere
5. Heat Transfer
6. Winds

## **Chapter 4. Weather**

1. Water in the Atmosphere
2. Clouds
3. Precipitation
4. Air Masses Core
5. Storms
6. Predicting the Weather

## **Chapter 5. Climate and Climate Change**

1. What Causes Climate?
2. Climate Regions
3. Changes in Climate
4. Human Activities and Climate Change

# **Astronomy and Space Science**

## **Chapter 1. Earth, Moon, and Sun**

1. The Sky from Earth

2. Earth in Space
3. Gravity and Motion
4. Phases and Eclipses
5. Tides
6. Earth's Moon

### **Chapter 2. Exploring Space**

1. The Science of Rockets
2. The History of Space Exploration
3. Using Space Science on Earth

### **Chapter 3. The Solar System**

1. Models of the Solar System
2. Introducing the Solar System
3. The Sun
4. The Inner Planets
5. The Outer Planets
6. Small Solar System Objects

### **Chapter 4. Stars, Galaxies, and the Universe**

1. Telescopes
2. The Scale of the Universe
3. Characteristics of Stars
4. Lives of Stars
5. Star Systems and Galaxies
6. The Expanding Universe

## **Ecology and the Environment**

### **Chapter 1. Populations and Communities**

1. Living Things and the Environment
2. Populations
3. Interactions Among Living Things
4. Changes in Communities

### **Chapter 2. Ecosystems and Biomes**

1. Energy Flow in Ecosystems
2. Cycles of Matter
3. Biomes
4. Aquatic Ecosystems
5. Biogeography

### **Chapter 3. Resources and Living Things**

1. Introduction to Environmental Issues
2. Introduction to Natural Resources
3. Human Population Growth
4. Forests and Fisheries
5. Biodiversity

### **Chapter 4. Land, Air, and Water Resources**

1. Conserving Land and Soil
2. Waste Disposal and Recycling
3. Air Pollution and Solutions
4. Water Pollution and Solutions
5. Ocean Resources

### **Chapter 5. Energy Resources**

1. Fossil Fuels
2. Renewable Sources of Energy
3. Energy Use and Conservation

## **Cells and Heredity**

### **Chapter 1. Introduction to Cells**

1. Discovering Cells
2. Looking Inside Cells
3. Chemical Compounds in Cells
4. The Cell in Its Environment

### **Chapter 2. Cell Processes and Energy**

1. Photosynthesis
2. Cellular Respiration
3. Cell Division

### **Chapter 3. Genetics: The Science of Heredity**

1. What Is Heredity?
2. Probability and Heredity
3. Patterns of Inheritance
4. Chromosomes and Inheritance

### **Chapter 4. DNA: The Code of Life**

1. The Genetic Code
2. How Cells Make Proteins

### 3. Mutations

## **Chapter 5. Human Genetics and Genetic Technology**

1. Human Inheritance
2. Human Genetic Disorders
3. Advances in Genetics
4. Using Genetic Information

## **Chapter 6. Change Over Time**

1. Darwin's Theory
2. Evidence of Evolution
3. Rate of Change

# **The Diversity of Life**

## **Chapter 1. Introduction to Living Things**

1. What Is Life?
2. Classifying Life
3. Domains and Kingdoms
4. Evolution and Classification

## **Chapter 2. Viruses, Bacteria, Protists, and Fungi**

1. Viruses .
2. Bacteria
3. Protists
4. Fungi

## **Chapter 3. Plants**

1. What Is a Plant?
2. Classifying Plants
3. Plant Structures
4. Plant Reproduction
5. Plant Responses and Growth
6. Plants in Everyday Life

## **Chapter 4. Introduction to Animals**

1. What Is an Animal?
2. Animal Body Plans
3. Introduction to Invertebrates
4. Introduction to Vertebrates
5. Vertebrate Diversity

## **Chapter 5. Getting Around**

1. Skeletons and Muscles
2. Nervous System
3. Animal Movement

## **Chapter 6. Obtaining Energy**

1. How Animals Obtain and Digest Food
2. How Animals Obtain Oxygen
3. Circulation and Excretion

## **Chapter 7. Animal Reproduction and Behavior**

1. Animal Reproduction and Fertilization
2. Development and Growth
3. What Is Behavior?
4. Patterns of Behavior

# **Human Body Systems**

## **Chapter 1. The Human Body**

1. Body Organization
2. System Interactions
3. Homeostasis

## **Chapter 2. Bones Muscles, and Skin**

1. The Skeletal System
2. The Muscular System
3. The Skin

## **Chapter 3. Digestion**

1. Food and Energy
2. Healthy Eating
3. The Digestive Process Begins
4. Final Digestion and Absorption

## **Chapter 4. Circulation**

1. The Body's Transport System
2. A Closer Look at Blood Vessels
3. Composition of Blood
4. Cardiovascular Health

## **Chapter 5. Respiration and Excretion**

1. The Respiratory System

2. Smoking and Your Health
3. The Excretory System

### **Chapter 6. Fighting Disease**

1. Infectious Disease
2. The Body's Defenses
3. HIV and AIDS
4. Infectious Disease and Your Health
5. Noninfectious Disease

### **Chapter 7 The Nervous System**

1. How the Nervous System Works
2. Divisions of the Nervous System .
3. Sight and Hearing
4. Smell, Taste, and Touch
5. Alcohol and Other Drugs

### **Chapter 8. The Endocrine System and Reproduction**

1. The Endocrine System
2. The Male and Female Reproductive Systems
3. Pregnancy and Birth
4. The Human Life Cycle

## **Introduction to Chemistry**

### **Chapter 1. Introduction to Matter**

1. Describing Matter
2. Classifying Matter
3. Measuring Matter
4. Changes in Matter

### **Chapter 2. Solids, Liquids, and Gases**

1. States of Matter
2. Changes of State
3. Gas Behavior

### **Chapter 3. Elements and the Periodic Table**

1. Introduction to Atoms
2. Organizing the Elements
3. Metals
4. Nonmetals and Metalloids
5. Radioactive Elements

## **Chapter 4. Atoms and Bonding**

1. Atoms, Bonding, and the Periodic Table
2. Ionic Bonds
3. Covalent Bonds
4. Bonding in Metals

## **Chapter 5. Chemical Reactions**

1. Observing Chemical Change
2. Describing Chemical Reactions
3. Controlling Chemical Reactions

## **Chapter 6. Acids, Bases, and Solutions**

1. Understanding Solutions
2. Concentration and Solubility
3. Describing Acids and Bases
4. Acids and Bases in Solution

# **Forces and Energy**

## **Chapter 1. Motion**

1. Describing Motion
2. Speed and Velocity
3. Acceleration

## **Chapter 2. Forces**

1. The Nature of Force
2. Friction and Gravity
3. Newton's Laws of Motion
4. Momentum
5. Free Fall and Circular Motion

## **Chapter 3. Work and Machines**

1. Work and Power
2. Understanding Machines
3. Inclined Planes and Levers
4. Putting Machines Together

## **Chapter 4. Energy**

1. What Is Energy?
2. Forms of Energy
3. Energy Transformations and Conservation

## **Chapter 5. Thermal Energy and Heat**

1. Temperature, Thermal Energy, and Heat
2. The Transfer of Heat
3. Thermal Properties

## **Chapter 6. Electricity**

1. Electric Charge and Static Electricity
2. Electric Current
3. Electric Circuits
4. Electric Power and Safety

## **Chapter 7. Magnetism and Electromagnetism**

1. What Is Magnetism?
2. Magnetic Fields
3. Electromagnetic Force
4. Electricity, Magnetism, and Motion
5. Electricity from Magnetism

# **Sound and Light**

## **Chapter 1. Characteristics of Waves**

1. What Are Waves?
2. Properties of Waves
3. Interactions of Waves

## **Chapter 2. Sound**

1. The Nature of Sound
2. Properties of Sound
3. Music
4. Hearing Sound
5. Using Sound

## **Chapter 3. Electromagnetic Waves**

1. The Nature of Electromagnetic Waves
2. Waves of the Electromagnetic Spectrum
3. Wireless Communication

## **Chapter 4. Light**

1. Light and Color
2. Reflection and Mirrors
3. Refraction and Lenses
4. Seeing Light
5. Using Light