

Science 7

Designed to help achieve the outcomes of Saskatchewan's Science 7 course in an individualized learning system, this resource includes eight workbook units, score keys, tests, and test keys. Corresponding experiments and activities are found in the final section of each workbook.

No additional text is required, but schools will need to be prepared with the necessary lab supplies for each workbook activity. **With the appropriate safeguards in place, these activities can be completed in a regular classroom setting.**

Workbook 1: Interactions with Ecosystems

- ❖ Interactions with Ecosystems
 - Basic Needs of All Living Things
 - Defining an Ecosystem
- ❖ Components of Ecosystems
 - Consumers
 - Producers
 - Oxygen
- ❖ Understanding Food Chains
 - Scavengers and Decomposers

NOTE:

These workbooks were designed to be used in conjunction with the text, *Saskatchewan Science 7*, Pearson Education Canada, 2009, but also work well on their own.

Workbook 2: Interactions with Ecosystems

- ❖ Matter and Energy in Ecosystems
 - Water and Carbon Cycles
 - Energy in Ecosystems
 - Food Webs
- ❖ Natural Changes in Ecosystems
 - The Fight for Survival: Competition
 - Succession: How Ecosystems Change Over Time
 - Biomes: The Products of Succession
- ❖ Human Activities and Ecosystems
 - The Impact of Technology
 - The Impact of Human Activities
 - Technologies to Manage Waste Humans Generate

Workbook 3: Mixtures and Solutions

- ❖ Measuring Matter
 - Measuring Volume
 - Using a Graduated Cylinder to Measure Volume
 - Measuring Mass
- ❖ What is Matter?
 - Pure Substances
 - Mixtures
 - Getting the Right Mix
 - Solutions
- ❖ Components of Mixtures
 - Separating Mechanical Mixtures

Workbook 4: Mixtures and Solutions II

- ❖ What's in Matter
 - The Particle Theory of Matter
 - The Four Points of the Particle Theory
 - Using the Particle Theory of Matter
 - How the Particle Theory Explains Mixing Substances
 - Dissolving
- ❖ Types of Solutions
 - Concentrated and Dilute Solutions
 - Unsaturated and Saturated Solutions
 - Solubility
 - Investigating Solubility Factors
 - Supersaturated Solutions
 - Solvent Solubility
 - Solubility and Water Hardness
- ❖ Processing Mixtures
 - Products Manufactured from Mixtures
 - Cleaning Our World
 - Waste and the Environment

Workbook 5: Heat and Temperature

- ❖ Heat Causes Matter to Change
 - How Does Heat Affect the State of Matter?
 - Heat Can Affect the Volume of Liquids and Gases
 - Heat Can Affect the Volume of Solids
- ❖ Particle Theory of Matter
 - Main Ideas of the Particle Theory of Matter
 - The Particle Theory Explains Volume and State Changes
- ❖ Studying Heat Energy
 - Heat and Temperature
 - Heat Energy and Different Masses
 - Holding on to Heat Energy
 - The Heat Capacity of Common Substances

Workbook 6: Heat Energy

- ❖ Transferring Heat Energy
 - Heat Energy Can Move by Conduction
 - Heat Energy Can Move by Convection
 - Heat Energy Can Move by Radiation
 - Heat Transfer and Earth
 - Protection from the Weather
- ❖ Heating-System Technologies
 - The Cost of Relying on Heat Energy

Workbook 7: Earth's Crust and Resources

- ❖ Processes with Earth's Crust
 - Inside Earth
 - Discovering Clues to Earth's Structure

- Tectonic Plates and What Happens When They Meet
- Earthquakes
- Building Mountains
- ❖ Rocks and Minerals
 - How Rocks Form
 - Types of Rocks
- ❖ Mining Minerals in Saskatchewan
 - The Process of Mining
 - The Technology of Mining

Workbook 8: Rock Cycle and Soil Characteristics

- ❖ How Rocks Form and Change Over Time
 - What Changes Rocks on Earth's Surface?
 - Tracing Evidence of Geological Change
 - Connecting the Rocks
- ❖ Soil Characteristics
 - What is Soil?
 - Soil Characteristics
 - Saskatchewan Soil
 - Soil Conservation