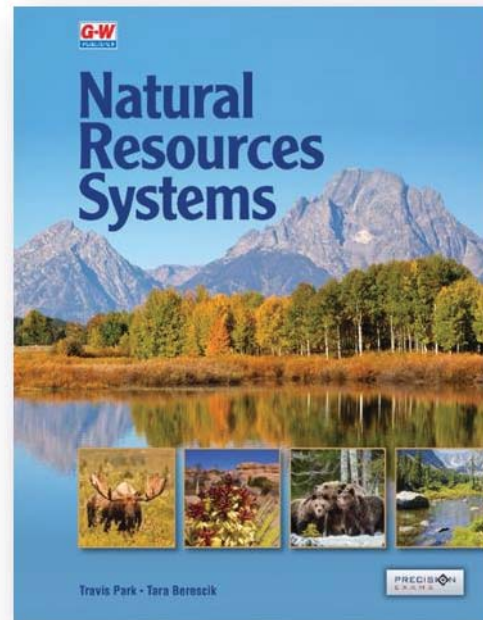


**Correlation Chart**  
**CASE Curriculum: Natural Resources**  
**and Ecology**  
**to**  
**Natural Resources Systems**  
**(1st Edition, 2021)**

A complete table of contents for the first edition of **Natural Resources Systems** is provided at the end of this document.



CASE Curriculum Natural Resources and Ecology Lessons	Natural Resources System (1e, 2021) Chapters
<b>Unit 1 Conservation, Preservation, Exploitation</b>	
Lesson 1.1 Natural Resources and Ecology 101	Chapters 1, 22
Lesson 1.2 Building Biomes	Chapters 4, 6, 22, 24, 25
<b>Unit 2 Mother Earth</b>	
Lesson 2.1 Soils and Land	Chapters 9, 10, 11, 25, 28
Lesson 2.2 Reading the Land	Chapters 4, 9, 10, 11, 27, 28
<b>Unit 3 Water Works</b>	
Lesson 3.1 Water Basics	Chapters 13, 14, 15, 20
Lesson 3.2 Water Function	Chapters 13, 14, 15, 20
<b>Unit 4 Lighter than Air</b>	
Lesson 4.1 The Role of Air	Chapters 16, 17
Lesson 4.2 The Smog has Lifted	Chapters 16, 17
<b>Unit 5 Earth's Energy</b>	
Lesson 5.1 The Energy of Life	Chapters 4, 5, 6, 8, 15, 18, 21
<b>Unit 6 Flora and Fauna</b>	
Lesson 6.1 All Natural Flora	Chapters 12, 18, 19, 22, 23, 25
Lesson 6.2 Flourishing Fauna	Chapters 6, 18, 19, 21, 24
<b>Unit 7 Farming, Forestry, and Ferrous</b>	

Lesson 7.1 Agricultural Stewardship Concepts	Chapters 5, 27
Lesson 7.2 Timber!	Chapters 23, 24
Lesson 7.3 Digging and Drilling Concepts	Chapters 12
<b>Unit 8 We the People</b>	
Lesson 8.1 Urban Sprawl Concepts	Chapters 1, 5, 7, 17
Lesson 8.2 Walk in the Park Concepts	Chapters 7, 26, 27
<b>Unit 9 Past, Present, Future</b>	
Lesson 9.1 Policing Our Wilderness Concepts	Chapters 3, 19, 20, 27
Lesson 9.2 What's Next?	Chapters 4, 5, 6, 7, 8

## ***Natural Resources Management***

### **1st Edition Contents**

#### **1 Introduction to Natural Resources**

Renewable or Nonrenewable?  
 Nonrenewable Natural Resources  
 Biotic and Abiotic Natural Resources  
 Environmental Stewardship  
 Conservation and Preservation  
 Why are Natural Resources Important?

#### **2 Career Planning**

What is a Career?  
 Planning Your Career  
 Identifying Career Options  
 Setting Goals  
 Applying for a Position  
 The Job Interview  
 Succeeding in the Workplace  
 Communication Skills  
 Ethical Workplace Behavior  
 Leaving a Job  
 Career Connection: *Ecologist*

#### **3 Historical Perspectives of Natural Resources and Conservation**

Historical Events and Natural Resources  
 Natural Resources Disasters  
 Conservationists and Preservationists  
 Legislation and Natural Resources  
 Government Agencies  
 Advocacy Organizations

#### **4 Ecology and Earth**

Ecosystems  
 Biogeochemical Cycles  
 Biomes and Ecoregions  
 Career Connection: *Dr. Robert G. Bailey, Geographer*

#### **5 Sustainability in the Environment**

Sustainability  
 Perceptions of the Environment over Time  
 Technology and Innovation  
 Waste Management  
 Measuring Sustainability  
 Making a Difference  
 Career Connection: *Sustainability Project Manager*  
 Career Connection: *Lance Wealing, Entrepreneur*

#### **6 Habitat Destruction**

Determining Habitat Health  
 Natural Cycle of Habitat Disturbances  
 Habitat Destruction Caused by Humans  
 Habitat Fragmentation  
 Habitat Degradation

#### **7 Global Environmental Issues**

Land Use  
 Water Use  
 Power Production and Regulation  
 Social Pressures  
 Economic Value of Resources  
 Pollution  
 Green Technology  
 Ecological Footprint  
 Career Connection: *Conservation Advocate*

#### **8 Population Dynamics**

Staples of Life  
 Space  
 Describing Populations  
 Population Ecology  
 Population Dispersion  
 Population Density

Growth of Human Population  
Career Connection: *Population Biologist*

## 9 What is Soil?

Soil Functions  
Soil Components  
Soil Formation  
Soil Profiles and Horizons  
Physical Properties of Soil  
Soil Water Movement  
Soil Chemistry  
Soil Classification  
Land Capability Classification (LCC)  
Career Connection: *Soil Scientist*

## 10 Soil Erosion, Leaching, and Pollution

Soil Degradation  
Soil Compaction  
Soil Erosion  
Shoreline, Channel, and Streambank Soil Erosion  
Factors that Contribute to Soil Erosion  
Leaching  
Soil Pollutants  
Career Connection: *Matt Lohr, Chief of National Resources Conservation Service*

## 11 Controlling Soil Erosion

Land Use Classification  
Tillage  
Conservation Buffers  
Structural Conservation Practices  
Career Connection: *Clayton Zimmerman, Project Earthwork and Grading Supervisor*  
Career Connection: *Soil Conservation Technician*

## 12 Mining of Natural Resources

Types of Mining  
Mineral Mining in the United States  
Energy Sources Mined in the United States  
The Impacts of Mining on the Environment  
Reclamation of Mined Areas  
Career Connection: *Matthew Olson, Soil Conservationist*

## 13 Water Supply

Hydrologic Cycle  
Locations of Water  
Water Rights  
Career Connection: *Hydrologist*

## 14 Water Quality

Water Chemistry  
Water Use  
Water Pollution  
Career Connection: *Water Quality Technician*  
Career Connection: *Thunder View Farms, Coombe Family*

## 15 Wetlands

Roles of Wetlands  
Wetland Soils  
Wetland Classifications  
Marine Wetlands  
Freshwater Wetlands  
Wetland Conservation and Management  
Wetland Rehabilitation and Restoration  
Career Connection: *Wetlands Tour Guide*

## 16 Weather and Climate

Earth's Atmosphere  
Atmospheric Changes  
Weather Patterns  
Career Connection: *Meteorologist*

## 17 Air Quality

Air Chemistry  
Types of Air pollution  
Airsheds  
Measuring Air Quality  
Focusing on Solutions  
Making a Difference  
Career Connection: *Dr. Hailey Wilmer, Rangeland and Social Scientist*

## 18 Interactions

Ecological Communities  
Food Webs and Energy Transfer  
Keystone Species  
Invasive Species  
Career Connection: *Jessica Heitt, Wildlife Education Coordinator*  
Career Connection: *Wildlife Photographer*

## 19 Endangered Species

International Union for Conservation of Nature  
The US Federal Lists of Endangered Species  
Why Do Species Become Extinct?  
Biodiversity and Ecological Health  
Wildlife Data Collection  
Recover and Restore Efforts  
Career Connection: *Paleobiologist*

## 20 Fisheries

What are Fisheries?  
History of Fisheries  
Types of Fishing  
Fisheries and the Economy  
Threats to Fisheries  
Fisheries Management  
Freshwater Finfish Species  
Commercial Marine Finfish Species  
Commercial Crustaceans and Mollusks  
Career Connection: *Shawn Sanders, US Fish and Wildlife Service*

## 21 Game Species

Game Hunting and the Economy

Game Species Management

Game Species

Harvesting Methods

Accidents and Injuries

Game Animal Diseases

Hunter Ethics

Career Connection: *Andy King, Fish and Wildlife  
Biologist*

## 22 Forests

Types of Forests

Healthy Forest Ecosystems

Sexual and Asexual Reproduction in Forests

Photosynthesis and Respiration in Forests

Most Common Tree Species in the United States

Other Important Tree Species

Non-Tree Forest Plants

Forest Products

Career Connection: *Ty Bowgren, Head of  
Procurement, Wagner Lumber*

## 23 Forest Succession and Management

Succession

Sustainable Forest Management

Forest Management Practices

Woodlots

Career Connection: *Matt Spalding, Education and  
Volunteer Manager, Olmstead Parks  
Conservatory, Louisville, Kentucky*

## 24 Threats to Forests

Forest Diseases

Forest Insect Pests

Managing Diseases and Insect Pests

Invasive Plant Pests

Abiotic Threats

Career Connection: *Fraser Smith, Sustainable  
Forestry Consultant*

## 25 Grasslands and Rangelands

Types of Grasslands

Important Grassland Plant Species

Healthy Grasslands and Rangelands

Threats to Grasslands

Career Connection: *Major Waltman, Project  
Director, Olmstead Parks Conservatory,  
Louisville, Kentucky*

## 26 Outdoor Recreation

Why People Engage in Outdoor Recreation

Types of Outdoor Recreation

Survival Skills and Supplies

Economic Impact of Outdoor Recreation

Sustainability and Outdoor Recreation

Career Connection: *Jacob Zuniga, Assistant  
Director, Parks and Recreation, Deer Park,  
Texas*

## 27 National Protected Areas

National Protected Areas

The Conservation Movement

State Parks

Career Connection: *Jim Barborak, Colorado State  
University, Co-Director of the Center for  
Protected Area Management*

## 28 Surveying and Cartography

Land Measurement

Cartography

Topographic Maps

Compasses

USGS Topographical Maps

Career Connection: *Evan Patrick, Natural Areas  
Manager, Olmstead Park System, Louisville,  
Kentucky*