



Correlation of Natural Resources Systems, Park and Berescik (Goodheart-Willcox Publisher ©2021)

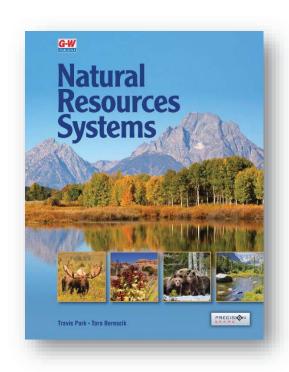
to

Precision Exams Natural Resource Science II (173)

Goodheart-Willcox is pleased to partner with Precision Exams by correlating *Natural Resources Systems* to their *Natural Resource Science II (173)* standards. Precision Exams standards and Career Skills Exams were created in concert with industry and subject matter experts to match real-world job skills and marketplace demands. Students who pass the exam and performance portion of the exam can earn a Career Skills Certification.

The correlation chart below lists the Standards, Objectives, and Indicators for the *Natural Resource Science II (173)* in the left column. Corresponding content from *Natural Resources Systems* that can be used by a student to help achieve the standard, objective, or indicator listed in the right column.

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Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Standard 1: Students will develop personal, leadership, and career skills through student organization participation.	
Objective 1. Assess the role of student organization participation in developing personal and leadership skills.	Appendix 153 (FFA 1) 175 (FFA 1) 329 (FFA 1)
Indicator 1: Identify important personal skills and the strategies to use in developing the skills.	Appendix
Indicator 2: Identify important leadership skills and the role of student organization participation in developing the skills.	CH 2 Appendix

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Objective 1. Assess the role of student organization participation in developing career skills.	79 (SAE 2) 175 (SAE 2) (SAE 2) CH 27 Appendix
Indicator 1: List and describe proficiency awards appropriate for natural resources.	Appendix
Indicator 2: List and describe career development events appropriate for natural resources.	19 (FFA 1) 49 (FFA 1) 79 (FFA 1) 107 (FFA 1) 135 (FFA 2) 175 (FFA 1) 255 (FFA 2) 279 (FFA 1) 329 (FFA 2) 403 (FFA 1) 489 (FFA 1) 595 (FFA 1) (FFA 1) CH 23 (FFA 1) CH 25 (FFA 1) CH 26 Appendix
Indicator 3: Relate the importance of supervised agricultural experience to student organization achievement.	19 (SAE 2) Appendix
Indicator 4: Utilize student organization and supervised agricultural experience participation to gain advanced degrees of student organization membership	19 (SAE 2) Appendix
Standard 2: Students will explain the maintenance Experience programs in agricultural education.	e and expansion of Supervised Agricultural
Objective 1. Maintain and use agricultural experience records.	Appendix Maintaining SAE Records
Indicator 1: Explain how agricultural experience records are maintained from year to year.	Appendix Maintaining SAE Records
Indicator 2: Explain how to summarize and analyze agricultural experience records.	Appendix Maintaining SAE Records

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Objective 1. Devise long-range plans for expanding agricultural experience programs.	Appendix Long-Range Plan
Indicator 1: Evaluate the overall quality of a current agricultural experience, and determine how to make it more productive or profitable.	Appendix
Indicator 2: Explain factors that should be considered in expanding an agricultural experience program.	Appendix
Indicator 3: Explain how placement and ownership agricultural experience programs may be expanded.	Appendix
Standard 3: Students will use effective methods a processes to the public.	nd venues to communicate natural resource
Objective 1. Communicate natural resource information to the public.	39–41 Communication Skills
Indicator 1: Describe the characteristics and importance of active and passive listening.	39 Are you a Good Listener?
Indicator 2: Demonstrate public speaking skills.	19 (CA 2) 135 (FFA 2) 153 (FFA 1); (CA 1) 174 (ST 3) 355 (CA 1, 3) 381 (CA 1, 2) CH 23 (CA 1) CH 23 (ST 4); (FFA 1) CH 26 (CA 1, 3)
Indicator 3: Read, comprehend, and interpret technical materials/publications.	79 (CA 2) 107 (CA 1) 135 (ST 6) 174 (ST 3) 175 (CA 2) 255 (ST 3) 305 (CA 1) 353 (TC 5) 402 (TC 1–3) 489 (CA 1) 594 (ST 1)

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 4: Produce a technical report/research paper.	19 (CA 1) 135 (CA 1) 153 (CA 2) 255 (ST 3) CH 28 (CA 2)
Indicator 5: Identify ways in which a message regarding natural resources may be communicated to the public.	19 (CA 2) 78 (TA 1) 79 (CA 1) 135 (FFA 2) 153 (CA 2) 174 (TC 4, 8) 175 (CA 1) 196 (TC 4) 305 (ST 3) 329 (CA 2) 355 (CA 3) 403 (ST 2) 489 (ST 6); (CA 2) 528 (TC 1) 529 (FFA 1) 559 (CA 2) CH 25 (CA 1) CH 26 (TC 3)

Standards, Objectives, and Indicators	G–W Content
	(TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 6: Design and construct a display	107 (ST 2); (CA 2)
that communicates a natural resource topic.	153 (SAE 3)
	174 (ST 2)
	175 (CA 1)
	175 (CA 2)
	279 (ST 1, 3, 4)
	305 (ST 1)
	328 (TC 5)
	354 (ST 8)
	380 (ST 1)
	381 (CA 1)
	431 (CA 1)
	459 (TC 5)
	460 (ST 5, 6)
	461 (FFA 1); (SAE 2); (CA 1, 2)
	528 (ST 6)
	529 (ST 7, 8)
	558 (TC 1)
	559 (ST 5)
	594 (ST 5)
	CH 23 (ST 7, 10)
	CH 24 (ST 2)
	CH 26 (TC 3); (ST 1, 5); (FFA 1)
	CH 27 (TC 1, 2); (ST 1, 7)
	CH 28 (ST 1, 3)

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA	
	Communicating about; Appendix)	
Indicator 7: Prepare and present a natural resources issues forum for the local	153 (CA 1) 175 (FFA 1)	
community.	197 (CA 1)	
	279 (CA 2)	
	305 (FFA 2); (CA 3)	
	328 (TC 4)	
	329 (FFA 1)	
	355 (CA 3)	
	403 (CA 1)	
	559 (FFA 1)	
	CH 23 (ST 6)	
	CH 24 (FFA 1); (CA 2)	
	CH 25 (CA 1, 2)	
	CH 27 (FFA 1); (CA 1, 2)	
Standard 4: Students will explain interrelationships between natural resources and humans in managing natural environments.		
Objective 1. Identify and evaluate natural	2–19 CH 1 Introduction to Natural Resources	
resources.	4–9 Renewable or Nonrenewable	
	9–11 Nonrenewable Natural Resources	
	11–12 Biotic and Abiotic Natural Resources	
Indicator 1: Select and assess a natural	135 (ST 4, 6); (CA 1)	
resource issue with regional/local impact; research its history and discuss its impact.	153 (FFA 1) (SAE 2)	
research its history and discuss its impact.	174 (TC 6)	
	175 (CA 1)	
	197 (SAE 2); (CA 1)	
	255 (SAE 1); (CA 2)	
	279 (FFA 1)	
	305 (ST 4)	
	328 (TC 5)	
	355 (CA 3)	
	381 (ST 8); (FFA 1)	
	431 (CA 1)	
	528 (ST 6)	
	558 (ST 2)	
	CH 23 (ST 6, 8)	
	CH 24 (ST 1)	
	CH 26 (ST 9)	

Standards, Objectives, and Indicators	G–W Content
	(TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 2: Explain the effects and/or trade- off of population growth, greater energy consumption, and increased technology and development on natural resources and the environment.	18 (TC 4) 108–135 CH 5 Sustainability in the Environment 175 (ST 5) 328 (TC 4) 430 (TC 5) 528 (TC 2)
Objective 2. Examine the relationship between natural resources and society, including conflict management.	197 (ST 4) 323–324 Water Rights; Conflicts in California
Indicator 1: Assess the responsibility of individuals in stewardship of the environment.	13 Environmental Stewardship 14 Why Are Natural Resources Important? 18 (TC 2) 129–130 Making a Difference 244 Thinking Critically 553 Hunter Ethics CH 27 Service Opportunities: The Volunteers-in- Parks Program
Indicator 2: Describe procedures and laws for public involvement in natural resource management.	13–14 Conservation and Preservation 67–69 Legislation and Natural Resources 70–72 Government Agencies 112–113 A Change of View 161–162 Water Use 162 Power Production and Regulation 166 Reducing Pollution 269 Drainage Systems 300 Reclamation of Mined Areas 323–324 Water Rights 329 (ST 3); (CA 1) 374–375 Wetland Conservation and Management 430 (TC 4) 482 Legislation (endangered species) 487 (TC 3) 497 National Oceanic Atmospheric Administration 498 Legislation (fisheries) 553–554 Hunter Ethics CH 26 Private Land Use Regulations

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 3: Examine the principles of risk assessment and how they are applied to decision making and adaptive management.	138–139 Determining Habitat Health 140–143 Introduction of Invasive Species 164 Untapped Resources 403 (SAE 2) 452 Umbrella Species 461 (CA 1) 465 IUCN Animal Classification 466 Species Criteria 487 (TC 3) 488 (ST 2) 529 (CA 1)
Indicator 4: Describe the effects of technology and biotechnology on the environment.	18 (ST 4) 79 (ST 3, 5); (CA 2) 134 (ST 2) 174 (ST 1–3) 329 (ST 1) 354 (ST 3) 380 (ST 2) 460 (ST 2) 488 (ST 2) 559 (ST 3) CH 24 (ST 2, 4) CH 26 (ST 1) CH 28 Global Positioning Systems CH 28 Geographic Information Systems CH 28 (SAE 2); (CA 2)
Indicator 5: Research and debate one or more current issues related to the conservation or preservation of natural resources.	18 (TC 3) 78 (TC 6) 79 (FFA 1) 174 (TC 4) 197 (CA 2) 255 (FFA 2) 279 (CA 2) 328 (TC 4) 381 (CA 1) 461 (CA 2) CH 27 (ST 8)

Standards, Objectives, and Indicators	G-W Content
	(TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 6: Identify issues involving	68 Pittman-Robertson Act; Dingell-Johnson Act
mitigation of natural resources.	322 Chesapeake Bay Watershed
	348–350 Pollution Mitigation
	360 Recreational Activities (paying for restoration)
	375–376 Wetland Rehabilitation and Restoration
	376 Replication (wetland)
	381 (FFA 1); (CA 1)
Objective 3. Compare and contrast the impact of	4–9 Renewable or Nonrenewable?
conventional and alternative energy sources on the	9–11 Nonrenewable Natural Resources
environment.	11–12 Biotic and Abiotic Natural Resources
Indicator 1: Identify conventional and	4–9 Renewable or Nonrenewable?
alternative energy sources.	9–11 Nonrenewable Natural Resources
	11–12 Biotic and Abiotic Natural Resources
Indicator 2: Identify advantages and	4–9 Renewable or Nonrenewable?
disadvantages of conventional and	9–11 Nonrenewable Natural Resources
alternative energy sources.	11–12 Biotic and Abiotic Natural Resources
Indicator 3: Compare and contrast various	4–9 Renewable or Nonrenewable?
energy resources in terms of their reserves,	9–11 Nonrenewable Natural Resources
uses, and impacts on the environment.	11–12 Biotic and Abiotic Natural Resources
Objective 4. Investigate air resources.	404–431 Air Quality
Indicator 1: Identify components and structural layers of the earth's atmosphere.	384–388 Earth's Atmosphere
Indicator 2: Identify sources of air pollution.	386 The Ozone Layer
	386 The Montreal Protocol
	390–391 The Greenhouse Effect
	406–418 Types of Air Pollution

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 3: Describe the effects of air pollution on people and their environment.	134 (TC 2) 174 (TC 1) 407 Indoor Air Pollution 410 Carbon Monoxide (CO) 412 Health and Environmental Concerns (sulfur oxides) 413 Particulate Matter (PM) 414 Health and Environmental Concerns (lead) 415 Health and Environmental Concerns (ground-level ozone) 430 (TC 3) CH 24 Air Pollution and Acid Rain
Indicator 4: Illustrate the formation of acid precipitation, and explain its impact on the environment.	207 Climate and Weathering (soil) 335 Rainwater 411 Nitrogen Oxides 412–413 Sulfur Oxides: Acid Rain 412 Figure 17-8 CH 24 Air Pollution and Acid Rain
Standard 5: Students will explain practices in natu	iral resource management.
Objective 1. Apply soil science principles to natural resource management.	198–231 CH 9 What Is Soil? 232–255 CH 10 Soil Erosion, Leaching, and Pollution 256–279 CH 11 Controlling Soil Erosion
Indicator 1: Describe soil degradation.	234 Soil Degradation
Indicator 2: Identify causes of soil erosion.	236–241 Soil Erosion 244–246 Factors That Contribute to Soil Erosion 278 (TC 1) (ST 5) CH 23
Indicator 3: Apply management practices to mitigate soil erosion.	256–279 CH 11 Controlling Soil Erosion 79 (ST 4) 254 (ST 1, 2) 255 (CA 2) 278 (TC 3) 279 (ST 1)
Objective 2. Relate the function of watersheds and water resources to natural resources.	101 Freshwater Rivers and Streams 321–322 Watersheds 328 (TC 2, 5)

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 1: Describe properties of watersheds, and identify the boundaries of local watersheds.	101 Figure 4-21 321–322 Watersheds 321 Figure 13-13 328 (TC 5) 364 Figure 15-7 US Coastal Watersheds
Indicator 2: Compare watershed management methods.	321–322 Watersheds 374 Local Conservation Practices
Indicator 3: Examine the impact of watershed management on local communities.	328 (TC 4, 5)
Indicator 4: Explain the potential water-holding/runoff capacity of a watershed.	321–322 Watersheds
Indicator 5: Identify water sources and quality standards.	306–329 CH 13 Water Supply 338–339 Water Supply Systems (domestic) 340 Supply Systems (agricultural) 340 Supply Systems (industrial) 330–355 Water Quality
Indicator 6: Conduct water quality tests.	354 (ST 3) 355 (FFA 1); (SAE 3)
Indicator 7: Identify sources of groundwater contamination	314 Groundwater Pollution 342–350 Water Pollution
Indicator 8: Describe the functions of wetlands, and differentiate types of wetlands.	356–381 CH 15 <i>Wetlands</i>
Indicator 9: Explain the importance of wetland management, creation, enhancement, and restoration programs.	356–381 CH 15 Wetlands 374–375 Wetland Conservation and Management 375–376 Wetland Rehabilitation and Restoration
Objective 3. Analyze wildlife/aquatic resources and management.	462–489 CH 19 Endangered Species 490–529 CH 20 Fisheries 530–559 CH 21 Game Species
Indicator 1: Describe characteristics of a healthy wildlife habitat.	79–107 CH 4 Ecology and Earth 136–153 CH 6 Habitat Destruction 432–461 CH 18 Interactions
Indicator 2: Explain methods of wildlife habitat improvement.	136–153 CH 6 Habitat Destruction 356–381 CH 15 Wetlands
Indicator 3: Identify wildlife species that can be sustainably harvested.	530–559 CH 21 Game Species Illustrated Glossary

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 4: Describe techniques used in managing wildlife.	533–534 Game Species Management 496–499 History of Fisheries 510–512 Fisheries Management
Indicator 5: Identify characteristics of a healthy aquatic habitat.	490–529 CH 20 Fisheries
Indicator 6: Describe techniques used in managing fish populations.	490–529 CH 20 Fisheries 510–512 Fisheries Management
Indicator 7: Identify and manage fish diseases.	509 Parasites
Objective 4. Examine forest resources and management.	560–595 CH 22 Forests CH 23 Forest Succession and Management CH 24 Threats to Forests
Indicator 1: Identify local forestry species by common and scientific names.	569–574 Most Common Tree Species in the United States 574–584 Other Important Tree Species 584–588 Non-Tree Forest Plants
Indicator 2: Describe forest ecology, and identify characteristics of a healthy forest.	564–566 Healthy Forest Ecosystems 594 (ST 2)
Indicator 3: Recognize the importance of forests.	562 Introduction 588–590 Forest Products 594 (ST 6)
Indicator 4: Describe the growth and decline of forest trees.	CH 23 Forest Succession and Management
Indicator 5: Identify ways in which forest stands may be improved.	CH 23 Timber Stand Improvement
Indicator 6: Measure trees and timber stands.	CH 23 Timber Cruising and Forest Inventories CH 23 Determining Tree Volume CH 23 STEM Connection: Calculating a Tree's Volume (ST 3, 4)
Indicator 7: Explain the role of fire in forest management.	CH 23 Prescribed Burns (ST 5) CH 23 (CA 1) CH 24
Indicator 8: Examine reforestation practices.	CH 23 Reforestation
Indicator 9: Identify forest products and uses.	588–590 Forest Products 594 (ST 6) CH 23 (ST 9)

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 10: Define urban forestry.	CH 23 Natural Areas in the City: Urban Forests and Urban Forest Management
Objective 5. Examine mineral resources and management.	280–305 CH 12 Mining of Natural Resources
Indicator 1: Identify local mineral resources	285–291 Mineral Mining in the United States
Indicator 2: Describe the importance of mineral resources to society.	282 Introduction 305 (ST 2, 3); (FFA 2)
Indicator 3: Explain the various practices for obtaining mineral resources.	282–285 Types of Mining 305 (ST 1, 3, 4)
Indicator 4: Describe the impact of mining practices on the environment.	296–299 The Impacts of Mining on the Environment 304 (TC 1, 2) 305 (ST 1, 3, 4); (CA 3)
Indicator 5: Identify processes for reclaiming areas where minerals have been extracted.	300 Reclamation of Mined Areas 305 (SAE 1); (CA 1, 2)
Objective 6. Explain the management of natural resources for recreational purposes.	CH 26 Outdoor Recreation CH 26 (ST 7, 8)
Indicator 1: Identify natural resource characteristics desirable for recreational purposes.	CH 26 Why People Engage in Outdoor Recreation
Indicator 2: Identify outdoor recreational enterprises.	CH 26 Types of Outdoor Recreation
Indicator 3: Describe natural resource management techniques for improving recreation opportunities.	CH 26 Sustainability and Outdoor Recreation CH 26 (CA 1)
Indicator 4: Compare various recreational uses of the region.	CH 26 Outdoor Recreation (ST 4)
Objective 7. Explain inventory and monitoring methods.	180–181 Describing Populations 181 STEM Connection: Quadrat Sampling 475–479 Wildlife Data Collection
Indicator 1: Identify the components of a monitoring plan.	181 STEM Connection: Quadrat Sampling 420–423 Measurement Techniques 475–479 Wildlife Data Collection

Standards, Objectives, and Indicators	G–W Content (TC Thinking Critically; ST STEM; FFA; SAE; CA Communicating about; Appendix)
Indicator 2: Compare and contrast the various inventory/sampling methodologies (e.g., population estimation).	180–181 Describing Populations 181 STEM Connection: Quadrat Sampling 185 STEM Connection: Estimating Population Size 534 Determining Population Size
Indicator 3: Develop a basic plan for monitoring a natural resource project.	18 (ST 2) 594 (ST 2) 595 (ST 8)
Standard 6: Students will apply basic economic principles in natural resource business and management.	
Objective 1. Apply basic economic principles in natural resource business and management.	Appendix
Indicator 1: Monitor monthly financial statements.	Appendix
Indicator 2: Apply tax strategies and estate planning to natural resource management.	Appendix
Indicator 3: Explain how economic principles contribute to land management through conservation easements and land swaps.	72 Bureau of Land Management CH 25 Grasslands and Rangelands CH 27 Natural Protected Areas
Indicator 4: Evaluate the economic impact of natural resources on a community.	19 (CA 2) 57- Natural Resources Disasters 69 Magnuson-Stevens Act 70, 497 US Exclusive Economic Zone 110-111 Economic Sustainability 135 (CA 2) 160 Economic Strength 163 Economic Value of Resources 164 Untapped Resources 175 (ST 4) 300 Reclamation of Mined Areas 304 (TC 4) 321 Watersheds 355 (CA 3) 360 Recreational Activities 402 (TC 1) Management of Grasslands and Rangelands CH 25 Economic Impact of Outdoor Recreation CH 26