

Colorado CTE Course – Scope and Sequence

Course Name	Wildlife & Fish Management		Course Details	Level 3 course in the Natural Resources / Environmental Science pathway.	
			Course = 0.50 Carnegie Unit Credit		
Course Description	An introductory course for agriculture education students pursuing careers in Wildlife Management. This course expands student learning to the principals of wildlife management. Students will gain knowledge in career development, leadership, personal development, communications, ecology, biology, zoology and trends in wildlife management in relation to outdoor recreation.				
Note:	This is a suggested scope and sequence for the course content. The content will work with any textbook or instructional resource. If locally adapted, make sure all essential knowledge and skills are covered.				
SCED Identification #	18310	Schedule calculation based on 60 calendar days of a 90-day semester. Scope and sequence allows for additional time for guest speakers, student presentations, field trips, remediation, or other content topics.			
Instructional Unit Topic	Suggested % of Instructional Time	CTE or Academic Standard Alignment	Competency / Performance Indicator	Outcome / Measurement	CTSO Integration
Analyze the different elements in an Ecosystem and the relationship of those interactions in relation to Wildlife Management.	8	<p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p> <p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p>	NRS.01.01. Apply methods of classification to examine natural resource availability and ecosystem function in a particular region.	<p>NRS.01.01.01.a. Summarize and classify the different kinds of natural resources using common classification schemes (e.g., living versus non-living, renewable versus nonrenewable, native versus introduced, etc.).</p> <p>NRS.01.01.02.a. Summarize the components that comprise all ecosystems.</p> <p>NRS.01.01.02.b. Analyze the interdependence of organisms within an ecosystem (e.g., food webs, niches, impact of keystone species, etc.) and assess the dependence of organisms on nonliving components (climate, geography, energy flow, nutrient cycling, etc.).</p>	

				<p>NRS.01.01.02.c. Conduct analyses of ecosystems and document the interactions of living species and non-living resources.</p> <p>NRS.01.01.03.b. Analyze how biodiversity develops through evolution, natural selection and adaptation; explain the importance of biodiversity to ecosystem function and availability of natural resources.</p> <p>NRS.01.01.03.c. Evaluate biodiversity in ecosystems and devise strategies to enhance the function of an ecosystem and the availability of natural resources by increasing the level of biodiversity.</p>	
<p>Identifying different species and variety of plants and how the impact on the health of the ecosystem.</p>	10	<p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p> <p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p>	<p>NRS.01.02. Classify different types of natural resources in order to enable protection, conservation, enhancement and management in a particular geographical region.</p>	<p>NRS.01.02.03.a. Research and examine the characteristics used to identify wildlife and insects.</p> <p>NRS.01.02.03.b. Apply identification techniques to determine the species of wildlife or insect.</p> <p>NRS.01.02.03.c. Evaluate the species of wildlife and insects present to assess the health of an ecosystem.</p> <p>NRS.01.02.04.a. Research and examine the characteristics used to identify aquatic species.</p>	

		<p>NRS.04. Demonstrate responsible management procedures and techniques to protect, maintain, enhance, and improve natural resources.</p>	<p>NRS.04.01. Demonstrate natural resource protection, maintenance, enhancement and improvement techniques.</p>	<p>NRS.01.02.04.b. Apply identification techniques to determine the species of an aquatic organism.</p> <p>NRS.01.02.04.c. Evaluate the aquatic species present to assess the health of an ecosystem.</p> <p>NRS.04.01.03.a. Identify and categorize characteristics of a healthy wildlife habitat.</p> <p>NRS.04.01.03.b. Assess and apply methods of wildlife habitat improvement.</p> <p>NRS.04.01.03.c. Devise a comprehensive improvement plan for a wildlife habitat.</p>	
<p>Understanding the relationship biogeochemical cycles impact on wildlife habitat and Aquatic ecosystems.</p>	8	<p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p> <p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p>	<p>NRS.01.02. Classify different types of natural resources in order to enable protection, conservation, enhancement and management in a particular geographical region.</p>	<p>NRS.01.02.05.a. Research and examine the characteristics used to identify non-living resources (e.g., soil types, climate, geography, etc.).</p> <p>NRS.01.02.05.b. Apply identification techniques to determine the types of non-living resources in an area.</p> <p>NRS.01.02.05.c. Evaluate the non-living resources present in an area to determine the best practices for improving, enhancing and protecting an ecosystem.</p>	

			<p>NRS.01.03. Apply ecological concepts and principles to atmospheric natural resource systems.</p>	<p>NRS.01.03.01.a. Classify different kinds of biogeochemical cycles and the role they play in natural resources systems.</p> <p>NRS.01.03.01.b. Assess the role that the atmosphere plays in the regulation of biogeochemical cycles.</p> <p>NRS.01.03.01.c. Evaluate and make recommendations to lessen the impact of human activity on the ability of the atmosphere to regulate biogeochemical cycles.</p>	
<p>Evaluating Wildlife habitat in relationship to ecology.</p>	8	<p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p>	<p>NRS.01.05. Apply ecological concepts and principles to terrestrial natural resource systems.</p>	<p>NRS.01.05.02.a. Compare and contrast the impact of habitat disturbances and habitat resilience.</p> <p>NRS.01.05.02.b. Analyze and summarize examples of habitat disturbances and habitat resilience.</p> <p>NRS.01.05.02.c. Interpret signs of habitat disturbances and resilience in an ecosystem and use these signs to assess the health of an ecosystem.</p>	
<p>Understanding the roles of resource inventories and populations in wildlife management.</p>	8	<p>NRS.01. Plan and conduct natural resource management activities that apply logical, reasoned and scientifically based solutions to natural resource issues and goals.</p>	<p>NRS.01.02. Classify different types of natural resources in order to enable protection, conservation, enhancement and management in a particular geographical region.</p>	<p>NRS.01.02.06.a. Research the purpose and value of resource inventories and population studies.</p> <p>NRS.01.02.06.b. Apply procedures for conducting</p>	

			<p>NRS.01.06. Apply ecological concepts and principles to living organisms in natural resource systems.</p>	<p>resource inventories and population studies.</p> <p>NRS.01.02.06.c. Conduct an assessment of the resource inventories or population in a given area.</p> <p>NRS.01.06.01.a. Differentiate between population ecology, population density and population dispersion and describe the importance of these concepts to natural resource systems.</p> <p>NRS.01.06.01.b. Analyze the factors that influence population density and population dispersion in natural resource systems.</p> <p>NRS.01.06.01.c. Create a management plan for a population of a species in an ecosystem given its population ecology, population density and population dispersion in natural resource systems.</p>	
<p>Exploring the relationship between Government Agencies, human interactions and Wildlife Management</p>	8	<p>NRS.02. Analyze the interrelationships between natural resources and humans.</p>	<p>NRS.02.01. Examine and interpret the purpose, enforcement, impact and effectiveness of laws and agencies related to natural resource management, protection, enhancement and improvement (e.g., water regulations, game laws, historic preservation laws, environmental</p>	<p>NRS.02.01.01.a. Distinguish between the types of laws associated with natural resources systems.</p> <p>NRS.02.01.01.b. Analyze the structure of laws associated with natural resources systems.</p> <p>NRS.02.01.01.c. Evaluate the impact of laws associated with</p>	

			policy, etc.).	<p>natural resources systems (e.g., mitigation, water regulations, carbon emissions, game limits, invasive species, etc.).</p> <p>NRS.02.03.02.a. Research and assess how historical figures played a prominent role in shaping how natural resources are viewed and used today (e.g., Aldo Leopold, Teddy Roosevelt, John Muir, Rachel Carson, Gaylord Nelson, etc.).</p> <p>NRS.02.03.02.b. Examine and describe the relationship between current trends in natural resource systems and historical figures that played a prominent role in shaping how natural resources are viewed and used today.</p> <p>NRS.02.03.02.c. Anticipate and predict how society's views and use of natural resources will continue to change as a result of historical figures and trends in modern society.</p>	
Analyzing the Economic impact of wildlife management.	8	NRS.02. Analyze the interrelationships between natural resources and humans.	NRS.02.04. Examine and explain how economics affects the use of natural resources.	<p>NRS.02.04.01.a. Compare and contrast how the economic value of a natural resource affects its availability.</p> <p>NRS.02.04.01.b. Assess whether economic value increases or decreases the conservation, protection, improvement and</p>	

		<p>NRS.03. Develop plans to ensure sustainable production and processing of natural resources.</p>	<p>NRS.03.01. Sustainably produce, harvest, process and use natural resource products (e.g., forest products, wildlife, minerals, fossil fuels, shale oil, alternative energy, recreation, aquatic species, etc.).</p>	<p>enhancement of natural resources.</p> <p>NRS.02.04.01.c. Devise a plan to improve the conservation, protection, improvement and enhancement of natural resources based on economic value and practices.</p> <p>NRS.02.04.02.a. Research the impact of the use of natural resources on local, state and national economies (e.g., outdoor recreation, energy production, preservation, etc.).</p> <p>NRS.02.04.02.b. Assess the importance of the use of natural resources on local, state and national economies.</p> <p>NRS.02.04.02.c. Anticipate and predict how changes to the availability of natural resources because of human activity may impact a local, state and national economy.</p> <p>NRS.03.01.02.a. Research and describe methods by which wildlife can be sustainably harvested (e.g., controlled harvests, hunting licenses, regulations, etc.).</p> <p>NRS.03.01.02.b. Assess and apply techniques used to harvest wildlife in regards to sustainability, practicality and other factors.</p>	
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<p>Analyze the harms to wildlife with the introduction of invasive species and disease.</p>	8	<p>NRS.04. Demonstrate responsible management procedures and techniques to protect, maintain, enhance, and improve natural resources.</p>	<p>NRS.04.01. Demonstrate natural resource protection, maintenance, enhancement and improvement techniques.</p> <p>NRS.04.02. Diagnose plant and wildlife diseases and follow protocols to prevent their spread.</p>	<p>NRS.04.01.03.a. Identify and categorize characteristics of a healthy wildlife habitat.</p> <p>NRS.04.01.03.b. Assess and apply methods of wildlife habitat improvement.</p> <p>NRS.04.01.03.c. Devise a comprehensive improvement plan for a wildlife habitat.</p> <p>NRS.04.02.02.a. Classify causes of diseases in wildlife and aquatic species and determine the correct authorities to whom some diseases should be reported.</p>	

			<p>NRS.04.03. Prevent or manage introduction of ecologically harmful species in a particular region.</p>	<p>NRS.04.02.02.b. Analyze a wildlife or aquatic species disease based on its symptoms, identify if the disease needs to be reported to authorities and determine which authorities it should be reported to.</p> <p>NRS.04.02.02.c. Create a management plan to reduce infection and spread of wildlife or aquatic species diseases in natural resource systems.</p> <p>NRS.04.03.02.a. Identify and classify invasive species common to a particular region.</p> <p>NRS.04.03.02.b. Analyze signs of the spread of invasive species, identify if it needs to be reported to authorities and determine which authorities it should be reported to.</p> <p>NRS.04.03.03.a. Research and summarize strategies and benefits of preventing the introduction of harmful species to a particular region.</p> <p>NRS.04.03.03.b. Assess and implement a plan for preventing the spread of harmful species for its effectiveness.</p>	
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