



SPRING GROVE AREA SCHOOL DISTRICT



PLANNED COURSE OVERVIEW

Course Title: Wildlife Studies Grade Level(s): 11 - 12 Units of Credit: 1 Classification: Elective	Length of Course: Full Year Periods Per Cycle: 6 Length of Period: 40 Minutes Total Instructional Time: 120 Hours
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Course Description

This course is the study of North American wildlife and their habitats. The history and development of wildlife management in America is considered. Natural histories of several mammals, birds, reptiles, amphibians, and fishes will be examined. Natural histories include species description, range, feeding habits, reproductive behavior, management, and characteristics peculiar to each species. The course is designed to develop an appreciation for wildlife and to encourage personal involvement in the maintenance and restoration of this valuable resource.

Instructional Strategies, Learning Practices, Activities, and Experiences

Instructional Strategies and Practices: Posted Objectives and Agendas Bell Ringers APL Strategies Teacher Led Discussions and Demonstrations Guided Practice	Strategies and Practices: Online Tutorials and Resources Critical Thinking Inquiry Questioning Technology Apps Review Games	Activities and Experiences: Inquiry Laboratory Activities Outside Observation Discussion Groups
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Assessments

Formative Assessments: Student Worksheets Class Discussion Exit Tickets	Summative Assessments: Unit Examinations Midterm and Final Exams Unit Projects	
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Materials/Resources

Classroom Sets of Field Guides and Texts Mounted Animals and Props Schoology Classroom	Power Point Note Presentations Online Resources Laboratory Resources and Equipment	Worksheets Videos
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Adopted: 12/7/88

Revised: 9/3/91, 7/15/98, 11/15/01, 8/20/07, 5/22/23

Taxonomy	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. Classification System and Taxonomy B. Characteristics of Five Major Animal Classes</p>	<p><u>Objectives:</u> Students will ...</p> <ul style="list-style-type: none"> • Explain the need for a classification system and scientific nomenclature. • Identify the five major classes of animals and their characteristics. <p><u>Standards:</u> HS-LS4-1 Biological Evolution: Unity and Diversity Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. HS-LS4-2 Biological Evolution: Unity and Diversity Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment. HS-LS4-4 Biological Evolution: Unity and Diversity Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>

Habitats	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. Four Major Types of North American Habitats B. Animal And Plant Adaptations C. Man's Impact</p>	<p><u>Objectives:</u> Students will ...</p> <ul style="list-style-type: none"> • Identify major types of habitats found in North America. • Describe the physical conditions of different habitat types using biotic and abiotic components. • Determine which habitat type a species is suited for based on physical features and/or behavioral adaptations. • Explain ecological succession and man's influence on it. • Identify and describe key components of wildlife habitat. • Design a landscape plan which provides the basic requirements for selected species of animals (insects, birds, reptiles, amphibians, and mammals). <p><u>Standards:</u> HS-LS4-4 Biological Evolution: Unity and Diversity Construct an explanation based on evidence for how natural selection leads to adaptation of populations. HS-LS4-5 Biological Evolution: Unity and Diversity Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>

Wildlife Management	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. History Of Management in America and Pennsylvania B. Population Dynamics C. Carrying Capacity and Limiting Factors D. Hunting – Past vs. Present E. Endangered/Extinct species</p>	<p><u>Objectives:</u> Students will ...</p> <ul style="list-style-type: none"> • Describe the historical developments that have occurred in America relating to wildlife management. • Identify the components of a wildlife population. • Explain and give examples of carrying capacity and limiting factors. • Compare and contrast hunting of the past and hunting as a management tool today. • Define endangered species and explain conflicts, both present and future, that jeopardize our wildlife resources. <p><u>Standards:</u> HS-LS2-1 Ecosystems: Interactions, Energy, and Dynamics Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. HS-LS2-2 Ecosystems: Interactions, Energy, and Dynamics Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. HS-LS2-6 Ecosystems: Interactions, Energy, and Dynamics Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem. HS-ESS3-1 Earth and Human Activity Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity. HS-ESS3-3 Earth and Human Activity Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. HS-LS4-6 Biological Evolution: Unity and Diversity Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>

Mammals	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. Identification B. Behaviors C. Management D. Role in the Ecosystem E. Groups to be studied: Bats Bears Deer Dogs Rodents Weasels Miscellaneous Others</p>	<p><u>Objectives:</u> Students will...</p> <ul style="list-style-type: none"> • Distinguish mammals by their physical features and their unique abilities. • Identify selected species of common North American mammals. • Explain the role of various mammals within the food chain. • Describe management practices of the past and present. • Identify skulls, scats, tracks, hides, and other signs of North American mammals. • Use various classification keys and field guides to locate information. <p><u>Standards:</u> HS-LS2-6 Ecosystems: Interactions, Energy, and Dynamics Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem. HS-LS2-7 Ecosystems: Interactions, Energy, and Dynamics Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. HS-LS2-8 Ecosystems: Interactions, Energy, and Dynamics Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce. HS-LS4-1 Biological Evolution: Unity and Diversity Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. HS-LS4-2 Biological Evolution: Unity and Diversity Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p>

Mammals	
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	<p>HS-LS4-4 Biological Evolution: Unity and Diversity Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Biological Evolution: Unity and Diversity Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-ESS3-3 Earth and Human Activity Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</p>

Birds	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. Identification B. Behaviors C. Management D. Role in the Ecosystem E. Groups to be Studied: Raptors Owls Game Species Songbirds</p>	<p><u>Objectives:</u> Students will...</p> <ul style="list-style-type: none"> • Distinguish birds by their physical features and their unique abilities. • Identify selected species of common North American birds. • Explain the role of various birds within the food chain. • Describe management practices of the past and present. • Identify skulls, nests, feathers, and other signs of North American birds. • Use various classification keys and field guides to locate information. <p><u>Standards:</u> HS-LS2-6 Ecosystems: Interactions, Energy, and Dynamics Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem. HS-LS2-7 Ecosystems: Interactions, Energy, and Dynamics Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. HS-LS2-8 Ecosystems: Interactions, Energy, and Dynamics Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce. HS-LS4-1 Biological Evolution: Unity and Diversity Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. HS-LS4-2 Biological Evolution: Unity and Diversity Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p>

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Reptiles and Amphibians	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. Identification B. Behaviors C. Management D. Role in the Ecosystem E. Groups to be Studied: Snakes Turtles Lizards Frogs Toads Salamanders</p>	<p><u>Objectives:</u> Students will...</p> <ul style="list-style-type: none"> • Distinguish reptiles and amphibians by their physical features and their unique abilities. • Identify selected species of common North American reptiles and amphibians. • Explain the role of various reptiles and amphibians within the food chain. • Describe management practices of the past and present. • Identify eggs, nests, shells, shed skins, and other signs of North American reptiles and amphibians. • Use various classification keys and field guides to locate information. <p><u>Standards:</u> HS-LS2-6 Ecosystems: Interactions, Energy, and Dynamics Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem. HS-LS2-7 Ecosystems: Interactions, Energy, and Dynamics Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. HS-LS2-8 Ecosystems: Interactions, Energy, and Dynamics Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce. HS-LS4-1 Biological Evolution: Unity and Diversity Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. HS-LS4-2 Biological Evolution: Unity and Diversity Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p>

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Fishes	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. Identification B. Behaviors C. Management D. Role in the Ecosystem E. Groups to be Studied: Warm Water Cold Water Migratory</p>	<p><u>Objectives:</u> Students will...</p> <ul style="list-style-type: none"> • Distinguish fish by their physical features and their unique abilities. • Identify selected species of common North American fish. • Explain the role of various fish within the food chain. • Describe management practices of the past and present. • Use various classification keys and field guides to locate information. <p><u>Standards:</u> HS-LS2-6 Ecosystems: Interactions, Energy, and Dynamics Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem. HS-LS2-7 Ecosystems: Interactions, Energy, and Dynamics Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. HS-LS2-8 Ecosystems: Interactions, Energy, and Dynamics Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce. HS-LS4-1 Biological Evolution: Unity and Diversity Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. HS-LS4-2 Biological Evolution: Unity and Diversity Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p>

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Nature Journal Writing and Wilderness Survival Skills	
CONTENT/KEY CONCEPTS	OBJECTIVES/STANDARDS
<p>A. Nature Observation Skills B. Aesthetic Value of Our Wildlife Resource C. Survival Skills</p>	<p><u>Objectives:</u> Students will...</p> <ul style="list-style-type: none"> • Take time to enjoy the aesthetic value of our natural surroundings. • Record nature observations and thoughts in a writing format unique to them. • Determine which essentials are necessary for survival in the wild. • Practice nature observation skills. <p><u>Disciplinary Core Ideas:</u> LS2A Interdependent relationship in ecosystems</p> <p><u>Science and Engineering Practices:</u></p> <ul style="list-style-type: none"> • Asking questions and defining problems • Constructing explanations and designing solutions <p><u>Cross-cutting Concepts:</u></p> <ul style="list-style-type: none"> • Cause and Effect • Patterns