Course Title: **Natural Resources Management**
Schools to Offer Course: **Elko, Spring Creek, Wells, Owyhee**
Grade Level: **9 through 12**
District Textbook Adoption: Managing Our Natural Resources 4th Edition
Publisher: Delmar/Thomson Learning
Student ISBN: 0-7668-1554-4
Student Lab Manual ISBN: 0-7668-2683-X
Teacher ISBN: 0-7668-2682-1
Teacher Lab Manual ISBN: 1-4018-9008-3

General Course Objectives:

1. To help students develop an understanding of natural resources and the environment.

2. To help students develop an understanding of important relationships in the environment and ways to sustain the productivity of the environment.

3. To help students understand the issues involved in resources conservation.

4. To help learners develop an understanding of important relationships in the environment and ways to sustain the productivity of the environment.

5. To help students develop an understanding of the growing demands made by people on the environment.

6. To help the students develop an understanding about living things and the environment.

7. To help the students develop an understanding of important life processes and how they are carried out by organisms.

8. To help the students develop an understanding of the nonliving, physical characteristics of the environment.

9. To help the student develop an understanding of weather and the environment.

10. To help the student develop an understanding of the structure and function of living and nonliving elements found on the earth.

11. To help the student develop an understanding about the nature and importance of soil.

12. To help the student develop an understanding concerning the nature, supply, and management of water.

13. To help the student develop an understanding concerning how water is affected by nature and pollution.

14. To help the student develop an understanding concerning plants as wildlife.

15. To help the student develop an understanding concerning wildlife classification, habitat, and value to humans.

16. To help the student develop an understanding of the impact of fishing and sportsman's on fish and wildlife.

17. To help the student understand the importance of outdoor safety, survival, and ethics to our lands and water.

18. All students are required to be a member of a Career & Technical Education extra-curricular organization.

19. All students are required to plan and manage a supervised agricultural experience program (SAEP).

Specific Course objectives

As adopted by the Nevada Board of Education Dec. 4th, 2004

Content Area 1.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 1.0) Soils	Students will understand soil science as it relates to natural resources
(PS 1.1) Performance Standard	Students will be able to identify the characteristics of soil.

Topic: SOILS

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

1.1.1	Explore soil formation factors.
1.1.2	Examine physical characteristics of soil.
1.1.3	Examine chemical and biological characteristics.
1.1.4	Diagram soil profiles.
1.1.5	Determine soil classification.
1.1.6	Investigate soil taxonomy.
1.1.7	Explore soil type distribution.

Special Materials and Equipment:

Content Area 1.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 1.0) Soils	Students will understand soil science as it relates to natural resources
(PS 1.2) Performance Standard	Students will explore the chemical and biological interactions of soil.

Topic: SOILS

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

1.2.1	Investigate the chemical relationship of soil nutrients and plant growth.
1.2.2	Investigate the micro/macro nutrients of soil.
1.2.3	Recognize the biological components of soil.

Special Materials and Equipment:

Content Area 1.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 1.0) Soils	Students will understand soil science as it relates to natural resources
(PS 1.3) Performance Standard	Students will develop an appreciation for soil conservation.

Topic: SOILS

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

1.3.1	Describe how soil is lost and damaged.
1.3.2	Describe the meaning and importance of wetlands.
1.3.3	Describe practices to prevent soil loss.
1.3.4	Classify important soil amendments and describe the role of each.
1.3.5	Compare and contrast examples of soil conservation practices in urban areas, agriculture, mining and other natural resource environments.
1.3.6	Examine historic soil impact within communities.

Special Materials and Equipment:

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 2.0) Hydrology	Students will understand hydrology as it relates to natural resources.
(PS 2.1) Performance Standard	Students will examine the sources and distribution of water resources.

Topic: Hydrology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

2.1.1	Determine the distribution of water on earth.
2.1.2	Identify sources of ground water and surface water.
2.1.3	Illustrate the sources and distributions of surface water in Nevada.
2.1.4	Explore natural and man-made water storage.
2.1.5	Identify practices to conserve and protect water.

Special Materials and Equipment:

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 2.0) Hydrology	Students will understand hydrology as it relates to natural resources.
(PS 2.2) Performance Standard	Students will be able to comprehend and describe the hydrologic cycle.

Topic: Hydrology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

2.2.1	Describe and explain the operation of the hydrologic cycle.
2.2.2	Explain how the hydrologic cycle causes weathering and soil formation.
2.2.3	Explain the effect of precipitation on groundwater recharge.
2.2.4	Illustrate the correlation between ground water and surface water.

Special Materials and Equipment:

Content Area 2.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 2.0) Hydrology	Students will understand hydrology as it relates to natural resources.

(PS 2.3) Performance Standard	Students will explore the factors contributing to water quality.

Topic: Hydrology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

2.3.1	Identify components of water.
2.3.2	Examine trace elements found in water.
2.3.3	Identify the natural and introduced sources of trace elements found in water.
2.3.4	Identify the natural and introduced sources of contaminants found in water.
2.3.5	Identify the natural and engineered methods of water treatment.
2.3.6	Identify various factors contributing to water quality.

Special Materials and Equipment:

Content Area 2.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 2.0) Hydrology	Students will understand hydrology as it relates to natural resources.
(PS 2.4) Performance Standard	Students will investigate the basis of water monitoring.

Topic: Hydrology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

2.4.1	Explain the importance of monitoring surface and ground water quality.
2.4.2	Explore the various types of water monitoring.
2.4.3	Describe the use of a Material Safety Data Sheet (MSDS) and develop a safety plan for water quality monitoring.

Special Materials and Equipment:

Content Area 3.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 3.0) Air Quality	Students will understand air quality as it relates to natural resource systems.
(PS 3.1) Performance Standard	Students will investigate the composition of the atmosphere.

Topic: Air Quality

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

3.1.1	Describe the composition and structure of the earth's atmosphere.
3.1.2	Explain how ozone in the atmosphere makes life on earth possible.
3.1.3	Describe the greenhouse effect.
3.1.4	Explain how atmospheric gases interact with the earth in nitrogen and carbon cycles.
3.1.5	Investigate the effect of air quality on the ecosystem.
3.1.6	Examine common meteorological occurrences.

Special Materials and Equipment:

Content Area 3.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 3.0) Air Quality	Students will understand air quality as it relates to natural resource systems.
(PS 3.2) Performance Standard	Students will explore major issues affecting air quality and monitoring techniques.

Topic: Air Quality

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

3.2.1	Define air pollution and explain how air quality is measured.
3.2.2	Describe the major sources of air pollution and its effects.
3.2.3	Examine major issues relating to air pollution and air quality.
3.2.4	Identify state and federal air quality standards.
3.2.5	Describe air quality monitoring techniques.
3.2.6	Describe common methods used to control air pollution.

Special Materials and Equipment:

Content Area 4.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 4.0) Energy Resources	Students will examine energy resources and how they interact with the ecosystem.
(PS 4.1) Performance Standard	Students will recognize the types and importance of energy resources.

Topic: Energy Resources

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

4.1.1	Differentiate between renewable and non-renewable energy resources.
4.1.2	Explore types of renewable energy resources.
4.1.3	Describe how electric power is generated from both renewable and non-renewable resources.
4.1.4	Explore types of non-renewable energy resources.

Special Materials and Equipment:

Content Area 4.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 4.0) Energy Resources	Students will examine energy resources and how they interact with the ecosystem.
(PS 4.2) Performance Standard	Students will explore the relationship between energy, development and use as it relates to the ecosystem.

Topic: Energy Resources

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

4.2.1	Identify the different natural resources for energy production.

4.2.2	Differentiate between the methods of extraction of energy resources.
4.2.3	Analyze positive and negative impacts of energy development to the environment.
4.2.4	Identify practices for conserving renewable and non-renewable energy resources.
4.2.5	Examine uses of energy.

Special Materials and Equipment:

Content Area 5.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 5.0) Minerals	Students will examine minerals in Nevada and their socioeconomic impact.
(PS 5.1) Performance Standard	Students will develop an appreciation for the mineral resources in Nevada.

Topic: Minerals in Nevada

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

5.1.1	Describe the mineral resources and production in Nevada.
5.1.2	Describe the historical significance of mineral development in Nevada.
5.1.3	Describe the current state of mineral development in Nevada.
5.1.4	Identify uses of minerals.

Special Materials and Equipment:

Content Area 5.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 5.0) Minerals	Students will examine minerals in Nevada and their socioeconomic impact.
(PS 5.2) Performance Standard	Students will examine the mineral development as it relates to natural resource management.

Topic: Minerals in Nevada

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

5.2.1	Identify the potential natural resources affected by mineral development and determine the potential impacts.
5.2.2	Discuss the relationship between mineral development and ecosystem.
5.2.3	Identify the role of the state and federal agencies in mine development.
5.2.4	Examine reclamation objectives relative to mine development.
5.2.5	Examine the natural resource protection and monitoring required for mineral development.

5.2.6	Examine sustainability to the ecosystem through the reclamation process.

Special Materials and Equipment:

Content Area 5.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 5.0) Minerals	Students will examine minerals in Nevada and their socioeconomic impact.
(PS 5.3) Performance Standard	Students will examine the mineral development as it relates to cultural resources and socioeconomics in Nevada.

Topic: Minerals in Nevada

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

5.3.1	Define cultural resources and socioeconomics as they relate to mineral development in Nevada under state law.
5.3.2	Investigate the steps required to comply with the National Historic Preservation Act.
5.3.3	Identify the types of cultural resources and define the criteria for significance for eligibility on the National Register of Historic Places.
5.3.4	Investigate the range of economic contributions of mining in Nevada.
5.3.5	Identify the economic significance to communities resulting from mineral development.

Special Materials and Equipment:

Content Area 6.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 6.0) Vegetation	Students will examine vegetation resources in Nevada.
(PS 6.1) Performance Standard	Students will examine plant biology.

Topic: Vegetation Resources

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

6.1.1 Examine the biological processes involved in plant physiology. 6.1.2 Identify the major life forms of plants. 6.1.3 Explore the interaction of plants with their environment. 6.1.4 Differentiate between the various taxonomic classes. 6.1.5 Investigate the environmental factors that affect plant growth. Describe the methods of natural plant propagation.

Special Materials and Equipment:

Content Area 6.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 6.0) Vegetation	Students will examine vegetation resources in Nevada.
(PS 6.2) Performance Standard	Students will be able to identify the characteristics of plant communities and community dynamics.

Topic: Vegetation Resources

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

6.2.1	Define the range of plant communities found in Nevada and describe their typical occurrences.
6.2.2	Identify the differences among competition, symbiosis, parasitism, and mutualism.
6.2.3	Describe the successional theory of plant community development.
6.2.4	Explain how plant succession changes forage availability.
6.2.5	Investigate the different life zones found in Nevada and their locations.
6.2.6	Explore plant mechanisms that modify their environment.
6.2.7	Investigate the natural and introduced factors that effect ecosystem changes.

Special Materials and Equipment:

Content Area 6.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 6.0) Vegetation	Students will examine vegetation resources in Nevada.
(PS 6.3) Performance Standard	Students will explore the agricultural vegetation of Nevada.

Topic: Vegetation Resources

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

6.3.1	Define the variety of natural and introduced agricultural vegetative resources in Nevada.
6.3.2	Identify the introduced agricultural vegetation resources in Nevada and where they are grown.
6.3.3	Investigate the unique characteristics found in Nevada that support the agricultural crops.
6.3.4	Identify the economic significance to state and communities resulting from agriculture.
6.3.5	Explore the positive and negative impacts of agriculture upon natural resources in Nevada.

Special Materials and Equipment:

Content Area 6.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 6.0) Vegetation	Students will examine vegetation resources in Nevada.
(PS 6.4) Performance Standard	Students will investigate the basis of vegetation standards and monitoring.

Topic: Vegetation Resources

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

6.4.1	Investigate the impact of noxious and invasive weeds on range and agricultural lands.
6.4.2	Identify the types of standards used by federal agencies related to rangeland health and productivity.
6.4.3	Identify the revegetation standards used by state and federal agencies as related to mine reclamation.
6.4.4	Describe the types of monitoring used to determine if range and revegetation standards are being met.

Special Materials and Equipment:

Content Area 7.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 7.0) Range Management	Students will explore the science of range management.
(PS 7.1) Performance Standard	Students will be able to identify the components of range management.

Topic: Range Management

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

7.1.1	Define rangeland.
7.1.2	Distinguish between the different types of rangelands.
7.1.3	Identify the major components that comprise range management.
7.1.4	Explain the role of plants, animals, socioeconomics and physical factors in range management.
7.1.5	Relate the role of rangeland plants for the production of food, fiber, wood, water and wildlife.

Special Materials and Equipment:

Content Area 7.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 7.0) Range Management	Students will explore the science of range management.
(PS 7.2) Performance Standard	Students will examine range animal nutrition.

Topic: Range Management

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

7.2.1 Explore the reproductive life cycle and nutritional needs of animals on range.

7.2.2 Explore the role of the carbon cycle in animal nutrition.

7.2.3 Discuss the temporal and spatial distribution of rangeland nutrition.

7.2.4 Examine the effects of nutritional shortage on reproduction, production and ranch economics.

7.2.5 Analyze the role of range nutrient supplement and water development on domestic animals and wildlife.

Special Materials and Equipment:

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 7.0) Range Management	Students will explore the science of range management.
(PS 7.3) Performance Standard	Students will determine the factors affecting carrying capacity of rangelands and compare and contrast between the various grazing systems.

Topic: Range Management

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

7.3.1 Define carrying capacity and determine how it is calculated.

7.3.2 Define Animal Unit Month (AUM) and how they are determined.

7.3.3 Explore the relationship between carrying capacity and AUMs.

7.3.4 Analyze grazing intensity, timing, frequency and selectiveness as it relates to grazing systems.

7.3.5 Examine different grazing systems and their effects on rangeland health.

Special Materials and Equipment:

(CS 7.0) Range Management	Students will explore the science of range management.
(PS 7.4) Performance Standard	Students will investigate the factors contributing to range ecology.

Topic: Range Management

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

7.4.1	Identify the factors that determine a range site.
7.4.2	Evaluate the relationship between range condition and range site.
7.4.3	Identify the natural and anthropogenic factors that influence range conditions.
7.4.4	Critique the range management practices that affect range condition.
7.4.5	Identify the disturbance factors responsible for plant community diversity on a landscape scale.

Special Materials and Equipment:

(CS 7.0) Range Management	Students will explore the science of range management.
(PS 7.5) Performance Standard	Students will investigate range vegetation manipulation practices.

Topic: Range Management

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

7.5.1	Describe the effects of mechanical vegetation manipulation.
7.5.2	Describe the effects of biological vegetation manipulation.
7.5.3	Describe the effects of chemical vegetation manipulation.
7.5.4	Describe the effects of fire vegetation manipulation.

Special Materials and Equipment:

(CS 7.0) Range Management	Students will explore the science of range management.
(PS 7.6) Performance Standard	Students will investigate the principles involved in range inventory monitoring.

Topic: Range Management

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

7.6.1	Define the types and techniques involved in range monitoring.
7.6.2	Compare and contrast aerial versus ground monitoring methods.
7.6.3	Describe the types of range data collected and the tools used to manage and present data.
7.6.4	Explain the types of analysis used in the interpretation of range monitoring data.

Special Materials and Equipment:

Content Area 8.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 8.0) Forest Ecology	Students will understand forest ecology.

(PS 8.1) Performance Standard	Students will develop historical and regional perspective of the forest resources and future forest management opportunities.

Topic: Forest Ecology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

8.1.1	Examine the historical uses of forest resources in Nevada.
8.1.2	Discuss current forest practices in Nevada.
8.1.3	Describe the different types of forest in Nevada and examine their ecology.
8.1.4	Identify opportunities for the use of forest resources in Nevada.
8.1.5	Describe the effect of pinyon-juniper encroachment on range site productivity.

Special Materials and Equipment:

Content Area 9.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 9.0) Fish and Wildlife Ecology	Students will investigate fish and wildlife ecology.

(PS 9.1) Performance Standard	Students will develop historical and regional perspective of the forest resources and future forest management opportunities.

Topic: Fish and Wildlife Ecology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

9.1.1	Identify the seven categories of wildlife (big game, fur bearers, predators, upland game, waterfowl, fish and non-game).
9.1.2	Identify the distribution of wildlife associated with various habitats in Nevada.
9.1.3	Describe the importance of wildlife including indigenous and migratory species, their physical and behavioral characteristics, habitat, and management.

Special Materials and Equipment:

Content Area 9.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 9.0) Fish and Wildlife Ecology	Students will investigate fish and wildlife ecology.
(PS 9.2) Performance Standard	Students will examine wildlife and aquatic ecology.

Topic: Fish and Wildlife Ecology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

9.2.1	Describe the type of fisheries habitats.
9.2.2	Identify the factors that affect fisheries habitats.
9.2.3	Describe the range of wildlife habitats found in Nevada.
9.2.4	Describe the seasonal habitat requirements, (i.e., seral stage) for various species of wildlife.

Special Materials and Equipment:

Content Area 9.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 9.0) Fish and Wildlife Ecology	Students will investigate fish and wildlife ecology.
(PS 9.3) Performance Standard	Students will investigate the relationship between uplands and riparian habitats.

Topic: Fish and Wildlife Ecology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

9.3.1	Describe the hydrologic function of upland habitats.
9.3.2	Describe the range of hydrologic functions of riparian habitats.
9.3.3	Identify the factors that affect the hydrologic functions of upland and riparian habitats.

Special Materials and Equipment:

Content Area 9.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 9.0) Fish and Wildlife Ecology	Students will investigate fish and wildlife ecology.
(PS 9.4) Performance Standard	Students will examine the endangered species act and its implementation.

Topic: Fish and Wildlife Ecology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

9.4.1	Describe the factors that lead to the passage of the endangered species act.
9.4.2	Investigate the intent and mission of the endangered species act.
9.4.3	Explore the listing process under the ESA and what it takes to delist a species.
9.4.4	Identify the agency and their jurisdiction for implementation of ESA.

Special Materials and Equipment:

Content Area 9.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 9.0) Fish and Wildlife Ecology	Students will investigate fish and wildlife ecology.
(PS 9.5) Performance Standard	Students will investigate the basis of wildlife and aquatic monitoring.

Topic: Fish and Wildlife Ecology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

9.5.1	Define the types and techniques involved in wildlife and aquatic monitoring.
9.5.2	Compare and contrast wildlife and aquatic monitoring methods.
9.5.3	Describe the types of monitoring data collected and the tools used to manage and present data.
9.5.4	Explain the types of analysis used in the interpretation of wildlife and aquatic monitoring data.

Special Materials and Equipment:

Content Area 10.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 10.0) Fire Ecology	Students will understand fire ecology dynamics.
(PS 10.1)Performance Standard	Students will explore the effects of fire on the ecosystem.

Topic: Fire Ecology _____

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

10.1.1	Determine the pre-settlement fire history in Nevada.
10.1.2	Explore the factors that change the fire history post-settlement.
10.1.3	Identify the factors affecting fire frequency today in Nevada.
10.1.4	Compare fire effects on the ecosystem today versus pre-settlement.
10.1.5	Describe the effects on the ecosystem from mosaics created by fires.

Special Materials and Equipment:

Content Area 10.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 10.0) Fire Ecology	Students will understand fire ecology dynamics.
(PS 10.2)Performance Standard	Students will explore the fire cycle and examine fire as a management tool on the rangeland ecosystem.

Topic: Fire Ecology

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

10.2.1	Compare and contrast fire interval and fire frequency.
10.2.2	Describe the factors that affect the fire cycle.

10.2.3	Examine how plant succession affects fuel loading.
10.2.4	Examine how anthropogenic factors affect fuel loading.
10.2.5	Describe the relationship between fuel loading and fire intensity.

Special Materials and Equipment:

Content Area 11.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 11.0) Outdoor Recreation	Students will understand outdoor recreation and its importance to natural resources.
(PS 11.1)Performance Standard	Students will explore opportunities associated with outdoor recreation.

Topic: Outdoor Recreation

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

11.1.1	Explore career opportunities related to outdoor recreation.
11.1.2	Explore primary and alternate business opportunities related to outdoor recreation.
11.1.3	Explore vocational opportunities relating to outdoor recreation.

11.1.4	Investigate conservation activities as it relates to outdoor recreation and wildlife habitat.
11.1.5	Investigate the impact of outdoor recreation on the ecosystem of private, state and Federal lands.

Special Materials and Equipment:

Content Area 12.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 12.0) Outdoor Safety & Survival	Students will explore outdoor safety and survival skills.
(PS 12.1)Performance Standard	Students will examine proper response to outdoor emergency situations.

Topic: Outdoor Safety & Survival

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

12.1.1	Demonstrate proper first aid techniques.
12.1.2	Identify harmful or poisonous plants, insects and reptiles.
12.1.3	Describe personal safety precautions during adverse weather conditions.
12.1.4	Identify appropriate outdoor clothing and safety equipment for the various seasons in Nevada.

Special Materials and Equipment:

Content Area 13.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM -

(CS 13.0) GPS/GIS	Students will understand the importance and application of GPS/GIS in natural resource management.
(PS 13.1)Performance Standard	**Students will investigate GPS/GIS systems and their applications.**

Topic: GPS/GIS

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

13.1.1	Explore the history of navigation as it relates to GIS and GPS development.
13.1.2	Define the uses of geographic information systems and spatial analysis as it applies to natural resource management.
13.1.3	Describe the purpose and function of Global Positioning System.
13.1.4	Explore geomorphic features and their relationship to range management.

Special Materials and Equipment:

Content Area 14.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.1)Performance Standard	Students shall demonstrate problem-solving skills.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.1.1	Solve a work-related problem using the appropriate steps in the problem-solving process.
14.1.2	Demonstrate brainstorming techniques.
14.1.3	Examine and explain the advantages and disadvantages of alternative solutions to one or more problems.
14.1.4	Create an action plan based upon a solution to a work-related problem.
14.1.5	Identify the benefits of solving a work-related problem.

Special Materials and Equipment:

Content Area 14.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.2)Performance Standard	Students shall demonstrate critical-thinking skills.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.2.1	Identify and explain the essential elements of the critical thinking process.
14.2.2	Demonstrate critical-thinking skills necessary in the workplace.
14.2.3	Explain how emotional thinking and logical thinking affect decision making in the workplace.
14.2.4	Explain the difference between reliable and unreliable observations and statements of facts.
14.2.5	Recognize patterns or relationships through observation and discovery.

Special Materials and Equipment:

Content Area 14.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.3)Performance Standard	Students shall demonstrate the ability to speak, write and listen effectively.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.3.1	Explain the benefits of effective communication skills in the workplace.
14.3.2	Effectively interpret and respond to verbal and nonverbal messages.
14.3.3	Demonstrate proper telephone etiquette.
14.3.4	Effectively communicate thoughts, ideas and information in writing.
14.3.5	Organize ideas and communicate orally; is able to effectively demonstrate job skills to others.
14.3.6	Locate, understand and interpret written information in documents such as manuals, graphs and schedules.
14.3.7	Select and utilize an appropriate medium for conveying messages with dignity and respect.
14.3.8	Organize information into the appropriate format in accordance with standard practices, which includes prewriting, drafting, proofreading, editing/revising, and preparing final copy.

14.3.9	Demonstrate sensitivity to cultural diversity in communication.
14.3.10	Identify common communication barriers and methods for improving communication.

Special Materials and Equipment:

Content Area 14.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.4)Performance Standard	Students shall demonstrate the ability to select, apply and maintain appropriate technology.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.4.1	Demonstrate ability to utilize basic keyboarding techniques.
14.4.2	Demonstrate ability to utilize other input devices.
14.4.3	Demonstrate ability to utilize various electronic research methods.
14.4.4	Demonstrate knowledge of the basic technology systems currently available and how they apply to your field (i.e., word processing, spreadsheets, multimedia applications, and database).
14.4.5	Investigate and explain the use, benefits, and costs of technological developments in workplace and school.
14.4.6	Identify and demonstrate the appropriate use of technology to enhance the efficiency of the workplace and school.
14.4.7	Demonstrate routine maintenance and repair of technological equipment.

Special Materials and Equipment:

Content Area 14.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.5)Performance Standard	Students shall demonstrate leadership and teamwork skills.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.5.1 Work cooperatively with others when given a group project.

14.5.2 Explain traits necessary to effectively lead and influence individuals and groups.

14.5.3 Demonstrate appropriate attitudes and behaviors for effective leadership.

14.5.4 Demonstrate respect for team members, team processes and team goals.

14.5.5 Participate in the implementation of a group's decision and evaluate the results.

14.5.6 Demonstrate the qualities of an effective leader and team member.

14.5.7 Describe the importance of company dress codes.

Special Materials and Equipment:

Content Area 14.0

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.6)Performance Standard	Students shall demonstrate sound workplace ethics.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.6.1 Develop personal work ethics through work experience.

14.6.2 Describe the importance of ethics practiced in the workplace.

14.6.3 Demonstrate regular attendance, promptness, and the willingness to follow instructions and complete an assigned task.

14.6.4 Demonstrate appropriate personal and professional attitudes and behaviors.

14.6.5 Maintain a safe, clean, and organized work area.

14.6.6 Demonstrate awareness of legal responsibilities related to individual performance, safety and customer satisfaction.

14.6.7 Demonstrate knowledge of various types of harassment.

Special Materials and Equipment:

- -NATURAL RESOURCES AND WILDLIFE MANAGEMENT CORE CURRICULUM - -

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.7)Performance Standard	Students shall demonstrate the ability to effectively manage resources in high-performance workplaces.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.7.1 Identify and organize the human resources needed to complete a job assignment.

14.7.2 Identify and organize the material resources and space requirements needed to complete a job assignment.

14.7.3 Effectively use technology at its highest level to complete a job assignment.

14.7.4 Demonstrate cooperation and leadership in a team at school or in a workplace setting.

14.7.5 Use the basic components of effective time management.

14.7.6 Recognize the need for management skills in the workplace with regard to stress, anger management, and substance abuse.

14.7.7 Estimate costs and prepare a detailed work order.

14.7.8 Develop a time schedule and prioritized task list to complete a job assignment.

Special Materials and Equipment:

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.8)Performance Standard	Students shall demonstrate career planning and development skills.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.8.1	Prepare a job application.
14.8.2	Prepare a personal résumé.
14.8.3	Complete a personal aptitude and interest inventory.
14.8.4	Participate in a job interview.
14.8.5	Establish short-term career goals.
14.8.6	Establish long-term career goals.
14.8.7	Use the Nevada Career Information System (NCIS) or a similar computer-based program to research careers in a chosen field.
14.8.8	Participate in an organized job-shadowing activity.
14.8.9	Participate in a community-service project.
14.8.10	Construct a career portfolio.

Special Materials and Equipment:

(CS 14.0) Career Development	Students shall achieve competence in workplace readiness, career development, and lifelong learning.
(PS 14.9)Performance Standard	Students shall demonstrate the ability of job retention and lifelong learning skills.

Topic: Career Development

Topic Objectives: Upon completion of this lesson the student will be able to:

Performance Indicators: Meets Standards

14.9.1	Maintain an employment/career portfolio.
14.9.2	Identify strategies for balancing work and family roles.
14.9.3	Demonstrate understanding of the need for lifelong learning in a rapidly changing job market.
14.9.4	Identify strategies to maintain employment in the face of job reductions.
14.9.5	Develop long-term career-planning strategies.
14.9.6	Identify various educational options needed for job advancement.
14.9.7	Demonstrate interpersonal skills needed for job retention.
14.9.8	Identify and model sound workplace ethics, such as loyalty, punctuality and initiative.

Special Materials and Equipment: