

Natural Resources013000...6040

Course Description

Curriculum emphasizes basic scientific principles and processes involved in conserving and/or improving natural resources; such as air, water, land, forestry, wildlife, and energy.

Course Code:

Program(s) of Study to which This Course Applies

- Environmental and Natural Resources

Course Framework	Reference Standards	Academic Crosswalk
Standard 1. Students will apply knowledge of renewable components to the management of natural resources systems.	NAS (NRS.01.01)	[TBD by NDE]
Benchmark 1.1 Determine the importance and scope of renewable natural resources. <u>Sample performance indicators:</u> <ul style="list-style-type: none"> • Define and classify renewable natural resources. • Explain renewable natural resources formation and progression. 	AE 12.7.4 NAS (NRS 12.7.8) AE 12.7.9 AE 12.7.11 AE 12.5.7 AE 12.7.5	
Benchmark 1.2 Identify the components and structural layers of the earth's atmosphere. <u>Sample performance indicators:</u> <ul style="list-style-type: none"> • Explain procedures for maintaining and improving air quality. • Identify major sources of air pollution. 	AE 12.7.4 NAS (NRS 12.7.8) AE 12.7.9 AE 12.7.11 AE 12.5.7 AE 12.7.5	
Benchmark 1.3 Identify tree, plant, fish and wildlife species.	AE 12.7.4	

<p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Understand relationships between wildlife and humans. Identify types and species of fish. Describe how a tree grows. 	NAS (NRS 12.7.8) AE 12.7.9 AE 12.7.11 AE 12.5.7 AE 12.7.5	
<p>Benchmark 1.4 Identify extinct, endangered, threatened, and rare species.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Identify characteristics of wildlife. Describe relationships between types of wildlife. 	AE 12.7.4 NAS (NRS 12.7.8) AE 12.7.9 AE 12.7.11 AE 12.5.7 AE 12.7.5	
<p>Benchmark 1.5 Identify, compare, and evaluate the components of ecosystems.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Classify resources based on renewability and exhaustibility. Describe the greenhouse affect and global warming. 	AE 12.7.4 NAS (NRS 12.7.8) AE 12.7.9 AE 12.7.11 AE 12.5.7 AE 12.7.5	[TBD by NDE]
<p>Standard 2. Students will apply knowledge of non-renewable components to the management of natural resources systems.</p>	NAS (NRS.01.01)	[TBD by NDE]
<p>Benchmark 2.1 Determine the importance and scope of nonrenewable natural resources.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Define and classify nonrenewable natural resources. Explain nonrenewable natural resources formation and progression. 	AE 12.7.4 AE 12.5.4 AE 12.7.10	
<p>Benchmark 2.2 Define, classify, and analyze nonrenewable natural resources.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Describe and recommend treatments for the 8 land capability classes. Identify factors affecting soil formation and erosion. 	AE 12.7.4 AE 12.5.4 AE 12.7.10	[TBD by NDE]
	NAS (NRS.02)	[TBD by NDE]



<p>Standard 3. Students will apply scientific principles to natural resource conservation activities.</p>		
<p>Benchmark 3.1 Describe the key factors affecting soil erosion by wind and water.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> List the important soil and water conservation practices. Describe the factors which affect ecological succession. 	<p>AE 12.7.7 AE 12.7.10 OH 5.3.8 CA E11.2 AE 12.5.7 AE 12.7.5 CA E13.0</p>	
<p>Benchmark 3.2 Use tools, equipment, machinery, and technology to accomplish environmental tasks.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Understanding environmental maps. Use surveying equipment; including GPS and a compass, to determine area, boundaries, and elevations. 	<p>AE 12.7.7 AE 12.7.10 OH 5.3.8 CA E11.2 AE 12.5.7 AE 12.7.5 CA E13.0</p>	
<p>Benchmark 3.3 Identify the purpose of laws associated with natural resources.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Understand public and private land issues. Identify and understand ethical practices. Explain the relationship between forest, wildlife and water resources. 	<p>AE 12.7.7 AE 12.7.10 OH 5.3.8 CA E11.2 AE 12.5.7 AE 12.7.5 CA E13.0</p>	<p>[TBD by NDE]</p>
<p>Standard 4. Students will apply scientific principles to natural resource management activities.</p>	<p>NAS (NRS.02)</p>	<p>[TBD by NDE]</p>
<p>Benchmark 4.1 Apply natural resources concepts to production practices.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Distinguish between preservation and conservation. Explain the relationship between land characteristics and water quality. Identify major threats to water quality and practices to reduce water pollution. 	<p>AE 12.7.4 AE 12.7.7, AE 12.7.10 AE 12.7.9 AE 12.7.11 OH 5.3.6</p>	

<ul style="list-style-type: none"> List appropriate tillage and residue management strategies. 	CA E9.1 NAS (NRS 02.01)	
<p>Benchmark 4.2 Demonstrate natural resource enhancement techniques.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Identify approved practices in wildlife management. Discuss restoration ecology and its role in repairing damaged landscapes. Understand the role of fire in forest and rangeland ecosystems. 	AE 12.7.4 AE 12.7.7, AE 12.7.10 AE 12.7.9 AE 12.7.11 OH 5.3.6 CA E9.1 NAS (NRS 02.01)	
<p>Benchmark 4.3 Explore natural resource careers.</p> <p><u>Sample performance indicators:</u></p> <ul style="list-style-type: none"> Identify uses of tools in a laboratory setting. Identify hazards and develop a safety plan associated with the outdoor environment. 	AE 12.7.4 AE 12.7.7, AE 12.7.10 AE 12.7.9 AE 12.7.11 OH 5.3.6 CA E9.1 NAS (NRS 02.01)	[TBD by NDE]

Reference Standards Sources

- NAS = National Agriculture Standards
- TX = Texas Essential Knowledge and Skills for Career and Technical Education
- CA = California Forestry and Natural Resources Pathway
- IA = Iowa Content Standards and Benchmarks
- NE = Links to Standards

Other Information

Suggestions for innovative teaching and learning strategies:	<ul style="list-style-type: none"> • Trap Shooting • Archery • Fishing • Camping • Raising Game Birds • Aquaculture • Taxidermy • Field Trips (State Park, Bird Watching, Hatchery)
Related assessments:	<ul style="list-style-type: none"> • Hunter Education • Boating Safety • Fishing Education
Extended learning opportunities:	<ul style="list-style-type: none"> • Envirothon • Land Judging • Range Judging • Natural Resources Speaking Leadership Skills Event • Natural Resources Contest Career Development Event • Proficiency Awards • Supervised Agricultural Experience (SAE) • Range Boards • 4-H projects • Safety Camp • View a prescribed burn