



Environmental Science

Career Cluster	Environmental Science
Course Code	03003
Prerequisite(s)	None
Credit	.5 or 1
Program of Study and Sequence	Cluster Course – Environmental Science – Pathway Course
Student Organization	National FFA Organization
Coordinating Work-Based Learning	Job shadowing, mentoring, service learning, workplace tours, school-based enterprises, Supervised Agricultural Experience (SAE)
Industry Certifications	OSHA 10 Hour Safety Certification (Agricultural, Construction Industry, or General Industry)
Dual Credit or Dual Enrollment	None
Teacher Certification	Agriculture Food and Natural Resources Cluster Endorsement; Natural Resources & Environmental Service System Pathway Endorsement; 7-12 Science – Biology; *Agriculture Education
Resources	

Course Description:

Agriculture and tourism are South Dakota’s two leading industries. For these industries to thrive, we must continue to protect and manage the environment with conservation in mind. Environmental Science is a course that enables students to develop an understanding of the natural environment and the environmental problems the world faces. Biology, statistics, algebra, English, and human relations skills will be reinforced throughout the course. Opportunities for application of clinical and leadership skills are provided by participation in FFA activities, conferences and related career development events and proficiency awards. Each student will be expected to maintain a Supervised Agricultural Experience (SAE) Program/Internship.

Program of Study Application

Environmental Science is a pathway course in the Agriculture, Food and Natural Resources Cluster and Environmental Service Systems Pathway. Environmental Science would follow a cluster course and will prepare a student to participate in Fundamental Natural Resources or Agriculture Biotechnology.

Course Standards**ES 1: Examine ecological principles and functions.**

<i>Webb Level</i>	<i>Sub-indicator</i>	<i>Integrated Content</i>
Two Skill/Concept	ES 1.1: Examine the structure and function of ecosystems.	
Four Extended Thinking	ES 1.2: Analyze the major biomes of the earth and the biodiversity associated with these biomes	
Four Extended Thinking	ES1.3: Analyze population dynamics.	

Notes:**ES 2: Evaluate human population dynamics on the environment.**

<i>Webb Level</i>	<i>Sub-indicator</i>	<i>Integrated Content</i>
Four Extended Thinking	ES 2.1: Evaluate factors affecting the human population.	
Four Extended Thinking	ES 2.2: Evaluate the consequences of human population growth.	
Four Extended Thinking	ES 2.3: Evaluate approaches that address over-population.	

Notes:

ES 3: Appraise our natural resources, their conservation and management.

<i>Webb Level</i>	<i>Sub-indicator</i>	<i>Integrated Content</i>
One Recall	ES 3.1: Explain the types, uses and history of renewable and nonrenewable resources.	
Three Strategic Thinking	ES 3.2: Assess methods of conservation of common non–energy natural resources.	
Two Skill/Concept	ES 3.3: Examine the impact of waste production and management on the environment.	

Notes:**ES 4: Examine energy sources and their conservation.**

<i>Webb Level</i>	<i>Sub-indicator</i>	<i>Integrated Content</i>
Two Skill/Concept	ES 4.1: Compare and contrast conventional and alternative energy sources.	
Two Skill/Concept	ES 4.2: Examine the types of energy-related pollution.	
Two Skill/Concept	ES 4.3: Compare various methods of energy conservation.	

Notes:

ES 5: Examine consequences of human interaction with the environment.

<i>Webb Level</i>	<i>Sub-indicator</i>	<i>Integrated Content</i>
Two Skill/Concept	ES 5.1: Examine the causes, environmental effects and methods for controlling pollution.	
Two Skill/Concept	ES 5.2: Examine environmental impact on human health.	
Four Extended Thinking	ES 5.3: Appraise the sustainability of human practices as they relate to water quality, agriculture/forestry/fishing, mining, energy and land use.	

Notes:**ES 6: Appraise personal and civic responsibility with regard to the environment.**

<i>Webb Level</i>	<i>Sub-indicator</i>	<i>Integrated Content</i>
Four Extended Thinking	ES 6.1: Evaluate personal views concerning the environment.	
Four Extended Thinking	ES 6.2: Evaluate the rights and responsibilities of citizens in maintaining a healthy environment.	

Notes: