

NM Public Education Department

ENVIRONMENT AND NATURAL RESOURCES

END-OF-COURSE EXAM | GRADE 9-12 | YEAR 17-18

ASSESSMENT BLUEPRINT

Purpose Statement

Environmental Science and Natural Resources

The Environmental Science and Natural Resources End-of-Course Exam is designed to measure student proficiency of the standards and performance elements aligned to the Common Career Technical Core Standards (https://cte.careertech.org/sites/default/files/CCTC_Standards_Formatted_2014.pdf). This course-level exam is provided to all students who have completed Environmental Science and Natural Resources.

This exam can be given for the following STARS course code:

0181 - Environmental Science and Natural Resources

Intended as a final exam for the course, this is a summative exam covering a wide range of content, skills, and applications. Scores are reported to the teacher, school, district, and state levels for the purposes of student grades, curriculum review, and NMTeach summative reports.

New Mexico State University College of Agriculture, Consumer and Environmental Sciences

This blueprint was developed and piloted in 2016 by the New Mexico State University's (NMSU) Secondary Agriculture Education Office (<http://aces.nmsu.edu/>) in partnership with New Mexico agriculture educators. NMSU uses test items with consent from MYCaert, Inc. (<http://www.mycaert.com>). MyCaert has given copyright permissions to the New Mexico Public Education Department (NMPED).

Sample Questions

The NMPED has released sample items (prior test exam questions in the test bank) for each performance element. Due to a limited item bank, only five, EOC specific, sample questions have been provided on the blueprint. The depth of knowledge (DOK) level has also been identified for each sample question.

Blueprint Table—Environmental Science and Natural Resources

Based on the Common Career Technical Core Standards

REPORTING CATEGORY	STANDARD/ BENCHMARK	PERFORMANCE ELEMENT
Environmental Service Systems	AG-ENV.2	<p>Performance Element: Evaluate the impact of public policies and regulations on environmental service system operations.</p> <p>Sample Question: Compare consumptive use of natural resources to non-consumptive use of natural resources.</p> <p>A. In consumptive use, the use of the resource makes that amount of that resource no longer exist. In non-consumptive use, the amount of that material used is still available. *</p> <p>B. In both consumptive and non-consumptive use, reduction of natural resources occurs.</p> <p>C. Non-consumptive use makes that resource unavailable to others. In consumptive use, the resource can be used by others.</p> <p>D. Consumptive use of a natural resource makes the resource temporarily unavailable for others to use. During non-consumptive use, others may also use the resource.</p> <p>DOK 3</p>
	AG-ENV.3	<p>Performance Element: Develop proposed solutions to environmental issues, problems and applications using scientific principles of meteorology, soil science, hydrology, microbiology, chemistry and ecology.</p>
	AG-ENV.4	<p>Performance Element: Demonstrate the operation of environmental service systems (e.g., pollution control, water treatment, wastewater treatment, solid waste management and energy conservation).</p> <p>Sample Question:</p> <p>1. Identify the term for water located between the soil particles and the rocks within the earth.</p> <p>A. spring water</p> <p>B. runoff</p>

REPORTING CATEGORY	STANDARD/ BENCHMARK	PERFORMANCE ELEMENT
		<p>C. groundwater *</p> <p>D. contamination</p> <p>DOK 1</p> <p>2. Soil will drain more quickly if it has a high content of which of the following?</p> <p>A. clay</p> <p>B. mud</p> <p>C. sand *</p> <p>D. silt</p> <p>DOK 1</p>
	AG-ENV.5	<p>Performance Element: Use tools, equipment, machinery and technology common to tasks in environmental service systems.</p>
Natural Resource Systems	AG-NR.2	<p>Performance Element: Analyze the interrelationships between natural resources and humans.</p> <p>Sample Question Evaporation and transpiration in the hydrologic cycle would cause which of the following?</p> <p>A. ground water</p> <p>B. precipitation *</p> <p>C. rivers</p> <p>D. oceans</p> <p>DOK 1</p>
	AG-NR.3	<p>Performance Element: Develop plans to ensure sustainable production and processing of natural resources.</p>
	AG-NR.4	<p>Performance Element: Demonstrate responsible management procedures and techniques to protect or maintain natural resources.</p> <p>Sample Question: Which of the following is a large area with a distinct combination of plant and animal life?</p>

REPORTING CATEGORY	STANDARD/ BENCHMARK	PERFORMANCE ELEMENT
		A. savannah B. home range C. habitat D. biome * DOK 1

Environmental Science and Natural Resources EoC Reporting Category Alignment Framework					
Reporting Category	Standard	DOK (Count by DOK)			Grand Total
		1	2	3	
Environmental Service Systems	AG-ENV.2			7	7
	AG-ENV.3	1		3	4
	AG-ENV.4	13	2	2	17
	AG-ENV.5		2		2
Natural Resource Systems	AG-NR.2	4	3	1	8
	AG-NR.3			4	4
	AG-NR.4	11		2	13
Total		29	7	19	55