

NM Public Education Department

EXPLORATORY SCIENCE OF AGRICULTURE

END-OF-COURSE EXAM | GRADE 7-8 | YEAR 17-18

ASSESSMENT BLUEPRINT

Purpose Statement

Exploratory Science in Agriculture

The Exploratory Science of Agriculture 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 Exploratory Science of Agriculture in middle school.

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

0131 - Exploratory Science of Agriculture

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.mycart.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—Exploratory Science in Agriculture

REPORTING CATEGORY	STANDARD	PERFORMANCE ELEMENT
HISTORY	AG-1,2,3,4,5	<p>Performance Elements:</p> <ol style="list-style-type: none"> 1. Analyze how issues, trends, technologies, and public policies impact systems in the Agriculture, Food, & Natural Resources Career Cluster™. 2. Evaluate the nature and scope of the Agriculture, Food, & Natural Resources Career Cluster™ and the role of agriculture, food, and natural resources (AFNR) in society and the economy. 3. Examine and summarize the importance of health, safety, and environmental management systems in AFNR businesses. 4. Demonstrate stewardship of natural resources in AFNR activities. 5. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food, & Natural Resources Career Pathways.
	AG-ANI-1	<p>Performance Element:</p> <ol style="list-style-type: none"> 1. Analyze historic and current trends impacting the animal systems industry
NATURAL RESOURCES	AG-3, 4	<p>Performance Elements:</p> <ol style="list-style-type: none"> 3. Examine and summarize the importance of health, safety, and environmental management systems in AFNR businesses. 4. Demonstrate stewardship of natural resources in AFNR activities.
	AG-NR-2, 4	<p>Performance Elements:</p> <ol style="list-style-type: none"> 2. Analyze the interrelationships between natural resources and humans. 4. Demonstrate responsible management procedures and techniques to protect or maintain natural resources.
	AG-ENV-1, 5	<p>Performance Elements:</p> <ol style="list-style-type: none"> 1. Use analytical procedures and instruments to manage environmental service systems. 5. Use tools, equipment, machinery, and technology common to tasks in environmental service systems.
COMMUNICATIONS	AG-1, 3, 5	<p>Performance Elements:</p> <ol style="list-style-type: none"> 1. Analyze how issues, trends, technologies, and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster. 3. Examine and summarize the importance of health, safety, and environmental management systems in AFNR activities.

REPORTING CATEGORY	STANDARD	PERFORMANCE ELEMENT
		5. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.
	AG-ANI- 6	Performance Element: 6. Classify, evaluate, and select animals based on anatomical and physiological characteristics.
	AG-BIZ-5	Performance Elements: 5. Use sales and marketing principles to accomplish AFNR business objectives. Sample Question: What type of contract is generally used between the owner and transporter of goods? A. bill of handling * B. warehouse receipt C. processed order D. invoice DOK 1 AG-BIZ-5
	AG-FD-4	Performance Elements: 4. Explain the scope of the food industry and the historical and current developments of food products.
ANIMAL SCIENCE	AG-5	Performance Elements: 5. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.
	AG-ANI-1, 2	Performance Elements: 1. Analyze historic and current trends impacting the animal systems industry. 2. Utilize best-practice protocols based upon animal behaviors for animal husbandry and welfare.
BUSINESS/MARKETING	AG-BIZ-1, 2, 3, 4, 5	Performance Elements: 1. Apply management planning principles in AFNR businesses. 2. Use record keeping to accomplish AFNR business objectives, manage budgets, and comply with laws and regulations. 3. Manage cash budgets, credit budgets, and credit for an AFNR business using generally

REPORTING CATEGORY	STANDARD	PERFORMANCE ELEMENT
		<p>accepted accounting principles.</p> <p>4. Develop a business plan for an AFNR business.</p> <p>5. Use sales and marketing principles to accomplish AFNR business objectives.</p> <p>Sample Questions:</p> <p>1. What are the four steps used when listening to a message and processing the information received?</p> <p>A. recall, receive, evaluation, hear</p> <p>B. receive, attend, evaluate, recall *</p> <p>C. hear, attend, evaluate, recall</p> <p>D. hear, listen, process, question</p> <p>AG-BIZ-1</p> <p>2. In a true democratic leadership model, which segment of the group has the most influence in an organization?</p> <p>A. the organization's officers</p> <p>B. the president</p> <p>C. everyone *</p> <p>D. committee members</p> <p>DOK 1</p> <p>AG-BIZ-1</p> <p>What is accrual accounting?</p> <p>A. posting payroll into the accounting system</p> <p>B. recording expenses and income as they are incurred *</p> <p>C. recording expenses as bills are paid on charge accounts</p>

REPORTING CATEGORY	STANDARD	PERFORMANCE ELEMENT
		D. entering livestock purchases as capitol accounts DOK 1 AG-BIZ-2
PLANT SCIENCE	AG-FD-2, 4	Performance Elements: 2. Apply principles of nutrition, biology, microbiology, chemistry, and human behavior to the development of food products. 4. Explain the scope of the food industry and the historical and current developments of food products.
PLANT SCIENCE (CONT.)	AG-PL-2, 3	Performance Elements: 2. Apply the principles of classification, plant anatomy and plant physiology to plant production and management. 3. Propagate, culture, and harvest plants and plant products based on current industry standards.
	AG-5	Performance Element: 5. Describe career opportunities and means to achieve those opportunities in each of the Agriculture.
FFA	AG-BIZ-3	Performance Element: 3. Manage cash budgets, credit budgets, and credit for an AFNR business using generally accepted accounting principles. Sample Question: Which type of pay system requires an employee to record the exact time they arrive at work and the exact time the employee leaves? A. hourly wage or day work * B. piecework system C. salary system D. compensation system DOK 1 AG-BIZ-3

REPORTING CATEGORY	STANDARD	PERFORMANCE ELEMENT
SOIL SCIENCE	AG-4, 5	Performance Elements: 4. Demonstrate stewardship of natural resources in AFNR activities. 5. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.
	AG-ENV-3	Performance Element: 3. Develop proposed solutions to environmental issues, problems, and applications using scientific principles of meteorology, soil science, hydrology, microbiology, chemistry and ecology.

Exploratory Science in Agriculture EoC Reporting Category Alignment Framework					
Reporting Category	Standard	(Count by DOK)			Grand Total
		1	2	3	
Soil Science	AG-4	1	1		2
	AG-5	1			1
	AG-ENV-3			1	1
Natural Resources	AG-4	1			1
	AG-NR-2	1			1
	AG-NR-4		1		1
	AG-ENV-1	1			1
	AG-ENV-5		1		1
History	AG-4	1			1
	AG-5	1	1		2
	AG-ANI-1		1		1
FFA	AG-5	1	3		4
Communication	AG-ANI-6		1		1
	AG-FD-4		1		1
	AG-1		1		1
	AG-3		1		1
	AG-5	1			1
	AG-BIZ-5			1	1

Exploratory Science in Agriculture EoC Reporting Category Alignment Framework					
Reporting Category	Standard	(Count by DOK)			Grand Total
		1	2	3	
Animal Science	AG-5		1		1
	AG-ANI-1		2		2
	AG-ANI-2		1		1
	AG-ANI-6		1		1
Business	AG-BIZ-1		1		1
	AG-BIZ-2	1			1
	AG-BIZ-3			1	1
	AG-BIZ-5		1		1
Plant Science	AG-PL-2		1		1
	AG-PL-3		3		3
	AG-FD-4		1	1	2
	Grand Total	10	24	4	38