



ND FFA Association

**MILK QUALITY
AND PRODUCTS**
Handbook

Purpose

The purpose of the Milk Quality and Products CDE is to promote practical learning activities in milk production, product quality and safety, raw milk marketing, and facility operations.

Objectives

This event will provide participants the ability to:

- Recognize causes of off flavors in milk and milk quality.
- Utilize knowledge of milk pricing.
- Utilize knowledge of composition and quality characteristics of raw and pasteurized milk and milk products.

Event Rules & Format

Allergy Information:

Food products used in this event may contain or come in contact with potential allergens. Any participant in need of a reasonable ADA accommodation(s) for their participation in the Milk Quality and Products CDE should complete the online.

Request for Accommodation Form in judging card registration or email the state advisor. The event committee will make all reasonable efforts to accommodate students with food allergies.

Equipment

Materials provided by the event committee include:

- Utensils for sampling will be provided (cups, spoons, etc.).
- Apples will be allowed for taste bud refreshing but must be supplied by the student.
- Participants may use their own cups if desired.

Contest Eligibility

1. To be eligible to participate the student must be enrolled in an agricultural education course and appear on the chapter FFA membership roster.

Team Activities

Team Make-Up

Each chapter may enter a team of three to five participants or one or two individuals.

- Team Scored will be determined by totaling the three highest individual scores.

Team Activity

Team activity in which all team members' work together to solve a selected situation from one of the following: sanitation, marketing and distribution and current issues in dairy health.

- Fifty (50) points

Individual Activities

Milk Samples

Milk samples to be scored on quality (Identification and Evaluation)

1. Ten (10) Milk samples will be provided for Identification of flavor/odor and scored for intensity.
2. For each sample the participant must bubble in one oval identifying the defect and bubble in one oval giving the sample a score of intensity (1 to 10) using only the numbers found on the chart below.
3. All samples of milk are prepared from pasteurized milk intended for table use.
4. Milk samples will be tempered to 60 degrees F.
5. Use whole numbers when scoring "Flavor and Odor" of milk.
6. Check only the one most serious defect in a sample even if more than one flavor or odor is detected.
7. For example: If no defect is noted, bubble the oval "No defect" and score the sample "10".
8. Five (5) points for milk flavor and five (5) points for milk score for a total of 100 points.

<u>Defect</u>	<u>Slight</u>	<u>Definite</u>	<u>Pronounced</u>
Acid	3	2	1
Bitter	5	3	1
Feed	9	8	5
Flat/Watery	9	8	7
Foreign	5	3	1
Garlic/Onion	5	3	1
Malty	5	3	1
No Defect	10	10	10
Oxidized	6	4	1
Rancid	4	2	1
Salty	8	6	4

Cheese Identification/Characteristics

Ten Cheese samples for identification will be selected from those listed.

1. Cubes of the cheeses will be available for tasting. Use toothpicks do not handle cheese.
2. Cheeses to be identified include: Bleu, Brie, Cheddar Mild, Cheddar Sharp, Cream/Neufchatel, Edam/Gouda, Monterey Jack, Mozzarella, Processed American, Provolone, Swiss, Colby, Feta, Havarti, Gruyere, Muenster, Parmesan, Queso Fresco, Ricotta
3. The cheese characteristic matrix and reference table are below.
4. Five (4) points per sample for cheese ID and six (6) points per sample for characteristics.

Cheese Characteristics Matrix						
Variety	Moisture (%) (Maximum) ¹	Fat (%) (Minimum) ²	Pasta Filata ³	Brine/Surface Salted	Ripened by	Origin
Blue/Bleu	46	50	No	Yes	Mold	France
Brie	52.5	20	No	No	Bacteria & Mold	France
Cheddar Mild	39	50	No	No	Bacteria	England
Cheddar Sharp	39	50	No	No	Bacteria	England
Colby	40	50	No	No	Bacteria	US
Cream	55	33	No	No	Unripened	US
Feta	60	42	No	Yes	Bacteria	Greece
Gouda	45	48	No	Yes	Bacteria	Netherlands
Havarti	54	30	No	No	Bacteria	Denmark
Gruyere	39	45	No	Yes	Bacteria	Switzerland
Monterey Jack	44	50	No	No	Bacteria	US
Mozzarella	60	45	Yes	Yes	Bacteria	Italy
Muenster	46	50	No	No	Bacteria	France
Parmesan	32	32	No	Yes	Bacteria	Italy
Processed American	40	50	No	No	Bacteria	US
Provolone	45	45	Yes	Yes	Bacteria	Italy
Queso Fresco	59	18	No	No	Unripened	Mexico
Ricotta	73	4	No	No	Unripened	Italy
Swiss	41	43	No	Yes	Bacteria	Switzerland

1. Some cheeses have a range in moisture permitted, but these are the highest permitted amounts
2. Some cheese standards use percentage by weight of total solids (e.g., cheddar) while others use percentage by weight of the cheese (e.g., cream)
3. Curd is stretched in hot water to align the protein molecules and provide stretch to the curd.

Cheese Characteristic Reference Table

<i>(this is just an example. Other characteristics can be used)</i>		
A.	Maximum moisture=39%	Any cheese with a maximum moisture of 39% or less you would bubble in "A".
B.	Minimum fat in the solids=33%	Any cheese with a minimum fat in the solids of 33% or less you would bubble in "B".
C.	Receives "pasta filata treatment"	If the cheese receives this treatment bubble in "C".
D.	Salted in Brine	If the cheese is salted in brine bubble in "D".
E.	Ripened by molds	If the cheese is ripened by mold bubble in "E".
F.	Originated in England	If the cheese originated in England bubble in "F".

***Each cheese may have more than one characteristic bubbled in. ***

California Mastitis Test

Five milk samples to be evaluated using the California Mastitis test method

- Score the California Mastitis test using even numbers from 0 to 8 inclusive.
- See the National Career Development Events handbook for the scoring guide for this section of the event.
- Eight (8) points per sample for a total of 40 points.

Written Test

Twenty-five objective type questions on milk production and twenty-five on milk marketing.

- 100 points.

Problem Solving – Individual

Apply concepts involved in decision making processes to answer questions about the dairy foods industry based on supplied information. (Answer questions that require a problem to be solved).

- Time – 18 minutes.
- 20 questions, 5 points per question.

Product Identification – Dairy vs. Non-Dairy

A total of 10 samples consisting of dairy and non-dairy products will be identified and assigned a milk-fat content score.

- 100 points – 6 points identification, 4 points fat content

The following products may be included among the samples:

- Dairy Products: nonfat (skim) milk (.05%), lowfat milk (1.0%), reduced fat milk (2%), milk (3.25%), half and half (10.5%), butter (80%), sour cream (18%), flavored milk (0.05%–3.25%) light whipped cream (30%), heavy cream (36%).
- Non-Dairy Products: margarine, non-dairy creamer, non-dairy sour cream, non-dairy milk,

non-dairy flavored beverage and non-dairy whipped topping. All of these are to be categorized as non-dairy fat.

Scoring

The event will be worth a total of 1,670 total team points.

Scoring Summary

Activity	Individual Points	Team Points
Milk Samples	100	300
Cheese ID/Characteristics	100	300
California Mastitis Test	40	120
Written Test	100	300
Problem Solving – Individual	100	300
Product Identification – Dairy vs Non-Dairy	100	300
Team Event		50
Total Points	540	1670

Awards

Awards will be presented at the awards ceremony to individuals and/or teams based upon their rankings. See the Awards section of the Career and Leadership Development Events and Activities Policies and Procedure for additional award guidelines.

a. Individual

1. Individual scores will be tabulated (and do not include the team activity) and broken into gold, silver, and bronze award areas.
2. Individual ties will not be broken.
3. The high individual receives the “baby bison” trophy and a \$250 stipend.

b. Team

1. Team scores will be tabulated by adding the top three member scores and the team activity. They will be broken into gold, silver, and bronze.
2. The high team shall be eligible to represent North Dakota in the National career development event. The high team receives the traveling trophy and travel stipends from the ND FFA Foundation to participate in the National Event.
3. Team Tie Breakers: 1) Written Test; 2) Milk ID & Evaluation; 3) Cheese ID.

References

This list of references is not intended to be all-inclusive. Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. Make sure to use discretion when selecting website references by only using reputable, proven sites.

The following list contains references that may prove helpful during event preparation. The most current edition of resources will be used.

- See the National Career Development Events handbook for details on this activity.
- Recommended references to study for the event are listed in the National FFA Career Development Events Handbook. General livestock and dairy production references available in most agricultural education departments should be helpful also.

Agriculture, Food and Natural Resources Content Standards

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
AS.01.01. Performance Indicator: Evaluate the development and implications of animal origin, domestication and distribution on production practices and the environment.		
AS.01.01.01.c. Evaluate the implications of animal adaptations on production practices and the environment.	Written exam	HS-LS4-3
AS.01.02.02.c. Devise and evaluate marketing plans for an animal agriculture product or service.	Problem solving Written exam	HS-LS4-3
AS.02.02. Performance Indicator: Analyze procedures to ensure that animal products are safe for consumption.		
AS.02.02.02.c. Research and evaluate programs to assure the safety of animal products for consumption.	Written exam	AFNR Career Cluster, Statement 1 AFNR Career Cluster – Animal Systems Pathway, Statement 3 STEM Career Cluster, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 3
AS.03.02 Performance Indicator: Analyze feed rations and assess if they meet the nutritional needs of animals.		
AS.03.02.01.c. Select appropriate feedstuffs for animals based on a variety of factors (e.g., economics, digestive system and nutritional needs, etc.).	Written exam	
AS.03.02.02.c. Select and utilize animal feeds based on nutritional requirements, using rations for maximum nutrition and optimal economic production.	Written exam	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
BS.02.02. Performance Indicator: Implement standard operating procedures for the proper maintenance, use and sterilization of equipment in a laboratory.		
BS.02.02.02.b. Manipulate basic laboratory equipment and measurement devices (e.g., water bath, electrophoresis equipment, micropipettes, laminar flow hood, etc.).	California Mastitis Test Team activity Written exam	
BS.02.02.03.b. Create a plan for sterilizing equipment in a laboratory according to standard operating procedures.	Exam Problem solving	
FPP.01.01. Performance Indicator: Analyze and manage operational and safety procedures in food products and processing facilities.		
FPP.01.01.01.b. Analyze and document attributes and procedures of current safety programs in food products and processing facilities.	Problem solving Team activity Written exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2 AFNR Career Cluster, Statement 6 Manufacturing Career Cluster – Maintenance, Installation and Repair Pathway Statement 2 Manufacturing Career Cluster – Maintenance, Installation and Repair Pathway Statement 4 Manufacturing Career Cluster – Production Pathway 2 Manufacturing Career Cluster – Production Pathway 3
FPP.01.01.02.c. Devise strategies to maintain equipment and facilities for food products and processing systems.	Team activity Written exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2 AFNR Career Cluster, Statement 6 Manufacturing Career Cluster – Maintenance, Installation and Repair Pathway Statement 2 Manufacturing Career Cluster – Maintenance, Installation and Repair Pathway Statement 4 Manufacturing Career Cluster – Production Pathway 2 Manufacturing Career Cluster – Production Pathway 3
FPP.01.02. Performance Indicator: Apply food safety and sanitation procedures in the handling and processing of food products to ensure food quality.		
FPP.01.02.01.c. Identify sources of contamination in food products and/or processing facilities and develop ways to eliminate contamination.	Milk flavor Team activity Written exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
FPP.01.02.02.c. Examine, interpret and report outcomes from safe handling procedures and results from quality assurance tests.	California Mastitis Test Milk flavor Team activity	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2
FPP.01.02.03.c. Interpret and evaluate results of quality assurance tests on food products and examine steps to implement corrective procedures.	California Mastitis Test Team activity Milk flavor Problem solving Exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2
FPP.01.02.04.c. Conduct and interpret microbiological tests for foodborne pathogens.	California Mastitis Test Team activity	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2
FPP.01.03. Performance Indicator: Apply food safety procedures when storing food products to ensure food quality.		
FPP.01.03.01.c. Prepare plans that ensure implementation of proper food storage procedures.	Team activity Exam	
FPP.01.03.02.c. Evaluate the effectiveness of a current documentation procedure used within a food products and processing facility and recommend improvements.	Team activity Problem solving	
FPP.02.01. Performance Indicator: Apply principles of nutrition and biology to develop food products that provide a safe, wholesome and nutritious food supply for local and global food systems.		
FPP.02.01.01.c. Analyze the properties of food products to identify food constituents and evaluate nutritional value.	Milk flavor Cheese type identification Problem solving Written exam	
FPP.02.01.02.b. Compare and contrast the nutritional needs of different human diets.	Written exam	
FPP.02.02. Performance Indicator: Apply principles of microbiology and chemistry to develop food products to provide a safe, wholesome and nutritious food supply for local and global food systems.		
FPP.02.02.01.c. Design and conduct experiments to determine the chemical and physical properties of food products.	California Mastitis Test Team activity	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
FPP.02.03. Performance Indicator: Apply principles of human behavior to develop food products to provide a safe, wholesome and nutritious food supply for local and global food systems.		
FPP.02.03.01.b. Examine, interpret and explain the meaning of required components on a food label.	Problem solving Product identification	
FPP.02.03.02.b. Determine consumer preference and market potential for a new food product.	Problem solving Written exam	
FPP.03.01. Performance Indicator: Implement selection, evaluation and inspection techniques to ensure safe and quality food products.		
FPP.03.01.01.c. Outline procedures to assign quality and yield grades to food products according to industry standards.	Product identification Written exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2 Buying Goods and Services, Benchmarks: Grade 12, Statement 7
FPP.03.01.02.c. Develop care and handling procedures to maintain original food quality and yield.	Problem solving Team activity Written exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2 Buying Goods and Services, Benchmarks: Grade 12, Statement 7
FPP.03.01.04.c. Evaluate and grade food products from different classifications of food products.	Cheese identification Milk flavor Product identification	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 1 AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 2 Buying Goods and Services, Benchmarks: Grade 12, Statement 7
FPP.03.02. Performance Indicator: Design and apply techniques of food processing, preservation, packaging and presentation for distribution and consumption of food products.		
FPP.03.02.01.b. Compare weights and measurements of products and perform conversions between units of measure.	Problem solving Team activity Written exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 3
FPP.03.02.02.c. Evaluate food quality factors on foods prepared for different markets (e.g., shelf life, shrinkage, appearance, weight, etc.).	Cheese identification Milk flavor Product identification Written exam	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 3
FPP.03.02.04.b. Analyze the degree of desirable food qualities of foods stored in various packaging.	Cheese identification Milk flavor Problem solving	AFNR Career Cluster – Food Products and Processing Systems Pathway, Statement 3

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
	Product identification	
FPP.03.03. Performance Indicator: Create food distribution plans and procedures to ensure safe delivery of food products.		
FPP.03.03.01.c. Devise a strategy to determine ways for food distribution to reduce environmental impacts.	Product identification Exam Problem solving	AFNR Career Cluster, Statement 7 AFNR Career Cluster – Food Products and Processing Pathway, Statement 3 Manufacturing Career Cluster – Logistics and Inventory Control, Pathway 2 Manufacturing Career Cluster – Manufacturing Product Process Development Pathway, Statement 1 Manufacturing Career Cluster – Manufacturing Product Process Development Pathway, Statement 2 Transportation, Distribution and Logistics Career Cluster, Statement 3 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.11-12.2 HS-ETS1-2
FPP.03.03.02.c. Make recommendations to improve safety procedures used in food distribution scenarios to ensure a safe product is being delivered to consumers.	Problem solving Team activity Written exam	AFNR Career Cluster, Statement 7 AFNR Career Cluster – Food Products and Processing Pathway, Statement 3 Manufacturing Career Cluster – Logistics and Inventory Control, Pathway 2 Manufacturing Career Cluster – Manufacturing Product Process Development Pathway, Statement 1 Manufacturing Career Cluster – Manufacturing Product Process Development Pathway, Statement 2 Transportation, Distribution and Logistics Career Cluster, Statement 3 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.11-12.2 HS-ETS1-2
FPP.03.03.03.b. Assess how market demand for food products influences the distribution of food products.	Problem solving Written exam	AFNR Career Cluster, Statement 7 AFNR Career Cluster – Food Products and Processing Pathway, Statement 3 Manufacturing Career Cluster – Logistics and Inventory Control, Pathway 2 Manufacturing Career Cluster – Manufacturing Product Process Development Pathway, Statement 1 Manufacturing Career Cluster – Manufacturing Product Process Development Pathway, Statement 2 Transportation, Distribution and Logistics Career Cluster, Statement 3 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.11-12.2 HS-ETS1-2

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
FPP.04.01. Performance Indicator: Examine the scope of the food industry by evaluating local and global policies, trends and customs for food production.		
FPP.04.01.01.b. Analyze the similarities and differences amongst policies and legislation that affect the food products and processing system in the U.S. or around the world.	Team activity Written exam	HS-ETS1-3 Buying Goods and Services, Benchmarks: Grade 12, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 2
FPP.04.01.02.a. Examine the impact of consumer trends on food products and processing practices (e.g., health and nutrition, organic, information about food products, local food movements, etc.).	Written exam	HS-ETS1-3 Buying Goods and Services, Benchmarks: Grade 12, Statement 1 Buying Goods and Services, Benchmarks: Grade 12, Statement 2
FPP.04.02. Performance Indicator: Evaluate the significance and implications of changes and trends in the food products and processing industry in the local and global food systems.		
FPP.04.02.01.b. Analyze and document significant changes and trends in the food products and processing industry.	Problem solving Team activity Written exam	Buying Goods and Services, Benchmarks: Grade 12, Statement 1
FPP.04.02.02.b. Assess the issues of safety and environmental concerns about foods and food processing (e.g., GMOs, irradiation, microorganisms, contamination, etc.).	Problem solving Team activity Written exam	Buying Goods and Services, Benchmarks: Grade 12, Statement 1
FPP.04.02.03.b. Evaluate desirable and undesirable outcomes of emerging technologies used in the food products and processing systems.	Problem solving Team activity	Buying Goods and Services, Benchmarks: Grade 12, Statement 1
FPP.04.03. Performance Indicator: Identify and explain the purpose of industry organizations, groups and regulatory agencies that influence the local and global food systems.		
FPP.04.03.01.b. Evaluate the changes in the food products and processing industry brought about by industry organizations or regulatory agencies.	Problem solving Written exam	Transportation, Distribution and Logistics Career Cluster – Transportation Systems/Infrastructure Planning, Management and Regulation Pathway, Statement 4 Buying Goods and Services, Benchmarks: Grade 12, Statement 7
FPP.04.03.02.c. Construct plans that ensure implementation of industry standards for food products and processing facilities.	Team activity	Transportation, Distribution and Logistics Career Cluster – Transportation Systems/Infrastructure Planning, Management and Regulation Pathway, Statement 4 Buying Goods and Services, Benchmarks: Grade 12, Statement 7

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CS.01.01. Performance Indicator: Examine issues and trends that impact AFNR systems on local, state, national and global levels.		
CS.01.01.02.c. Evaluate emerging trends and the opportunities they may create within the AFNR systems.	Problem solving Written exam	
CS.02.01.01.c. Evaluate geographic data and select necessary data sets to solve problems within AFNR systems.	Problem solving Written exam	
CS.02.02. Performance Indicator: Examine the components of the AFNR systems and their impact on the local, state, national and global society and economy.		
CS.02.02.03.c. Evaluate how positive or negative changes in the local, state, national or global economy impacts AFNR systems.	Written exam	
CS.03.01. Performance Indicator: Identify required regulations to maintain and improve safety, health and environmental management systems.		
CS.03.01.01.c. Evaluate how AFNR organizations/businesses promote improved health, safety and environmental management.	Written exam	
CS.03.04. Performance Indicator: Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.		
CS.03.04.03.b. Assess and demonstrate appropriate operation, storage and maintenance techniques for AFNR tools and equipment.	Written exam	
CRP.01.01. Performance Indicator: Model personal responsibility in the workplace and community.		
CRP.01.01.01.b. Analyze and predict how personal responsibility impacts the workplace and community.	Team activity	
CRP.01.01.02.b. Assess personal level of responsibility and examine opportunities for improvement.	Team activity	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CRP.02.01. Performance Indicator: Use strategic thinking to connect and apply academic learning, knowledge and skills to solve problems in the workplace and community.		
CRP.02.01.01.a. Distinguish opportunities to apply academic learning to solve problems in the workplace (e.g., identify how to: increase productivity, reduce costs, lower inputs, etc.).	Team activity	
CRP.02.01.01.b. Assess workplace problems and identify the most appropriate academic knowledge and skills to apply.	Team activity	
CRP.02.01.01.c. Apply academic knowledge and skills to solve problems in the workplace and reflect upon the results achieved.	Team activity	
CRP.02.02. Performance Indicator: Use strategic thinking to connect and apply technical concepts to solve problems in the workplace and community.		
CRP.02.02.01.c. Apply technical concepts to solve problems in the workplace and reflect upon the results achieved.	Team activity	
CRP.04.01. Performance Indicator: Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.		
CRP.04.01.01.a. Identify and categorize strategies for ensuring clarity, logic, purpose and professionalism in verbal and non-verbal communication (e.g., vocal tone, organization of thoughts, eye contact, preparation, etc.).	Team activity	
CRP.04.01.01.c. Evaluate other's verbal and non-verbal communications (e.g., speeches, presentations, oral reports, etc.) and propose recommendations for improvement in clarity, logic, purpose and professionalism.	Team activity	
CRP.04.01.02.a. Examine and assess personal ability to speak with clarity, logic, purpose and professionalism in formal and informal settings (e.g., speeches, interviews, presentations, oral reports, etc.).	Team activity	
CRP.04.01.02.b. Apply strategies for speaking with clarity, logic, purpose and professionalism in a variety of situations in formal and informal settings.	Team activity	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CRP.05.01. Performance Indicator: Assess, identify and synthesize the information and resources needed to make decisions that positively impact the workplace and community.		
CRP.05.01.01.c. Evaluate workplace and community decision-making processes and devise strategies for improvement.	Team activity	
CRP.05.01.02.c. Evaluate workplace and community situations and recommend the information and resources needed to support good decisions.	Team activity	
CRP.05.01.03.a. Classify the types of information (e.g., data, research, procedures, regulations, etc.) and resources (e.g., human, financial, technology, time, etc.) that may be used to make workplace and community decisions.	Team activity	
CRP.05.01.03.b. Analyze workplace and community decisions and assess the information and resources used to make those decisions.	Team activity	
CRP.05.01.03.c. Synthesize information and resources and apply to workplace and community situations to make positive decisions.	Team activity	
CRP.05.02. Performance Indicator: Make, defend and evaluate decisions at work and in the community using information about the potential environmental, social and economic impacts.		
CRP.05.02.01.c. Evaluate and defend decisions applied in the workplace and community situations.	Team activity	
CRP.05.02.02.c. Evaluate workplace and community situations and propose decisions to be made based upon the positive impact made on environment, social and economic areas.	Team activity	
CRP.06.01. Performance Indicator: Synthesize information, knowledge and experience to generate original ideas and challenge assumptions in the workplace and community.		
CRP.06.01.02.c. Devise strategies (e.g., ask questions, brainstorm ideas, present facts and information, etc.) to challenge common assumptions in workplace and community situations.	Team activity	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CRP.06.02. Performance Indicator: Assess a variety of workplace and community situations to identify ways to add value and improve the efficiency of processes and procedures.		
CRP.06.02.01.c. Evaluate past workplace and community situations and determine how processes and procedures impacted outcomes.	Team activity	
CRP.07.02. Performance Indicator: Evaluate the validity of sources and data used when considering the adoption of new technologies, practices and ideas in the workplace and community.		
CRP.07.02.01.c. Propose valid and reliable data sources to use when considering the adoption of new technologies, practices and ideas.	Team activity	
CRP.07.02.02.c. Create and defend proposals for new technologies, practices and ideas using valid and reliable data sources.	Team activity	
CRP.08.01. Performance Indicator: Apply reason and logic to evaluate workplace and community situations from multiple perspectives.		
CRP.08.01.01.c. Evaluate how applying critical thinking skills can impact workplace and community situations.	Team activity	
CRP.08.01.02.c. Devise strategies to apply reason, logic and input from multiple perspectives to solve workplace and community problems.	Team activity	
CRP.08.02. Performance Indicator: Investigate, prioritize and select solutions to solve problems in the workplace and community.		
CRP.08.02.01.c. Devise strategies to evaluate the effectiveness of solutions for resolving workplace and community problems.	Team activity	
CRP.08.02.02.c. Evaluate and select solutions with greatest potential for success to solve workplace and community problems.	Team activity	
CRP.12.01. Performance Indicator: Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.		
CRP.12.01.02.a. Identify and summarize techniques to build consensus in a team situation.	Team activity	

Measurements Assessed	Event Activities Addressing Measurements	Related Academic Standards
CRP.12.01.02.b. Apply consensus building techniques to accomplish results in team-oriented situations.	Team activity	
CRP.12.01.02.c. Devise and implement methods to obtain feedback from team members on their experiences after completing workplace and community projects.	Written exam	
CRP.12.01.03.c. Evaluate personal level of cultural and global competence and implement plans for growth and improvement in workplace and community situations.	Problem solving	
CRP.12.02. Performance Indicator: Create and implement strategies to engage team members to work toward team and organizational goals in a variety of workplace and community situations (e.g., meetings, presentations, etc.).		
CRP.12.02.02.a. Examine and summarize workplace and community situations where it is important to engage team members to meet team and organizational goals (e.g., meetings, presentations, etc.).	Team activity	
CRP.12.02.02.b. Select strategies to engage team members and apply in a variety of situations.	Team activity	
CRP.12.02.02.c. Evaluate the effectiveness of strategies to engage team members in a variety of workplace and community situations.	Team activity	