

Jr. Food Science & Technology CDE

(rev. Oct-2016)

Purpose

The food science and technology career development event is designed to promote learning activities in food science and technology related to the food industry and to assist students in developing practical knowledge of principles used in a team decision making process.

Eligibility

This event is open to all 7-8th grade members from middle school chapters in good standing.

This event will be held during the Middle School CDE day of State Convention (*High School contest still occurs in June*)

Event Procedures

- A. **Team Make Up** – The team will consist of four members with all four members' scores being totaled for the team score.
- B. Official Dress is required for all participants.
- C. Any participant in possession of an electronic device, except a calculator in the event area is subject to disqualification.
- D. The middle school food science career development event will consist of three types of activities: an objective test taken as a team, a food safety and quality practicum, and a sensory evaluation practicum.
- E. All team members will participate in all of the activities. There will be a possible 450 points per team. The objective test will be worth 50 points, awarded per team. Individually, each participant will earn a maximum of 50 points per practicum, for a total of 100 points.
- F. **Allergy Information:** Food products used in this event may contain or come in contact with potential allergens. Advisors must submit a special needs request form for participants with any allergies with certification. The event committee will make all reasonable efforts to accommodate students with food allergies.
- G. Observers will not be permitted in the event area while the event is in progress.
- H. All participants will be given an identification number by which they will be designated throughout the event.
- I. Each participant must provide:
 - a. A clipboard that is clean and free of notes.
 - b. Two sharpened No. 2 pencils.
 - c. A bottle of water per participant to cleanse palettes between sensory sample.
 - d. Electronic Calculator – Calculators used in this event should be non-programmable and non-graphing. Calculators should have only basic functions such as addition, subtraction, multiplication, division, etc. No other calculators are allowed to be used, including cell phones.
 - e. Teams and/or individuals will not be permitted to use electronic media during the event. This includes but is not limited to cell phones, mp3 players, cameras, etc.

Event Format

Team Activity

A. Objective Test

1. The objective questions administered during the food science and technology examination will be designed to determine the team's understanding of basic principles of food science and technology.

The test will be comprised of questions taken from the past three (3) years of National FFA CDE Exams, which are primarily based on the list of references at the end of this chapter.

2. 60 minutes will be given to complete the examination. Each question will be worth 1 point, for a total of 50 points.

Individual Activities

A. Food Safety & Quality Practicum – Total of 50 Points

1. **Customer Inquiry** – Each participant will be given five scenarios representing general consumer inquiries. Participants must determine if the consumer inquiry reflects a quality or safety issue and determine if it is a biological, chemical, or physical concern or hazard. (25 Points)

2. **Food Safety/Sanitation** – Each participant will be given ten situations (e.g., photos, videos, written scenarios, live demonstrations, or a combination). A numbered list of problems will be provided at the beginning of this practicum segment. The list will contain concepts such as good manufacturing practices (GMPs), sanitation, food handling/storage, and other prerequisite programs. Participants will identify if there is a violation presented in the situation. If participants decide that there is a violation, they will indicate the number of the violation from the list of problems provided. (25 Points)

B. Sensory Evaluation Practicum – Total of 50 Points

1. **Triangle Tests** – Three different triangle tests will be conducted. Participants are expected to identify the different samples through flavor, aroma, visual cues and/or textural difference. Answers will be given on the sheet provided. No list will be provided for this segment of the practicum. Each test is worth 5 points. (15 Points)

2. **Flavor Identification** – Three samples will be tasted. Participants will be expected to discern the flavor of each sample by taste. Flavors may include but are not limited to fruits, vegetables, florals, savory, sweeteners, etc. Each sample is worth 5 points. (15 Points)

3. **Aromas** – Each participant will be asked to identify four different aromas from vials provided at each station and record the answer on the sheet provided. A list of potential aromas will be provided to each person. Each sample is worth 5 points. (20 Points)

Aromas

Cinnamon	Chocolate	Grape
Garlic	Maple	Peppermint
Oregano	Clove	Basil
Nutmeg	Lemon	Ginger
Lime	Molasses	Orange
Wintergreen	Vanilla	Banana
Coconut	Cherry	Smoke (Liquid)
Lilac	Pine	Raspberry
Onion	Strawberry	Butter
Licorice (Anise)		Menthol

Individual: To identify the high individual for this even in case of a tie, the highest Safety & Quality Practicum score will be used as the first tiebreaker, followed by the highest Sensory Evaluation practicum score as the second tiebreaker.

Awards

Awards will be presented to individuals and/or teams based upon their rankings at the Delaware FFA State Convention awards ceremony.

References

(See *High School Food Science & Technology Handbook Chapter for a full list of references*)

Scoring**Team Activity**

Objective Test	60 Mins
Total Points	50 Points

Individual Activities

Safety & Quality Practicum	30 Mins
Customer Inquiry	25 Points
Safety/Sanitation	25 Points

Total Points 50 Points

Sensory Evaluation	30 Mins
Triangle Tests	15 Points
Flavor ID	15 Points
Aromas	20 Points

Total Points 50 Points

Team Points (50 Points Possible)

Individual Points (100 Points Possible x 4 Members)

TOTAL TEAM POINTS _____ 450 Points

Tiebreakers

Team: Should a tie occur in the overall team placing, the tie will be broken by the highest objective test score. If this score does not break the tie, then the highest number of total points earned by a team from the Safety & Quality Practicum will be used. Should a third tiebreaker be necessary, the total points earned by a team in the Sensory Evaluation portion of the contest will be used.

